King Fahd University of Petroleum & Minerals

Dhahran, Kingdom of Saudi Arabia

CURRICULUM VITAE

of

Dr. Muhammad Khalid

Associate Professor

Electrical Engineering Department

College of Engineering and Physics

Submitted for the Consideration of:

Distinguished Professorship Award

15 October 2025

The applicant confirms that the information given in this dossier is correct, accurate, and complete.

CONFIDENTIAL

CURRICULUM VITAE

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Summary of Major Achievements

Teaching

- I received the Excellence in Teaching Award: College of Engineering & Physics, KFUPM, 2023 – 2024.
- I received the Best Academic Advising Award: College of Engineering & Physics, KFUPM, 2024 – 2025.
- I received the Best Academic Advising Award: College of Engineering & Physics, KFUPM, 2020 – 2021.
- Delivered a wide range of different courses, including **10** undergraduate and **6** graduate courses, achieving consistently high student evaluations with averages of **8.94/10** for UG and **9.05/10** for PG courses.
- Played a pivotal role in developing new programs such as the **CX**, **MX**, and **M. Eng** Executive Programs, enhancing the department's curriculum and keeping pace with technological advancements.
- I am serving as the coordinator of the MX in Sustainable and Renewable Energy program, where I oversee its management and development, ensuring that it aligns closely with evolving industry needs.
- Contributed to update the EE's B.Sc. curriculum to align with current academic and industry standards.
- Developed and delivered new courses tailored to meet the requirements of emerging programs.
- Developed and improved laboratory facilities enhancing the practical learning experience for students.
- I have successfully mentored teams to win awards in senior design project competitions, including a third-place winner at KFUPM's Annual Expo in 2021.
- Successfully guided one of my undergraduate students to win the prestigious global "The IEEE Power & Energy Society Outstanding Student Scholarship 2023", highlighting exceptional mentorship and the student's outstanding accomplishments in electrical engineering.
- Successfully supervised **18** M.Sc. and co-supervised **4** Ph.D. students to graduation, with **6** advancing to Ph.D. programs at top-tier universities. Overall, I served as committee member to **36** graduate students.
- I am currently supervising and **3** M.Sc. and **4** PhD students.
- I have supervised and served as an examiner to **20** COOP students, **18** summer trainees, and **16** undergraduate research projects, significantly enhancing their practical skills and research capabilities.
- Coordinated the Electrical Engineering Control Systems Group from 2018 to 2023, overseeing the management of both courses and research in this vital area.
- Developed and delivered specialized short courses in renewable energy.
- Actively involved in numerous student groups, enhancing the student community and engagement.
- Implemented innovative teaching strategies such as Inquiry-Based Learning (IBL), and Active Learning to boost student engagement and understanding.
- Received excellent feedback on my teaching from both students and peer consultations.
- I attended many workshops on teaching methodologies to enhance my professional development.

Research

- International Recognition of Innovations: Presented two inventions at the International Convention on Inventions in Geneva, Switzerland (April 2024), earning **Silver and Bronze Medals**—demonstrating both strong international recognition and significant commercialization potential.
- I have received global recognition by being listed among the **top 2% of scientists** worldwide by Stanford University in 2021, 2023, and 2025.
- Overall, I have authored **400+** scholarly works, with over **70+%** where I served as the corresponding author. My contributions at my current rank include **120** ISI journal papers, **82** international conferences, **21** issued US patents, **2** books, **15** book chapters, and **11** technical reports.
- I have achieved an H-index of **46** on Google Scholar (**41** on Scopus), accumulated around 8,800+ citations, and maintained a Field-Weighted Citation Impact (**FWCI**) of **1.92** over the past 4 years at my current rank**.**
- I recently secured a prestigious laboratory establishment grant of SAR1.5 million from RDIA Saudi Arabia.
- I recently completed a proof-of-concept project (PoC) that is now advancing into product development for a solid-state transformer. Another PoC on the development of local microgrid is at the completion stage.
- I have secured project funding exceeding SAR2.1 million through internal and external grants.
- Led the design and development of state-of-the-art laboratory facilities like Electrification Solutions lab.
- I have been recognized for research excellence at KFUPM with several prestigious awards, including the **Research Excellence Award** in 2022, the **Best Research Project Award** in 2020, **Excellence in Academic Advising Award (twice)**, and **three High Impact Paper Awards** in 2023. Also, won the **Best Poster Award** at the Saudi Smart Grid Conference 2022.
- I have been awarded multiple prestigious and highly competitive EXTERNAL research fellowships from K.A.CARE in 2023 and SDAIA in 2022.
- Demonstrated leadership in research by securing funding for 30 projects serving as a **PI** in most of them.

- Fostered extensive interdisciplinary local and international collaborations with entities like the Ministry of Energy (Saudi Arabia), University of New South Wales (Australia), and others, enhancing global knowledge exchange and innovation in fields such as renewable energy, e-transportation, and sustainability.
- Mentored undergraduate research projects, one of whom was the Second Place Winner at the Undergraduate Research Competition (URC'21, Abu Dhabi) in the Renewable Energy Category in 2021.
- I played an active role in organizing committees of both national and international conferences, significantly enhancing the university's profile and strengthening industry-academic collaborations.
- I actively participated in workshops, seminars, and training sessions, extensively enhancing my knowledge and personal development.
- I am leading pivotal large-scale research projects at our Interdisciplinary Research Center for Sustainable Energy Systems, significantly boosting its reputation and addressing complex challenges in targeted fields.
- I am serving as an Innovation Goals Coordinator on National Research Priority: Electric Vehicles and EV Batteries in Interdisciplinary Research Center for Sustainable Energy Systems at KFUPM.

Community Services

- Regularly involved in public seminars and invited lectures, disseminating knowledge, and engaging with the broader community.
- Served as the university delegate at the Global AI Summit 2022 in Riyadh, representing the University and showcasing our commitment to advancing AI education and research on an international platform.
- Actively participated in the University Community Life Committee, contributing to pivotal discussions and initiatives that enhance campus life and promote a vibrant academic community.
- Proposed the development of the "KFUPM Connect" application, aimed at strengthening community engagement by facilitating better communication and collaboration among university members.
- I serve as an Associate Editor for the Arabian Journal for Science and Engineering (AJSE) and has guest-edited two special issues dedicated to renewable energy technologies.
- Played a key role in organizing the AJSE's First AI Symposium 2024, bringing together leading experts and academics to discuss advancements and future trends in artificial intelligence.
- I am involved in organizing the University's inaugural SMiLE Conference.
- I delivered a knowledge-sharing session on Inquiry-Based Learning (IBL) to empower and enrich our community with practical insights and effective strategies.

Others

- Overall, I consistently received the highest annual faculty evaluation throughout my tenure at the University, demonstrating exceptional performance acknowledged by the university management.
- I have successfully completed three leadership courses from UNSW Sydney in 2021, 2022, and 2023, an accomplishment that underscores my commitment to enhancing my leadership skills and contributing to our organization's success.
- I have played a pivotal role in recruiting top-tier postdoctoral researchers and distinguished faculty members for both the affiliated research center and the department respectively, significantly strengthening our academic and research capabilities.
- In 2021, I was honored with elevation to the status of Senior Member of the IEEE, recognizing my contributions and professional maturity in the field of electrical engineering.
- I am actively collaborating with the Ministry of Energy (MoE) on projects focused on renewable energy, contributing significantly to government initiatives aimed at sustainable development.
- My research strategy prioritizes impactful outcomes, focusing on proof-of-concept projects that pave the way for product development and commercialization. This approach is implemented in collaboration with the MoE and Gulf Battery Company, enhancing the practical applications of our findings and contributing to industry advancements.
- I have represented the University at international forums, notably leading special technical sessions at key conferences, thereby enhancing our institution's global presence.
- My research approach is rooted in fostering multidisciplinary collaboration, leveraging diverse expertise to drive innovative solutions and broaden the scope of our scientific inquiry.
- I have participated in and attended 45+ training and certification programs.

End of Summary

1. Summary of Experience Record (RESUME)

1.1 Personal Profile

Full Name	Muhammad Khalid		
Citizenship	Australian		
Department, College	Electrical Engineering Department, College of Engineering and Physics		
Date of Employment	01/2016		
Current Rank	Assoc. Professor	Promotion Date to Current Rank:	10/2020
Website	https://ee.kfupm.edu.sa/people/faculty/faculty-details/dr.-muhammad-khalid		
University Profile	https://pure.kfupm.edu.sa/en/persons/muhammad-khalid/publications/		
Google Scholar	https://scholar.google.com/citations?user=vdj6kjgAAAAJ&hl=en		
ORCID	https://orcid.org/0000-0001-7779-5348		
SCOPUS	https://www.scopus.com/authid/detail.uri?authorId=35324924400		
Researcher ID	G-2305-2016		
Address	Office 2074, Building 59, Electrical Engineering Department, King Fahd University of Petroleum & Minerals, Dhahran 31261, Saudi Arabia		
Telephone (office)	(+966) 13 860 8076	Mobile:	(+966) 59 022 7731
e-mail	mkhalid@kfupm.edu.sa		

1.2 Educational Record (recent first)

2007 – 2011	**Doctor of Philosophy** (Ph.D.) in ELECTRICAL Engineering, The University of New South Wales (UNSW), Sydney, Australia	
	Dissertation Title:	Forecasting and Control for Wind Power Systems
	Supervisor Name:	Prof. Andrey V. Savkin
2001 – 2003	**Master of Science** (M.Sc.) in SYSTEMS Engineering, Pakistan Institute of Engineering and Applied Sciences (PIEAS), Islamabad, Pakistan	
	Thesis Title:	Design and Development of Lathe Machine Controller
	Supervisor Name:	Dr. Nauman Masud
1996 – 2000	**Bachelor of Science** in in ELECTRICAL Engineering, University of Engineering & Technology (UET), Taxila, Pakistan	

1.3 Specialization (Areas of Research Interest)

My research primarily focuses on renewable energy and power systems, encompassing a wide range of topics including, but not limited to:

- Renewable Energy
- Energy Storage
- Distributed Generations and Storage
- Hydrogen Systems
- Microgrids and Smart Grids

- Renewable Power Forecasting
- Smart Electrification Solutions
- Charging Infrastructure of Electric Vehicles
- Optimization Techniques
- Advanced Control Systems
- Digitalization and Artificial Intelligence
- Power Converters
- Power Quality and Reliability
- Fault Tolerant Control
- Industrial Processes
- Net Zero Energy Buildings
- Energy Efficiency
- Power System Planning and Operation

1.4 Employment Record (recent first)

2020 – Present	**Associate Professor**, Electrical Engineering Department, King Fahd University of Petroleum & Minerals (KFUPM), Dhahran 31261, Saudi Arabia
2016 – 2020	**Assistant Professor**, Electrical Engineering Department, King Fahd University of Petroleum & Minerals (KFUPM), Dhahran 31261, Saudi Arabia
2014 – 2016	**Senior Research Associate**, Australian Energy Research Institute (AERI), School of Electrical Engineering & Telecommunications, The University of New South Wales (UNSW), Sydney, Australia
2013 – 2014	**Research Fellow** (Part-Time), The University of Western Sydney (UWS), Sydney, Australia
2011 – 2014	**Postdoctoral Fellow**, School of Electrical Engineering & Telecommunications The University of New South Wales (UNSW), Sydney, Australia
2008 – 2009	Customer Support Officer (Part-Time), SOUL Communications, Maroubra, Sydney, Australia
2007 – 2011	Tutor/Lab Demonstrator/Lab Coordinator, School of Electrical Engineering & Telecommunications, The University of New South Wales (UNSW), Sydney, Australia
2005 – 2007	Assistant Professor, Electrical Engineering Department, Pakistan Institute of Engineering & Applied Sciences (PIEAS), Islamabad, Pakistan
2003 – 2005	Senior Lecturer, Electrical Engineering Department, Pakistan Institute of Engineering & Applied Sciences (PIEAS), Islamabad, Pakistan
2001 – 2003	PIEAS Fellow, Electrical Engineering Department, Pakistan Institute of Engineering & Applied Sciences (PIEAS), Islamabad, Pakistan

1.5 Consultation and Professional Activities

My consultation and professional activities are demonstrated as follows:

My Professional Activities:

As a faculty member, my professional activities are diverse and integral to both my personal development and the enrichment of the academic community. These activities not only define my role

as an instructor but also reflect my commitment to advancing knowledge, supporting my students, and contributing positively to society at large. Here's an in-depth look at my roles:

1. **Teaching:** I am responsible for designing and delivering lectures, creating course materials, grading assignments, and providing personalized academic guidance to my students.
2. **Research:** I engage actively in scholarly research, which involves formulating research questions, conducting experiments, applying for grants, and publishing findings in reputable academic journals, conferences, books, and patents.
3. **Supervision:** I supervise undergraduate and postgraduate research students, guiding their theses or dissertation works, mentoring them academically and professionally, and helping them shape their research trajectories.
4. **Curriculum Development:** I actively participate in EE curriculum development, updating and refining course content to keep pace with evolving academic standards and industry trends.
5. **Academic Advising:** I advise students on their academic journeys, helping them select courses and navigate their career paths, while also addressing any personal challenges they may face.
6. **Service to the University:** I actively participate in numerous university committees, playing a pivotal role in faculty recruitment, managing departmental academic affairs, spearheading university research initiatives, organizing events, and fostering community engagement.
7. **Community Engagement:** I extend my expertise beyond the university through public lectures, community outreach programs, and consultancy projects, aiming to apply academic knowledge to solve practical problems.
8. **Professional Development:** I continually enhance my professional skills and stay updated in my field by attending workshops, pursuing additional training, and maintaining memberships in professional organizations.
9. **Administrative Responsibilities:** In my administrative capacity, I serve as a coordinator for various academic programs and projects, overseeing their execution and success. Additionally, I lead as the principal investigator on numerous grants, both internal and external, managing the associated budgets, research activities, and team collaborations to drive forward innovative research and educational advancements.
10. **Peer Review:** I contribute to the academic community by performing peer reviews for scholarly journals and grant applications, ensuring the integrity and quality of academic outputs.
11. **Research Commercialization:** I actively pursue opportunities and collaborative scope with academia as well as industry towards commercialization and application of my research solutions. I have meticulously included activities in my consultation opportunities towards achieving this goal.

My Consultation Activities:

As a university instructor, while I do not engage in intensive professional consultation services, I actively participate in various consultation activities that broaden the application and influence of my expertise beyond the academic setting. These responsibilities not only demonstrate my commitment to applying academic knowledge practically but also underscore my dedication to contributing positively to society and the professional community. Here's how I contribute:

12. **Industry Collaboration:** I collaborate with industry partners to offer expert advice on technology development and process improvements, effectively bridging the gap between academia and industry. A notable example of this collaboration is with Gulf Battery Company, where our joint efforts are particularly active.

13. **Community Consultation:** I actively contribute to university community committees, utilizing my knowledge and experience to address and resolve specific societal challenges faced by these communities.
14. **Professional Services:** I provide professional services tailored to the specific needs of various organizations, leveraging my expertise in my areas of specialization. Notably, I work with Saudi Authority for Data and Artificial Intelligence (SDAIA) and King Abdullah City for Atomic and Renewable Energy (K.A.CARE), offering targeted solutions to advance their objectives.
15. **Workshops and Training Sessions:** I design and lead workshops, training sessions, and short courses for university students from diverse backgrounds, enhancing their capabilities with specialized knowledge.
16. **Research Consultancy:** I provide consultancy services to research institutions that require deep domain knowledge or specialized skills to enhance their research projects.
17. **Editorial Roles:** I contribute to the academic community as a member of editorial boards and/or an editor for scholarly journals, ensuring the integrity and quality of published research.
18. **Board Memberships:** I hold board/society memberships in various organizations, contributing to strategic decisions and supporting governance with my academic perspective.
19. **Speaker Engagements:** I am regularly invited to speak at both local university events and various conferences and seminars, both locally and internationally, where I share my research findings and expert insights with a wide range of audiences.
20. **Government Advising:** I collaborate closely with government agencies and ministries, providing insights and recommendations in my field to inform and guide policy decisions. A prime example of this collaboration is my active engagement with the Ministry of Energy (MoE) to enhance their renewable energy initiatives as outlined in Saudi Vision 2030. This partnership not only focuses on leveraging my expertise to advance sustainable energy solutions but also includes working on product development projects aimed at contributing significantly to national development goals.

1.6 Training (Training Activities, Certification and Training Experience)

Date	Workshop/Seminar/Course Details
24 Sep 2025	Webinar – Getting Started with Kahoot as a Digital Tool for Student Response in Classroom – actively participated to enhance student engagement strategies, arranged by the Deanship of Academic Development (DAD)
10 Sep 2025	Webinar – Promoting Academic Integrity in Student Writing in the Age of AI – Turnitin Clarity – gained insights into ensuring integrity in academic writing, arranged by DAD
27 Aug 2025	Webinar – The Newly Automated Course File System – attended to strengthen course management practices, arranged by DAD
21 Aug 2025	Workshop – SwiftAssess Co-Suite: Empowering Assessments with Secure, Innovative, and AI-Driven Solutions – learned innovative assessment and evaluation approaches, arranged by DAD
18 Aug 2025	Webinar – Getting Started with ClassPoint: An Interactive Teaching Experience – joined to explore interactive teaching tools, arranged by DAD
17 Aug 2025	Webinar – Online Tools at KFUPM to Engage Students in Classroom – attended to enhance digital engagement practices, arranged by DAD

14 Aug 2025	Webinar – From Admin to Ally: Building Responsive and Sustainable Research Support for World Class Excellence – engaged to align research with global excellence standards, arranged by DAD
14 Aug 2025	Symposium – KFUPM Research & Innovation – contributed by attending key research and innovation sessions, arranged by DAD
14 Aug 2025	Webinar – Scholarly Journals Publishing: Retraction of Scientific Articles Briefing – gained knowledge on publication ethics and practices, arranged by DAD
14 Aug 2025	Webinar – Research Ethics and Best Practices – attended to strengthen understanding of ethical research conduct, arranged by DAD
13 Aug 2025	Workshop – Teaching with AI: From Cheating to Creative Assignments – certified participation with focus on AI-enabled creative learning, arranged by DAD
12 Aug 2025	Seminar – OpenAI Training: Building with ChatGPT Edu – attended to explore AI integration in education, arranged by DAD
12 Aug 2025	Workshop – Faculty ChatGPT Hackathon #1 – certified participation through hands-on AI hackathon activities, arranged by DAD
12 Aug 2025	Keynote Talk – The Opposite of Cheating: Academic Integrity in the Age of AI – attended to explore integrity-focused AI applications, arranged by DAD
11 Aug 2025	Keynote Talk – Opening Remarks and Keynote Talk on Ancient Wisdom Meets Modern Minds: Learning in the Age of AI – attended to reflect on blending traditional and modern educational insights, arranged by DAD
11 Aug 2025	Keynote Talk – Student Success in the Age of AI: The Impact of Providing Personalized Support to Learners at Scale – attended to understand AI's role in personalized learning, arranged by DAD
11 Aug 2025	Keynote Talk – Teaching with AI: Literacy, Tools & Techniques – attended to explore literacy and pedagogical tools in AI, arranged by DAD
06 June 2024	I attended a workshop on "Active Learning", which was organized by the Teaching and Learning Center at KFUPM, and presented by Mr. Salih Abdullah, an International Pedagogical Consultant, Qualia Training, USA.
10 Mar 2024	I attended a workshop titled "Reimagining Your Teaching" which was organized by the Deanship of Academic Development (DAD) at King Fahd University of Petroleum and Minerals (KFUPM) in Saudi Arabia.
16 Oct 2023 – 22 Oct 2023	I completed a virtual leadership course titled "Learn to Lead: Leading Future Technologies" offered by the University of New South Wales (UNSW) in Sydney, Australia.
31 Aug 2023	I participated in a hands-on training workshop titled "Gradescope: A Hands-on Training Workshop" hosted by the Learning Technology Center at KFUPM.
23 Aug 2021 – 3 Sep 2021	I completed a virtual leadership course titled "Learn to Lead: Leading with Heart", offered by the UNSW in Sydney, Australia.
23 Aug 2023	I participated in an experience sharing session on "Inquiry-Based Learning (IBL)" hosted by the Teaching and Learning Center at KFUPM.

22 Aug 2023	I participated in a virtual webinar titled "Artificial Intelligence and the Future of Education" presented by the Head of Stanford AIRE (AI, Robotics and Education). This event was hosted by the Learning Technology Center at KFUPM.
21 Aug 2023	I attended an experience sharing session on "Senior Design Project" hosted by the Teaching and Learning Center at KFUPM.
20 Aug 2023	I attended an experience sharing session on "Working with Gradescope" hosted by the Learning Technology Center at KFUPM.
20 Aug 2023	I participated in a seminar titled "An Integrative Research & Best Practices in R&I" hosted by the Deanship of Research at KFUPM.
18 Aug 2023	I attended a webinar titled "AQAF 1: An Overview of Academic Quality Assurance Framework" hosted by the Academic Assessment Center at KFUPM.
17 Aug 2023	I attended a webinar titled "University Faculty Roles in the Non-Profit Sector Toward the 2030 Vision" hosted by the DAD at KFUPM.
15 Aug 2023	I attended a seminar titled "New Metrics for Institutional Research Performance: What We Need to Know?" hosted by the Office of Planning and Quality at KFUPM.
14 Aug 2023	I participated in a webinar titled "Opening Remarks & Keynote Speech: AI in Higher Education: Implications, Opportunities, and Strategies for Faculty and Students" hosted by the DAD at KFUPM.
13-14 Jun 2023	I attended a two-day workshop on "Large Language Models (LLMs) and ChatGPT" organized by the Saudi Authority for Data and Artificial Intelligence (SDAIA) at KFUPM.
31 May 2023	I attended a one-day workshop on diverse fields presented by Yokogawa headquarters in Japan, hosted by the SDAIA at KFUPM.
07 Sep 2022	I attended the workshop titled "A Guide to Sanely Flipping Your Classroom (APDP 112)" which was hosted by the Teaching and Learning Center and presented by Dr. Cynthia Furse, Professor of Electrical & Computer Science at the University of Utah. The event provided comprehensive insights into the flipped classroom approach, equipping participants with practical strategies to enhance their teaching methodologies.
31 Aug 2022	I attended a workshop titled "Gradescope: A Hands-on Training Workshop" hosted by the Learning Technology Center at KFUPM.
26 Aug 2022	I attended the Experience Sharing Session on "Senior Design Project" hosted by the Teaching and Learning Center at KFUPM. This session offered valuable perspectives and discussions on the execution and outcomes of senior design projects.
26 Aug 2021	I attended the "IRCs Open Forum" discussion forum, hosted by the Deanship of Research in collaboration with the Teaching and Learning Center. This event provided an open platform for discussing the roles and impacts of Interdisciplinary Research Centers at KFUPM.
24 Aug 2021	I participated in the workshop titled "KFUPM System for Technology Commercialization and Entrepreneurship" which was jointly hosted by the Deanship of Research and the Teaching and Learning Center. This session offered insights into the frameworks and strategies for advancing technology commercialization and fostering entrepreneurship at KFUPM.
23 Aug 2022	I participated in the Experience Sharing Session on Inquiry-Based Learning (IBL), which was hosted by the Teaching and Learning Center at KFUPM. This session

	provided valuable insights into the practical implementation of IBL strategies in educational settings.
22 Aug 2021	I attended the webinar titled "KFUPM New Ecosystem for Research and Innovation" hosted by the Deanship of Research along with the Teaching and Learning Center. This event provided a detailed overview of the newly implemented ecosystem designed to enhance research and innovation at KFUPM.
18 Aug 2022	I attended the webinar titled "AQAF 1: An Overview of Academic Quality Assurance Framework" hosted by the Academic Assessment Center at KFUPM. The session provided a comprehensive introduction to the frameworks and practices involved in maintaining academic quality assurance.
01 Jul 2022	I attended a virtual webinar on "Federated Learning in AI and Machine Learning", hosted by the ACM chapter at GC University, Lahore, Pakistan.
26 Jan 2022	I participated in a workshop titled "APDP 103: Creating Wicked Students: Redesigning Courses for a Complex World" hosted by the Teaching and Learning Center at KFUPM and delivered by the Director of the Houston H. Harte Center at Washington & Lee University.
19 Jan 2022	I attended a workshop titled "Adapting Inquiry-Based Teaching for Your Own Classes" hosted by the Teaching and Learning Center at KFUPM and presented by a Professor of Chemical Engineering from Bucknell University.
20 Dec 2021	I attended the "IBL Experience Sharing Session" hosted by the Teaching and Learning Center at KFUPM. This event provided an excellent opportunity to engage with and learn from other educators about their experiences with Inquiry-Based Learning.
08 Nov 2021	I attended the webinar titled "Learn a Skill in 30 Minutes: Expand MS Excel Capabilities using Pivot Tables" hosted by the Learning Technology Center at KFUPM.
12 Oct 2021	I participated in the webinar titled "Collaborative Scientific Writing Using LaTeX" hosted by the Teaching and Learning Center at KFUPM. This session offered valuable insights into using LaTeX for efficient and effective collaborative writing projects in scientific research.
11 Oct 2021	I participated in the "Inquiry Based Learning Experience Sharing Session" hosted by the Teaching and Learning Center at KFUPM. This event provided an excellent platform to exchange insights and experiences with other educators about implementing Inquiry Based Learning in various educational settings.
23 Aug 2021	I participated in the "Advanced Tools in Blackboard" workshop, hosted by the Learning Technology Center at KFUPM. This session provided in-depth training on utilizing advanced features in Blackboard to enhance online teaching and learning experiences.
18 Aug 2021	I attended the webinar titled "AQAF 1: An Overview of Academic Quality Assurance Framework" hosted by the Academic Assessment Center at KFUPM. This session provided a comprehensive introduction to the frameworks involved in maintaining academic quality assurance.
17 Aug 2021	I attended the "Enhancing Students' Engagement (APDP 105)" workshop, hosted by the Teaching and Learning Center and led by a professor from Purdue University. This workshop focused on innovative strategies to boost student engagement in the classroom.

17 Aug 2021	I participated in the "Gamification: A Tool for Enhanced Learning" workshop, hosted by the Learning Technology Center and led by the Assistant Director of the Institute for Interactive Technologies at Bloomsburg University. This session explored the effective use of gamification techniques to improve learning outcomes.
16 Aug 2021	I attended the webinar titled "Taking a Scientific Approach to Teaching Science and Engineering Education" hosted by the Teaching and Learning Center and delivered by Professor Carl Wieman, Nobel Laureate from Stanford University. The session offered insightful strategies for applying scientific methods to enhance teaching effectiveness in science and engineering disciplines.
16 Aug 2021	I participated in the "More than Results: An Advanced Workshop Integrating Assessment with Learning Improvement (APDP 104)", which was hosted by the Academic Assessment Center at KFUPM and led by the Executive Director of the Center for Assessment & Research Studies at James Madison University. The workshop provided a deep dive into effectively combining assessment techniques with strategies for enhancing learning outcomes.
16 Aug 2021	I attended a webinar titled "Engaging Students with Gamification: An Overview" hosted by the Learning Technology Center at KFUPM and delivered by the Institute for Interactive Technologies at Bloomsburg University. The event offered a comprehensive introduction to the use of gamification techniques to enhance student engagement in educational settings.
08 Jun 2021	I attended the workshop on "IBL Instructional Methods" delivered by a Professor of Chemical Engineering from Bucknell University. This session offered valuable insights into implementing Inquiry-Based Learning techniques in the field of chemical engineering.
03 Mar 2021	I participated in the "Effective Teaching & Learning" experience sharing session, hosted by the Teaching and Learning Center at KFUPM. This event provided a platform for exchanging ideas and best practices for enhancing educational outcomes.
02 Mar 2021	I participated in the "Academic Advisor Professional Development (Part II)" workshop, which was hosted by the Student Success Center and the Teaching and Learning Center and delivered by the Director of the Academic Support Center at the American University of Sharjah. This session continued to build on the skills and strategies essential for effective academic advising.
23 Feb 2021	I attended the "Academic Advisor Professional Development (Part I)" workshop, hosted by the Student Success Center and the Teaching and Learning Center, and delivered by the Director of the Academic Support Center at the American University of Sharjah. This session focused on enhancing the skills and strategies necessary for effective academic advising.
26 Jan 2021	I participated in the "Effective Use of MS Teams for Teaching" workshop, hosted by the Learning Technology Center at KFUPM. This session provided in-depth guidance on utilizing Microsoft Teams to enhance teaching and streamline classroom communication.

1.7 Awards, Honors and Professional Affiliations

2024 – 2025	International Recognition of Innovations: Presented two inventions at the International Convention on Inventions in Geneva, Switzerland (April 2024), earning **Silver and Bronze Medals**—demonstrating both strong international recognition and significant commercialization potential.
2024 – 2025	**Excellence in Academic Advising Award** in Faculty of Engineering, KFUPM
2024 – 2025	**Best Paper Award** at the SMiLE (2024 Smart Mobility and Logistics Ecosystems) Conference.
2025	Received global recognition by being listed among the **top 2% of scientists** worldwide by Stanford University, 2025.
2023 – 2024	**Excellence in Teaching Award**: College of Engineering & Physics, KFUPM.
2023 – 2024	Received 3 **High Impact Paper Awards**, Deanship of Research, KFUPM.
2024	My undergraduate research student won the Undergraduate Student **Poster Award** at the AJSE Symposium.
2023	Received global recognition by being listed among the **top 2% of scientists** worldwide by Stanford University, 2023.
2024 – 2025 2020 – 2021 2019 – 2020	King Abdullah City for Atomic and Renewable Energy (K·A·CARE) **Research Fellowships**
2022 – 2023	SDAIA-KFUPM JRC-AI **Research Fellowship**
2022	**Best Poster Award**, Saudi Smart Grid Conference 2022 (SASG'22), Riyadh, 12-14 Dec 2022
2021 – 2022	**The Research Excellence Award**, Deanship of Research, KFUPM
2021	**Undergraduate Research Competition** (URC'21, Abu Dhabi), Second Place Winner, Renewable Energy Category for the Project Titled: "Machine Learning Based Approach for Controlled Production of Green Hydrogen for Stable and Decarbonized Clean Power Supply with Battery State of Charge Regulation"
2021	Received global recognition by being listed among the **top 2% of scientists** worldwide by Stanford University, 2021.
2020 – 2021	**The Best Research Project Award**, Deanship of Research, KFUPM
2020 – 2021	**The Best Academic Advising Award** in Faculty of Engineering, KFUPM
2019	**Best Poster Award**, 8th International Conference on Renewable Energy Research and Applications (ICRERA 2019), Brasov, Romania, 3-6 Nov 2019.
2018	**Student Travel Support Award**, 27th International Symposium on Industrial Electronics (ISIE), 13-15 June 2018, Cairns, Australia
2010	**Postgraduate Research Student Support (PRSS)** Travel Grant, School of Electrical Engineering & Telecommunications, UNSW, Sydney
2010	**Postdoctoral Writing Fellowship Award**, School of Electrical Engineering & Telecommunications, UNSW, Sydney

2009	**Postgraduate Research Student Support (PRSS)** Travel Grant, School of Electrical Engineering & Telecommunications, UNSW, Sydney
Jul 2009 - Aug 2010	**Australian Post Graduate Award and Supplementary Engineering Award**
Mar 2007 - Jul 2009	**University International Post Graduate Award (UIPA)**, UNSW, Sydney
2004	**Gold Medal for Best Thesis Project** G. Mustafa, N. Iqbal and M. Khalid, "Robust Controller Design for Twin Rotor Control System", MS Thesis, Department of Electrical Engineering, PIEAS, 2004.

Remark:

Throughout my career at KFUPM, I have been honored with every award advertised by the University and open to my eligibility, spanning research, teaching, advising, and innovation—reflecting a consistent record of excellence and recognition across all domains.

2. TEACHING

Please report required information under **Teaching** (at Current Rank **only)**

Statement on **Teaching** Philosophy, Practices, Methods, and Tools

My teaching philosophy is based on the hypothesis that the most effective learning technique is through combining the right amount of active participation, collaborative inquiry, and real-world applications. Being a teacher, my passion lies in facilitating a stimulating as well as engaging environment for my students so that they can easily comprehend intricate ideas and use it in an innovative and inventive manner. The core of my philosophy is the amalgamated framework of Outcome-Based Education (OBE) tactics, Inquiry-Based Learning (IBL) strategies, and Active Learning Methodologies. I refine and update my approaches over time based on my progressively evolving practical experience and professional development.

I practice and strongly believe that the ability of conveying engineering concept in everyday language is paramount as it demonstrates true comprehension and understanding of the subject matter instilling the necessary communicative ability as well as skill to facilitate easeful environment and regulative practice ensuring students gain deep understanding and conceptual mastery. My teaching methodology for achieving such interactive classroom that targets realization of an immersive and collaborative experience includes not only a preemptive preparation to formulate a variety of instructional technique and practical examples but also enhancing and incorporating visualization of concepts and applications through visual aids and multimedia resources while targeting active participation and open discussions.

I believe that education is a transformative journey that helps students reach their full potential. I had used OBE strategies, and currently I am frequently employing IBL techniques, and active learning methods to inspire students to become lifelong learners, critical thinkers, and innovative problem solvers. As an instructor, I am dedicated to creating a supportive and inclusive learning environment, where every student can thrive and succeed. In these efforts, I harness various educational tools such as multimedia resources, simulation software, and interactive learning platforms to enhance student engagement and facilitate deeper understanding.

Accordingly, I try my best for my students to build a deeper appreciation for the subject matter that will further enable them in critical thinking and problem-solving abilities. Beginning with the fundamental concepts with simple explanations and tasks, I encourage students to ask questions, formulate project-based group tasks, share my personal experience as well as expertise, and engage in factual-focused discussions. This practice jointly aims towards the development of technical-oriented collaboration, communication, teamwork, and project coordination.

In simple terms, my teaching approach is self-preparedness towards explaining complex concepts in a simple fashion to the students while utilizing teaching techniques to initiate a culture of curiosity and inquiry and combining it with my meticulous guidance, mentorship, and opportunities for independent study beyond the confines of the classroom to instill in students a passion for learning and a desire for continuous intellectual growth.

In this aspect, I strongly advocate for Undergraduate Research that serves as a platform for student's both only towards their academic and research excellence as well as cultivates essential skills such as problem-solving, analytical reasoning, and effective communication. One of my proudest moments was guiding a team to **second place** in the **8th Undergraduate Virtual Research Competition (URC'21)** across the MENA region in **2021** and the **Student Success Center at KFUPM** honored

my undergraduate student with the Outstanding Student Researcher Achievement Award for the academic year 2021. Such commitment to student-centered learning approach has led to recognition and accolades, including the Best Academic Advising Award in 2020, and my students' achievements, such as the UG Research Award in 2021, and the Senior Design Award in 2022. These achievements not only highlight my effectiveness as an educator but also prove my commitment to excellence in teaching. Accordingly, I consider it an honor to serve these students and to become lifelong learners and active contributors to the academic community.

Furthermore, multidisciplinary teaching is pertinent for preparing the students to face the complexities of the transformative world. As an instructor, I am very keen towards teaching such diversified courses the MX program and consistently aim to on integrating knowledge and perspectives from various disciplines such as mechanical engineering, computer science, and physics into my teaching. Such an approach allows me to facilitate a holistic understanding while incorporating complex distinctive concepts and methodologies associated with these interdisciplinary courses. My objective is to ensure a level of knowledge transfer to my students that will suitably equip them in various and rapidly changing professional situations.

Accordingly, I am actively engaged in curriculum development, course coordination, and student mentoring. I have launched and revitalized several courses, developed laboratory facilities, and provided guidance to students on various academic projects. I utilize these opportunities to initiate and establish necessary hands-on as well as meaningful academic and professional experiences.

Finally, I dedicatedly aim to develop and strive towards creating an independent learning environment for my pupils to develop their analytical reasoning minds through originality in teaching concepts and ingenuity in my mentorship to prepare them in them eagerness to explore ideas and reach innovative excellence in their careers. In my strong conviction, effective and meaningful education is not just based upon imparting knowledge but also involves instilling and equipping them with the necessary skills and intellectuality so that they can successfully navigate in the practical while making meaningful contribution. Therefore, by implementing interactive tasks, stimulating conversations, and demanding assignments my teaching environment promotes student autonomy fostering critical thinking, curiosity, and self-discovery. Accordingly, I actively aim to cultivate this approach to cultivate enduring enthusiasm and utilizing their attentive capacity towards critical and creative thinking, motivating students to tackle challenges from several angles and produce inventive resolutions. This process provides the students an opportunity to develop their exploitative, investigative, and experimentational skills necessary to gain intellectual presence in the academic as well as professional world. My dedication lies in facilitating a foundational guidance and consistent motivation to students as they embark on a transformative journey of seeking and sharing knowledge, developing lifetime career passions, active contributors and leading catalyst of betterment of future society.

Recently, I was awarded a highly competitive and prestigious **Excellence in Teaching Award 2023-2024** from the College of Engineering & Physics at KFUPM. It is an annual recognition, which is awarded based on demonstrated teaching effectiveness in courses taught, curriculum development, students' feedback, innovative instructional methods, and the use of technology and tools. This award is a testament to the effectiveness of my teaching strategies.

2.1 Courses Taught (at Current Rank)

Please first, complete required information under **Appendix A**, Summary of results can then be reported here						
Students' Evaluation of Courses Taught at KFUPM: **Undergraduate Courses**						
No.	**Academic Year**	**Terms**	**Total Courses**	**Total No. of Students**	**Students' Evaluation**	
					Term AVR (10)	**Year AVR (10)**
1.	2024-2025	**241** **242**	**1** **2**	**42** **47**	**8.84** **9.49**	**9.17**
2.	2023-2024	**23-1** **23-2**	**1** **1**	**26** **22**	**8.48** **9.08**	**8.78**
3.	2022-2023	**22-1** **22-2**	**3** **1**	**47** **24**	**8.91** **8.66**	**8.79**
4.	2021-2022	**21-1** **21-2**	**3** **2**	**87** **26**	**8.89** **8.60**	**8.75**
5.	2020-2021	**20-1** **20-2** **20-3**	**1** **3** **1**	**18** **57** **29**	**8.84** **9.47** **9.39**	**9.23**
	4.5 Years	**11 Terms**	**19 Courses**	**336**	**Overall**	**8.94**

List of Courses Taught at KFUPM: **Graduate Courses**				
Course No.	**Course Title**	**Academic Year (Semester)**		**Students' Evaluation (out of 10)**
EE 583	Energy Storage & Hydrogen Systems	2020-21 2023-21	**(20-1)** **(23-1)**	**9.91** **8.50**
EE 629	Special Topics in Power Systems	2020-21 2021-22 2022-23 2023-24 2024-25	**(20-1)** **(21-2)** **(22-2)** **(23-2)** **(24-2)**	**9.29** **8.70** **9.84** **9.33** **9.13**
EE 581	Renewable Energy Integration	2021-22 2022-23 2023-24	**(21-3)** **(22-3)** **(23-3)**	**7.81** **9.00** **9.46**
	Overall:		**Total = 10**	**AVR = 9.09**

2.2 Course Coordination (at Current Rank)

List of Courses Coordinated at KFUPM: **Undergraduate Courses**				
Course No.	**Course Title**	**Academic Year (Semester)**		**Students' Evaluation (out of 10)**
EE 463	Power Flow Analysis	2025-2026	**(25-1)**	**On-going**
EE 360	Electric Energy Engineering	2023-24	**(23-1)**	**8.48**

EE 206	Introduction to Electrical Systems and Computations	2017-18	**(17-2)**	**NA**
EE 306	Electromechanical Devices	2017-18	**(17-3)**	**9.20**
	Overall:	**3**	**Total = 3**	**AVR = 8.84**

2.3 Course and/or Curricula Development (at Current Rank)

List of **Courses** (if any) *developed* at KFUPM				
Course No.	**Course Title**	**Academic Year (Semester)**		**Course Level**
EE 311	Fundamentals of EE Design, on-going	2025-26	**(25-1)**	Undergraduate
EE 469	Introduction to Nuclear Engineering	2024-2025	**(24-2)**	Undergraduate
EE 629	Special topics in Power Systems	2021-22	**(21-2)**	Graduate
SEN 556	Energy Storage	2021-22	**(21-1)**	Graduate
EE 583	Energy Storage & Hydrogen Systems	2020-21	**(20-1)**	Graduate
SEN 540	Electric Energy Systems	2020-21	**(20-1)**	Graduate
EE 554	Advanced Digital Control *(Revision)*	2016-17	**(16-2)**	Graduate
EE 432	Digital Control Systems *(Revision)*	2020-21	**(20-2)**	Undergraduate

List of **Programs** (if any) *developed* at KFUPM	
Development Activities	**Academic Year (Semester)**
1. I participated within the SEN Program Revision Committee to revise/update the curriculum of the **Master of Engineering Program (M. Eng) in Sustainable and Renewable Energy** at the Electrical Engineering Department including the development of two new courses of the program's curriculum.	2019-20 **(19-2)**
2. I was actively engaged in the Undergraduate Curriculum Revision Committee (UCRC), contributing significantly to the comprehensive update of the entire **Bachelor of Science Program** within the Electrical Engineering Department.	2019-20 **(19-2)**
3. I served as a committee member in the collaborative development of a new concentration program (**CX Program**), the "**Renewable and Energy Storage Concentration**", in partnership with the Chemical Engineering Department.	2019-20 **(19-2)**
4. I played a pivotal role in the development of a new **MX Program** specializing in **Sustainable and Renewable Energy** within the Electrical Engineering Department. Additionally, I designed and implemented a new course as part of this program's curriculum.	2020-21 **(20-1)**
5. I actively contributed to a task force responsible for conducting a thorough review of all Electrical Engineering Master's (**MX**) and Concentration (**CX**) **programs**, identifying areas for improvement, proposing necessary changes, and assessing the need for new programs.	2023-24 **(23-1)**

2.4 Senior Projects (SP), Summer, and COOP/Internship Supervision

List of SP/Training Supervision at KFUPM: Undergraduate Courses [at current rank]				
Course No.	**Course Title (CT) / Project Title (PT)**	**Academic Year (Semester)**		**Role**
EE 411 (Sec 11)	**CT: Senior Design Project** **PT:** AI Based Power Quality Controller for Renewable Microgrids	2022-23	**(22-2)**	**Principal Advisor**
EE 411 (Sec 12)	**CT: Senior Design Project** **PT:** An Intelligent Energy Management System Based on Machine Learning	2022-23	**(22-2)**	**Principal Advisor**
EE 411 (Sec 17)	**CT: Senior Design Project** **PT:** Home Security and Energy Management System **(Third Place Winner, Annual Expo, KFUPM)**	2021-22	**(21-2)**	**Principal Advisor**
EE 412 (Team 78)	**CT: TEAM Design** **PT:** Utilize The Power of Pumped Storage Hydropower	2023-24	**(23-2)**	Examiner
EE 412 (Team 69)	**CT: TEAM Design** **PT:** Dissolved Gas Analysis for Oil Filled Transformers	2023-24	**(23-2)**	Examiner
EE 412 (Team 46)	**CT: TEAM Design** **PT:** Transforming Microalgae to biofuels	2023-24	**(23-1)**	Examiner
EE 412 (Team 48)	**CT: TEAM Design** **PT:** Small-scale rocket engine	2023-24	**(23-1)**	Examiner
EE 411 (Sec 13)	**CT: Senior Design Project** **PT:** Building and Development of an Energy-Water Management System	2022-23	**(22-1)**	Examiner
EE 411 (Sec 14)	**CT: Senior Design Project** **PT:** Operation of an Energy and Water Building Management System	2022-23	**(22-1)**	Examiner
EE 411 (Sec 03)	**CT: Senior Design Project** **PT:** Design of a Microgrid for Industrial Loads	2021-22	**(21-1)**	Examiner
EE 411 (Sec 07)	**CT: Senior Design Project** **PT:** Friendly Interface Learning Media for Synchronous Generators	2021-22	**(21-1)**	Examiner
EE 411 (Sec 01)	**CT: Senior Design Project** **PT:** Optimal Real-Time Pricing-Based Scheduling Utilizing Genetic Algorithm in Home Energy Management System	2020-21	**(21-2)**	Examiner
EE 411 (Sec 03)	**CT: Senior Design Project** **PT:** Design and Economic Analysis of PV, BIPV and CPV for a Building in Dammam	2020-21	**(20-2)**	Examiner

EE 411 (Sec 05)	**CT: Senior Design Project** **PT:** Design of Friendly-Interface Learning Media for DC Motor	2020-21	**(20-1)**	Examiner
EE 411 (Sec 15)	**CT: Senior Design Project** **PT:** Controlling the Speed of a Separately Excited DC Motor	2020-21	**(20-1)**	Examiner
EE 398	**CT: Internship Program** **PT:** Electrical Systems and Equipment in Saudi Aramco	2023-24	**(23-1)**	**Principal Advisor**
EE 398	**CT: Internship Program** **PT:** Enhancing Energy Efficiency in Industrial Applications	2023-24	**(23-1)**	**Principal Advisor**
EE 398	**CT: Internship Program** **PT:** Field Maintenance Practices in Saudi Arabia's Petrochemical Industry	2023-24	**(23-1)**	**Principal Advisor**
EE 398	**CT: Internship Program** **PT:** Internship Program at Saudi Aramco	2025-2026	**(25-1)**	Examiner
EE 398	**CT: Internship Program** **PT:** Internship Program at Saudi Aramco	2025-2026	**(25-1)**	Examiner
EE 351	**CT: COOP Program** **PT:** Electrical Auditing, Testing & Design	2023-24	**(23-1)**	Examiner
EE 351	**CT: COOP Program** **PT:** Drilling industry and Drilling Tool Development in Saudi Aramco	2023-24	**(23-1)**	Examiner
EE 350	**CT: COOP Program** **PT:** Testing and Evaluation the Performance of Gas Turbines Generators	2022-23	**(22-2)**	Examiner
EE 350	**CT: COOP Program** **PT:** Testing and Evaluation the Performance of Gas Turbines Generators	2022-23	**(22-2)**	Examiner
EE 351	**CT: COOP Program** **PT:** Drone Localization and Obstacle Avoidance	2022-23	**(22-1)**	Examiner
EE 351	**CT: COOP Program** **PT:** Power System Planning and Design	2022-23	**(22-1)**	Examiner
EE 351	**CT: COOP Program** **PT:** Data Center Infrastructure Management at Saudi Aramco	2022-23	**(22-1)**	Examiner
EE 350	**CT: COOP Program** **PT:** Designing a PV system and Evaluate Mono PERC PV Panel	2021-22	**(21-3)**	**Principal Advisor**
EE 350	**CT: COOP Program** **PT:** Maintenance and Operation of Electrical Machines	2020-21	**(21-3)**	**Principal Advisor**

EE 350	**CT: COOP Program** **PT:** Evaluating Mono PERC PV Panels	2020-21	**(21-1)**	Examiner
EE 350	**CT: COOP Program** **PT:** Preventive and Corrective Maintenance Activities in Monomer Plants	2020-21	**(21-1)**	Examiner
EE 350	**CT: COOP Program** **PT:** Designing a Solar System and Evaluate Mono PERC PV Panel	2020-21	**(20-3)**	**Principal Advisor**
EE 350	**CT: COOP Program** **PT:** Applications of Electrical Machine in a Petrochemical Plant	2020-21	**(20-3)**	**Principal Advisor**
EE 351	**CT: COOP Program** **PT:** Maintenance and Electrical Aspects of Hawiyah Gas Plant	2020-21	**(20-1)**	Examiner
EE 351	**CT: COOP Program** **PT:** Power protection and analysis at Berri Gas Plant in Jubail	2020-21	**(20-1)**	Examiner
EE 399	**CT: Summer Training** **PT:** Summer Training Report	2025-26	**(25-1)**	**Principal Advisor**
EE 399	**CT: Summer Training** **PT:** Summer Training Report	2025-26	**(25-1)**	**Principal Advisor**
EE 399	**CT: Summer Training** **PT:** Summer Training Report	2025-26	**(25-1)**	Examiner
EE 399	**CT: Summer Training** **PT:** Summer Training Report	2025-26	**(25-1)**	Examiner
EE 399	**CT: Summer Training** **PT:** Summer Training Report	2023-24	**(23-1)**	Examiner
EE 399	**CT: Summer Training** **PT:** Summer Training Report	2023-24	**(23-1)**	Examiner
EE 399	**CT: Summer Training** **PT:** Summer Training Report	2022-23	**(22-3)**	**Principal Advisor**
EE 399	**CT: Summer Training** **PT:** Summer Training Report	2022-23	**(22-3)**	**Principal Advisor**
EE 399	**CT: Summer Training** **PT:** Summer Training Report	2022-23	**(22-1)**	Examiner
EE 399	**CT: Summer Training** **PT:** Summer Training Report	2022-23	**(22-1)**	Examiner
EE 399	**CT: Summer Training** **PT:** Summer Training Report	2021-22	**(21-3)**	**Principal Advisor**
EE 399	**CT: Summer Training** **PT:** Summer Training Report	2021-22	**(21-3)**	**Principal Advisor**
EE 399	**CT: Summer Training** **PT:** Summer Training Report	2021-22	**(21-3)**	**Principal Advisor**

EE 399	**CT: Summer Training** **PT:** Summer Training Report	2021-22	**(21-1)**	Examiner
EE 399	**CT: Summer Training** **PT:** Summer Training Report	2021-22	**(21-1)**	Examiner
EE 399	**CT: Summer Training** **PT:** Summer Training Report	2020-21	**(20-3)**	**Principal Advisor**
EE 399	**CT: Summer Training** **PT:** Summer Training Report	2020-21	**(20-3)**	**Principal Advisor**
EE 399	**CT: Summer Training** **PT:** Summer Training Report	2020-21	**(20-3)**	**Principal Advisor**

2.5 Student Advising

Statement on Advising Philosophy, Practices, Methods, and Tools

As an advisor, I recognize the importance of critical role I play in guiding and supporting students on their academic journey. Grounded in our shared values of accuracy, empathy, inclusion, and professionalism, I am committed to empowering students to achieve their academic goals and thrive in their pursuits.

When it comes to academic advising, I prioritize the fundamental values that are the basis of our field, such as accuracy, consistency, empathy, empowerment, equity, honesty, inclusion, professionalism, respect, support, transparency, and trust. I make sure that my advising methods are collaborative, respectful, and proactive, always focusing on the needs and well-being of the students. I assess each student from the perspective of a growth mindset, motivating them to accept challenges and leverage their distinctive strengths to cultivate new capabilities, proficiencies, and aptitudes. My approach is centered around prioritizing the student experience. I am committed to fostering relationships and building environments that are defined by respect, trust, empathy, and inclusiveness for all individuals involved.

As part of my job, I fulfill the function of a translator for university rules and regulations. I advocate for students and provide them with crucial information to help them make well-informed decisions regarding their academic journey. My goal is to assist students in overcoming problems and achieving their maximum potential by facilitating their access to university and community resources that foster growth, development, and well-being. My holistic approach ensures that I consider each student's unique circumstances and aspirations, ultimately contributing to the University's excellence.

By utilizing a variety of theories and methodologies such as appreciative advising, strengths-based advising, and developmental advising, I customize my interactions with students to align with their specific needs and objectives. By fostering empathetic and considerate collaborations, I strive to build trust and empower students to take ownership of their academic journey.

I utilize technology as a tool for connecting with students and resources, enhancing the advising experience, and providing personalized support. By documenting student progress and facilitating self-advocacy, I empower students to navigate their academic path with confidence and autonomy.

My approach to academic advising can be summarized as collaborative, courteous, proactive, and based around the needs and goals of the student. I adopt a growth mindset perspective while evaluating students, motivating them to excel in the face of obstacles by leveraging their distinctive strengths as a foundation for cultivating new capabilities, proficiencies, and aptitudes. My focus in my work is on the students' experience. I want to establish connections and environments that prioritize respect,

trust, empathy, and inclusiveness for all individuals involved. I believe it takes the entire university community to fully support students as they achieve their educational objectives.

Participating in continuous advisor development programs enables me to consistently improve and strengthen my advising practice. My unwavering commitment to ensuring the achievement of students and ongoing enhancement is essential in molding the future of our student community at KFUPM.

Finally, my dedication to student success has been recognized through the receipt of **two Best Academic Advising Awards in 2020-2021 and 2024-2025** from the Faculty of Engineering at KFUPM, underscoring the impact of my advising efforts on the academic journey of students.

Students' **Advising** at KFUPM (at Current Rank) Undergraduate (**UG**) / Graduate (**G**)				
Academic Year (Semester)		**Number of Students**		**Total Number**
		UG	**G**	
2024-25	**(25-1)**	0	33	33
2024-25	**(24-2)**	0	34	34
2024-25	**(24-1)**	0	33	33
2023-24	**(23-3)**	13	0	13
2023-24	**(23-2)**	18	23	41
2023-24	**(23-1)**	18	27	45
2022-23	**(22-3)**	06	0	06
2022-23	**(22-2)**	21	1	22
2022-23	**(22-1)**	17	2	19
2021-22	**(21-3)**	15	0	15
2021-22	**(21-2)**	19	3	22
2021-22	**(21-1)**	20	2	22
2020-21	**(20-3)**	5	0	05
2020-21	**(20-2)**	19	3	22
2020-21	**(20-1)**	18	3	21

2.6 Short Courses

List of Short Courses Coordination / Instruction / Participation Coordinator (**CO**), Instructor (**IN**), Guest Speaker (**GS**)					
	Academic Year (Semester)		**Short Course Title**	**Organizer**	**Role**
1.	2023-24	**(24-1)**	Fundamentals of Solar Energy Utilization	Renewable Energy Incubator under	**IN**

List of Short Courses Coordination / Instruction / Participation Coordinator (CO), Instructor (IN), Guest Speaker (GS)					
	Academic Year (Semester)		Short Course Title	Organizer	Role
				NIDLP and IRC-SES	
2.	2023-24	**(23-1)**	Smart Grids and Renewables	Renewable Energy Incubator under NIDLP and IRC-SES	**IN**

2.7 Lab Development (if any)

Lab Development Activities	
1.	I proposed and contributed significantly to the inception of the **"Smart Electrified Transportation Solutions (SETS) Laboratory for Advancing Electric Vehicles and Renewable Energy Technologies in Saudi Arabia.** This pioneering initiative is poised to revolutionize the landscape of research and development in electric vehicle (EV) technologies and renewable energy systems by transforming the existing Power Systems Laboratory into the cutting-edge SETS Laboratory within the esteemed Electrical Engineering Department at KFUPM. The transition to the SETS Laboratory signifies a dedicated focus on advancing EV technologies and renewable energy systems, aligning perfectly with our commitment to innovation and sustainability. At the core of our mission lies the aspiration to establish a state-of-the-art facility that serves as the nucleus for research endeavors aimed at enhancing crucial components of EVs and renewable energy systems, notably batteries and motors. Through strategic collaboration and pioneering research, our primary objective is to fortify Saudi Arabia's research, development, and innovation (**RDI**) ecosystem, positioning the nation at the forefront of technological advancements in the field. Recently securing a substantial funding of **1.5M Saudi Riyals** from the **Research Development and Innovation Authority (RDIA)** underscores the recognition and support garnered by the SETS Laboratory, reaffirming our collective commitment to driving transformative change and fostering sustainable solutions for the future.
2.	As a Co-Investigator, I played a pivotal role in the initiation of the **Saudi National Battery Assessment Laboratory (SNABL)** project, designed to be a pioneering national-level facility hosted within KFUPM's esteemed Research Institute. Central to my contributions was the comprehensive analysis and justification of the project's feasibility. Leveraging my expertise, I spearheaded the preparation of a meticulous proposal aimed at securing full funding from King Abdullah City for Atomic and Renewable Energy (K•A•CARE), outlining essential infrastructure requirements and operational frameworks. Furthermore, my proactive efforts led to the initiation of a potential collaboration with K•A•CARE, underscoring the project's strategic partnerships and potential for impactful synergy. Through strategic planning and diligent execution, my involvement has been pivotal in laying the groundwork for SNABL, poised to revolutionize battery assessment on a national scale.
3.	In my capacity as Chairman of a departmental ad-hoc committee, I have led efforts to develop an **Advanced Control Systems Laboratory (ACSL)** within the Control Systems Research Group of the Electrical Engineering department. Simultaneously, as the coordinator for the Control Systems Research Group, I have diligently overseen the process to ensure its seamless

	execution. The primary objective behind this lab development initiative is to optimize the utilization of state-of-the-art equipment and devices already available within the department while augmenting the capabilities of the control systems research group. By facilitating the involvement of interested faculty members and graduate students pursuing both M.Sc. and Ph.D. degrees, we aim to maximize the benefits derived from this enhanced research infrastructure, fostering a collaborative environment conducive to cutting-edge research and innovation.
4.	In my role as the Coordinator of the EE Control Systems Group, I spearheaded a collaborative effort among faculty members to establish and revitalize a **Digital Control Laboratory**. This specialized facility was meticulously designed to complement the EE432 course within the Electrical Engineering curriculum. Since its inception in term 211, the lab, now identified by the distinct code EE476, has been fully operational, serving as a dedicated space for hands-on learning and practical applications in the field of digital control.
5.	As the Coordinator of the EE Control Systems Group, I have also been dedicated to continually enhancing the **Process Control Laboratory**, implementing various improvements such as expanding lab setups, arranging comprehensive training sessions, enhancing lab manuals. This lab serves as a vital component of process control education, complementing the essential EE433 course. Identified by the new code EE477, it has been fully operational, facilitating hands-on learning experiences and practical application in the realm of process control.
6.	As a committee member, I actively participated in the proposal and development stages of the **Electrical Engineering Principles and Applications Laboratory**. This innovative facility caters not only to the needs of electrical engineering students but also serves interdisciplinary fields, extending its resources to other departments within the university. My involvement in this initiative underscores a commitment to fostering collaborative learning environments and enhancing educational opportunities across various disciplines. Operating under the EE235 code, this lab stands as a testament to our commitment to innovation and cross-disciplinary engagement in academia.
7.	As an instructor, I have consistently dedicated myself to enhancing the **Electromechanical Devices Laboratory**. My efforts have included promptly reporting equipment malfunctions, suggesting upgrades, overseeing equipment calibrations, and revising manuals for optimal clarity. Notably, during the COVID-19 pandemic, I made significant contributions through the creation of instructional videos and visual demonstrations. These resources have proven invaluable for fellow instructors, facilitating the delivery of lab material with enhanced effectiveness. Operating under the EE306 code, this lab is committed to serving the needs of Mechanical Engineering students with unwavering dedication.
8.	Similarly, I have consistently dedicated myself to enhancing the **Electric Energy Engineering Laboratory** tailored for Electrical Engineering students. My efforts have encompassed promptly reporting equipment malfunctions, suggesting upgrades, overseeing equipment calibrations, and revising manuals for optimal clarity. Notably, during the COVID-19 pandemic, I made significant contributions through the creation of instructional videos and visual demonstrations. Operating under the EE360 code, this lab remains steadfast in its commitment to serving the specific needs of Electrical Engineering students.

3. Master and Doctoral Students' Supervision

Throughout my tenure in the Electrical Engineering Department, I have had the privilege of supervising or co-supervising numerous Master's and Doctoral Theses. Additionally, I have served as a valuable member of several thesis committees within the same department. This experience has been incredibly enriching and rewarding for me as well as the students involved. Whether overseeing a thesis project or contributing as a committee member, I have been deeply engaged in guiding students through the research and thesis writing process. Some of the thesis titles and my level of involvement include:

3.1 Master Theses Supervision /Advising

List of Master Theses Thesis Supervisor (SS), Thesis Co-Advisor (CA), Committee Member (CM)				
No.	**Thesis Title**	**Student's Name**	**Role**	**Years**
1.	Microgrid Reliability Modeling and Optimal Planning of Battery Energy Storage Systems	Mohammed Atta Abdulgalil	**SS**	**2017 – 2018**
2.	Forecasting Models for Renewable Power Dispatch in Microgrids	Adil Ahmed	**SS**	**2016 – 2017**
3.	Joint Capacity Optimization of Renewable Generation and Hybrid Energy Storage for Micro-Grids	Umer Akram	**SS**	**2016 – 2017**
4.	Optimal Unit Commitment Case Study Using Differential Evolution Technique	Hussain Ali Alharthi	**SS**	**2016 – 2017**
5.	Vehicle-to-Grid Model in Microgrid Applications	Salem Alshahrani	**SS**	**2016 – 2018**
6.	Advanced Filtering Strategies for Solar Power Smoothing Supported by Battery Energy Storage System	Ammar Atif Abdalla	**SS**	**2017 – 2019**
7.	Design and Development of Frequency Regulation Scheme for MicroGrids	Ali Ahmed Al-Shehri	**SS**	**2016 – 2018**
8.	Optimal Sizing and Operation Methodologies for Renewable Power Integration	Umar T. Salman	**SS**	**2017 – 2019**
9.	Power Quality Improvement Based on Hybrid Differential Evolution Optimization and Artificial Neural Networks Using Battery Energy Storage	Jaber Alshehri	**SS**	**2017 – 2019**
10.	Hybrid Battery-Supercapacitor Energy Storage for Renewable Power Integration	Khalid Abdullah Khan	**SS**	**2018 – 2020**
11.	Impact of Static VAR Compensator and Load Shedding on Power Quality in Microgrids	Luay Elkhidir	**SS**	**2017 – 2019**
12.	Minimization of Power Losses Using Multi-Objective Optimization Techniques	Yousef Al-Humaid	**SS**	**2017 – 2019**
13.	Accurate Detection and Correction of Technical and Non-Technical Losses Using Smart Metering	Abdullah L. Shah	**CM**	**2016 – 2018**
14.	A Hybridized SMES / BESS Optimal Storage System	Ibrahim M. Alotaibi	**CM**	**2016 – 2017**
15.	Adaptive, Communication-Free Charge Controller of Electric Vehicles Under Distribution Network Constraints	Saifullah Shafiq	**CM**	**2016 – 2017**
16.	Wide-Area Control for Low Frequency Oscillations in Multi- Machine Power Systems	Ahmed H. Mohammed	**CM**	**2016 – 2018**
17.	Design and Real-Time Implementation of an Adaptive Microgrid Protection Strategy	Muiz M. Zaben	**CM**	**2016 – 2018**
18.	Integrated Energy Management System for Microgrids with Renewable Generation, Energy Storage and Controllable Loads	Ahmed Saleh Alahmed	**CM**	**2017 – 2019**
19.	An Intelligent Energy Management System for Microgrids	Shehab E. Al-Sakkaf	**CM**	**2016 – 2018**
20.	Reliability Assessment of Residential Distribution Power System Considering Cold Load Pickup Events	Abdullah A. Alnujaimi	**CM**	**2016 – 2018**

List of Master Theses Thesis Supervisor (SS), Thesis Co-Advisor (CA), Committee Member (CM)				
No.	**Thesis Title**	**Student's Name**	**Role**	**Years**
21.	Power System Stabilizer for Multimachine Power Systems Based on Fuzzy Logic Control and Artificial Bee Colony Algorithm	Abdullah M. Baraean	**CM**	**2016 – 2018**
22.	Iterative and Robust Control Schemes for Induction Motor Drives	Muhammad M. Shirazi	**CM**	**2016 – 2017**
23.	Combined Vector and Direct Power Control- Doubly Fed Induction Generator (DFIG)-Based Using Conventional and Adaptive PID Controller	Ali A. Balfas	**CM**	**2017 – 2019**
24.	Optimal Placement of Capacitors Considering Transient Switching Events and Reliability Constraints	Abdulaziz A. Almuhanna	**CM**	**2017 – 2019**
25.	Control of Induction Motors Subject to Hard-Input Nonlinearities	Hassan M. Al-Abudib	**CM**	**2016 – 2017**
26.	Sensorless Control of Line-Start Permanent Magnet Synchronous Machine	Abubakr Hassan Elsayed	**CM**	**2017 – 2019**
27.	MIMO Hammerstein Model Identification based on PSOGSA	Amro F. Abdoun	**CM**	**2016 – 2018**
28.	Voltage Sensitivities-Based Demand response in distribution systems	Bilal Khan	**CM**	**2017 – 2019**
29.	Optimal Bidding & Dispatching of Electric Vehicles Performing Vehicle-to- Grid Ancillary Services Considering Communication Constraints	Mohamed M. Omer	**CM**	**2017 – 2019**
30.	Cybersecurity Systems in Smart Grids Paradigm	Affan Abbasi	**SS**	**2023-2024**
31.	Optimal Sizing and Location of Battery Energy Storage in Distribution Networks	Ali Maher Mohammed	**SS**	**2023-2024**
32.	Novel Approach for Wind Turbine Robust Speed Control Using SMC with Disturbance Observer	Abdulrahman Qaswarah Abuaskar	**SS**	**2022-2024**
33.	Optimal Utilization of Battery Energy Storage System for Power Losses Minimization in an Active Distribution Network	Hassan Ibrahim Alhammad	**CM**	**2023-2024**
34.	Performance Assessment of Solar PV Based Dynamic Façade for Commercial Buildings in Saudi Arabia	Rayyan Sharieff	**CM**	**2023-2024**
35.	A Machine Learning Approach for Short-Term Load Forecasting in Smart Grids	Abdullah Yusuf Alhussain	**CM**	**2022-2023**
36.	PV Hosting Capacity	Khaled Mohammed Zahi Alharbi	**CM**	**2022-2023**
37.	Operation and Real-time Control of Microgrids	Saad Ahmad	**CM**	**2022-2023**
38.	Stability and Control for Grid Connected Renewable Power Systems	Alhassan Ali Alsharif	**CM**	**2021-2022**
39.	Communication Assisted Protection Scheme based on Artificial Neural Networks for Multi-Microgrids, Communication Assisted Protection Scheme based on Artificial Neural Networks for Multi-Microgrids	Ali Fuhaid Alqusayer	**CM**	**2022-2023**

List of Master Theses Thesis Supervisor (SS), Thesis Co-Advisor (CA), Committee Member (CM)				
No.	**Thesis Title**	**Student's Name**	**Role**	**Years**
40.	A New Breaker-less protection strategy for Intelligent Dual-Active-Bridge Converter Based DC Microgrids	Hamed Mohammed Bin Qadhi	**CM**	**2021-2022**
41.	Data-Driven Distributed Generation Day-Ahead Scheduling with Battery Energy Storage System	Abdul Rauf	**CM**	**2021-2022**
42.	Microgrid Energy Management using Deep Reinforcement Learning	Mohammed Hussain Alabdullah	**CM**	**2021-2023**
43.	Robust Energy Management System for Duck Curve Handling	Sulaiman Sulaiman Ahmad	**CM**	**2020-2021**
44.	Performance Assessment of Solar PV Based Dynamic Façade for Commercial Buildings in Saudi Arabia	Rayyan Sharieff	**CM**	**2022-2024**
45.	Operation and Real-time Control of Microgrids	Saad Ahmad	**CM**	**2022-2023**
46.	Accurate PV Parameter Estimation Under Varied Conditions: A Comparative Study of HOA and EHO Algorithms	Ali Maher Mohammed	**SS**	**2023-2025**
47.	Virtual Inertia Control for Grid-Firming Inverters	Jenna Ibraheem A Almofeez	**SS**	**2023-2025**
50.	Neural Network-Based Real-Time Load Frequency Control for Modern Power Systems	Affan Abbasi	**SS**	**2024-2026**

3.2 Ph.D. Dissertation Supervision /Advising

List of Doctoral Dissertations Dissertation Supervisor (DS), Committee Member (CM)				
No.	**Thesis Title**	**Student's Name**	**Role**	**Year**
1.	Design and Implementation of Grid Firming Inverters	Salem Alshahrani	**Co-DS**	**2021-2024**
2.	Frequency Domain Transient Modeling of Multiconductor Transmission Lines Based on Analytical Impedance Equation	Hosam Salem Alharbi	**Co-DS**	**2019-2022**
3.	Reactive Power Compensation in Low Inertia Power Systems	Khalid Abdullah Khan	**DS**	**2022-2025**
4.	Solid State Transformer Design and Implementation	Amir Bin Saheg	**Co-DS**	**2023-2026**
5.	Switching Controller for Hybrid Battery-Supercapacitor Energy Storage System	Ali Al-Shehri	**DS**	**2024-2027**
6.	Artificial Intelligence-Based Secure Formation Maneuver Control of Multi-agent Cyber-Physical Systems with Guaranteed Performance	Muhammad Danlami Ma'Aruf	**CM**	**2020-2023**
7.	Virtual Power Plant Operation Optimization	Hussein Adel Abdellatif	**CM**	**2021-2022**

List of Doctoral Dissertations Dissertation Supervisor (DS), Committee Member (CM)				
No.	**Thesis Title**	**Student's Name**	**Role**	**Year**
8.	Robust Operation and Control of Power Systems Considering High Penetration of Renewable Energy	Ibrahim Mohammad Alotaibi	**Co-DS**	**2021-2023**
9.	Analysis and Optimal Design of Outer Rotor Motor for Electric Vehicle	Abdulaziz Saleh Milhem	**Co-DS**	**2022-2025**
10.	Power Transformer Design Optimization Using Multi-Objective Evolutionary Algorithms	Ayyoub Wael Al Hourani	**CM**	**2021-2023**
11.	An Effective Techniques for Optimal Design of Microgrids with Renewable Energy Sources and Energy Storage Systems: A Case Study in Saudi Arabia	Ahmed Safy Menesy	**CM**	**2022-2025**
12.	A Deep-Learning-Based Fault Diagnosis Method of AC Microgrid	Muiz Muhyeddin Zaben	**CM**	**2022-2023**
13.	Techno-Economic Assessment of a Multi-Bus Energy Hub for Shaping Policy Development in Power System Decarbonization and Climate Change Mitigation	Sulaiman Sulaiman Ahmad	**CM**	**2023-2026**
14.	Data-Driven Linear Distribution System State Estimation with Hybrid Measurements via Complex Linearization of Non-holomorphic Functions	Wasiu Olaoti Sulaimon	**CM**	**2022-2025**
15.	Reinforcement Deep-Learning Model for Protection Relays in Microgrids an Adaptive Setting Approach	Mohammed Taher Al-Saba	**CM**	**2022-2025**
16.	Deep Learning for Demand Side Management	Gharamllah Ahmed Al-Zahrani	**CM**	**2022-2025**
17.	Neural Network-based Adaptive Backstepping Terminal Sliding Mode Controller of DC Microgrids for Efficient Renewable Energy Integration	Abdullah Mohammed Ba Raean	**CM**	**2022-2024**
18.	Resilience Assessment and Enhancement of Cyber-Physical Power Systems	Hamed Bin Qadhi	**CM**	**2023-2026**
19.	A Jointly Planning model for Power and Water Systems	Adnan S. Al-Bukhaytan	**CM**	**2023-2026**
20.	Development of an Optimization Framework for Selecting and Tuning Smart Inverter Operation Modes for PV Systems in Distribution Micro-Grids	Ibrahim Abuobeida Abuelhassan Saeed	**CM**	**2023-2026**
21.	Forecast-Integrated Dynamic Economic Load Dispatch Using Hybrid Deep Learning and Enhanced Metaheuristic Optimization	Ali Ahmed Al Shehri	**DS**	**2024-2028**
22	Optimization and Control of Virtual Power Plants	Abubakar Abdulkarim	**DS**	**2024-2028**

3.3 Graduation Projects, Independent/Directed Research Supervision

Project Advisor (PA), Committee Member (CM)				
No.	**Project Title**	**Student's Name**	**Role**	**Year**
1.	Floating PV System with Hybrid Battery-Hydrogen Energy Storage (SEN600-Project)	Linah Alghulayqah & Ahmed Okasha	**PA**	**2024-2025**
2.	Development of Renewable Dispatch Algorithm Logic and Demand Side Management using V2G (EE600-Project)	Khalid Alghamdi	**PA**	**2023-2024**
3.	Comparative Technical Analysis of PV/Battery vs. PV/Hydrogen Standalone Systems (EE600-Project)	Yousuf Alhajry	**PA**	**2023-2024**
4.	Unlocking Hydroelectric Potential: Assessing the Viability of Retrofitting Existing Dams in Saudi Arabia for Hydro Storage Plants (EE619-Project)	Tawfiq Albeshri & Saud Albadeea	**PA**	**2023-2024**
5.	Renewable Power Quality Enhancement Using Hydrogen Storage (EE619-Project)	Kholud Munshi & Raghdan Bokhari	**PA**	**2023-2024**
6.	To Design and Develop a Solar Power System for a Mining Plant in Congo (SEN600-Project)	Faisal Alshehri & Sultan Alenazi	**PA**	**2023-2024**
7.	Design and Development of Rooftop Solar PV for a Residential House (EE619-Project)	Yousef AlYousef & Abdullah Shehab	**PA**	**2022-2023**
8.	Design of a Hybrid Renewable Solar-Wind System to Power a Desalination Plant (EE619-Project)	Mohammed Alawad & Abdulrahman Alwehaibi	**PA**	**2022-2023**
9.	Feasibility Study of replacing a 1 MW Steam Turbine with a Wind Turbine in an Industrial City (SEN600 - Project)	Fahd Alhamdan & Abdulrahman Albuainain	**PA**	**2022-2023**
10.	Comparative Technical Analysis of PV/Battery vs. PV/Hydrogen Standalone Systems (EE619-Project)	Sarah Albouf & Muneera Alsaadoun	**PA**	**2021-2022**
11.	Technical Evaluation & Economical Analysis of Modularizing Solar System to Power Onshore Wells in Saudi Arabia (SEN600 - Project)	Muhammad Al-Otaibi & Mohammed Aldossary	**PA**	**2021-2022**
12.	EE606 - Independent Research	Ammar Abdalla & Alhumaid Yousef	**PA**	**2020-2021**
13.	EE701- Directed Research-I	Salem Alshahrani	**PA**	**2019-2020**
14.	EE711- PhD Pre-Dissertation	Ayoub Alkhalifah	**PA**	**2021-2022**

4. RESEARCH

4.1 Research Interests / Specific Areas

4.1.A Research Interests:

- Renewable Energy
- Energy Storage
- Distributed Generations and Storage
- Hydrogen Systems
- Microgrids and Smart Grids
- Renewable Power Forecasting
- Smart Electrification Solutions
- Charging Infrastructure of Electric Vehicles
- Control and Optimization
- Advanced Control Systems
- Digitalization and Artificial Intelligence
- Power Converters
- Power Quality and Reliability
- Fault Tolerant Control
- Industrial Processes
- Net Zero Energy Buildings
- Energy Efficiency
- Power System Planning and Operation

4.1.B Specific Areas of Specialization

- Grid integration of renewables
- Energy storage modeling and control strategies
- Energy storage system design and optimization for industrial applications
- Optimal sizing and placement of distributed energy resources in microgrids
- Coordination strategies for multiple distributed energy storage systems in a network
- Hierarchical control architecture design for microgrids
- Demand response optimization in smart grid environments
- Machine learning techniques for short-term solar power forecasting
- Statistical modeling approaches for wind power forecasting
- Ensemble forecasting methods for improved accuracy in renewable power prediction
- Optimization of smart building energy management systems
- Metaheuristic optimization algorithms for energy system planning
- Multi-objective optimization techniques for simultaneous economic and environmental objectives
- Model Predictive Control (MPC) for renewable energy integration in microgrids
- Voltage stability analysis and enhancement techniques for improving power system reliability
- Grid-forming control strategies for voltage-source converters in renewable energy systems
- Nonlinear control techniques for improving the transient response of energy systems

- Fault-tolerant control strategies for grid-connected inverters in microgrid applications
- Control and optimization of hydrogen for power quality improvement
- Renewable power smooching and economic dispatch
- Switching controllers for hybrid energy storage systems

4.2 Research Projects (Sponsored/Funded, recent first) [at current rank]

Role: Principal Investigator (**PI**), Co-Investigator (**CI**), Project Consultant (**PC**) Status: (Completed, **CP**), (In progress, **IP**), (Accepted, **A**), Type: (Internal, **IN**), External, **EX**)						
No.	Project Title	Role	Status	Start	End	Type
1.	Design and Hardware Implementation of a Cost-Effective and Energy-Efficient Half-Bridge Resonant Bidirectional EV Charger, A One-year project by Interdisciplinary Research Center for Sustainable Energy Systems (IRC-SES), INSE2518, SR125,800	**PI**	**IP**	**02-25**	**12-25**	**IN**
2.	Embedded Hardware-Software Testing for Cyber-Secure Power Dispatch of Hybrid Energy Networks, A One-year project by Interdisciplinary Research Center for Sustainable Energy Systems (IRC-SES), INSE2505, SR100,050	**CI**	**IP**	**02-25**	**12-25**	**IN**
3.	Robust Load and Energy Management in Smart Grids with Prosumer-Integrated Distributed Energy Resources, A One-year project by Interdisciplinary Research Center for Smart Mobility and Logistics Center (IRC-SML), INML2502, SR61,342	**CI**	**IP**	**02-25**	**12-25**	**IN**
4.	A Backup System-based Resilient Distributed Energy Dispatch using Consensus Protocol and XGBoost under Multi-channel DoS Attacks (NCA Grant)	**PI**	**A**	**10-25**	**09-26**	**EX**
5.	**M. Khalid**, M. Abido, A. Ali, and A. Alzahrani, Smart Electrified Transportation Solutions (SETS) Laboratory for Advancing Electric Vehicles and Renewable Energy Technologies in Saudi Arabia, A Three-year project by The Research, Development and Innovation Authority (**RDIA**), Project # 12912, SR1.5 Million, 2025-2028	**PI**	**IP**	**04-24**	**03-27**	**EX**
6.	M. Worku, M. Hassan, M. Abido, **M. Khalid**, and Md Hussain, Microgrid Prototype Building and Development, A One-year project by National Industrial Development and Logistics Program (**NIDLP**), Renewable Energy Technical Incubator (**RETI**), **Proof-of-Concept (PoC)**, CREP2522, SR300,000	**CI**	**IP**	**04-22**	**03-24**	**EX**
7.	**M. Khalid**, *et al.*, Solid-State Transformer Prototype Development for Smart Grid Applications, A One-year project by National	**PI**	**CP**	**04-23**	**03-24**	**EX**

Role: Principal Investigator (**PI**), Co-Investigator (**CI**), Project Consultant (**PC**) Status: (Completed, **CP**), (In progress, **IP**), (Accepted, **A**), Type: (Internal, **IN**), External, **EX**)						
No.	Project Title	Role	Status	Start	End	Type
	Industrial Development and Logistics Program (**NIDLP**), Renewable Energy Technical Incubator (**RETI**), **Proof-of-Concept (PoC)**, CREP2522, SR300,000					
8.	**M. Khalid** and S. Miswar, Power Firming Filter for Solar PV System Coupled with Battery Storage System, A Four-year project by Ministry of Energy (**MoE**), Renewable Energy Projects, Product Development Initiative, ~SR2.2 Million (estimated)	**PI**	**IP**	**12-23**	**11-27**	**EX**
9.	M. Ahmed and **M. Khalid**, Enhanced Power Harvesting in Wind Turbines through Robust Sliding Mode Control by using Twisting Control-Based Observer with Deep Learning Adaptation, A Half-year project by **NIDLP**, RETI, CREP 2522-UG-P, SR20,000	**PC**	**IP**	**01-24**	**06-24**	**EX**
10.	M. Muqaibl and **M. Khalid**, Model Predictive Control for Renewable Energy Smoothening and Energy Reliability Improvement Through Energy Storage, A Half-year project by **NIDLP**, RETI, CREP 2522-UG-P, SR20,000	**PC**	**IP**	**01-24**	**06-24**	**EX**
11.	**M. Khalid**, M. Abido, and A. Ali, Improving the Efficacy and Performance of Electric Vehicles using Robust Charging/Discharging, A One-year project by Interdisciplinary Research Center for Sustainable Energy Systems (**IRC-SES**), INSE2415, SR127,525	**PI**	**IP**	**02-24**	**12-24**	**IN**
12.	M. W. Khan, G. Ali, **M. Khalid**, and A. Ali, Renewable-based Grid Resiliency Improvement Through Time-of-Use Pricing for Peak Hour Energy Demands, A One-year project by **IRC-SES**, INSE2418, SR35,650	**CI**	**IP**	**02-24**	**12-24**	**IN**
13.	A. Ali, A. Atif, and **M. Khalid**, Analysis of Battery Waste Recycling & Management Policies and Guidelines: A Global Perspective and Straw Man Action Plan for Saudi Arabia Towards Sustainable Energy Future, A One-year project by **IRC-SES**, INSE2402, SR34,500	**CI**	**IP**	**02-24**	**12-24**	**IN**
14.	M. Gulzar and **M. Khalid**, Load Frequency Controller for Hybrid PV-Hydrogen Bromide Redox Flow Battery Storage Power System, A One-year project by **IRC-SES**, INSE2416, SR27,025	**CI**	**IP**	**02-24**	**12-24**	**IN**
15.	M. Abido, A. Alzahrani, and **M. Khalid**, Kotb Baldeem, and M Elkadeem, Design Optimization and Energy-Enviro-Socio-Economic Analysis of Hydrogen-Based Renewable Systems in Saudi	**CI**	**IP**	**02-24**	**02-25**	**IN**

Role: Principal Investigator (**PI**), Co-Investigator (**CI**), Project Consultant (**PC**) Status: (Completed, **CP**), (In progress, **IP**), (Accepted, **A**), Type: (Internal, **IN**), External, **EX**)						
No.	Project Title	Role	Status	Start	End	Type
	Arabia, A One-year project by **IRC-SES**, INSE2410, SR38,525					
16.	M. Abido, A. Salem, and **M. Khalid**, Grid-Forming Converters for Frequency Stabilization of Power Systems with High Penetration Level of Renewable Energy Sources, A One-and-a-half-year project by **IRC-SES**, INRE2102, SR140,000	**CI**	**CP**	**09-21**	**03-23**	**IN**
17.	M. Abido, A. Salem, **M. Khalid**, and Md Shafiullah, Advanced Wide Band Gap-based Drive System for Concentrated Solar Power Plant, A One-and-a-half-year project by **IRC-SES**, INRE2103, SR140,000	**CI**	**CP**	**09-21**	**03-23**	**IN**
18.	M. Abido, F. Al-Ismail, A. Salem, **M. Khalid**, and Md Alam, Adaptive and Robust Virtual Inertia Control for Efficient Power Management Scheme of DC Microgrids, A Two-year project from Deanship of Research (**DR**), DF201022, SR283,885	**CI**	**CP**	**04-21**	**04-23**	**IN**
19.	**M. Khalid**, M. Abido, S. Shaik, M. Al-Dhaifallah, and M. Gulzar, Mitigating the Impact of Renewable Stochasticity through Incorporation of Energy Storage and Smart Inverters, A One-and-a-half-year project by **IRC-SES**, INRE2321, SR42,425	**PI**	**CP**	**03-23**	**12-23**	**IN**
20.	M. Asif and **M. Khalid**, An Integrated Techno-Economic and Environmental Assessment of Retrofitting for Achieving Net Zero Carbon Targets for Buildings in Saudi Arabia, A One-year project by **IRC-SES**, INRE2319, SR22,425	**CI**	**CP**	**03-23**	**12-23**	**IN**
21.	S. Shaik, M. Abido, and **M. Khalid**, Cybersecurity Framework for Distributed Energy Resources in Smart Grids, A One-and-a-half-year project by **IRC-SES**, INRE2322, SR22,425	**CI**	**CP**	**03-23**	**06-24**	**IN**
22.	M. Gulzar and **M. Khalid**, Optimal Controller to Stabilize Grid Frequency under Uncertainties, A One-year project by **IRC-SES**, INRE2320, SR37,425	**CI**	**CP**	**03-23**	**12-23**	**IN**
23.	M. Abido, M. Shafiullah, **M. Khalid**, and M. Suhail, Reinforcement Learning Based Approach for Intelligent Microgrid Protection, A One-and-a-half-year project by **IRC-SES**, INRE2328, SR140,000	**CI**	**CP**	**03-23**	**09-24**	**IN**
24.	M. Gulzar and **M. Khalid**, Load Frequency Control for Hybrid Renewable Power System Using Fractional Model Predictive Controller, A One-year project by **DR**, EC221008, 2023-2024, SR96,530	**PC**	**CP**	**01-23**	**12-23**	**IN**

Role: Principal Investigator (**PI**), Co-Investigator (**CI**), Project Consultant (**PC**) Status: (Completed, **CP**), (In progress, **IP**), (Accepted, **A**), Type: (Internal, **IN**), External, **EX**)						
No.	Project Title	Role	Status	Start	End	Type
25.	F. Ismail, Md S. Alam, S. M. Rahman, and **M. Khalid**, Distributionally Robust Optimization for Power-to-Hydrogen and Carbon Capture System with High-Level Renewable, A Two-year project by **DR**, ER221005, SR99,935	**CI**	**CP**	**10-22**	**10-24**	**IN**
26.	**M. Khalid**, M. Abido, and A. Salem, Development of Robust Integrated Controller for Optimal Power Management in Renewable Microgrids, A One-and-a-half-year project by **IRC-SES**, INRE2106, SR139,500	**PI**	**CP**	**09-21**	**03-23**	**IN**
27.	**M. Khalid**, M. Abido, and A. Salem, Frequency Control and Inertia Support for Solar PV Plants Using Integrated Hybrid Energy Storage Systems, A Two-year project by **DR**, DF201011, SR207,816	**PI**	**CP**	**04-21**	**03-23**	**IN**
28.	**M. Khalid**, M. Abido, and M. Al-Muhaini, Development of an Intelligent Power Quality and Stability Framework for Large-Scale Integration of Renewable Energy Sources, A Two-year project by **DR**, DF191011, SR300,000	**PI**	**CP**	**04-20**	**03-22**	**IN**
29.	**M. Khalid**, M. Abido, and A. Al-Awami, Design and Development of an Optimal Distributed Generation and Hybrid Storage System for Microgrids" A Two-year project by **DR**, RG171009, 273000	**PI**	**CP**	**04-18**	**03-20**	**IN**
30.	**M. Khalid**, M. Abido, and M. Al-Muhaini, Design and Control of Battery Energy Storage System for Microgrids, A Two-year project by **DR**, IN161038, SR295,000 **(Winner, Best Research Project Award, KFUPM)**	**PI**	**CP**	**04-17**	**03-19**	**IN**
31.	**M. Khalid**, Development and Control of Hybrid Battery-Supercapacitor Energy Storage System for Solar Power Applications, A One-year project by **DR**, SR161001, SR75,000	**PI** (Solo)	**CP**	**09-16**	**08-17**	**IN**
32.	S. Miswar and **M. Khalid**, Solar Power Dispatch Using Control and Optimization Technique, A One-year project by **DR**, USRG1902, SR50,000	**PC**	**CP**	**09-20**	**08-21**	**IN**
33.	M. Abido, A. Salem, and **M. Khalid**, Advanced Controller Design of Solar Energy Integrated Modular Multilevel Converter based VSC-HVDC System, A Two-and-a-half-year project by **DR**, DF191004, SR300,000	**CI**	**CP**	**04-20**	**10-22**	**IN**
34.	M. Abido, I. Elamin, and **M. Khalid**, and A. Al-Awami, Controller Design and Implementation of DFIG Wind Integrated VSC-HVDC System with Bridge Type Fault Current Limiters, A Two-and-a-half-year project by **DR**, RG171002, SR299,730	**CI**	**CP**	**04-18**	**10-20**	**IN**

Role: Principal Investigator (**PI**), Co-Investigator (**CI**), Project Consultant (**PC**) Status: (Completed, **CP**), (In progress, **IP**), (Accepted, **A**), Type: (Internal, **IN**), External, **EX**)						
No.	Project Title	Role	Status	Start	End	Type
35.	A. Al-Awami and **M. Khalid**, Integrating AGC to Generation Scheduling, A Three-year project by **DR,** RG171003, SR300,000	**CI**	**CP**	**04-17**	**03-20**	**IN**
36.	M. Al-Muhaini, M. Abido, and **M. Khalid**, Integrated Energy Management System for Microgrids with Renewable Generation, Storage and Controllable Load Resources, A Two-and-a-half-year project by **DR,** IN161043, SR271,360	**CI**	**CP**	**04-17**	**10-19**	**IN**
37.	**M. Khalid**, M. Abido, and M. Ali, Development of Smart Integrated Converter Control Platform for Solar PV Integration with Net Zero Energy Building Coupled with Battery Energy Storage System, A One-and-a-half-year project by **IRC-SES,** INRE2220, SR139,000	**PI**	**CP**	**04-22**	**8-23**	**IN**
38.	**M. Khalid**, and Huzaifa Rauf, Modelling Battery Degradation and Estimating Battery Lifetime Using Machine Learning, A Half-year project by **IRC-SES**, IVSP2207 (International Inbound Visiting Scholar Program)	**PI**	**CP**	**12-23**	**05-23**	**IN**
39.	**M. Khalid**, Machine Learning for Battery Energy Storage Degradation Modeling and Optimal Large-Scale grid Integration of renewables in Saudi Arabia, A One-year project by **JRC-SDAIA,** JRC-AI-RFP-08, SR180,000	**PI**	**CP**	**07-22**	**06-23**	**EX**
40.	S. Taiwo and **M. Khalid**, Capacity Optimization of Battery Energy Storage System, A One-year project by **K.A.CARE**, KACARE182-GSGP-14, SR65,00	**PC**	**CP**	**03-19**	**02-20**	**EX**
41.	**M. Khalid**, Smart Hybrid Energy Storage System for Solar Power Applications Under Critical Weather Conditions, A One-year project by **K.A.CARE**, KACARE182-RFP-08, SR116,800	**PC**	**CP**	**03-19**	**02-20**	**EX**
42.	**M. Khalid**, Practical Battery Degradation Modelling Considering Saudi Harsh Conditions to Enable Optimal Grid Integration of Renewables and Improve System Stability, A One-year project by **K.A.CARE**, SR120,000	**PC**	**CP**	**11-23**	**10-24**	**EX**

4.3 Publications

4.3.1 Refereed Journal Papers

4.3.1.A List of Referred Journal Papers **under the Current Rank** (recent first)
Indicate if **Extracted (Ex-PhD), (Ex-MSc)** (Technical Report, **Ex-TR**), (Conference Paper, **Ex-CP)**

J1.	Iqbal, N., Masood, M., & **Khalid, M**. (**2025**). Unsupervised deep seismic pursuit: Recovering the compressed seismic data without ground truth. IEEE Transactions on Instrumentation and Measurement, 74, 1–7. https://doi.org/10.1109/TIM.2025.3608320
J2.	Elkhidir, L. K., Ahmed, I., **Khalid, M.**, & Al-Ismail, F. S. (**2025**). Techno-economic optimization of multi-output energy hubs with integrated storage systems and electrolyzers. Journal of Energy Storage, 136, 118323. https://doi.org/10.1016/j.est.2025.118323
J3.	Wahid, N., Asif, M., Khan, M. I., & **Khalid, M.** (**2025**). A strategic analysis of geothermal energy for sustainable energy transition: Case study from Indonesia. Energy Conversion and Management: X, 101303. https://doi.org/10.1016/j.ecmx.2025.101303
J4.	Abdirahman, A. A., Asif, M., Cuce, E., Ahmed, I., Alqahtani, M., & **Khalid, M.** (**2025**). Optimizing PV systems in high-temperature environments: A SWOT-based analysis of cooling technologies. Energy Strategy Reviews, 61, 101828. https://doi.org/10.1016/j.esr.2025.101828
J5.	Ahmed, I., Hossain, M. A., & **Khalid*, M**. (**2025**). Assessment of smart district heating–cooling networks considering renewable and zero-carbon strategies. Renewable and Sustainable Energy Reviews, 224, 116037. https://doi.org/10.1016/j.rser.2025.116037
J6.	Hussain, M., Tahir, F., Rehan, M., Ahn, C. K., Ahmed, I., & **Khalid, M.** (**2025**). Fractional Proportionate Normalized Filtered Input Least Mean Square Algorithm for Active Noise Control Systems, accepted in Journal of Control, Automation and Electrical Systems. DOI will be available soon.
J7.	Zeb, K., Ramisha, Awan, Q., Hayat, R., Rasheed, A., Uddin, W., & Khalid, M. (2025). Deep Reinforcement Learning based Model Free Secondary Frequency Control of Widespread Islanded Microgrid with Stability Constraints. accepted in Arabian Journal for Science and Engineering, 6 Oct 2025. DOI will be available soon.
J8.	Bali, A., Maaruf, M., Singh, U. P., Fekih, A., Abubakar, A. N., & Khalid, M. (2025). Adaptive control of nonstrict-feedback cyber-physical systems with unmodeled dynamics and false data injection attacks. International Journal of Control, 1-17. https://doi.org/10.1080/00207179.2025.2571931
J9.	Hennache, A., Quamar, Md., Khan, K., Alqahtani, M., Ahmed, I., & **Khalid, M.** (**2025**). Control Strategies for Reverse Osmosis Desalination Powered by Photovoltaic Systems: A Comprehensive Review, accepted in Energy Strategy Reviews, 5 Oct 2025. DOI will be available soon.
J10.	Rauf, H., **Khalid, M.**, & Arshad, N. (**2025**). A review of processes and mechanisms driving structural and mechanical evolution in lithium-ion batteries. Sustainable Energy Technologies and Assessments, 82, 104545. https://doi.org/10.1016/j.seta.2025.104545

J11.	Sun, P., Pinthurat, W., Li, G., **Khalid, M.**, Town, G. E., & Konstantinou, G. (**2025**). Adaptive Droop Control in VSC-Based MT-MVDC Distribution Systems Considering ESS Participation. IEEE Transactions on Energy Conversion, 40(2), 761-772. https://doi.org/10.1109/TEC.2024.3456070
J12.	Zeb, K., Uddin, W., Al-Durra, A., Alqahtani, M., & **Khalid, M**. (**2025**). A technological review on emerging trends and future outlook of cutting-edge charger technologies for next-generation electric vehicles. Energy Conversion and Management: X, 101161. https://doi.org/10.1016/j.ecmx.2025.101161
J13.	Hussain, M., Tahir, F., Rehan, M., Ahn, C. K., Ahmed, I., & **Khalid, M.** (**2025**). Fully-Distributed Resilient Consensus of Multi-Agent Systems With State and Input Sector Nonlinearities Under Stochastic Denial-of-Service Attacks. IEEE Transactions on Automation Science and Engineering. https://doi.org/10.1109/TASE.2025.3597153
J14.	Ahmad, H., Gulzar, M. M., Ahmed, I., & **Khalid, M**. (**2025**). Adoption of modern digital innovations: a systematic review of social impacts in online community forums. Social Network Analysis and Mining, 15(1), Article 29. https://doi.org/10.1007/s13278-025-01450-x
J15.	Shahzad, M. I., Gulzar, M. M., Habib, S., Shafiullah, M., Shahzad, A., & **Khalid, M**. (**2025**). Advanced frequency stabilization framework for multi-area renewable energy grids with EV aggregator support: A multi-stage control perspective. Sustainable Computing: Informatics and Systems, 46, Article 101120. https://doi.org/10.1016/j.suscom.2025.101120
J16.	Sun, P., Wu, R., Shen, Z., Wang, H., Li, G., **Khalid, M**., & Konstantinou, G. (**2025**). Data-Driven Power Flow Estimation for MVDC Distribution Systems Based on Physics-Embedded FCN. IEEE Transactions on Smart Grid. https://doi.org/10.1109/TSG.2025.3555228
J17.	Mamoon, M., Mustafa, G., Iqbal, N., Rehan, M., Ahmed, I., & **Khalid*, M**. (**2025**). An adaptive neural network approach for resilient leader-following consensus control of multi-agent systems under cyber-attacks. ISA Transactions, 157, 20-34. https://doi.org/10.1016/j.isatra.2024.11.046
J18.	Khaliq, A., Rehan, M., Ahmed, I., Rashid, U., & **Khalid*, M**. (**2025**). A Novel Robust-Adaptive Control Methodology for Sign-Consensus of Multi-agent Systems Under Signed Graphs and External Disturbances. Arabian Journal for Science and Engineering, 50(8), 6141-6156. Article 111797. https://doi.org/10.1007/s13369-024-09826-5
J19.	Ahmad, M., Shafiullah, M., Worku, M. Y., Alam, M. S., & **Khalid, M**. (**2025**). An Overview of VSC-HVDC Systems and Challenges to Harvest Wind Energy Potential Considering South Asian Region as a Case Study. International Journal of Energy Research, 2025(1), Article 8644219. https://doi.org/10.1155/er/8644219
J20.	Zaid, M., Ali, M., Sarwar, A., **Khalid, M**., & Iqbal, A. (**2025**). A reduced switch stress common-ground boosting multilevel inverter for renewable energy applications. e-Prime - Advances in Electrical Engineering, Electronics and Energy, 12, Article 100953. https://doi.org/10.1016/j.prime.2025.100953
J21.	Ali, H., Khan, H. A., **Khalid, M**., & Pecht, M. (**2025**). A review and analysis of the safety labeling of lithium-ion batteries. Journal of Energy Storage, 120, Article 116461. https://doi.org/10.1016/j.est.2025.116461

J22.	Ahmed, I., Maaruf, M., Ali, A., AlMuhaini, M., & **Khalid*, M**. (**2025**). A review on challenges and future of green charging networks for zero emission electric transportation. Energy Conversion and Management: X, 25, Article 100867. https://doi.org/10.1016/j.ecmx.2024.100867
J23.	Alqahtani, M., Alhajri, S., Menesy, A. S., Maher Mohammed, A., Sultan, H. M., & **Khalid, M**. (**2025**). Comprewhensive techno-environmental evaluation of an isolated PV/wind/biomass hybrid microgrid employing various battery technologies: A comparative analysis. PLoS ONE, 20(2 February), Article e0317757. https://doi.org/10.1371/journal.pone.0317757
J24.	Ahmed, I., Rehan, M., & **Khalid, M**. (**2025**). Consensus-Oriented Distributed Protocol for a Resilient Optimal Power Delivery Over a Smart Grid Under Electric Vehicles Load and Stochastic Hybrid Cyber-Attacks. International Journal of Energy Research, 2025(1), Article 9914892. https://doi.org/10.1155/er/9914892
J25.	Faruque, M. O., Hossain, M. A., Alam, S. M. M., & **Khalid, M**. (**2025**). Constraint-aware wind power forecasting with an optimized hybrid machine learning model. Energy Conversion and Management: X, 27, Article 101026. https://doi.org/10.1016/j.ecmx.2025.101026
J26.	Gull, M. S., Ahmed, I., **Khalid, M**., & Arshad, N. (**2025**). Design and optimization of electric vehicle battery swapping stations with integrated storage for enhanced efficiency. Journal of Energy Storage, 129, Article 117211. https://doi.org/10.1016/j.est.2025.117211
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J28.	**Khalid*, M**., & Jasińska, E. (**2025**). Editorial: AI-based energy storage systems. Frontiers in Energy Research, 13, Article 1626556. https://doi.org/10.3389/fenrg.2025.1626556
J29.	Ahmed, I., Basit, A., Ahmad, M., AlMuhaini, M., & **Khalid*, M**. (**2025**). Electric Mobility Challenges and Approaches for Sustainable Green Power Synergy in Smart Cities. Arabian Journal for Science and Engineering, 50(8), 5323-5351. https://doi.org/10.1007/s13369-024-09838-1
J30.	Sultan, H. M., Zaki Diab, A. A., Menesy, A. S., Kassas, M., Alqahtani, **M., Khalid**, M., & Abdul-Ghaffar, H. I. (**2025**). Enhancing optimal power flow in power systems: A comparative analysis of recent metaheuristic optimization techniques. Energy Reports, 13, 3957-3999. https://doi.org/10.1016/j.egyr.2025.03.031
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J32.	Vishnuram, P., Dominic Savio, A., Bajaj, M., Ahmed, I., & **Khalid*, M**. (**2025**). Isolated Power DC-DC and AC-DC Converter Topologies for Light-Emitting Diode Applications: A Systematic Review. Arabian Journal for Science and Engineering, 50(8), 5377-5405. Article 216350. https://doi.org/10.1007/s13369-025-09974-2

J33.	Gulzar, M. M., Sibtain, D., Alqahtani, M., Alismail, F., & **Khalid, M**. (**2025**). Load frequency control progress: A comprehensive review on recent development and challenges of modern power systems. Energy Strategy Reviews, 57, Article 101604. https://doi.org/10.1016/j.esr.2024.101604
J34.	Feroze, F., Zeb, K., Uddin, W., Imran, **M., Khalid**, M., & Ullah, Z. (**2025**). Lyapunov-Based Novel Integral Backstepping and Integral Sliding Mode Controllers Design for Efficient Voltage Regulation of Resilient DC Microgrid. International Journal of Energy Research, 2025(1), Article 8849426. https://doi.org/10.1155/er/8849426
J35.	Ahmed, I., Rehan, M., Alqahtani, M., & **Khalid, M**. (**2025**). Microgrid modernization using exponential decentralized consensus-based energy assessment by considering renewable generation uncertainties and operational price analysis. Results in Engineering, 27, Article 105731. https://doi.org/10.1016/j.rineng.2025.105731
J36.	Babiker, A., Ahmad, S. S., Ahmed, I., **Khalid, M**., Abido, M. A., & Al-Ismail, F. S. (**2025**). Optimal Power Flow: A Review of State-of-the-Art Techniques and Future Perspectives. IEEE Access, 13, 60012-60039. https://doi.org/10.1109/ACCESS.2025.3556168
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J38.	Ali, M. Q., Rehan, M., Ahmed, I., & **Khalid, M**. (**2025**). Robust Distributed Formation of UAV Swarms with Collision Avoidance under Control Signal Nonlinearity and Unknown Input of Leader. Nonlinear Dynamics, Article 106997. https://doi.org/10.1007/s11071-025-11375-x
J39.	Qamar, N., Alqahtani, M., Rehan, M., Ahmed, I., & **Khalid*, M**. (**2025**). Stochastic optimization for minimizing operational costs in smart hybrid energy networks considering electric vehicle. PLoS ONE, 20(6 June), Article e0323491. https://doi.org/10.1371/journal.pone.0323491
J40.	M.S. Gull, **M. Khalid**, and N. Arshad, "Multi-objective Optimization of Battery Swapping Station to Power Up Mobile and Stationary Loads", Applied Energy, 374, p.124064, (**2024**). https://doi.org/10.1016/j.apenergy.2024.124064
J41.	M. M. Gulzar, D. Sibtain, and **M. Khalid**, Innovative Design for Enhancing Transient Stability with an ATFOPID Controller in Hybrid Power Systems", Journal of Energy Storage, 99, p.113364, (**2024**). https://doi.org/10.1016/j.est.2024.113364
J42.	K. Zeb, T. D.C. Busarello, W. Uddin, and **M. Khalid***, "An Improved Digital Multi-Resonant Controller for 3 Φ Grid-Tied and Standalone PV System Under Balanced and Unbalanced Conditions", Ain Shams Engineering Journal, p.103036, (**2024**). https://doi.org/10.1016/j.asej.2024.103036
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J45.	**M. Khalid***, "Energy 4.0: AI-enabled Digital Transformation for Sustainable Power Networks", Computers & Industrial Engineering, p. 110253 (**2024**). https://doi.org/10.1016/j.cie.2024.110253
J46.	M. Ali, F. Al-Ismail, M. M. Gulzar, and **M. Khalid***, "A Review on Harmonic Elimination and Mitigation Techniques in Power Converter Based Systems", Electric Power Systems Research, vol. 234, p. 110573 (**2024**). https://doi.org/10.1016/j.epsr.2024.110573
J47.	**M. Khalid***, "Passivity-based Nonlinear Control Approach for Efficient Energy Management in Fuel Cell Hybrid Electric Vehicles", IEEE Access, vol. 12, pp. 84169 - 84188 (**2024**). https://doi.org/10.1109/ACCESS.2024.3412888
J48.	E. Bushra, K. Zeb, I. Ahmad, and **M. Khalid**, "A Comprehensive Review on Recent Trends and Future Prospects of PWM Techniques for Harmonic Suppression in Renewable Energies based Power Converters", Results in Engineering, vol. 22, p. 102213 (**2024**). https://doi.org/10.1016/j.rineng.2024.102213
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J50.	R. Ghafoor, L. Guanghua, M. Gulzar, R. Irfan, M. Alqahtani, and **M. Khalid***, "Load Frequency Control of Multi-Area Power System Incorporated Renewable Energy Considering Electrical Vehicle Effect Using Modified Cascaded Controller Tuned by BESSO Algorithm", Heliyon, vol. 10, p. 31840 (2024). https://doi.org/10.1016/j.heliyon.2024.e31840
J51.	**M. Khalid***, "Adaptive Neuro-Fuzzy Inference System-based Data-Driven Model for Optimal Recharging of Electric Vehicles and Cost Prediction in Energy", Arabian Journal for Science and Engineering, pp. 1-17 (**2024**). https://doi.org/10.1007/s13369-024-09050-1
J52.	M. Asif, G. Naeem, and **M. Khalid**, "Digitalization for Sustainable Buildings: Technologies, Applications, Potential, and Challenges", Journal of Cleaner Production, vol. 450, p. 141814 (**2024**). https://doi.org/10.1016/j.jclepro.2024.141814
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J54.	M. A. Syed, O. Siddiqui, M. Kazerani, and **M. Khalid**, "Analysis and Modeling of Direct Ammonia Fuel Cells for Solar and Wind Power Leveling in Smart Grid Applications", IEEE Access, vol. 12, pp. 46512-46523 (**2024**). https://doi.org/10.1109/ACCESS.2024.3376513
J55.	H. Mansoor, M. S. Gull, H. Rauf, I. H. Shaikh**, M. Khalid** and N. Arshad, "Graph Convolutional Networks based Short-Term Load Forecasting: Leveraging Spatial Information for Improved Accuracy", Electric Power Systems Research, vol. 11, pp.1-12 (**2024**). https://doi.org/10.1016/j.epsr.2024.110263

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J59.	Ch. S. V. P. Rao, A. Pandian, Ch. R. Reddy, M. M. Gulzar, and **M. Khalid***, "A Novel Hybrid RERNN-SCSO Technique-based Unified Power Quality Conditioner of Microgrid in an EV Charging Station", Arabian Journal for Science and Engineering, vol. 49, pp. 7277-7306 (**2024**). https://doi.org/10.1007/s13369-024-08765-5
J60.	F. Mustafa, I. Ahmed, A. Basit, M. Alqahtani, and **M. Khalid***, "An Adaptive Metaheuristic Optimization Approach for Tennessee Eastman Process for an Industrial Fault Tolerant Control System", PLoS One, vol. 19 (2): p. e0296471 (**2024**). https://doi.org/10.1371/journal.pone.0296471
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4.3.1.B List of Referred Journal Papers **before the attainment** of the **Current Rank** (recent first)

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J159.	U. Akram, **M. Khalid**, and S. Shafiq, "An Innovative Hybrid Wind-Solar and Battery-Supercapacitor Microgrid System-Development and Optimization", IEEE Access, vol. 5, pp. 25897-25912 (**2017**). https://doi.org/10.1109/ACCESS.2017.2767618
J160.	Savkin, A. V., **M. Khalid**, and Agelidis, V. G. (2016). A Constrained Monotonic Charging/Discharging Strategy for Optimal Capacity of Battery Energy Storage Supporting Wind Farms. IEEE Transactions on Sustainable Energy, *7*(3), 1224-1231. Article 7437467. https://doi.org/10.1109/TSTE.2016.2528222
J161.	**M. Khalid**, Ahmadi, A., Savkin, A. V., & Agelidis, V. G. (2016). Minimizing the energy cost for microgrids integrated with renewable energy resources and conventional generation using controlled battery energy storage. Renewable Energy, *97*, 646-655.

	https://doi.org/10.1016/j.renene.2016.05.042
J162.	**M. Khalid*** and A. V. Savkin, "Minimization and Control of Battery Energy Storage for Wind Power Smoothing: Aggregated, Distributed and Semi-Distributed Storage", Renewable Energy, vol. 64, pp. 105-112 (**2014**). https://doi.org/10.1016/j.renene.2013.09.043
J163.	**M. Khalid*** and A. V. Savkin, "Closure to Discussion on "A Method for Short-Term Wind Power Prediction with Multiple Observation Points", IEEE Transactions on Power Systems, vol. 28 (2), pp. 1898-1899 (**2013**). https://doi.org/10.1109/TPWRS.2013.2255351
J164.	A. Khatamianfar, **M. Khalid,** A. V. Savkin, and V. G. Agelidis, "Improving Wind Power Dispatch in the Australian Electricity Market with Battery Energy Storage Using Model Predictive Control", IEEE Transactions on Sustainable Energy, vol. 4, no. 3, pp. 745-755 (**2013**). https://ieeexplore.ieee.org/document/6478862
J165.	**M. Khalid*** and A. V. Savkin, "A Method for Short-Term Wind Power Prediction with Multiple Observation Points", IEEE Transactions on Power Systems, vol. 27(2), pp. 579-586 (**2012**). **(Ex-PhD).** https://doi.org/10.1109/TPWRS.2011.2160295
J166.	**M. Khalid*** and A. V. Savkin, "An Optimal Operation of Wind Energy Storage System for Frequency Control Based on Model Predictive Control", Renewable Energy, vol. 48, pp. 127-132 (**2012**). **(Ex-PhD).** https://doi.org/10.1016/j.renene.2012.03.038
J167.	**M. Khalid*** and A. V. Savkin, "A Model Predictive Control Approach to the Problem of Wind Power Smoothing with Controlled Battery Storage", Renewable Energy, vol. 35, pp. 1520–1526 (**2010**). **(Ex-PhD).** https://doi.org/10.1016/j.renene.2009.11.030

4.3.2 Refereed Conference Papers

4.3.2.A List of Referred Conferences Papers **under the Current Rank** (recent first)

C1.	Ahmed, I., Rehan, M., & **Khalid, M.** (**2025**, July). A Novel Distributed Averaging Approach for Estimating Economic Dispatch in Directed Balanced Power Networks. In **2025** IEEE 15th International Conference on Power Electronics and Drive Systems (PEDS) (pp. 1-5). IEEE. https://doi.org/10.1109/PEDS63958.2025.11144824
C2.	Binyamin, M., Tufail, M., Ahmed, I., Rehan, M., & **Khalid, M.** (**2025**, July). Energy-Efficient Robust Event-Triggered State Estimation for Nonlinear Systems. In 2025 IEEE 15th International Conference on Power Electronics and Drive Systems (PEDS) (pp. 1-5). IEEE. https://doi.org/10.1109/PEDS63958.2025.11144836
C3.	Basit, A., Hamanah, W. M., Ahmed, I., & **Khalid, M.** (**2025**, July). Hybrid Fault Identification Analysis for an Industrial Control Process. In 2025 IEEE 15th International Conference on Power Electronics and Drive Systems (PEDS) (pp. 1-5). IEEE. https://doi.org/10.1109/PEDS63958.2025.11144893
C4.	Noor, F., Zeb, K., Uddin, W., & **Khalid, M.** (**2025**, Sep). Adaptive Barrier Function Sliding Mode Controller Design for Energy Storage System of Fuel Cell Hybrid Electric Vehicle. In 2025 IEEE 15th International Conference on Smart Grid Communications, Control, and Computing Technologies (SmartGridComm 2025). IEEE. *(In press)*
C5.	Furqan, M., Uddin, W., Zeb, K., Ayaz, M. A., Khan, I., & **Khalid, M**. (**2025**). Robust Charging Solutions for 400V EV Batteries: Implementing a Quasi Single-Stage Current-Fed Resonant Converter. In 2025 IEEE Texas Power and Energy Conference, TPEC 2025 (2025 IEEE Texas

	Power and Energy Conference, TPEC 2025). Institute of Electrical and Electronics Engineers Inc.. https://doi.org/10.1109/TPEC63981.2025.10907216
C6.	Zeb, K., & **Khalid, M**. (**2024**, November). Design of Adaptive-SMC based Multifunctional Inverter under Smart Grid Initiative for Grid Tied PV System. In 2024 IEEE 34th Australasian Universities Power Engineering Conference (AUPEC) (pp. 1-6). IEEE. https://doi.org/10.1109/AUPEC62273.2024.10807635
C7.	Ahmed, I., Basit, A., Zeb, K., Rehan, M., & **Khalid, M**. (**2024**, November). An attack-resilient and center-free energy dispatch framework for power generation considering renewable sources. In 2024 IEEE 34th Australasian Universities Power Engineering Conference (AUPEC) (pp. 1-6). IEEE. https://doi.org/10.1109/AUPEC62273.2024.10807612
C8.	Baraean, A., Al-Sakkaf, S., Kassas, M., & **Khalid, M**. (**2024**, November). Unlocking the Renewable Energy Potential: A Comprehensive Study of Saudi Arabia's Eastern Region. In IECON 2024-50th Annual Conference of the IEEE Industrial Electronics Society (pp. 1-6). IEEE. https://doi.org/10.1109/IECON55916.2024.10905324
C9.	P. Sun, R. Wu, H. Wang, Z. Shen, G. Li, **M. Khalid**, and G. Konstantinou, "DC Voltage Prediction based on CNN with Physics Information Embedding for MVDC Distribution Systems", in the 2024 IEEE 10th International Power Electronics and Motion Control Conference (IPEMC2024-ECCE Asia), IEEE, Chengdu, China, 17-20 May, (**2024**). https://doi.org/10.1109/IPEMC-ECCEAsia60879.2024.10567577
C10.	A. Ali, A. AlZahrani, M. W. Khan, H. S. Sahaf, **M. Khalid**, and A. Islam, "Recycling and Material Extraction from End-of-Life Photovoltaic Modules Waste: Exploring Physical Recovery Techniques", in the 2024 IEEE 1st Karachi Section Humanitarian Technology Conference (KHI-HTC), IEEE, Tandojam, Pakistan, 08-09 Jan, (**2024**). 10.1109/KHI-HTC60760.2024.10482243
C11.	M. A. M. Eltoum, A. Jacknoon, K. A. Khan, and **M. Khalid**, "Robust Control and Unified Operation of Integrated Fuel Cell Electric Vehicle and Supercapacitor", in the 25th IEEE International Conference on Industrial Technology (ICIT), IEEE, Bristol, UK, 25-27 March, (**2024**). 10.1109/ICIT58233.2024.10540686
C12.	Faizan-e-Mustafa, I. Ahmed, M. Maaruf, and **M. Khalid**, "Detection of Cracks in the Industrial System using Adaptive Principal Component Analysis and Wavelet Denoising", in the 25th IEEE International Conference on Industrial Technology (ICIT), IEEE, Bristol, UK, 25-27 March, (**2024**). 10.1109/ICIT58233.2024.10540880
C13.	I. Ahmed, A. Basit, M. Rehan, A. Ali, M. Maaruf, and **M. Khalid**, "A Resilient Consensus-based Energy 5.0 Framework for Micro-grids under Ramp-rate Constraints and Stochastic FDI Attacks", in the 25th IEEE International Conference on Industrial Technology (ICIT), IEEE, Bristol, UK, 25-27 March, (**2024**). 10.1109/ICIT58233.2024.10540926
C14.	M. Moin, M. Rehan, I. Ahmed, A. Ali, and **M. Khalid**, "Distributed Economic Dispatch with Valve-Point Effect via LPV-based Modified Incremental Cost Consensus Approach", in the 25th IEEE International Conference on Industrial Technology (ICIT), IEEE, Bristol, UK, (**2024**). 10.1109/ICIT58233.2024.10540766
C15.	A. Abuaskar, K. A. Khan, and **M. Khalid**, "Modified Sliding Model Control for Resilient Speed Control of Wind Energy Systems", in IEEE PES T&D Conference & Exposition, IEEE, Anaheim, USA, 06-09 May, (**2024**). 10.1109/TD47997.2024.10556149

C16. J. Palmino, A. Alqusayer, K.A. Khan, and **M. Khalid**, "Economic Optimization of Utility Integrated PV-Battery System Considering Grid Decarbonization", in IEEE PES T&D Conference & Exposition, IEEE, Anaheim, USA, 06-09 May, (**2024**). 10.1109/TD47997.2024.10556312

C17. M. Maaruf, and **M. Khalid**, "Model Predictive Control of Power Converters for Load Fluctuations Attenuation in DC-Microgrid with Fuel Cell and Battery Energy Storage", in IEEE PES T&D Conference & Exposition, IEEE, Anaheim, USA, 06-09 May, (**2024**). 10.1109/TD47997.2024.10556171

C18. M. Ali, M. Zaid, A. Sarwar, A. Iqbal, Md I. Hossain, and **M. Khalid**, "A Common-Ground Seven-Level Boosting Inverter (CG7LI) for Solar-PV Application", in 2023 IEEE International Conference on Energy Technologies for Future Grids (ETFG), pp. 1-5. IEEE, Wollongong, Australia, 03-06 Dec, (**2023**). 10.1109/ETFG55873.2023.10408272

C19. Md M. Quamar, K. A. Khan, B. Liu, and **M. Khalid**, "Optimal PID and FOPID Based Pitch Angle Control of Wind Generation System", in 2023 IEEE International Conference on Energy Technologies for Future Grids (ETFG), pp. 1-6. IEEE, Wollongong, Australia, 03-06 Dec, (**2023**). 10.1109/ETFG55873.2023.10407371

C20. W. Khardawi, K. Khan, and **M. Khalid**, "Enhancement of Energy Storage System and HVDC Transmission for Optimal Handling of Duck Curve in High Solar PV Integrated Networks", in 2023 IEEE International Conference on Energy Technologies for Future Grids (ETFG), pp. 1-6. IEEE, Wollongong, Australia, 03-06 Dec, (**2023**). 10.1109/ETFG55873.2023.10407693

C21. M. M. Gulzar, M. M. Ahmed, A. Shakoor, and **M. Khalid**, "Design and Implementation of Cascaded Ant Colony Optimization Coupled with Sliding Mode Controller for Autonomous Cruise Control System", in 2023 IEEE International Conference on Energy Technologies for Future Grids (ETFG), pp. 1-6. IEEE, Wollongong, Australia, 03-06 Dec, (**2023**). 10.1109/ETFG55873.2023.10407424

C22. K. A. Khan, Md M. Quamar, M. M. Gulzar, and **M. Khalid**, "Optimal Power Generation of Variable Wind Turbine System Using Linear Quadratic Regulator", in 2023 IEEE International Conference on Energy Technologies for Future Grids (ETFG), pp. 1-6. IEEE, Wollongong, Australia, 03-06 Dec, (**2023**). 10.1109/ETFG55873.2023.10408440

C23. M. Ali, and **M. Khalid**, "A Metaheuristic Approach for Eleven-Level Switched-Capacitor Multilevel Inverter Modulation", in 2023 IEEE International Conference on Energy Technologies for Future Grids (ETFG), pp. 1-6. IEEE, Wollongong, Australia, 03-06 Dec, (**2023**). 10.1109/ETFG55873.2023.10407754

C24. Ijaz Ahmed, W. Khardawi, F. S. AL-Ismail, and **M. Khalid**, "A Novel Consensus-driven Technique for Optimal Power Allocation in Smart Energy Networks Considering Multiple Fueling Feature of Thermal Plants", in 2023 IEEE International Conference on Energy Technologies for Future Grids (ETFG), pp. 1-6. IEEE, Wollongong, Australia, 03-06 Dec, (**2023**). 10.1109/ETFG55873.2023.10408384

C25. M. Syed, O. Siddiqui, M. Kazerani, and **M. Khalid**, "Analysis of Electrochemical Ammonia Production Rate via Smoothing Filters for Solar Energy Storage", in 2023 IEEE Canadian Conference on Electrical and Computer Engineering (CCECE), pp. 593-598. IEEE, Regina, SK, Canada, 24-27 Sept, (**2023**). 10.1109/CCECE58730.2023.10288686

C26. H. Mansoor, M. Shabbir, M. Y. Ali, H. Rauf, **M. Khalid**, and Naveed Arshad "Spatio-Temporal Short Term Load Forecasting Using Graph Neural Networks", in 2023 12th International Conference on Renewable Energy Research and Applications (ICRERA), pp. 320-323. IEEE, Oshawa, ON, Canada, Aug 29 – Sep 1, (**2023**).

10.1109/ICRERA59003.2023.10269401

C27. S. Zafar, and **M. Khalid**, "Dynamic Performance Assessment Through Simulated Model of Photovoltaic Water Pumping System for Off-Grid Communities", in 2023 12th International Conference on Renewable Energy Research and Applications (ICRERA), pp. 259-263. IEEE, Oshawa, Canada, Aug 29 – Sep 1, (**2023**).

10.1109/ICRERA59003.2023.10269428

C28. H. Rauf, M. S. Gul, **M. Khalid**, and N. Arshad, "Smart Feature Selection-Based Machine Learning Framework for Calendar Loss Prediction of Li-Ion Electric Vehicle Battery", in 2023 12th International Conference on Renewable Energy Research and Applications (ICRERA), pp. 300-303. IEEE, Oshawa, ON, Canada, Aug 29 – Sep 1, (**2023**).

10.1109/ICRERA59003.2023.10269362

C29. M. S. Alam, F. S. Al-Ismail, Md Shafiullah, S. M. Rahman, **M. Khalid**, and M. A. Abido, "A Virtual Inertia Compensation Control Technique for DC Microgrid Voltage Stabilization", in 2023 IEEE Power & Energy Society General Meeting (PESGM), pp. 1-5. IEEE, Orlando, FL, USA, 16-20 July, (**2023**). 10.1109/PESGM52003.2023.10252944

C30. H. Rauf, **M. Khalid**, N. Arshad, and M. Pecht, "Novel Feature Selection Strategy for Cyclic Loss Prediction of Lithium-ion Electric Vehicle Battery", in 2023 IEEE Power & Energy Society General Meeting (PESGM), pp. 1-6. IEEE, Orlando, FL, USA, 16-20 July (**2023**).

10.1109/PESGM52003.2023.10253190

C31. A. Alsharif, and **M. Khalid,** "PV/Fuel Cell/Superconducting Magnetic Energy Storage Coupled with VSG to Improve Frequency and Voltage Regulation of Power Grid", in 2023 IEEE PES GTD International Conference and Exposition (GTD), pp. 350-355. IEEE, Istanbul, Turkiye, 22-25 May, (**2023**). 10.1109/GTD49768.2023.00093

C32. M. Ali, M. Tayyab, & **M. Khalid** "A Sparse Sextuplet 13-Level Switched-Capacitor DCAC Converter for Renewable Energy Integration", in 2023 IEEE IAS Global Conference on Emerging Technologies (GlobConET), (pp. 1-5). IEEE, London, United Kingdom, 19-21 May, (**2023**). 10.1109/GlobConET56651.2023.10149999

C33. K. Khan, A. Rauf, and **M. Khalid,** "Economic Dispatch for Conventional Generation-Replacement with Solar PV and Battery Storage Using Robust Stochastic Optimization", in 2023 International Conference on Control, Automation and Diagnosis (ICCAD), pp. 1-6. IEEE, Rome, Italy, 10-12 May, (**2023**). 10.1109/ICCAD57653.2023.10152359

C34. M. A. Abdulgalil, M. Ali, and **M. Khalid**, "Capacity Optimization of Battery Energy Storage System for Large-Scale Grid Integration of Renewables", in 2023 International Conference on Control, Automation and Diagnosis (ICCAD), pp. 1-6. IEEE, Rome, Italy, 10-12 May, (**2023**).

10.1109/ICCAD57653.2023.10152336

C35. M. M. Gulzar, F. U. Khan, D. Sibtain, A. Shakoor, and **M. Khalid**, "Systematic Control of Electro-hydraulic Velocity Servomechanism Using Fractional Order Technique", in 2023 International Conference on Control, Automation and Diagnosis (ICCAD), pp. 01-07. IEEE, Rome, Italy, 10-12 May, (**2023**).

10.1109/ICCAD57653.2023.10152387

C36. Md M. Quamar, K. A. Khan, and **M. Khalid**, "Narrowband-IoT Based Integrated Framework for Monitoring Pipeline Condition in Oil and Gas Industry", in 2023 International Conference on Control, Automation and Diagnosis (ICCAD), pp. 1-6. IEEE, Rome, Italy, 10-12 May, (**2023**). 10.1109/ICCAD57653.2023.10152310

C37. M. M. Gulzar, M. Maaruf, K. Khan, F. Alismail, and **M. Khalid**, "Biologically Inspired Algorithm for Adaptive Convergence in Multi-Agent Systems", in 2023 International Conference on Control, Automation and Diagnosis (ICCAD), pp. 01-05. IEEE, Rome, Italy, 10-12 May, (**2023**). 10.1109/ICCAD57653.2023.10152391

C38. M. M. Gulzar, T. Jadoon, K. A. Khan, and **M. Khalid**, "Cucker-Smale Model Based Consensus Algorithm for Enhanced Convergence in Communication Network of Distributed Energy Systems", in 2023 IEEE Green Technologies Conference (GreenTech), pp. 219-223. IEEE, Denver, CO, USA, 19-21 April, (**2023**). 10.1109/GreenTech56823.2023.10173809

C39. A. Abu-Askar, M. M. Gulzar, and **M. Khalid**, "A Novel Approach for Wind Turbine Robust Speed Control Using Sliding Mode Control with Extended State Observer", in 2023 IEEE IAS Global Conference on Renewable Energy and Hydrogen Technologies (GlobConHT), pp. 1-7. IEEE, Male, Maldives, 11-12 March, (**2023**). 10.1109/GlobConHT56829.2023.10087868

C40. S. Alhashedi, K. A. Khan, M. Alowaifeer, and **M. Khalid**, "Multi-Period Optimization of Hybrid Energy Systems Using Mixed Integer Linear Programming", in 2023 IEEE IAS Global Conference on Renewable Energy and Hydrogen Technologies (GlobConHT), pp. 1-6. IEEE, Male, Maldives, 11-12 March, (**2023**). 10.1109/GlobConHT56829.2023.10087807

C41. M. M. Gulzar, M. Munawar, F. Alismail, and **M. Khalid**, "Finite-time Consensus Algorithm for Power Systems using Cucker-Smale Model", in 2023 IEEE IAS Global Conference on Renewable Energy and Hydrogen Technologies (GlobConHT), pp. 1-5. IEEE, Male, Maldives, 11-12 March, (**2023**). 10.1109/GlobConHT56829.2023.10087559

C42. P. Sun, G. Li, **M. Khalid**, G. Town, and G. Konstantinou, "Power Distribution Estimation in VSC-based MT-MVDC Distribution System with Droop Control under Steady-State Operation", in CIGRE Muscat International Symposium, Muscat, Oman, 06-08 March, (**2023**).

https://orbit.dtu.dk/en/publications/power-distribution-estimation-in-vsc-based-mt-mvdc-distribution-s

C43. A. Alshalawi, H. AL-Barrak, and **M. Khalid**, "PQ Control of Microgrid with Energy Storage Using Adaptive Controller", in 2022 Saudi Arabia Smart Grid (SASG), pp. 1-7. IEEE, Riyadh, Saudi Arabia, 12-14 Dec, (**2022**). 10.1109/SASG57022.2022.10199799

C44. S. Alshahrani, **M. Khalid**, and Mohammed Abido, "Grid-Forming Converter Control Optimization using Genetic Algorithm with Bounded Regions", in 2022 Saudi Arabia Smart Grid (SASG), pp. 1-10. IEEE, Riyadh, Saudi Arabia, 12-14 Dec, (**2022**).

10.1109/SASG57022.2022.10199754

C45. M. Ali, and **M. Khalid**, "Multiphase Matrix Converter Modulation for Wind Energy Systems using Genetic Algorithm", in 2022 Saudi Arabia Smart Grid (SASG), pp. 1-5. IEEE, Riyadh, Saudi Arabia, 12-14 Dec, (**2022**). 10.1109/SASG57022.2022.10200268

C46. M. Ali, O. Alkadi, A. Alotaibi, A. Almajed, H. Albesher, and **M. Khalid**, "Smart Home Energy Scheduling Using Demand Side Management Programs", in 2022 Saudi Arabia Smart Grid (SASG), pp. 1-6. IEEE, Riyadh, Saudi Arabia, 12-14 Dec, (**2022**).

10.1109/SASG57022.2022.10200128

C47. M. Ali, and **M. Khalid**, "A Modified Modulation of WE-Type Multilevel Inverter for Enhanced Output Voltage Capability", in 2022 IEEE Electrical Power and Energy Conference (EPEC), pp. 56-60. IEEE, Victoria, BC, Canada, 05-07 Dec, (**2022**).

10.1109/EPEC56903.2022.10000087

C48. P. Sun, **M. Khalid**, and G. Konstantinou, "Symmetrical Monopole Three-Wire HVDC Transmission System based on Hybrid Modular Multilevel and Alternate Arm Converters", in 2022 IEEE PES 14th Asia-Pacific Power and Energy Engineering Conference (APPEEC), pp. 1-6. IEEE, Melbourne, Australia, 20-23 Nov, (**2022**).

10.1109/APPEEC53445.2022.10072102

C49. M. Maaruf, S. El-Ferik, M. Abido, and **M. Khalid**, "Two-Loop Distributed Optimal Secondary Voltage Control of an Islanded Microgrid with Multiple Distributed Generators", in 2022 IEEE PES 14th Asia-Pacific Power and Energy Engineering Conference (APPEEC), pp. 1-5. IEEE, Melbourne, Australia, 20-23 Nov, (**2022**).

10.1109/APPEEC53445.2022.10072258

C50. M. Ali, M. H. Mohamed, A. Alashwali, M. Alfarraj, and **M. Khalid**, "Machine Learning Based Solar Power Forecasting Techniques: Analysis and Comparison", in 2022 IEEE PES 14th Asia-Pacific Power and Energy Engineering Conference (APPEEC), pp. 1-6. IEEE, Melbourne, Australia, 20-23 Nov, (**2022**). 10.1109/APPEEC53445.2022.10072276

C51. M. Maaruf, G. Konstantinou, and **M. Khalid**, "Current Sharing Control Method for Fuel Cell Hybrid Electric Vehicles", in 2022 IEEE PES 14th Asia-Pacific Power and Energy Engineering Conference (APPEEC), pp. 1-5. IEEE, Melbourne, Australia, 20-23 Nov, (**2022**).

10.1109/APPEEC53445.2022.10072195

C52. M. Maaruf, S. Ahmad, and **M. Khalid**, "Improving the Frequency Response of High Renewable Penetrated Islanded Microgrids", in 2022 IEEE PES 14th Asia-Pacific Power and Energy Engineering Conference (APPEEC), pp. 1-6. IEEE, Melbourne, Australia, 20-23 Nov, (**2022**).

10.1109/APPEEC53445.2022.10072211

C53. M. A. Abdulgalil, M. Ali, F. S. Al-Ismail, and **M. Khalid**, "One-step Solution for Sizing and Allocation of Battery Energy Storage System Using Dc Optimal Power Flow", in 2022 11th International Conference on Renewable Energy Research and Application (ICRERA), pp. 379-384. IEEE, Istanbul, Turkey, 18-21 Sep, (**2022**).

10.1109/ICRERA55966.2022.9922869

C54. **M. Khalid**, "Voltage Recovery Through Active-Reactive Coordination of Solar PV Inverters During Grid Fault", in 2022 11th International Conference on Renewable Energy Research and Application (ICRERA), pp. 395-399. IEEE, Istanbul, Turkey, 18-21 Sep, (**2022**).

10.1109/ICRERA55966.2022.9922796

C55. M. Maaruf, S. El-Ferik, F. S. Al-Ismail, and **M. Khalid**, "A Decentralized Multiagent-Based Robust Backstepping Control for Restoring Secondary Voltage and Frequency of Autonomous Microgrids", in 2022 11th International Conference on Renewable Energy Research and Application (ICRERA), pp. 430-435. IEEE, Istanbul, Turkey, 18-21 Sep, (**2022**).

10.1109/ICRERA55966.2022.9922805

C56. M. Maaruf, S. El Ferik, F. S. Al-Ismail, and **M. Khalid**, "Robust Optimal Virtual Inertia Control for Microgrid Frequency Regulation Considering High Renewable Energy Penetration", in 2022 11th International Conference on Renewable Energy Research and Application (ICRERA), pp. 369-373. IEEE, Istanbul, Turkey, 18-21 Sep, (**2022**).

10.1109/ICRERA55966.2022.9922718

C57. M. Ali, M. Tayyab, A. Sarwar, and **M. Khalid**, "A Single-Source Multilevel Inverter with Boosted Output Voltage for Solar PV Applications", in 2022 IEEE IAS Global Conference on Emerging Technologies (GlobConET), pp. 631-636. IEEE, Arad, Romania, 20-22 May, (**2022**).

10.1109/GlobConET53749.2022.9872450

C58. M. Ali, M. A. Syed, and **M. Khalid**, "NARX Recurrent Neural Network Based Short Term Residential Load Forecasting Considering the Effects of Multiple Weather Features", in 2022 IEEE IAS Global Conference on Emerging Technologies (GlobConET), pp. 557-561. IEEE, Arad, Romania, 20-22 May, (**2022**).

10.1109/GlobConET53749.2022.9872509

C59. M. Ali, A. Ibnouf, M. A. Syed, and **M. Khalid**, "Artificial Neural Network Modeling of an Autonomous Vehicle for Enhanced Lateral Position and Yaw Angle Prediction", in 2022 13th Asian Control Conference (ASCC), pp. 2263-2267. IEEE, Jeju, Republic of Korea, 04-07 May, (**2022**). 10.23919/ASCC56756.2022.9828365

C60. M. Maaruf, and **M. Khalid**, "Hybrid Solar/PEM Fuel Cell/And Water Electrolyzer Energy System for All-Electric Ship", in 2022 IEEE Kansas Power and Energy Conference (KPEC), pp. 1-5. IEEE, Manhattan, KS, USA, 25-26 April, (**2022**).

10.1109/KPEC54747.2022.9814802

C61. A. Atif, K. A. Khan, and **M. Khalid**, "Battery Integrated Optimal Power Smoothing of Solar PV Output Using Meta-Heuristic Optimization", in 2022 IEEE green technologies conference (GreenTech), pp. 13-18. IEEE, Houston, TX, USA, 30 March 2022 - 01 April, (**2022**).

10.1109/GreenTech52845.2022.9772017

C62. M. Ali, and **M. Khalid**, "A Modified Less-Switch-Count Switched-Capacitor Multilevel Inverter for Solar PV-Applications", in 2022 5th International Conference on Power Electronics and their Applications (ICPEA), vol. 1, pp. 1-6. IEEE, Hail, Saudi Arabia, 29-31 March, (**2022**).

10.1109/ICPEA51060.2022.9791164

C63. A. Alkhalifah, and **M. Khalid**, "Power Quality in Electrical Network–A Practical Case", in 2022 5th International Conference on Power Electronics and their Applications (ICPEA), vol. 1, pp. 1-6. IEEE, Hail, Saudi Arabia, 29-31 March, (**2022**).

10.1109/ICPEA51060.2022.9791168

C64. J. Alboali, A. Alsuwaid, M. Aljafar, and **M. Khalid**. "Techno-Economic Assessment of Different Solar PV Configurations for a Typical House in Dhahran", in 2021 4th International Symposium on Advanced Electrical and Communication Technologies (ISAECT), pp. 1-6. IEEE, Alkhobar, Saudi Arabia, 06-08 Dec, (**2021**).

10.1109/ISAECT53699.2021.9668595

C65. I. M. Alotaibi, I. Elamin, M. Abido, and **M. Khalid**, "Hybrid Storage System for Controlling Wind Uncertainty", in 2021 4th International Symposium on Advanced Electrical and

Communication Technologies (ISAECT), pp. 01-06. IEEE, Alkhobar, Saudi Arabia, 06-08 Dec, (**2021**). 10.1109/ISAECT53699.2021.9668334

C66. M.A. Syed, and **M. Khalid**, "A Feedforward Neural Network Hydrogen Electrolyzer Output Regulator for Wind Power Control with Battery Storage", in 2021 IEEE PES Innovative Smart Grid Technologies-Asia (ISGT Asia), pp. 1-5. IEEE, Brisbane, Australia, 05-08 Dec, (**2021**).

10.1109/ISGTAsia49270.2021.9715687

C67. M. Maaruf, and **M. Khalid**, "Power Quality Control of Hybrid Wind/Electrolyzer/Fuel-Cell/BESS Microgrid", in 2021 IEEE PES Innovative Smart Grid Technologies-Asia (ISGT Asia), pp. 1-5. IEEE, Brisbane, Australia, 05-08 Dec, (**2021**).

10.1109/ISGTAsia49270.2021.9715639

C68. O. Siddiqui, and **M. Khalid**, "Ammonia Fuel Cells for Wind Power Smoothing and Control for Smart Grid Applications", in 2021 IEEE PES Innovative Smart Grid Technologies Europe (ISGT Europe), pp. 1-5. IEEE, Espoo, Finland, 18-21 Oct, (**2021**).

10.1109/ISGTEurope52324.2021.9640003

C69. M. A. Syed, and **M. Khalid**, "Machine Learning Based Hydrogen Electrolyzer Control Strategy for Solar Power Output and Battery State of Charge Regulation", in 2021 IEEE PES Innovative Smart Grid Technologies Europe (ISGT Europe), pp. 1-5. IEEE, Espoo, Finland, 18-21 Oct, (**2021**). 10.1109/ISGTEurope52324.2021.9640182

C70. H. M. Ghazal, K. A. Khan, F. Alismail, and **M. Khalid**, "Maximizing Capacity Credit in Generation Expansion Planning for Wind Power Generation and Compressed Air Energy Storage System", in 2021 IEEE PES Innovative Smart Grid Technologies Europe (ISGT Europe), pp. 1-5, IEEE, Espoo, Finland, 18-21 Oct, (**2021**).
10.1109/ISGTEurope52324.2021.9640125

C71. H. I. Alhammad, K. A. Khan, F. Alismail, and **M. Khalid**, "Capacity Optimization and Optimal Placement of Battery Energy Storage System for Solar PV Integrated Power Network", in 2021 IEEE Energy Conversion Congress and Exposition (ECCE), pp. 847-852. IEEE, Vancouver, BC, Canada, 10-14 Oct, (**2021**).

10.1109/ECCE47101.2021.9595426

C72. J. Alboali, A. Alsuwaid, M. Aljafar, and **M. Khalid**, "Incentive-Based Assessment of Residential Solar PV Systems: A Case Study", in 2021 31st Australasian Universities Power Engineering Conference (AUPEC), pp. 1-5. IEEE, Perth, Australia, 26-30 Sep, (**2021**).

10.1109/AUPEC52110.2021.9597710

C73. Hassan I. Alhammad, Khalid A. Khan, Omar F. Konash, and **M. Khalid**, "Deployment of Battery Energy Storage System in a Renewable Integrated Distribution Network Based on Long-Term Load Expansion", in 2021 31st Australasian Universities Power Engineering Conference (AUPEC), pp. 1-6. IEEE, Perth, Australia, 26-30 Sep, (**2021**).

10.1109/AUPEC52110.2021.9597750

C74. M. A. Syed, and **M. Khalid**, "Hodrick Prescott Decomposition for Battery Energy Storage Size Reduction and Wind Power Control for Microgrid Applications", in 2021 IEEE PES Innovative Smart Grid Technologies Conference-Latin America (ISGT Latin America), pp. 1-5. IEEE, Lima, Peru, 15-17 Sep, (**2021**). 10.1109/ISGTLatinAmerica52371.2021.9543005

C75.	M. A. Syed, and **M. Khalid**, "Locally Weighted Filtering for Photovoltaic Power Fluctuation Control and Time Delay Reduction with Battery Energy Storage", in 2021 IEEE Madrid PowerTech, pp. 1-5. IEEE, Madrid, Spain, 28 June 2021 - 02 July, (**2021**). 10.1109/PowerTech46648.2021.9494831
C76.	H. I. Alhammad, M. F. Alsada, K. A. Khan, and **M. Khalid**, "A Voltage Sensitivity Framework for Optimal Allocation of Battery Energy Storage Systems", in 2021 IEEE Green Technologies Conference (GreenTech), pp. 558-562. IEEE, Denver, CO, USA, 07-09 April, (**2021**). 10.1109/GreenTech48523.2021.00093
C77.	M. Maaruf, K. A. Khan, and **M. Khalid**, "Integrated Power Management and Nonlinear-Control for Hybrid Renewable Microgrid", in 2021 IEEE Green Technologies Conference (GreenTech), pp. 176-180. IEEE, Denver, CO, USA, 07-09 April, (**2021**). 10.1109/GreenTech48523.2021.00037
C78.	Y. M. Alhumaid, K. A. Khan, and **M. Khalid**, "Stochastic Approach for Optimal Sizing and Allocation of Energy Storage Systems", in 2021 IEEE Green Technologies Conference (GreenTech), pp. 569-573. IEEE, Denver, CO, USA, 07-09 April, (**2021**). 10.1109/GreenTech48523.2021.00095
C79.	M. A. Syed, and **M. Khalid**, "Machine Learning Based Controlled Filtering for Solar PV Variability Reduction with BESS", in 2021 International Conference on Sustainable Energy and Future Electric Transportation (SEFET), pp. 1-5. IEEE, Hyderabad, India, 21-23 Jan, (**2021**). 10.1109/SeFet48154.2021.9375792
C80.	S. Alshahrani, **M. Khalid**, and M. Abido, "Frequency Regulation Coordinated Framework: Hybrid Battery Energy Storage System and Supercapacitor", in CIRED 2021 - The 26th International Conference and Exhibition on Electricity Distribution, pp. 2339-2344, IEEE, Online Conference, 20-23 Sep, (**2021**). 10.1049/icp.2021.1920
C81.	M. A. Syed, F. Alismail and **M. Khalid**, "Deep Learning Based Intelligent Methodology for Photovoltaic Power Quality Control with Energy Storage", in CIRED 2021 - The 26th International Conference and Exhibition on Electricity Distribution, pp. 2290-2293, IEEE, Online Conference, 20-23 Sep, (**2021**). 10.1049/icp.2021.1841
C82.	A. Rauf, A. T. Awami, M. Kassas, and **M. Khalid**, "Optimizing a Residential Solar PV System Based on Net-Metering Approaches", in CIRED 2021 - The 26th International Conference and Exhibition on Electricity Distribution, pp. 3300-3304, IEEE, Online Conference, 20-23 Sep, (**2021**). 10.1049/icp.2021.1804

4.3.2.B List of Referred Conferences Papers **before the attainment** of the **Current Rank**

C83.	M. A. Syed, A. A. Abdalla, A. Al-Hamdi, and **M. Khalid**, "Double Moving Average Methodology for Smoothing of Solar Power Fluctuations with Battery Energy Storage", in 2020 International Conference on Smart Grids and Energy Systems (SGES), pp. 291-296. IEEE, Perth, Australia, 23-26 Nov, (**2020**). 10.1109/SGES51519.2020.00058
C84.	A. Alzahrani, H. Alharthi, and **M. Khalid**, "Optimal Battery Energy Storage Placement in Highly PV-Penetrated Distribution Networks", in 2020 IEEE Power & Energy Society Innovative Smart Grid Technologies Conference (ISGT), pp. 1-5. IEEE, Washington, DC, USA, 17-20 Feb, (**2020**). 10.1109/ISGT45199.2020.9087725

C85. J. Alshehri, A. Alzahrani, **M. Khalid**, and Fahad Alismail, "Optimal Control of a Microgrid with Distributed Renewable Generation and Battery Energy Storage", in 2020 IEEE Power & Energy Society Innovative Smart Grid Technologies Conference (ISGT), pp. 1-5. IEEE, Washington, DC, USA, 17-20 Feb, (**2020**). 10.1109/ISGT45199.2020.9087685

C86. H. Alharthi, J. Alshehri, **M. Khalid**, A. Alzahrani and M. Faggal, "Evaluation of Distance Protection Responses in AC Power System with Converter Interface", in Proc. of the IEEE PES ISGT ASIA, Chengdu, China, 21-24 May, (**2019**). 10.1109/ISGT-Asia.2019.8881574

C87. J. Alshehri, A. Alzahrani and **M. Khalid**, "Wind Energy Conversion Systems and Artificial Neural Networks: Role and Applications", in Proc. of the IEEE PES ISGT ASIA, Chengdu, China, 21-24 May, (**2019**). 10.1109/ISGT-Asia.2019.8881404

C88. K. A. Khan and **M. Khalid**, "Hybrid Energy Storage System for Voltage Stability in a DC Microgrid Using a Modified Control Strategy", in Proc. of the IEEE PES ISGT ASIA, Chengdu, China, 21-24 May, (**2019**). 10.1109/ISGT-Asia.2019.8881611

C89. Y. Abass, M. Abido, M. Almuhaini and **M. Khalid**, "Multi-objective Optimal DG Sizing and Placement in Distribution Systems Using Particle Swarm Optimization", in Proc. of the IEEE PES ISGT ASIA, Chengdu, China, 21-24 May, (**2019**). 10.1109/ISGT-Asia.2019.8881564

C90. N. Amleh, M. Almuhaini and **M. Khalid**, "Reliability Assessment of Standalone Wind-Based Energy Storage System Using Monte Carlo Simulation", in Proc. of the IEEE PES ISGT ASIA, Chengdu, China, 21-24 May, (**2019**). 10.1109/ISGT-Asia.2019.8881327

C91. S. Alshahrani, **M. Khalid** and M. Almuhaini, "Minimizing Active Power Losses in Electricity Networks Based on Optimal Location of Battery Energy Storage System", in Proc. of the IEEE PES ISGT ASIA, Chengdu, China, 21-24 May, (**2019**). 10.1109/ISGT-Asia.2019.8881599

C92. S. Al-Sakkaf, M. Kassas and M. Khalid**,** "Energy Management for Standalone DC Microgrid Using Artificial Bee Colony", in Proc. of the IEEE PES ISGT ASIA, Chengdu, China, 21-24 May, (**2019**). 10.1109/ISGT-Asia.2019.8881081

C93. M. A. Abdulgalil, A. Elsayed, **M. Khalid** and I. Elamin, "Comparison Between Two LCL DC Transformer Topologies: SCR-LCL and IGBT-LCL", in Proc. of the IEEE PES ISGT ASIA, Chengdu, China, 21-24 May, (**2019**). 10.1109/ISGT-Asia.2019.8881657

C94. M. A. Abdulgalil, **M. Khalid** and J. Alshehri, "Microgrid Reliability Evaluation Using Distributed Energy Storage Systems", in Proc. of the IEEE PES ISGT ASIA, Chengdu, China, 21-24 May, (**2019**). 10.1109/ISGT-Asia.2019.8881068

C95. J. Alshehri, **M. Khalid**, and F. Alismail, "Distance Protection Performance in AC Power System with Back-to-Back Converter Interface", in Proc. of the 2019th IAS Annual Meeting, Baltimore, USA, 29 Sep – 03 Oct, (**2019**). 10.1109/IAS.2019.8912433

C96. K.A. Khan, S. Shafiq and **M. Khalid**, "A Strategy for Utilization of Reactive Power Capability of PV Inverters", in Proc. of the 9th International Conference on Power and Energy Systems (ICPES), Perth, Australia, 10-12 Dec, (**2019**). 10.1109/ICPES47639.2019.9105613

C97. A. H. Alzahrani, H. Alharthi, S. Shafiq, and **M. Khalid**, "Optimal Allocation of Batteries to Facilitate High Solar Photovoltaic Penetrations", in Proc. of the 9th International Conference on Power and Energy Systems (ICPES), Perth, Australia, 10-12 Dec, (**2019**).

10.1109/ICPES47639.2019.9105479

C98. A. Atif and **M. Khalid**, "Smoothing Methodologies for Photovoltaic Power Fluctuations", in Proc. of the 8th International Conference on Renewable Energy Research and Applications (ICRERA), Brasov, Romania, 3-6 Nov, (**2019**). 10.1109/ICRERA47325.2019.8996534

C99. K.A. Khan and **M. Khalid**, "A Reactive Power Compensation Strategy in Radial Distribution Network with High PV Penetration", in Proc. of the 8th International Conference on Renewable Energy Research and Applications (ICRERA), Brasov, Romania, 3-6 Nov, (**2019**).
10.1109/ICRERA47325.2019.8997110

C100. J. Alshehri, A. Alzahrani, and **M. Khalid**, "Voltage and Frequency Control of Microgrids with Distributed Generations and Battery Energy Storage", in Proc. of the 8th International Conference on Renewable Energy Research and Applications (ICRERA), Brasov, Romania, 3-6 Nov, (**2019**). 10.1109/ICRERA47325.2019.8996929

C101. S. AlShahrani, M. AlMuhaini and **M. Khalid**, "Minimizing Active/Reactive Power Losses in Electricity Networks Based on Optimal Location of Battery Energy Storage System", in Proc. of the 8th International Conference on Renewable Energy Research and Applications (ICRERA), Brasov, Romania, 3-6 Nov, (**2019**). 10.1109/ICRERA47325.2019.8996990

C102. H. Alharthi, J. Alshehri and **M. Khalid**, "Optimal Scheduling of Power Generation Units using Differential Evolution Approach: A Case Study", in Proc. of the 8th International Conference on Renewable Energy Research and Applications (ICRERA), Brasov, Romania, 3-6 Nov, (**2019**).
10.1109/ICRERA47325.2019.8996587

C103. L. Elkhider, A. Hassan and **M. Khalid**, "SVC-based Controller Design via Ant Colony Optimization Algorithm", in Proc. of the 8th International Conference on Renewable Energy Research and Applications (ICRERA), Brasov, Romania, 3-6 Nov, (**2019**).
10.1109/ICRERA47325.2019.8996883

C104. J. Alshehri, A. Alshalawi and **M. Khalid**, "Electric Field Computation Under a Double Circuit 380kV Overhead Transmission Line", in Proc. of the 8th International Conference on Renewable Energy Research and Applications (ICRERA), Brasov, Romania, 3-6 Nov, (**2019**).
10.1109/ICRERA47325.2019.8996514

C105. M. Elsir, M. Abdulgalil, A. Al-Awami and **M. Khalid**, "Sizing and Allocation for Solar Energy Storage System Considering the Cost Optimization", in Proc. of the 8th International Conference on Renewable Energy Research and Applications (ICRERA), Brasov, Romania, 3-6 Nov, (**2019**). 10.1109/ICRERA47325.2019.8997082

C106. L. Elkhidir, A. Hassan, and **M. Khalid**, "SVC-based controller design via ant colony optimization algorithm", in 2019 8th International Conference on Renewable Energy Research and Applications (ICRERA), pp. 301-308, IEEE, Brasov, Romania, 3-6 Nov, (**2019**).
10.1109/ICRERA47325.2019.8996883

C107. U. Salman, M. Abdulgalil, W. Sulaimon, and **M. Khalid**, "Energy Management Strategy Considering Battery Efficiency for Grid-Tied Microgrids During Summer in the Kingdom of Saudi Arabia", in Proc. of the 8th International Conference on Renewable Energy Research and Applications (ICRERA), Brasov, Romania, 3-6 Nov (**2019**). **Received Best Poster Award**
10.1109/ICRERA47325.2019.8997000

C108. U. Akram, **M. Khalid**, and S. Shafiq, "A Novel Operation Strategy of Battery-Supercapacitor Hybrid Energy Storage System Providing Frequency Regulation Service", in Proc. of the IEEE

27th International Symposium on Industrial Electronics (ISIE), Cairns, Australia, pp. 31-36, June (**2018**). 10.1109/ISIE.2018.8433770

C109. M. A. Abdulgalil, H. S. Alharbi, **M. Khalid**, and M. Almuhaini, "Reliability Assessment of Microgrids with Multiple Distributed Generations and Hybrid Energy Storage", in Proc. of the IEEE 27th International Symposium on Industrial Electronics, Cairns, Australia, pp. 868-873, June, (**2018**). 10.1109/ISIE.2018.8433614

C110. **M. Khalid**, "Economic Dispatch Using Functional Network Wind Forecast Model", in Proc. of the IEEE 27th International Symposium on Industrial Electronics, Cairns, Australia, pp. 502-507, 13-15 June, (**2018**). 10.1109/ISIE.2018.8433599

C111. M. H. Arshad and **M. Khalid**, "Advanced Direct Torque Control of Four Switch Fed Two-Phase Symmetric Induction Motor", in Proc. of the IEEE 27th International Symposium on Industrial Electronics (ISIE), Cairns, Australia, pp. 108-113, 13-15 June, (**2018**). **(Winner, IEEE PES Student Travel Grant Award)**

10.1109/ISIE.2018.8433668

C112. U. Akram, **M. Khalid**, and S. Shafiq, "Towards Reliable Microgrids-An Economic and Environmental Evaluation", in Proc. of the International Conference on Industrial Technology (ICIT), Lyon, France, 20-22 Feb, (**2018**). 10.1109/ICIT.2018.8352327

C113. U. Akram, **M. Khalid**, and S. Shafiq, "A Strategy for Residential Demand Response Management in Modern Electricity Markets", in Proc. of the International Conference on Industrial Technology (ICIT), Lyon, France, 20-22 Feb, (**2018**).

10.1109/ICIT.2018.8352338

C114. M. A. Abdulgalil, M. N. Khater, **M. Khalid**, and F. Alisamail, "Sizing of Energy Storage Systems to Enhance Microgrid Reliability", in Proc. of the International Conference on Industrial Technology (ICIT), Lyon, France, 20-22 Feb, (**2018**).

10.1109/ICIT.2018.8352366

C115. H. Abdellatif, M. Almuhaini and **M. Khalid**, "Hybrid Distributed Generation System Modeling for Smart Self-Healing Electric Microgrid", in IEEE IAS Annual Meeting, Portland, USA, 23-27 Sep, (**2018**). 10.1109/IAS.2018.8544621

C116. A. Ahmed and **M. Khalid**, "An Intelligent Method for Very-Short Range Multi-Step Wind Power Forecasting", in Proc. of the 10th IEEE PES Asia-Pacific Power and Energy Engineering Conference 2018 (APPEEC), Kota Kinabalu, Sabah, Malaysia, 07-10 Oct, (**2018**).

10.1109/APPEEC.2018.8566455

C117. U. Akram and **M. Khalid**, "Residential Demand Side Management in Smart Grid Paradigm", in Proc. of the 10th IEEE PES Asia-Pacific Power and Energy Engineering Conference 2018 (APPEEC), Kota Kinabalu, Sabah, Malaysia, 07-10 Oct, (**2018**).

10.1109/APPEEC.2018.8566374

C118. M. Abdulgalil, A. Alsayed, **M. Khalid**, and I. Elamin "Optimal Dispatch of Distributed Generation Units, Wind Farms and Energy Storage Systems", in Proc. of the 10th IEEE PES Asia-Pacific Power and Energy Engineering Conference 2018, Kota Kinabalu, Sabah, Malaysia, 07-10 Oct, (**2018**). 10.1109/APPEEC.2018.8566506

C119. M. Abdulgalil, A. Amin and **M. Khalid**, "Optimal Sizing, Allocation, Dispatch and Power Flow of Energy Storage Systems Integrated with Distributed Generation Units and a Wind

Farm", in Proc. of the 10th IEEE PES Asia-Pacific Power and Energy Engineering Conference 2018 (APPEEC), Kota Kinabalu, Sabah, Malaysia, 07-10 Oct, (**2018**).

10.1109/APPEEC.2018.8566332

C120. H. Abdellatif, M. AlMuhaini and **M. Khalid**, "Reliability Analysis of an Integrated PV System Using Markovian Modeling", in Proc. of the 10th IEEE PES Asia-Pacific Power and Energy Engineering Conference 2018 (APPEEC), Kota Kinabalu, Sabah, Malaysia, 07-10 Oct, (**2018**).

10.1109/APPEEC.2018.8566485

C121. S. Ahmed, **M. Khalid**, and U. Akram. "A method for short-term wind speed time series forecasting using Support Vector Machine Regression Model", in 2017 6th International Conference on Clean Electrical Power (ICCEP), pp. 190-195, IEEE, Santa Margherita Ligure, Italy, 27-29 June, (**2017**). 10.1109/ICCEP.2017.8004814

C122. S. Shafiq, M. A. Aslam, **M. Khalid**, A. Raza, and U. Akram, "Implementation of Electric Drive System Using Induction Motor for Traction Applications", in 2017 6th International Conference on Clean Electrical Power (ICCEP), pp. 673-677, IEEE, Santa Margherita Ligure, Italy, 27-29 June, (**2017**). 10.1109/ICCEP.2017.8004762

C123. U. Akram, **M. Khalid**, and S. Shafiq, "An Advanced Control Strategy for Magnetic Levitation Train System Based on an Online Adaptive PID Controller", in 2017 9th IEEE-GCC Conference and Exhibition (GCCCE), Manama, Bahrain, 08-11 May, (**2017**).

10.1109/IEEEGCC.2017.8448027

C124. U. Akram, **M. Khalid**, and S. Shafiq. "Optimizing a Grid-Connected Micro-Grid with Optimal Renewable Generation and Battery Energy Storage", in 2017 9th IEEE-GCC Conference and Exhibition (GCCCE), Manama, Bahrain, 08-11 May, (**2017**).

10.1109/IEEEGCC.2017.8448232

C125. U. Akram, **M. Khalid** and S. Shafiq, "On Sizing of Standalone Hybrid Wind/Solar/Battery Micro-grid System", In: International Conference on Renewable Energies and Power Quality (ICREPQ'17), Malaga, Spain, 4-6 April, (**2017**).

https://www.icrepq.com/icrepq17/421-17-akram.pdf

C126. A. Ahmed, and **M. Khalid**, "A Nonlinear Autoregressive Neural Network Model for Short-Term Wind Forecasting", in 2017 9th IEEE-GCC Conference and Exhibition (GCCCE), Manama, Bahrain, 08-11 May, (**2017**). 10.1109/IEEEGCC.2017.8447983

C127. S. Sakkaf, M. Kassas, and M. Khalid, "The Effect of Ambient Temperature on the Power Output of 5kW Photovoltaic Solar Power System", in Proceedings of the International Conference on Sustainability in Energy and Buildings, Chania, Greece, July, (**2017**).

https://nimbusvault.net/publications/koala/SEBRA/579.html

C128. A. Ahmed and **M. Khalid**, "Multi-step Ahead Wind Forecasting Using Nonlinear Autoregressive Neural Networks", in Proceedings of the International Conference on Sustainability in Energy and Buildings, Chania, Greece, July, (**2017**).

https://doi.org/10.1016/j.egypro.2017.09.609

C129. **M. Khalid**, A. V. Savkin, and V. G. Agelidis, "A Method for Minimizing Energy Cost in a Microgrid with Hybrid Renewable Power Generation Using Controlled Battery Energy Storage", in IEEE 35th Chinese Control Conference (CCC), pp. 8596-8600. IEEE, Chengdu, China, 27-29 July, (**2016**).

10.1109/ChiCC.2016.7554728

C130. **M. Khalid**, A. V. Savkin, and V. G. Agelidis, "An Adaptive Control Algorithm for Wind Power Dispatch Using a Battery Energy Storage System", in Proceedings of the IEEE Multi-Conference on Systems and Control (MSC), Sydney, Australia, 21-23 Sep, (**2015**). **(Ex-PhD)**

10.1109/CCA.2015.7320732

C131. **M. Khalid,** A. V. Savkin, and V. G. Agelidis, "Optimization of a Power System Consisting of Wind and Solar Power Plants and Battery Energy Storage for Optimal Matching of Supply and Demand", in Proceedings of the IEEE Multi-Conference on Systems and Control (MSC), Sydney, Australia, 21-23 Sep, (**2015**). **(Ex-PhD)**

10.1109/CCA.2015.7320705

C132. **M. Khalid**, A. V. Savkin, and V. G. Agelidis, "Maximizing the Income for Wind Power Plant Integrated with a Battery Energy Storage System Using Dynamic Programming", in Proceedings of the 10th Asian Control Conference (ASCC), Kota Kinabalu, Malaysia, 31 May 2015 - 03 June, (**2015**). **(Ex-PhD)**

10.1109/ASCC.2015.7244620

C133. **M. Khalid**, A. V. Savkin, and V. G. Agelidis, "Optimal Hybrid Wind-Solar System for Matching Renewable Power Generation with Demand", in 11th IEEE International Conference on Control & Automation (IEEE ICCA 2014), Taichung, Taiwan, 18-20 June, (**2014**). **(Ex-PhD)**

10.1109/ICCA.2014.6871115

C134. A. Khatamianfar, **M. Khalid**, A. V. Savkin, and V. G. Agelidis, "Power Generation Dispatch Improvement with Battery Energy Storage Using Model Predictive Control", in Proceedings of the 2012 IEEE International Conference on Control Applications, Dubrovnik, Croatia, (**2012**). **(Ex-PhD)**

10.1109/CCA.2012.6402350

C135. **M. Khalid** and A. V. Savkin, "Model Predictive Control of Distributed and Aggregated Battery Energy Storage System for Capacity Optimization", in Proceedings of the 9th IEEE International Conference on Control & Automation, pp. 521-526, Santiago, Chile, 19-21 Dec, (**2011**). **(Ex-PhD)**

10.1109/ICCA.2011.6137882

C136. **M. Khalid** and A. V. Savkin, "Optimization and Control of a Distributed Battery Energy Storage System for Wind Power Smoothing", in Proceedings of the 19th Mediterranean Conference on Control and Automation, pp. 39–43, Corfu, Greece, 20-23 June, (**2011**). **(Ex-PhD).** 10.1109/MED.2011.5983095

C137. **M. Khalid** and A. V. Savkin, "Model Predictive Control of Wind Energy Storage System for Frequency Regulation", in Proceedings of the International Conference on Sustainability in Energy and Buildings, Brighton, UK, (**2010**). **(Ex-PhD)**

https://doi.org/10.1007/978-3-642-17387-5_11

C138. **M. Khalid** and A. V. Savkin, "Direction Dependent Power Curves for Wind Power Prediction: A Case Study", in Proceedings of the International Conference on Sustainability in Energy and Buildings, Brighton, UK, (**2010**). **(Ex-PhD)**

https://doi.org/10.1007/978-3-642-17387-5_13

C139. **M. Khalid** and A. V. Savkin, "Model Predictive Control Based Efficient Operation of Battery Energy Storage System for Primary Frequency Control", in Proceedings of the 11th

	International Conference on Control, Automation, Robotics and Vision (ICARCV 2010), Singapore, pp. 2248-2252, 07-10 Dec, (**2010**). **(Ex-PhD)** 10.1109/ICARCV.2010.5707855
C140.	**M. Khalid** and A. V. Savkin, "Development of Short-Term Prediction System for Wind Power Generation Based on Multiple Observation Points", in Proceedings of the International Conference on Sustainability in Energy and Buildings, Brighton, UK, (**2009**). **(Ex-PhD)** https://doi.org/10.1007/978-3-642-03454-1_10
C141.	**M. Khalid** and A. V. Savkin, "Model Predictive Control for Wind Power Generation Smoothing with Controlled Battery Storage", in Proceedings of the 48th IEEE Conference on Decision and Control (CDC/CCC), Shanghai, China, pp. 7849-7853, 15-18 Dec, (**2009**). **(Ex-PhD)** 10.1109/CDC.2009.5400002
C142.	**M. Khalid** and A. V. Savkin, "Adaptive Filtering Based Short-Term Wind Power Prediction with Multiple Observation Points", in Proceedings of the 7th International Conference on Control and Automation, Christchurch, New Zealand, pp. 1547-1552, 09-11 Dec, (**2009).** 10.1109/ICCA.2009.5410400. **(Ex-PhD)**

4.3.3 Refereed Technical Reports

TR1.	**M. Khalid**, M. Abido, S. Shaik, M. Al-Dhaifallah, and M. Gulzar, *"Mitigating the Impact of Renewable Stochasticity through Incorporation of Energy Storage and Smart Inverters"*, A one-year Funded Research Project, Interdisciplinary Research Center for Sustainable Energy Systems (*IRC-SES*), Final Technical Report, # INRE2321, December **2023**.
TR2.	**M. Khalid**, *"Machine Learning for Battery Energy Storage Degradation Modeling and Optimal Large-Scale grid Integration of renewables in Saudi Arabia"*, A One-year project by Saudi Authority for Data and Artificial Intelligence (*SDAIA*), Final Technical Report, #JRC-AI-RFP-08, December **2023**.
TR3.	**M. Khalid**, M. Abido, and M. Ali, *"Development of Smart Integrated Converter Control Platform for Solar PV Integration with Net Zero Energy Building Coupled with Battery Energy Storage System"*, A One-and-a-half-year project by Interdisciplinary Research Center for Sustainable Energy Systems (*IRC-SES*), Final Technical Report, #INRE2220, August **2023.**
TR4.	**M. Khalid**, M. Abido, and A. Salem, *"Development of Robust Integrated Controller for Optimal Power Management in Renewable Microgrids"*, A One-and-a-half-year project by Interdisciplinary Research Center for Sustainable Energy Systems (*IRC-SES*), Final Technical Report, #INRE2106, March **2023**.
TR5.	**M. Khalid**, M. Abido, and A. Salem, *"Frequency Control and Inertia Support for Solar PV Plants Using Integrated Hybrid Energy Storage Systems"*, A Two-year project by Deanship of Research, #DF201011, March **2023**.
TR6.	**M. Khalid**, M. Abido, and M. Al-Muhaini, *"Development of an Intelligent Power Quality and Stability Framework for Large-Scale Integration of Renewable Energy Sources"*, A Two-year project by Deanship of Research, Final Technical Report, #DF191011, March **2022**.
TR7.	**M. Khalid**, *"Development of Sustainable Solutions for Future Integration of Renewables Based on Optimal Hybrid Energy Storage System Under Saudi Extreme Weather Conditions"*, A One-year project by King Abdullah City for Atomic and Renewable Energy (*K.A.CARE*), Final Technical Report, November **2021**.

TR8.	**M. Khalid**, *"Smart Hybrid Energy Storage System for Solar Power Applications Under Critical Weather Conditions"*, A One-year project by King Abdullah City for Atomic and Renewable Energy (*K.A.CARE*), #KACARE182-RFP-08, Final Technical Report, February 2020. **(Ex-TR)**
TR9.	**M. Khalid**, M. Abido, and A. Al-Awami, *"Design and Development of an Optimal Distributed Generation and Hybrid Storage System for Microgrids"*, A Two-year project by A Two-year project by Deanship of Research, #RG171009, Final Technical Report, March **2020. (Ex-TR)**
TR10	**M. Khalid**, M. Abido, and M. Al-Muhaini, *"Design and Control of Battery Energy Storage System for Microgrids"*, A two-year Funded Research Project, Deanship of Research, Final Technical Report, Final Technical Report, #IN161038, April **2019**. **(Ex-TR)**
TR11	**M. Khalid (Sole Author)**, *"Development and Control of Hybrid Battery-Supercapacitor Energy Storage System for Solar Power Applications"*, A One-year Funded Research Project, Deanship of Research, Final Technical Report, Final Technical Report, # SR161001, April **2017**. **(Ex-TR)**

4.3.4 Book Writing and Book Chapters

	4.3.4.A Book Writing
B1.	**M. Khalid**, Sustainable Energy Systems: Emerging Technologies and Practices in Renewable Energy Storage, Sustainability, (**2023**), ISBN 978-3-0365-8914-5. https://doi.org/10.3390/books978-3-0365-8915-2
B2.	M. Asif, G. Sahin, and **M. Khalid**, Handbook of Energy and Environment in the 21st Century: Technology and Policy Dynamics, Taylor & Francis, CRC Press (**2024**), ISBN 9781032715421. https://doi.org/10.1201/9781032715438
	4.3.4.B Contribution to Book Chapters
BC1.	M. M. Gulzar, M. S. Tolba, **M. Khalid**. "Book: Frequency Regulation in Microgrids", "Chapter # 6: Role of Energy Storage Systems in Microgrid Frequency Control", Elsevier. 2025 (Accepted)
BC2.	U. Habiba, A. Yousaf, H. Ahmad, M. Rehan, I. Ahmed, and **M. Khalid**. "A Roadmap to Achieve Net-Zero Emissions." Net ZERO: Foundations, Technologies and Strategic Innovation, 1st ed., Elsevier, eBook ISBN 9780443364273
BC3.	F. Noor, K. Zeb, W. Uddin, I. Khan, **M. Khalid**. "Book: Electric and Hybrid Vehicles: A Solution to Green Transportation and Resilient Grid", "Chapter # 07: Resilient ABF-SMC Design for a Novel Multisource Hybrid Electric Vehicle", IEEE. July 2025 (Accepted)
BC4.	M. Ali, **M. Khalid**, and M. A. Abido, Multilevel Inverter Operation with Reduced Capacitor Inrush Currents for Solar Photo-Voltaic Applications, John Wiley & Sons, Inc., (**2024**), ISBN:9781394167371, https://doi.org/10.1002/9781394167371.ch4
BC5.	**M. Khalid**, Technology and Architecture of Smart Grids, Taylor & Francis, (**2024**), ISBN 9781032715421, https://doi.org/10.1201/9781032715438-5
BC6.	M. Maaruf and **M. Khalid**, Power Management and Control of an All-Electric Ship Powered by Solar Photovoltaic and Hydrogen Energy System, Performance Enhancement and Control of Photovoltaic Systems, Elsevier (**2024**). https://doi.org/10.1016/B978-0-443-13392-3.00015-3
BC7.	M. Ali, **M. Khalid**, and M. M. Gulzar, Transforming the grid: AI, ML, Renewable, Storage, EVs, and Prosumers, pp. 3-30, Intelligent Learning Approaches for Renewable and Sustainable Energy, Elsevier (**2024**), ISBN 978-0-443-15806-3. https://doi.org/10.1016/B978-0-443-15806-3.00001-2

BC8.	A. Ahmad, S. Kashif, A. Ashraf, M. Gulzar, M. Alqahtani, and **M. Khalid**, Coordinated Economic Operation of Hydrothermal Units with HVDC Link Based on Lagrange Multipliers, Mathematics, (**2024**), ISBN 978-3-7258-0776-5, https://doi.org/10.3390/math11071610
BC9.	M. Ali, A. Iqbal, M. R. Khan, and **M. Khalid**, AC-AC Converters, pp. 437-480, Power Electronics Handbook, Butterworth-Heinemann, Elsevier (**2024**), ISBN 978-0-323-99216-9. https://doi.org/10.1016/B978-0-323-99216-9.00024-X
BC10.	A. Atif, K. A. Khan, and **M. Khalid**, Solar Power Smoothing Using Battery Energy Storage System Through Fuzzy Filtration Technique, pp. 485-520, Emerging Trends in Energy Storage Systems and Industrial Applications, *Elsevier*, (**2022**), ISBN 978-0-323-90521-3. https://doi.org/10.1016/B978-0-323-90521-3.00004-1
BC11.	Y. M. Al-Humaid, K. A. Khan, M. A. Abdulgalil, and **M. Khalid**, Cost-Optimization and Optimal Selection of Energy Storage System for Renewable Integrated Power Grid, *in* Trends in Renewable Energies and Power Quality, Cambridge Scholars Publishing, (**2024**), ISBN: 1-5275-9433-5
BC12.	K. A. Khan, A. Atif and **M. Khalid**, "Hybrid Battery-Supercapacitor Energy Storage for Enhanced Voltage Stability in DC Microgrids Using Autonomous Control Strategy, pp. 535-569, Emerging Trends in Energy Storage Systems and Industrial Applications, *Elsevier*, (**2022**), ISBN 978-0-323-90521-3. https://doi.org/10.1016/B978-0-323-90521-3.00007-7
BC13.	**M. Khalid** and A. V. Savkin, Model Predictive Control of Wind Energy Storage System for Frequency Regulation, pp. 101-110, Sustainability in Energy and Buildings, Springer Berlin Heidelberg, pp. 101–110, (**2011**), ISBN 978-3-642-17386-8 **(Ex-BC)** https://doi.org/10.1007/978-3-642-17387-5_11
BC14.	**M. Khalid** and A. V. Savkin, Direction Dependent Power Curves for Wind Power Prediction: A Case Study, pp. 121-127, Sustainability in Energy and Buildings, Springer Berlin Heidelberg, pp. 121–127, (**2011**), ISBN 978-3-642-17386-8 **(Ex-BC).** https://doi.org/10.1007/978-3-642-17387-5_13
BC15.	**M. Khalid** and A. V. Savkin, Development of Short-Term Prediction System for Wind Power Generation Based on Multiple Observation Points, pp. 89-98, Sustainability in Energy and Buildings, Springer Berlin Heidelberg, pp. 89–98, (**2009**), ISBN 978-3-642-03453-4 **(Ex- BC).** https://doi.org/10.1007/978-3-642-03454-1_10

4.3.5 Patents (Filed and/or Registered) [at Current Rank]

Patents Issued

P1.	**M. Khalid***, "Fault recovery controller for integrated solar PV system," US12407165B2, Sep. 2, 2025. https://patents.google.com/patent/US12407165B2/en
P2.	**M. Khalid*** and M. Ali, "Inverter topology circuit," US12407274B2, Sep. 2, 2025. https://patents.google.com/patent/US12407274B2/en
P3.	J. Alshehri, **M. Khalid***, A. Hussain Alzahrani, "Battery energy storage-based controller for improving microgrid power quality," US12294219B2, May 9, 2025. https://patents.google.com/patent/US12294219B2/en
P4.	M. M. Gulzar, **M. Khalid*, "**Systems and methods for converterless solar PV operation in hybrid renewable microgrids," US12355257B2, Jul. 8, 2025. https://patents.google.com/patent/US12355257B2/en

P5.	**M. Khalid*** and M. Maaruf, "System and method for controlling a hybrid microgrid system," U.S. Patent US12003111B1, Jun. 4, 2024. https://patents.google.com/patent/US12003111B1/en
P6.	**M. Khalid*** and M. A. Syed, "Renewable energy system and electrical grid," U.S. Patent US11979112B2, May 7, 2024. https://patents.google.com/patent/US11979112B2/en
P7.	**M. Khalid*** and M. A. Syed, "Systems and methods for wind power control and battery size-reduction," U.S. Patent US11894683B1, Feb. 6, 2024. https://patents.google.com/patent/US11894683B1/en
P8.	**M. Khalid*** and M. A. Syed, "Renewable energy system with low pass filter," U.S. Patent US12040745B1, Jul. 16, 2024. https://patents.google.com/patent/US12040745B1/en
P9.	H. S. AlHarbi, **M. Khalid***, and M. A. Abido, "Static electrostatic generator for high voltage low power applications," U.S. Patent US11133756B2, Sep. 28, 2023. https://patents.google.com/patent/US11133756B2/en
P10.	H. S. AlHarbi, **M. Khalid***, and M. A. Abido, "Copper block-patterned spherical static electrostatic generator," U.S. Patent US11588415B2, Feb. 21, 2023. https://patents.google.com/patent/US11588415B2/en
P11.	H. S. AlHarbi, **M. Khalid***, and M. A. Abido, "Concentric wire and tube electrostatic generator," U.S. Patent US11581824B2, Feb. 14, 2023. https://patents.google.com/patent/US20220006397A1/en
P12.	H. S. AlHarbi, **M. Khalid***, and M. A. Abido, "Electrostatic generator with patterned metal sphere," U.S. Patent US11575333B2, Feb. 7, 2023. https://patents.google.com/patent/US11575333B2/en
P13.	H. S. AlHarbi, **M. Khalid***, and M. A. Abido, "Air ionizer for air purification," U.S. Patent US11563387B2, Jan. 24, 2023. https://patents.google.com/patent/US11563387B2/en
P14.	H. S. AlHarbi, **M. Khalid***, and M. A. Abido, "Electrostatic generator having metallic patterned surface," U.S. Patent US11496069B2, Nov. 8, 2022. https://patents.google.com/patent/US11496069B2/en
P15.	M. Syed, **M. Khalid***, and A. S. Miswar, "Moving linear regression based power firming filter," U.S. Patent US11411533B1, Aug. 9, 2022. https://patents.google.com/patent/US11411533B1/en
P16.	M. Gulzar and **M. Khalid***, "Systems and methods for converterless solar PV operation in hybrid renewable microgrids," U.S. Patent US12355257B2, Jul. 8, 2025. https://patents.google.com/patent/US12355257B2/en
P17.	J. A. Alshehri, **M. Khalid***, and A. H. Alzahrani, "Battery energy storage-based controller for improving microgrid power quality," U.S. Patent US12294219B2, May 6, 2025. https://patents.google.com/patent/US12294219B2/en
P18.	**M. Khalid*** and M. Maaruf, "Hybrid microgrid system for wind power electrical generation," U.S. Patent US12119659B2, Oct. 15, 2024. https://patents.google.com/patent/US12119659B2
P19.	**M. Khalid*** and M. Maaruf, "Method for controlling hybrid microgrid system for wind power electrical generation," U.S. Patent US12107427B2, Oct. 1, 2024. https://patents.google.com/patent/US12107427B2

P20.	**M. Khalid*** and M. A. Syed, "Photovoltaic energy network," U.S. Patent US12107539B2, Oct. 1, 2024. https://patents.google.com/patent/US12107539B2/en
P21.	**M. Khalid*** and K. Zeb, "Supertwisting sliding mode controller for fast EV charging," U.S. Patent US12145460B1, Nov. 11, 2024. https://patents.google.com/patent/US12145460B1/en

Patents Under Review

P22.	K. A. Khan and **M. Khalid***, "Voltage regulation controller for microgrids with renewables and hybrid energy storage," U.S. Patent Application 18/073,960.
P23.	**M. Khalid*** and M. Maaruf, "Robust control for optimized islanded and grid-connected operation of solar/wind/battery hybrid energy systems," KFUPM Ref: 2022-055-TM.
P24.	M. M. Gulzar and **M. Khalid***, "Intelligent stability and control for frequency stabilization of an integrated hybrid renewable energy system," KFUPM Ref: 2023-174.
P25.	**M. Khalid*** and M. Maaruf, "Power distribution controller for hybrid electric vehicle," KFUPM Ref: 2022-042-TM.
P26.	M. M. Gulzar and **M. Khalid***, "Load frequency controller for hybrid PV-hydrogen-bromine redox flow battery storage power system," KFUPM Ref: 2023-059.
P27.	**M. Khalid*** and M. Ali, "Less-switch-count switched-capacitor multilevel inverter," KFUPM Ref: 2023-173.
P28.	M. M. Gulzar and **M. Khalid***, "Solar PV automatic voltage regulator under extreme weather conditions," KFUPM Ref: 2023-188.
P29.	**M. Khalid***, H. Rauf, and N. Arshad, "Battery degradation modelling based on modern machine learning approaches," KFUPM Ref: 2023-077.
P30.	M. M. Gulzar and **M. Khalid***, "Robust load frequency controller in multi-area hybrid renewable power system with uncertainties," KFUPM Ref: 2023-170.
P31.	M. M. Gulzar and **M. Khalid***, "Control system for interconnected hybrid power network," KFUPM Ref: 2023-159.
P32.	**M. Khalid*** and K. Zeb, "Nonlinear harmonic disturbance observer and robust controller for UAVs," KFUPM Ref: 2024-075.
P33.	**M. Khalid***, A. Warsag, and M. A. Abido, "Solid-state transformer design for enhanced smart grid integration," KFUPM Ref: 2024-118.
P34.	**M. Khalid*** and K. Zeb, "An integrated induction motor drive control system for hybrid electric vehicles," KFUPM Ref: 2024-116.

4.4 Ranking and Citations ([exclude self-citations])

4.4.1 List of Publications (Main Contributions)			
		WoS = **W**eb **o**f **S**cience Citations, **S** = **S**copus Citations (i.e., excluding Self-Citations)	

No	**Paper Details,** Authors(s) and Paper Title	Q-Rank	IF-JCR	Citations		Is ISI?/ Any Comments
				WoS	S	%
J1.	Iqbal, N., Masood, M., & **Khalid, M. (2025).** Unsupervised deep seismic pursuit: Recovering the compressed seismic data without ground truth. IEEE Transactions on Instrumentation and Measurement, 74, 1–7. https://doi.org/10.1109/TIM.2025.3608320	**Q1**	**5.9**	**0**	**0**	**Yes**/ Top 15%
J2.	Elkhidir, L. K., Ahmed, I., **Khalid, M.**, & Al-Ismail, F. S. (**2025**). Techno-economic optimization of multi-output energy hubs with integrated storage systems and electrolyzers. Journal of Energy Storage, 136, 118323. https://doi.org/10.1016/j.est.2025.118323	**Q1**	**9.8**	**0**	**0**	**Yes**/ Top 15%
J3.	Wahid, N., Asif, M., Khan, M. I., & **Khalid, M. (2025).** A strategic analysis of geothermal energy for sustainable energy transition: Case study from Indonesia. Energy Conversion and Management: X, 101303. https://doi.org/10.1016/j.ecmx.2025.101303	**Q1**	**7.6**	**0**	**0**	**Yes**/ Top 5%
J4.	Abdirahman, A. A., Asif, M., Cuce, E., Ahmed, I., Alqahtani, M., & **Khalid, M. (2025).** Optimizing PV systems in high-temperature environments: A SWOT-based analysis of cooling technologies. Energy Strategy Reviews, 61, 101828. https://doi.org/10.1016/j.esr.2025.101828	**Q1**	**9.9**	**0**	**0**	**Yes**/ Top 15%
J5.	Ahmed, I., Hossain, M. A., & **Khalid*, M**. (**2025**). Assessment of smart district heating–cooling networks considering renewable and zero-carbon strategies. Renewable and Sustainable Energy Reviews, 224, 116037. https://doi.org/10.1016/j.rser.2025.116037	**Q1**	**16.3**	**1**	**1**	**Yes**/ Top 5%
J6.	Hussain, M., Tahir, F., Rehan, M., Ahn, C. K., Ahmed, I., & **Khalid, M. (2025).** Fractional Proportionate Normalized Filtered Input Least Mean Square Algorithm for Active Noise Control Systems, accepted in Journal of Control Automation and Electrical Systems. *(in press)*	**Q3**	**1.3**	**0**	**0**	**Yes**
J7.	Zeb, K., Ramisha, Awan, Q., Hayat, R., Rasheed, A., Uddin, W., & Khalid, M. (2025). Deep Reinforcement Learning based Model Free Secondary Frequency Control of Widespread Islanded Microgrid with Stability Constraints. accepted in Arabian Journal for Science and Engineering, 6 Oct 2025. *(in press)*	**Q2**	**2.9**	**0**	**0**	**Yes**
J8.	Bali, A., Maaruf, M., Singh, U. P., Fekih, A., Abubakar, A. N., & Khalid, M. (2025). Adaptive control of nonstrict-feedback cyber-physical systems with unmodeled dynamics and false data injection attacks. International Journal of Control, 1-17. https://doi.org/10.1080/00207179.2025.2571931	**Q3**	**1.6**	**0**	**0**	**Yes**

J9.	Hennache, A., Quamar, Md., Khan, K., Alqahtani, M., Ahmed, I., & **Khalid, M. (2025)**. Control Strategies for Reverse Osmosis Desalination Powered by Photovoltaic Systems: A Comprehensive Review, accepted in Energy Strategy Reviews, 5 Oct 2025. (in press)	**Q1**	**9.9**	**0**	**0**	**Yes**/ Top 15%
J10.	Rauf, H., **Khalid, M.**, & Arshad, N. (**2025**). A review of processes and mechanisms driving structural and mechanical evolution in lithium-ion batteries. Sustainable Energy Technologies and Assessments, 82, 104545. https://doi.org/10.1016/j.seta.2025.104545	**Q2**	**7.0**	**0**	**0**	**Yes**
J11.	Sun, P., Pinthurat, W., Li, G., **Khalid, M**., Town, G. E., & Konstantinou, G. (**2025**). Adaptive Droop Control in VSC-Based MT-MVDC Distribution Systems Considering ESS Participation. IEEE Transactions on Energy Conversion, 40(2), 761-772. https://doi.org/10.1109/TEC.2024.3456070	**Q1**	**5.4**	**1**	**2**	**Yes**/ Top 20%
J12.	Zeb, K., Uddin, W., Al-Durra, A., Alqahtani, M., & **Khalid, M**. (**2025**). A technological review on emerging trends and future outlook of cutting-edge charger technologies for next-generation electric vehicles. Energy Conversion and Management: X, 101161. https://doi.org/10.1016/j.ecmx.2025.101161	**Q1**	**7.6**	**1**	**1**	**Yes**/ Top 5%
J13.	Hussain, M., Tahir, F., Rehan, M., Ahn, C. K., Ahmed, I., & **Khalid, M. (2025)**. Fully-Distributed Resilient Consensus of Multi-Agent Systems With State and Input Sector Nonlinearities Under Stochastic Denial-of-Service Attacks. IEEE Transactions on Automation Science and Engineering. https://doi.org/10.1109/TASE.2025.3597153	**Q1**	**6.4**	**0**	**0**	**Yes**/ Top 15%
J14.	Ahmad, H., Gulzar, M. M., Ahmed, I., & **Khalid, M**. (**2025**). Adoption of modern digital innovations: a systematic review of social impacts in online community forums. Social Network Analysis and Mining, 15(1), Article 29. https://doi.org/10.1007/s13278-025-01450-x	**Q2**	**2.8**	**0**	**0**	**Yes**
J15.	Shahzad, M. I., Gulzar, M. M., Habib, S., Shafiullah, M., Shahzad, A., & **Khalid, M**. (**2025**). Advanced frequency stabilization framework for multi-area renewable energy grids with EV aggregator support: A multi-stage control perspective. Sustainable Computing: Informatics and Systems, 46, Article 101120. https://doi.org/10.1016/j.suscom.2025.101120	**Q1**	**5.7**	**3**	**3**	**Yes**/ Top 15%
J16.	Sun, P., Wu, R., Shen, Z., Wang, H., Li, G., **Khalid, M**., & Konstantinou, G. (**2025**). Data-Driven Power Flow Estimation for MVDC Distribution Systems	**Q1**	**9.8**	**0**	**0**	**Yes**/ Top 5%

	Based on Physics-Embedded FCN. IEEE Transactions on Smart Grid. https://doi.org/10.1109/TSG.2025.3555228					
J17.	Mamoon, M., Mustafa, G., Iqbal, N., Rehan, M., Ahmed, I., & **Khalid*, M**. (**2025**). An adaptive neural network approach for resilient leader-following consensus control of multi-agent systems under cyber-attacks. ISA Transactions, 157, 20-34. https://doi.org/10.1016/j.isatra.2024.11.046	**Q1**	**6.5**	**2**	**2**	**Yes**/ Top 5%
J18.	Khaliq, A., Rehan, M., Ahmed, I., Rashid, U., & **Khalid*, M**. (**2025**). A Novel Robust-Adaptive Control Methodology for Sign-Consensus of Multi-agent Systems Under Signed Graphs and External Disturbances. Arabian Journal for Science and Engineering, 50(8), 6141-6156. Article 111797. https://doi.org/10.1007/s13369-024-09826-5	**Q2**	**2.9**	**1**	**0**	**Yes**/
J19.	Ahmad, M., Shafiullah, M., Worku, M. Y., Alam, M. S., & **Khalid, M**. (**2025**). An Overview of VSC-HVDC Systems and Challenges to Harvest Wind Energy Potential Considering South Asian Region as a Case Study. International Journal of Energy Research, 2025(1), Article 8644219. https://doi.org/10.1155/er/8644219	**Q1**	**4.2**	**0**	**0**	**Yes**/ Top 2%
J20.	Zaid, M., Ali, M., Sarwar, A., **Khalid, M**., & Iqbal, A. (**2025**). A reduced switch stress common-ground boosting multilevel inverter for renewable energy applications. e-Prime - Advances in Electrical Engineering, Electronics and Energy, 12, Article 100953. https://doi.org/10.1016/j.prime.2025.100953	**-**	**-**	**0**	**0**	**No**
J21.	Ali, H., Khan, H. A., **Khalid, M**., & Pecht, M. (**2025**). A review and analysis of the safety labeling of lithium-ion batteries. Journal of Energy Storage, 120, Article 116461. https://doi.org/10.1016/j.est.2025.116461	**Q1**	**9.8**	**0**	**1**	**Yes**/ Top 15%
J22.	Ahmed, I., Maaruf, M., Ali, A., AlMuhaini, M., & **Khalid*, M**. (**2025**). A review on challenges and future of green charging networks for zero emission electric transportation. Energy Conversion and Management: X, 25, Article 100867. https://doi.org/10.1016/j.ecmx.2024.100867	**Q1**	**7.6**	**7**	**9**	**Yes**/ Top 5%
J23.	Alqahtani, M., Alhajri, S., Menesy, A. S., Maher Mohammed, A., Sultan, H. M., & **Khalid, M**. (**2025**). Comprewhensive techno-environmental evaluation of an isolated PV/wind/biomass hybrid microgrid employing various battery technologies: A comparative analysis. PLoS ONE, 20(2 February), Article e0317757.	**Q2**	**2.6**	**2**	**2**	

	https://doi.org/10.1371/journal.pone.0317757					
J24.	Ahmed, I., Rehan, M., & **Khalid, M**. (**2025**). Consensus-Oriented Distributed Protocol for a Resilient Optimal Power Delivery Over a Smart Grid Under Electric Vehicles Load and Stochastic Hybrid Cyber-Attacks. International Journal of Energy Research, 2025(1), Article 9914892. https://doi.org/10.1155/er/9914892	**Q1**	**4.2**	**0**	**0**	**Yes**/ Top 2%
J25.	Faruque, M. O., Hossain, M. A., Alam, S. M. M., & **Khalid, M**. (**2025**). Constraint-aware wind power forecasting with an optimized hybrid machine learning model. Energy Conversion and Management: X, 27, Article 101026. https://doi.org/10.1016/j.ecmx.2025.101026	**Q1**	**7.6**	**1**	**2**	**Yes**/ Top 5%
J26.	Gull, M. S., Ahmed, I., **Khalid, M**., & Arshad, N. (**2025**). Design and optimization of electric vehicle battery swapping stations with integrated storage for enhanced efficiency. Journal of Energy Storage, 129, Article 117211. https://doi.org/10.1016/j.est.2025.117211	**Q1**	**9.8**	**0**	**0**	**Yes**/ Top 15%
J27.	Ahmed, I., Syed, M. A., Maaruf, M., & **Khalid, M**. (**2025**). Distributed computing in multi-agent systems: a survey of decentralized machine learning approaches. Computing (Vienna/New York), 107(1), Article 2. https://doi.org/10.1007/s00607-024-01356-0	**Q2**	**2.8**	**11**	**11**	**Yes**
J28.	**Khalid*, M**., & Jasińska, E. (**2025**). Editorial: AI-based energy storage systems. Frontiers in Energy Research, 13, Article 1626556. https://doi.org/10.3389/fenrg.2025.1626556	**Q3**	**2.4**	**0**	**0**	**Yes**
J29.	Ahmed, I., Basit, A., Ahmad, M., AlMuhaini, M., & **Khalid*, M**. (**2025**). Electric Mobility Challenges and Approaches for Sustainable Green Power Synergy in Smart Cities. Arabian Journal for Science and Engineering, 50(8), 5323-5351. https://doi.org/10.1007/s13369-024-09838-1	**Q2**	**2.9**	**4**	**4**	**Yes**
J30.	Sultan, H. M., Zaki Diab, A. A., Menesy, A. S., Kassas, M., Alqahtani, **M., Khalid**, M., & Abdul-Ghaffar, H. I. (**2025**). Enhancing optimal power flow in power systems: A comparative analysis of recent metaheuristic optimization techniques. Energy Reports, 13, 3957-3999. https://doi.org/10.1016/j.egyr.2025.03.031	**Q2**	**5.1**	**0**	**1**	**Yes**
J31.	Kharal, A. Y., **Khalid, M**., Naqvi, I. H., & Arshad, N. (**2025**). Identification and quantification of degradation modes in lithium-ion battery cells under	**Q1**	**7.9**	**1**	**1**	**Yes**/ Top 15%

	dynamic load conditions using equivalent circuit and physics-based models. Journal of Power Sources, 632, Article 236274. https://doi.org/10.1016/j.jpowsour.2025.236274					
J32.	Vishnuram, P., Dominic Savio, A., Bajaj, M., Ahmed, I., & **Khalid*, M**. (**2025**). Isolated Power DC-DC and AC-DC Converter Topologies for Light-Emitting Diode Applications: A Systematic Review. Arabian Journal for Science and Engineering, 50(8), 5377-5405. Article 216350. https://doi.org/10.1007/s13369-025-09974-2	**Q2**	**2.9**	**0**	**0**	**Yes**
J33.	Gulzar, M. M., Sibtain, D., Alqahtani, M., Alismail, F., & **Khalid, M**. (**2025**). Load frequency control progress: A comprehensive review on recent development and challenges of modern power systems. Energy Strategy Reviews, 57, Article 101604. https://doi.org/10.1016/j.esr.2024.101604	**Q1**	**9.9**	**0**	**20**	**Yes**/ Top 15%
J34.	Feroze, F., Zeb, K., Uddin, W., Imran, **M., Khalid**, M., & Ullah, Z. (**2025**). Lyapunov-Based Novel Integral Backstepping and Integral Sliding Mode Controllers Design for Efficient Voltage Regulation of Resilient DC Microgrid. International Journal of Energy Research, 2025(1), Article 8849426. https://doi.org/10.1155/er/8849426	**Q1**	**4.2**	**0**	**0**	**Yes**/ Top 2%
J35.	Ahmed, I., Rehan, M., Alqahtani, M., & **Khalid, M**. (**2025**). Microgrid modernization using exponential decentralized consensus-based energy assessment by considering renewable generation uncertainties and operational price analysis. Results in Engineering, 27, Article 105731. https://doi.org/10.1016/j.rineng.2025.105731	**Q1**	**7.9**	**0**	**0**	**Yes**/ Top 5%
J36.	Babiker, A., Ahmad, S. S., Ahmed, I., **Khalid, M**., Abido, M. A., & Al-Ismail, F. S. (**2025**). Optimal Power Flow: A Review of State-of-the-Art Techniques and Future Perspectives. IEEE Access, 13, 60012-60039. https://doi.org/10.1109/ACCESS.2025.3556168	**Q2**	**3.6**	**2**	**4**	**Yes**
J37.	Geweda, A. E., Saif, A. G. H., Zayed, M. E., Kabeel, A. E., Zafar, S., & **Khalid, M**. (**2025**). Recent advances in hybrid compressed air energy storage systems: Technology categorization, integration potentials with renewable energy systems, and retrofitting improvement strategies. Alexandria Engineering Journal, 115, 12-29. https://doi.org/10.1016/j.aej.2024.11.062	**Q1**	**6.8**	**0**	**12**	**Yes**/ Top 5%
J38.	Ali, M. Q., Rehan, M., Ahmed, I., & **Khalid, M**. (**2025**). Robust Distributed Formation of UAV Swarms with Collision Avoidance under Control	**Q1**	**6.0**	**0**	**0**	**Yes**/ Top 10%

	Signal Nonlinearity and Unknown Input of Leader. Nonlinear Dynamics, Article 106997. https://doi.org/10.1007/s11071-025-11375-x					
J39.	Qamar, N., Alqahtani, M., Rehan, M., Ahmed, I., & **Khalid*, M**. (**2025**). Stochastic optimization for minimizing operational costs in smart hybrid energy networks considering electric vehicle. PLoS ONE, 20(6 June), Article e0323491. https://doi.org/10.1371/journal.pone.0323491	**Q2**	**2.6**	**0**	**0**	**Yes**
J40.	M.S. Gull, **M. Khalid**, and N. Arshad, "Multi-objective Optimization of Battery Swapping Station to Power Up Mobile and Stationary Loads", Applied Energy, 374, p.124064, (**2024**). https://doi.org/10.1016/j.apenergy.2024.124064	**Q1**	**11**	**15**	**17**	**Yes**/ Top 10%
J41.	M. M. Gulzar, D. Sibtain, and **M. Khalid**, Innovative Design for Enhancing Transient Stability with an ATFOPID Controller in Hybrid Power Systems", Journal of Energy Storage, 99, p.113364, (**2024**). https://doi.org/10.1016/j.est.2024.113364	**Q1**	**9.8**	**14**	**15**	**Yes**/ Top 15%
J42.	K. Zeb, T. D.C. Busarello, W. Uddin, and **M. Khalid***, "An Improved Digital Multi-Resonant Controller for 3 Φ Grid-Tied and Standalone PV System Under Balanced and Unbalanced Conditions", Ain Shams Engineering Journal, p.103036, (**2024**). https://doi.org/10.1016/j.asej.2024.103036	**Q1**	**5.9**	**0**	**0**	**Yes**/ Top 10%
J43.	**M. Khalid***, "A Techno-Economic Framework for Optimizing Multi-Area Power Dispatch in Microgrids with Tie-Line Constraints", Renewable Energy, p. 120854, (**2024**). https://doi.org/10.1016/j.renene.2024.120854	**Q1**	**9.1**	**8**	**12**	**Yes**/ Top 20%
J44.	M. Ali, M. Tayyab, A. Sarwar, M.A. Abido, and **M. Khalid***, "Standalone and Grid-Connected Operation of Single-Source Multilevel Inverter with Boosted Output Voltage", Alexandria Engineering Journal, vol. 103, pp. 278-287 (**2024**). https://doi.org/10.1016/j.aej.2024.06.019	**Q1**	**6.8**	**4**	**4**	**Yes**/ Top 5%
J45.	**M. Khalid***, "Energy 4.0: AI-enabled Digital Transformation for Sustainable Power Networks", Computers & Industrial Engineering, p. 110253 (**2024**). https://doi.org/10.1016/j.cie.2024.110253	**Q1**	**6.5**	**32**	**62**	**Yes**/ Top 15%
J46.	M. Ali, F. Al-Ismail, M. M. Gulzar, and **M. Khalid***, "A Review on Harmonic Elimination and Mitigation Techniques in Power Converter Based Systems", Electric Power Systems Research, vol. 234, p. 110573 (**2024**). https://doi.org/10.1016/j.epsr.2024.110573	**Q2**	**4.2**	**6**	**12**	**Yes**

J47.	**M. Khalid***, "Passivity-based Nonlinear Control Approach for Efficient Energy Management in Fuel Cell Hybrid Electric Vehicles", IEEE Access, vol. 12, pp. 84169 - 84188 (**2024**). https://doi.org/10.1109/ACCESS.2024.3412888	**Q2**	**3.6**	**6**	**7**	**Yes**
J48.	E. Bushra, K. Zeb, I. Ahmad, and **M. Khalid**, "A Comprehensive Review on Recent Trends and Future Prospects of PWM Techniques for Harmonic Suppression in Renewable Energies based Power Converters", Results in Engineering, vol. 22, p. 102213 (**2024**). https://doi.org/10.1016/j.rineng.2024.102213	**Q1**	**7.9**	**20**	**33**	**Yes**/ Top 5%
J49.	U. Habiba, I. Ahmed, M. Asif, H. Alhelou, and **M. Khalid***, "A Review on Enhancing Energy Efficiency and Adaptability through System Integration for Smart Buildings", Journal of Building Engineering, vol. 89, p. 109354 (**2024**). https://doi.org/10.1016/j.jobe.2024.109354	**Q1**	**7.4**	**0**	**0**	**Yes**/ Top 5%
J50.	Gulzar, M. M., Naeem, M. M., Shahid, K., Naeem, F. A., Alqahtani, M., & **Khalid, M.** (**2024**). Strategic optimization of PV integrated fuel cell systems for energy surplus utilization in grid failure scenarios. Frontiers in Energy Research, 12, 1467820. https://doi.org/10.3389/fenrg.2024.1467820	**Q3**	**2.4**			**Yes**
J51.	**M. Khalid***, "Adaptive Neuro-Fuzzy Inference System-based Data-Driven Model for Optimal Recharging of Electric Vehicles and Cost Prediction in Energy", Arabian Journal for Science and Engineering, pp. 1-17 (**2024**). https://doi.org/10.1007/s13369-024-09050-1	**Q2**	**2.9**	**2**	**4**	**Yes**
J52.	M. Asif, G. Naeem, and **M. Khalid**, "Digitalization for Sustainable Buildings: Technologies, Applications, Potential, and Challenges", Journal of Cleaner Production, vol. 450, p. 141814 (**2024**). https://doi.org/10.1016/j.jclepro.2024.141814	**Q1**	**10**	**55**	**69**	**Yes**/ Top 5%
J53.	Ch. R. Reddy, J. Choi, B. Pangedaiah, I. Colak, and **M. Khalid,** "State of the Art Review of Islanding Detection Methods for Integrated Distributed Generation System", Electric Power Components and Systems, vol. 52 (10), pp. 1906-1935 (**2024**). https://doi.org/10.1080/15325008.2024.2314197	**Q3**	**1.5**	**3**	**4**	**Yes**
J54.	M. A. Syed, O. Siddiqui, M. Kazerani, and **M. Khalid**, "Analysis and Modeling of Direct Ammonia Fuel Cells for Solar and Wind Power Leveling in Smart Grid Applications", IEEE Access, vol. 12, pp. 46512-46523 (**2024**). https://doi.org/10.1109/ACCESS.2024.3376513	**Q2**	**3.6**	**5**	**10**	**Yes**

J55.	H. Mansoor, M. S. Gull, H. Rauf, I. H. Shaikh, **M. Khalid** and N. Arshad, "Graph Convolutional Networks based Short-Term Load Forecasting: Leveraging Spatial Information for Improved Accuracy", Electric Power Systems Research, vol. 11, pp.1-12 (**2024**). https://doi.org/10.1016/j.epsr.2024.110263	**Q2**	**4.2**	**12**	**13**	**Yes**
J56.	**M. Khalid***, I. Ahmed, M. AlMuhaini, and A. V. Savkin, "A Novel Computational Paradigm for Scheduling of Hybrid Energy Networks Considering Renewable Uncertainty Limitations", Energy Reports, vol. 11, pp.1959-1978 (**2024**). https://doi.org/10.1016/j.egyr.2024.01.047	**Q2**	**5.1**	**24**	**34**	**Yes**
J57.	**M. Khalid***, "Hybrid Soft Computing Based Optimization for Low Carbon Energy Management Considering Nonlinear Battery Recharging Patterns of Electric Vehicles", Energy Reports, vol. 11, pp.1856-1873 (**2024**). https://doi.org/10.1016/j.egyr.2024.01.004	**Q2**	**5.1**	**5**	**6**	**Yes**
J58.	P. Sun, R. Wu, Z. Shen, G. Li, **M. Khalid**, G. Town, and G. Konstantinou, "Sequential Power Flow Algorithm and Post-Event Steady-State Power Distribution Analysis in Hybrid AC/MT-MVDC Systems", International Journal of Electrical Power & Energy Systems, vol. 157, p.109828 (**2024**). https://doi.org/10.1016/j.ijepes.2024.109828	**Q1**	**5.0**	**2**	**3**	**Yes**/ Top 20%
J59.	Ch. S. V. P. Rao, A. Pandian, Ch. R. Reddy, M. M. Gulzar, and **M. Khalid***, "A Novel Hybrid RERNN-SCSO Technique-based Unified Power Quality Conditioner of Microgrid in an EV Charging Station", Arabian Journal for Science and Engineering, vol. 49, pp. 7277-7306 (**2024**). https://doi.org/10.1007/s13369-024-08765-5	**Q2**	**2.9**	**11**	**14**	**Yes**
J60.	F. Mustafa, I. Ahmed, A. Basit, M. Alqahtani, and **M. Khalid***, "An Adaptive Metaheuristic Optimization Approach for Tennessee Eastman Process for an Industrial Fault Tolerant Control System", PLoS One, vol. 19 (2): p. e0296471 (**2024**). https://doi.org/10.1371/journal.pone.0296471	**Q2**	**2.6**	**16**	**20**	**Yes**
J61.	A. S. Menesy, S. Almomin, H. M. Sultan, I. O. Habiballah, M. M. Gulzar, M. Alqahtani, and **M. Khalid***, "Techno-economic Optimization Framework of Renewable Hybrid Photovoltaic/Wind Turbine/Fuel Cell Energy System Using Artificial Rabbits Algorithm", IET Renewable Power Generation, pp. 1-18 (**2024**). https://doi.org/10.1049/rpg2.12938	**Q3**	**2.9**	**13**	**21**	**Yes**
J62.	Abdullah, B. U. D., Dhar, S. L., Jaiswal, S. P., Gulzar, M. M., Alqahtani, M., & **Khalid, M.** (**2025**). Hybrid	**Q3**	**2.4**	**0**	**0**	**Yes**

	MPPT control using hybrid pelican optimization algorithm with perturb and observe for PV connected grid. Frontiers in Energy Research, 12, 1505419. https://doi.org/10.3389/fenrg.2024.1505419					
J63.	M. Zaid, M. Tayyab, Z. Sarwer, M. Ali, A. Sarwar, Md. N. Anwar, M. Tariq, and **M. Khalid**, "A Single-Source Nine-Level Solar-PV Inverter with Quadruple Voltage Boosting and High Reliability", International Journal of Circuit Theory and Applications, pp. 1-22 (**2024**). https://doi.org/10.1002/cta.3956	**Q3**	**1.6**	**2**	**2**	**Yes**
J64.	**M. Khalid***, "Smart Grids and Renewable Energy Systems: Perspectives and Grid Integration Challenges", Energy Strategy Reviews, vol. 51, p. 101299 (**2024**). https://doi.org/10.1016/j.esr.2024.101299	**Q1**	**9.9**	**238**	**351**	**Yes**/ Top 15%
J65.	P. Sun, R. Wu, H. Wang, G. Li, **M. Khalid**, G. Konstantinou, "Physics-Informed Fully Convolutional Network-based Power Flow Analysis for MT-MVDC Distribution Systems", IEEE Transactions on Power Systems, pp. 1-13 (**2024**). https://doi.org/10.1109/TPWRS.2024.3382266	**Q1**	**7.2**	**6**	**8**	**Yes**/ Top 10%
J66.	Kumar Kolluru, A., Malligunta, K. K., Teja, S. R., Reddy, C. R., Alqahtani, M., & **Khalid*, M.** (**2023**). A novel controller for PV-fed water pumping optimization system driven by an 8/6 pole SRM with asymmetrical converter. Frontiers in Energy Research, 11, 1205704. https://doi.org/10.3389/fenrg.2023.1205704	**Q3**	**2.4**	**4**	**5**	**Yes**
J67.	I. Ahmed, M. Rehan, N. Iqbal, A. Basit, and **M. Khalid***, "Free-Weighting Matrix Approach for Event-Triggered Cooperative Control of Generic Linear Multi-Agent Systems: An Application for UAVs", Arabian Journal for Science and Engineering, vol. 49, pp. 6761-6772 (**2024**). https://doi.org/10.1007/s13369-023-08465-6	**Q2**	**2.9**	**10**	**12**	**Yes**
J68.	S. Alshahrani, K. Khan, M. Abido, and **M. Khalid***, "Grid-Forming Converter and Stability Aspects of Renewable-Based Low-Inertia Power Networks: Modern Trends and Challenges", Arabian Journal for Science and Engineering, vol. 49, pp. 6187-6216 (**2024**). https://doi.org/10.1007/s13369-023-08399-z	**Q2**	**2.9**	**16**	**19**	**Yes**
J69.	H. M. Sultan, A. S. Menesy, M. Alqahtani, **M. Khalid***, and A. A. Z. Diab, "Accurate Parameter Identification of Proton Exchange Membrane Fuel Cell Models Using Different Metaheuristic Optimization Algorithms", Energy Reports, vol. 10, pp. 4824-4848 (**2023**).	**Q2**	**5.1**	**19**	**23**	**Yes**

	https://doi.org/10.1016/j.egyr.2023.11.007					
J70.	I. Ahmed, A. Basit, Faizan e Mustafa, M. Alqahtani, and **M. Khalid***, "The Nexus of Energy in Microgrids: A Review on Communication Barriers in Distributed Networks Auxiliary Controls", IET Generation, Transmission & Distribution, vol. 17 (22), pp. 4907-4922 (**2023**). https://doi.org/10.1049/gtd2.13018	**Q2**	**2.6**	**21**	**28**	**Yes**
J71.	M. A. Baig, S. A. R. Kashif, M. M. Gulzar, M. Alqahtani, and **M. Khalid***, "Improved Hybrid Sphere Decoding Algorithm for Long Horizon Finite Control Set Model Predictive Control of Grid-Tied Inverter", Energy Reports, vol. 10, pp. 3229-3239 (**2023**). https://doi.org/10.1016/j.egyr.2023.09.166	**Q2**	**5.1**	**1**	**1**	**Yes**
J72.	Ali, M., Amrr, S. M., & **Khalid*, M.** (**2022**). Speed control of a wind turbine–driven doubly fed induction generator using sliding mode technique with practical finite-time stability. Frontiers in Energy Research, 10, 970755. https://doi.org/10.3389/fenrg.2022.970755	**Q3**	**2.4**	**12**	**7**	**Yes**
J73.	U. T. Shami, S. A. R. Kashif, M. A. Aslam, M. M. Gulzar, M. Maaruf, F. Alismail, and **M. Khalid***, "Selective Harmonic Elimination Notch Angle Calculation Using THD and ZHF Benchmarks for Cascaded Multilevel Inverters", IEEE Access, vol. 11, pp. 116497 - 116510 (**2023**). https://doi.org/10.1109/ACCESS.2023.3324557	**Q2**	**3.6**	**1**	**5**	**Yes**
J74.	A. Q. Khan, A. Samee, I. Ahmed, M. Abid, M. Alqahtani, and **M. Khalid***, "Advanced Statistical and Meta-Heuristic Based Optimization Fault Diagnosis Techniques in Complex Industrial Processes: A Comparative Analysis", IEEE Access, vol. 11, pp. 104373 - 104391 (**2023**). https://doi.org/10.1109/ACCESS.2023.3317516	**Q2**	**3.6**	**11**	**17**	**Yes**
J75.	M. Ali, Md. I. Hossain, F. S. Al-Ismail, M. A. Abido, and **M. Khalid***, "Capacitor Ripple Reduction in T-Type Multilevel Inverter Operation for Solar PV-Application", Alexandria Engineering Journal, vol. 77, pp. 613-624 (**2023**). https://doi.org/10.1016/j.aej.2023.06.088	**Q1**	**6.8**	**9**	**12**	**Yes**/ Top 5%
J76.	Ch. R. Reddy, O. C. Sekhar, B. Pangedaiah, K. A. Khan, and **M. Khalid***, "Passive Island Detection Method Based on Positive Sequence Components for Grid-Connected Solar–Wind Hybrid Distributed Generation System", Electric Power Components and Systems, vol. 52 (7), pp. 1129-1144 (**2024**). https://doi.org/10.1080/15325008.2023.2238705	**Q3**	**1.5**	**1**	**6**	**Yes**

J77.	K. A. Khan, Md. M. Quamar, F. H. Al-Qahtani, M. Asif, M. Alqahtani, and **M. Khalid***, "Smart Grid Infrastructure and Renewable Energy Deployment: A Conceptual Review of Saudi Arabia", Energy Strategy Reviews, vol. 50, p. 101247 (**2023**). https://doi.org/10.1016/j.esr.2023.101247	**Q1**	**9.9**	**47**	**59**	**Yes**/ Top 15%
J78.	S. Aziz, I. Ahmed, K. Khan, and **M. Khalid***, "Emerging Trends and Approaches for Designing Net-Zero Low-Carbon Integrated Energy Networks: A Review of Current Practices", Arabian Journal for Science and Engineering, vol. 49, pp. 6163-6185 (**2023**). https://doi.org/10.1007/s13369-023-08336-0	**Q2**	**2.9**	**43**	**39**	**Yes**
J79.	M. A. Aslam, S. A. R. Kashif, M. M. Gulzar, M. Alqahtani, and **M. Khalid***, "A Novel Multi Level Dynamic Decomposition Based Coordinated Control of Electric Vehicles in Multimicrogrids", Sustainability, vol. 15 (6), p. 12648 (**2023**). https://doi.org/10.3390/su151612648	**Q3**	**3.3**	**1**	**2**	**Yes**
J80.	K. R. Cheepati, E. P. Sundar, K. Suresh, Ch. R. Reddy, M. M. Alqahtani, and **M. Khalid**, "Design of Triple Tuned Passive Harmonic Power Filter—A Novel Approach", IEEE Canadian Journal of Electrical and Computer Engineering, vol. 46 (4), pp. 270 - 277 (**2023**). https://doi.org/10.1109/ICJECE.2023.3296826	**Q3**	**1.9**	**3**	**21**	**Yes**
J81.	M. Ali, A. Iqbal, and **M. Khalid***, "A Review on Recent Advances in Matrix Converter Technology: Topologies, Control, Applications, and Future Prospects", International Journal of Energy Research, pp. 1-28 (**2023**). https://doi.org/10.1155/2023/6619262	**Q1**	**4.2**	**10**	**14**	**Yes**/ Top 2%
J82.	M. Ali, M. Tayyab, A. Sarwar, and **M. Khalid***, "A Low Switch Count 13-Level Switched-Capacitor Inverter with Hexad Voltage-Boosting for Renewable Energy Integration", IEEE Access, vol. 11, pp. 36300 - 36308 (**2023**). https://doi.org/10.1109/ACCESS.2023.3265467	**Q2**	**3.6**	**15**	**28**	**Yes**
J83.	A. S. Menesy, H. M. Sultan, I. O. Habiballah, H. Masrur, K. R. Khan, and **M. Khalid***, "Optimal Configuration of a Hybrid Photovoltaic/Wind Turbine/Biomass/Hydro-Pumped Storage-Based Energy System Using a Heap-Based Optimization Algorithm", Energies, vol. 16 (9), p. 3648 (**2023**). https://doi.org/10.3390/en16093648	**Q3**	**3.2**	**36**	**49**	**Yes**
J84.	M. Alqahtani, P. Marimuthu, V. Moorthy, B. Pangedaiah, Ch. R. Reddy, M. K. Kumar, and **M. Khalid**, "Investigation and Minimization of Power	**Q3**	**3.2**	**5**	**7**	**Yes**

	Loss in Radial Distribution Network Using Gray Wolf Optimization", Energies, vol. 16 (12), p. 4571 (**2023**). https://doi.org/10.3390/en16124571					
J85.	M. M. Gulzar, S. Gardezi, D. Sibtain, and **M. Khalid***, "Discrete-Time Modeling and Control for LFC Based on Fuzzy Tuned Fractional-Order Pdμ Controller in a Sustainable Hybrid Power System", IEEE Access, vol. 11, pp. 63271-63287 (**2023**). https://doi.org/10.1109/ACCESS.2023.3288991	**Q2**	**3.6**	**15**	**22**	**Yes**
J86.	T. B. Nadeem, M. Siddiqui, **M. Khalid**, and M. Asif, "Distributed Energy Systems: A Review of Classification, Technologies, Applications, and Policies", Energy Strategy Reviews, vol. 48, p. 10109611 (**2023**). https://doi.org/10.1016/j.esr.2023.101096	**Q1**	**9.9**	**132**	**238**	**Yes**/ Top 15%
J87.	M. Ali, M. A. Abdulgalil, I. Habiballah, and **M. Khalid***, "Optimal Scheduling of Isolated Microgrids with Hybrid Renewables and Energy Storage Systems Considering Demand Response", IEEE Access, vol. 11, pp. 80266-80273 (**2023**). https://doi.org/10.1109/ACCESS.2023.3296540	**Q2**	**3.6**	**25**	**41**	**Yes**
J88.	Y. Huang, H.O. Howlader, A.M. Hemeida, K. Narayanan, H. Masrur, **M. Khalid**, A. Mikhaylov, and T. Senjyu, "A Comparative Assessment of the Power Generation via S-shape and M-shape PV System and its Impact on a Residential Consumer", Franklin Open, vol. 5, p. 100049 (**2023**). https://doi.org/10.1016/j.fraope.2023.100049	**-**	**-**	**0**	**7**	**Yes**
J89.	S. V. R Reddy, T. R. Premila, C. R. Reddy, M. M. Gulzar, and **M. Khalid***, "A New Variational Mode Decomposition-Based Passive Islanding Detection Strategy for Hybrid Distributed Renewable Generations", Arabian Journal for Science and Engineering, vol. 48, pp. 15435–15443 (**2023**). https://doi.org/10.1007/s13369-023-08103-1	**Q2**	**2.9**	**12**	**15**	**Yes**
J90.	M. M. Gulzar, H. Tehreem, and **M. Khalid***, "Modified Finite Time Sliding Mode Controller for Automatic Voltage Regulation under Fast-Changing Atmospheric Conditions in Grid-Connected Solar Energy Systems", International Journal of Intelligent Systems, pp. 1-20 (**2023**). https://doi.org/10.1155/2023/8863346	**Q2**	**3.7**	**5**	**13**	**Yes**
J91.	H. Rauf, **M. Khalid**, and N. Arshad, "A Novel Smart Feature Selection Strategy of Lithium-Ion Battery Degradation Modelling for Electric Vehicles Based on Modern Machine Learning Algorithms", Journal of Energy Storage, vol. 68, p. 107577 (**2023**).	**Q1**	**9.8**	**29**	**49**	**Yes**/ Top 15%

	https://doi.org/10.1016/j.est.2023.107577					
J92.	M. Hassan, M. Ali, M. Tayyab, A. Sarwar, M. Tariq, M. Abido, and **M. Khalid***, "Self-Balanced Quadruple-Boost Nine-Level Switched-Capacitor Inverter for Solar PV System", Arabian Journal for Science and Engineering, vol. 48, pp. 14717-14729 (**2023**). https://doi.org/10.1007/s13369-023-07837-2	**Q2**	**2.9**	**5**	**12**	**Yes**
J93.	P. Sun, Y. Wang, **M. Khalid,** R. Blasco-Gimenez, and G. Konstantinou, "Steady-State Power Distribution in VSC-Based MTDC Systems and DC Grids Under Mixed P/V and I/V Droop Control", Electric Power Systems Research, vol. 214, p. 108798 (**2023**). https://doi.org/10.1016/j.epsr.2022.108798	**Q2**	**4.2**	**14**	**20**	**Yes**
J94.	M. M. Gulzar, D, Sibtain, and **M. Khalid*,** "Cascaded Fractional Model Predictive Controller for Load Frequency Control in Multiarea Hybrid Renewable Energy System with Uncertainties", in International Journal of Energy Research, pp. 1-25 (**2023**). https://doi.org/10.1155/2023/5999997	**Q1**	**4.2**	**40**	**51**	**Yes**/ Top 2%
J95.	M. Zaid, S. Khan, A. Mahmood, M. Ali, A. Sarwar, and **M. Khalid***, "A New High Gain Boost Converter with Common Ground for Solar-PVApplication and Low Ripple Input Current", Arabian Journal for Science and Engineering, vol. 48, pp. 14655–14669 (**2023**). https://doi.org/10.1007/s13369-023-07814-9	**Q2**	**2.9**	**11**	**12**	**Yes**
J96.	M. Akhtar and **M. Khalid*,** "An Intelligent Model Predictive Control Strategy for Stable Solar-Wind Renewable Power Dispatch Coupled with Hydrogen Electrolyzer and Battery Energy Storage", International Journal of Energy Research, pp. 1-17 (**2023**). https://doi.org/10.1155/2023/4531054	**Q1**	**4.2**	**14**	**20**	**Yes**/ Top 2%
J97.	M. M. Gulzar, A. Iqbal, D. Sibtain, and **M. Khalid***, "An Innovative Converterless Solar PV Control Strategy for a Grid Connected Hybrid PV/Wind/Fuel-Cell System Coupled with Battery Energy Storage", IEEE Access, vol. 11, pp. 23245-23259 (**2023**). https://doi.org/10.1109/ACCESS.2023.3252891	**Q2**	**3.6**	**90**	**145**	**Yes**
J98.	L. Maraaba, M. Almuhaini, M. Habli, and **M. Khalid***, "Neural Networks Based Dynamic Load Modeling for Power System Reliability Assessment", Sustainability, vol. 15 (6), p. 5403 (**2023**). https://doi.org/10.3390/su15065403	**Q3**	**3.3**	**3**	**7**	**Yes**
J99.	A. Ahmad, S. A. R. Kashif, A. Ashraf, M. M. Gulzar, M. Alqahtani, and **M. Khalid***, "Coordinated Economic Operation of Hydrothermal Units with	**Q1**	**2.2**	**3**	**5**	**Yes**/ Top 5%

	HVDC Link Based on Lagrange Multipliers", Mathematics, vol. 11 (7), p. 1610 (**2023**). https://doi.org/10.3390/math11071610					
J100.	Hadoune, A., Mouradi, A., Mimet, A., Chojaa, H., Dardabi, C., Gulzar, M. M., ... & **Khalid*, M.** (**2023**). Optimizing direct power control of DFIG-based WECS using super-twisting algorithm under real wind profile. Frontiers in Energy Research, 11, 1261902. https://doi.org/10.3389/fenrg.2023.1261902	**Q3**	**2.4**	**10**	**16**	**Yes**
J101.	I. M. Alotaibi, S. Ibrir, M. A. Abido, and **M. Khalid,** "Nonlinear Power System Stabilizer Design for Small Signal Stability Enhancement", Arabian Journal for Science and Engineering, vol. 47, pp. 13893-13905 (**2022**). https://doi.org/10.1007/s13369-022-06566-2	**Q2**	**2.9**	**4**	**11**	**Yes**
J102.	I. M. Alotaibi, M. A. Abido, and **M. Khalid,** "Primary Frequency Regulation by Demand Side Response", Arabian Journal for Science and Engineering, vol. 46, pp. 9627-9637 (**2021**). https://doi.org/10.1007/s13369-021-05440-x	**Q2**	**2.9**	**9**	**13**	**Yes**
J103.	U. T. Salman, S. Shafiq, F. S. Al-Ismail, and **M. Khalid***, "A Review of Improvements in Power System Flexibility: Implementation, Operation and Economics", Electronics, vol. 11 (4), p. 581 (**2022**). https://doi.org/10.3390/electronics11040581	**Q2**	**2.6**	**18**	**24**	**Yes**
J104.	M. S. Gull, N. Mehmood, H. Rauf, **M. Khalid**, and N. Arshad, "Soft Load Shedding Based Demand Control of Residential Consumers", Electronics, vol. 11 (4), p. 615 (**2022**). https://doi.org/10.3390/electronics11040615	**Q2**	**2.6**	**6**	**7**	**Yes**
J105.	L. Elkhidir, K. Khan, M. Al-Muhaini, and **M. Khalid***, "Enhancing Transient Response and Voltage Stability of Renewable Integrated Microgrids", Sustainability, vol. 14 (7), p. 3710 (**2022**). https://doi.org/10.3390/su14073710	**Q3**	**3.3**	**5**	**8**	**Yes**
J106.	M. Khalid and K. A. Khan, "Discussion on Mitigation of Fault Induced Delayed Voltage Recovery (FIDVR) by PV-STATCOM", IEEE Transactions on Power Systems, vol. 37 (2), pp. 1665-1665 (2022). https://doi.org/10.1109/TPWRS.2022.3148022	**Q1**	**7.2**	**3**	**6**	**Yes/** Top 10%
J107.	M. Maaruf, K. Khan, and **M. Khalid***, "Robust Control for Optimized Islanded and Grid-Connected Operation of Solar/Wind/Battery Hybrid Energy", Sustainability, vol. 14 (9), pp. 5673 (**2022**). https://doi.org/10.3390/su14095673	**Q3**	**3.3**	**25**	**38**	**Yes**

J108.	H. Alharbi, **M. Khalid**, and M. Abido, "Transmission Lines Impedance Fitting Using Analytical Impedance Equation and Frequency Response Analysis", Mathematics, vol. 10 (15), p. 2677 (**2022**). https://doi.org/10.3390/math10152677	**Q1**	**2.2**	**1**	**2**	**Yes**/ Top 5%
J109.	A. Rauf, M. Kassas, and **M. Khalid***, "Data-Driven Optimal Battery Storage Sizing for Grid-Connected Hybrid Distributed Generations Considering Solar and Wind Uncertainty", Sustainability, vol. 14 (17), pp. 11002 (**2022**). https://doi.org/10.3390/su141711002	**Q3**	**3.3**	**12**	**15**	**Yes**
J110.	M. Ali, S.M. Amrr, and **M. Khalid***, "Speed Control of a Wind Turbine–Driven Doubly Fed Induction Generator Using Sliding Mode Technique with Practical Finite-Time Stability", Frontiers in Energy Research, vol. 10, pp. 1-12 (**2022**). https://doi.org/10.3389/fenrg.2022.970755	**Q3**	**2.4**	**12**	**19**	**Yes**
J111.	P. Sun, H. R. Wickramasinghe, **M. Khalid**, and G. Konstantinou, "AC/DC Fault Handling and Expanded DC Power Flow Expression in Hybrid Multi-Converter DC Grids", International Journal of Electrical Power and Energy Systems, vol. 141, p. 107989 (**2022**). https://doi.org/10.1016/j.ijepes.2022.107989	**Q1**	**5**	**13**	**15**	**Yes**/ Top 20%
J112.	**M. Khalid*** and K. A. Khan, "Discussion on Mitigation of Fault Induced Delayed Voltage Recovery (FIDVR) by PV-STATCOM", IEEE Transactions on Power Systems, vol. 37 (2), pp. 1665-1665 (**2022**). 10.1109/TPWRS.2022.3148022	**Q1**	**7.2**	**3**	**6**	**Yes**/ Top 10%
J113.	H. Rauf, **M. Khalid**, and N. Arshad, "Machine Learning in State of Health and Remaining Useful Life Estimation: Theoretical and Technological Development in Battery Degradation Modelling", Renewable and Sustainable Energy Reviews, vol. 156, p. 111903 (**2022**). https://doi.org/10.1016/j.rser.2021.111903	**Q1**	**16.3**	**176**	**220**	**Yes**/ Top 5%
J114.	B. O. Alawode, U. T. Salman, and **M. Khalid**, "A Flexible Operation and Sizing of Battery Energy Storage System Based on Butterfly Optimization Algorithm", Electronics, vol. 11 (1), p. 109 (**2021**). https://doi.org/10.3390/electronics11010109	**Q2**	**2.6**	**14**	**18**	**Yes**
J115.	M. Maaruf and **M. Khalid***, "Global Sliding-Mode Control with Fractional-Order Terms for the Robust Optimal Operation of a Hybrid Renewable Microgrid with Battery Energy Storage", Electronics, vol. 11 (1), p. 88 (**2021**). https://doi.org/10.3390/electronics11010088	**Q2**	**2.6**	**26**	**31**	**Yes**

J116.	Y. M. Al-Humaid, K. A. Khan, M. A. Abdulgalil, and **M. Khalid**, "Two-Stage Stochastic Optimization of Sodium-Sulfur Energy Storage Technology in Hybrid Renewable Power Systems", IEEE Access, vol. 9, pp. 162962 – 162972 (**2021**). https://doi.org/10.1109/ACCESS.2021.3133261	**Q2**	**3.6**	**22**	**31**	**Yes**
J117.	A. Rauf, A. Alawami, M. Kassas, and **M. Khalid**, "Optimal Sizing and Cost Minimization of Solar Photovoltaic Power System Considering Economical Perspectives and Net Metering Schemes", Electronics, vol. 10 (21), p. 2713 (**2021**). https://doi.org/10.3390/electronics10212713	**Q2**	**2.6**	**10**	**14**	**Yes**
J118.	H. Mansoor, H. Rauf, M. Mubashar, **M. Khalid** and N. Arshad, "Past Vector Similarity for Short Term Electrical Load Forecasting at the Individual Household Level", IEEE Access, vol. 9, pp. 42771-42785 (**2021**). https://doi.org/10.1109/ACCESS.2021.3063650	**Q2**	**3.6**	**10**	**17**	**Yes**
J119.	M. A. Syed and **M. Khalid**, "Neural Network Predictive Control for Smoothing of Solar Power Fluctuations with Battery Energy Storage", Journal of Energy Storage, vol. 42, p. 103014 (**2021**). https://doi.org/10.1016/j.est.2021.103014	**Q1**	**9.8**	**27**	**36**	**Yes**/ Top 15%
J120.	F. Alismail, M. A. Abdulgalil, and **M. Khalid**, "Optimal Coordinated Planning of Energy Storage and Tie-Lines to Boost Flexibility with High Wind Power Integration", Sustainability, vol. 13 (5), p. 2526 (**2021**). https://doi.org/10.3390/su13052526	**Q3**	**3.3**	**9**	**11**	**Yes**
J121.	Y. Alhumaid, K. Khan, F. Alismail, and **M. Khalid***, "Multi-Input Nonlinear Programming Based Deterministic Optimization Framework for Evaluating Microgrids with Optimal Renewable-Storage Energy Mix", Sustainability, vol. 13 (11), p. 5878 (**2021**). https://doi.org/10.3390/su13115878	**Q3**	**3.3**	**27**	**32**	**Yes**
J122.	U. Salman, K. Khan, F. Alismail, and **M. Khalid**, "Techno-Economic Assessment and Operational Planning of Wind-Battery Distributed Renewable Generation System", Sustainability, vol. 13 (12), p. 6776 (**2021**). https://doi.org/10.3390/su13126776	**Q3**	**3.3**	**18**	**23**	**Yes**
J123.	M. A. Syed and **M. Khalid***, "Moving Regression Filtering with Battery State of Charge Feedback Control for Solar PV Firming and Ramp Rate Curtailment", IEEE Access, vol. 9, pp. 13198-13211 (**2021**). https://doi.org/10.1109/ACCESS.2021.3052142	**Q2**	**3.6**	**24**	**35**	**Yes**

J124.	K. A. Khan and **M. Khalid***, "Improving the Transient Response of Hybrid Energy Storage System for Voltage Stability in DC Microgrids Using an Autonomous Control Strategy", IEEE Access, vol. 9, pp. 10460-10472 (**2021**). https://doi.org/10.1109/ACCESS.2021.3051144	**Q2**	**3.6**	**37**	**54**	**Yes**
J125.	A. Atif and **M. Khalid**, "Fuzzy Logic Controller for Solar Power Smoothing Based on Controlled Battery Energy Storage and Varying Low Pass Filter", IET Renewable Power Generation, vol. 14 (18), pp. 3824-33 (**2021**). https://doi.org/10.1049/iet-rpg.2020.0459	**Q3**	**2.9**	**13**	**18**	**Yes**
4.3.1.B List of Referred Journal Papers **before the attainment** of the **Current Rank** (recent first)						
J126.	I. Alotaibi, M. A. Abido, **M. Khalid**, and A. V. Savkin, "A Comprehensive Review of Recent Advances in Smart Grids: A Sustainable Future with Renewable Energy Resources", Energies, vol. 13 (23), p. 6269 (Nov **2020**). https://doi.org/10.3390/en13236269	**Q3**	**3.2**	**153**	**241**	**Yes**
J127.	J. Alshehri and **M. Khalid**, "Discussion on 'Decentralized Optimal Frequency Control in Autonomous Microgrids'", IEEE Transactions on Power Systems, vol. 35 (6), pp. 4972-4972 (Nov **2020**). 10.1109/TPWRS.2020.3027197	**Q1**	**7.2**	**2**	**5**	**Yes**/ Top 10%
J128.	A. A. Abdalla and **M. Khalid**, "Saviztky-Golay Filtering for Solar Power Smoothing and Ramp Rate Reduction Based on Controlled Battery Energy", IEEE Access, vol. 8, pp. 33806-33817 (**2020**). https://doi.org/10.1109/ACCESS.2020.2973036	**Q2**	**3.6**	**64**	**77**	**Yes**
J129.	**M. Khalid***, "Discussion on 'Short-term Reactive Power Planning to Minimize Cost of Energy Losses Considering PV Systems'", IEEE Transactions on Smart Grid, vol. 11 (2), pp. 1812-1812 (**2020**). https://doi.org/10.1109/TSG.2020.2970259	**Q1**	**9.8**	**5**	**6**	**Yes**/ Top 5%
J130.	**M. Khalid*,** "Discussion on 'Novel Supervisory Control Method for Islanded Droop-based AC/DC Microgrids'", IEEE Transactions on Power Systems, vol. 35 (5), pp. 4138-4138 (**2020**). https://doi.org/10.1109/TSG.2020.2970259	**Q1**	**7.2**	**2**	**6**	**Yes**/ Top 10%
J131.	S. S. Ahmad, F. S. Al-Ismail, A. A. Almehizia, and **M. Khalid***, "Model Predictive Control Approach for Optimal Power Dispatch and Duck Curve Handling Under High Photovoltaic Power Penetration", IEEE Access, vol. 8, pp. 186840-186850 (**2020**). https://doi.org/10.1109/ACCESS.2020.3030100	**Q2**	**3.6**	**12**	**18**	**Yes**
J132.	U. T. Salman, F. S. Al-Ismail, and **M. Khalid**, "Optimal sizing of battery energy storage for grid-	**Q2**	**3.6**	**76**	**108**	**Yes**

	connected and isolated wind-penetrated microgrid", IEEE Access, vol. 8, pp. 91129 - 91138 (**2020**). https://doi.org/10.1109/ACCESS.2020.2992654					
J133.	Ali, R.H.M. & Khan, Khalid Abdullah & Khalid, M. & Khan, A.A.. (2020). Multi-Input Boost Converter for Parallel Connected Renewable Energy Systems. Renewable Energy and Power Quality Journal. 18. 403-408. https://doi.org/10.24084/repqj18.361	**-**	**-**	**0**	**2**	**No**
J134.	Al-Humaid, Y. M., Abdulgalil, M. A., Khan, K. A., & Khalid, M. (2020). Optimal allocation of energy storage systems for load management in distributed renewable generations. Renewable Energy and Power Quality Journal, 18, 675-679. Article 468. https://doi.org/10.24084/repqj18.468	**-**	**-**	**0**	**0**	**No**
J135.	Alshahrani, S., Abido, M., & Khalid, M. (2020). Active/reactive power losses minimization based on optimal location of battery energy storage system. Renewable Energy and Power Quality Journal, 18, 594-598. https://doi.org/10.24084/repqj18.442	**-**	**-**	**0**	**0**	**No**
J136.	A. Alzahrani, H. Alharthi **and M. Khalid**, "Minimization of Power Losses through Optimal Battery Placement in a Distributed Network with High Penetration of Photovoltaics", Energies, vol. 12 (1), p. 140 (**2019**). https://doi.org/10.3390/en13010140	**Q3**	**3.2**	**49**	**63**	**Yes**
J137.	**M. Khalid***, "Wind Power Economic Dispatch - Impact of Radial Basis Functional Networks and Battery Energy Storage", IEEE Access, vol. **7**, pp. 36819-36832 (**2019**). https://doi.org/10.1109/ACCESS.2019.2905620	**Q2**	**3.6**	**16**	**29**	**Yes**
J138.	**M. Khalid***, "A Review on the Selected Applications of Battery-Supercapacitor Hybrid Energy Storage Systems for Microgrids", Energies, vol. 12 (23), p. 4559 (**2019**). https://doi.org/10.3390/en12234559	**Q3**	**3.2**	**106**	**128**	**Yes**
J139.	M. A. Abdulgalil and **M. Khalid***, "Enhancing the Reliability of a Microgrid Through Optimal Size of Battery Energy Storage System", IET Generation, Transmission & Distribution, vol. 13 (9), pp. 1499-1508 (**2019**). https://doi.org/10.1049/iet-gtd.2018.5335	**Q2**	**2.6**	**17**	**36**	**Yes**
J140.	A. Ahmed and **M. Khalid***, "A Review on the Selected Applications of Forecasting Models in Renewable Power Systems", Renewable and Sustainable Energy Reviews, vol. 100, pp. 9-21 (**2019**). https://doi.org/10.1016/j.rser.2018.09.046	**Q1**	**16.3**	**209**	**355**	**Yes/** Top 5%
J141.	J. Alshehri and **M. Khalid**, "Power Quality Improvement in Microgrids Under Critical Disturbances Using an Intelligent Decoupled Control Strategy Based on Battery Energy Storage System", IEEE Access, vol. 7, pp.147314-147326 (**2019**).	**Q2**	**3.6**	**40**	**55**	**Yes**

	https://doi.org/10.1109/ACCESS.2019.2946265					
J142.	M. Ott, M. AlMuhaini, and **M. Khalid,** "A MILP-Based Restoration Technique for Multi-Microgrid Distribution Systems", IEEE Access, vol. 7, pp.136801-136811 (**2019**). https://doi.org/10.1109/ACCESS.2019.2942633	**Q2**	**3.6**	**18**	**23**	**Yes**
J143.	S. Al-Sakkaf, M. Kassas, **M. Khalid**, and M. Abido, "An Energy Management System for Residential Autonomous DC Microgrid Using Optimized Fuzzy Logic Controller Considering Economic Dispatch", Energies, vol. 12 (8), pp. 1457 (**2019**). https://doi.org/10.3390/en12081457	**Q3**	**3.2**	**58**	**75**	**Yes**
J144.	J. Alshehri, **M. Khalid**, and A. Alzahrani, "An Intelligent Battery Energy Storage-Based Controller for Power Quality Improvement in Microgrids", Energies, vol. 12 (11), p. 2112 (**2019**). https://doi.org/10.3390/en12112112	**Q3**	**3.2**	**29**	**40**	**Yes**
J145.	M. A. Abdulgalil, **M. Khalid**, and F. Alismail, "Optimal Sizing of Battery Energy Storage for a Grid-Connected Microgrid Subjected to Wind Uncertainties", Energies, vol. 12 (12), p. 2412 (**2019**). https://doi.org/10.3390/en12122412	**Q3**	**3.2**	**37**	**50**	**Yes**
J146.	M. A. Abdulgalil, **M. Khalid,** and F. Alismail, "Optimizing a Distributed Wind-Storage System Under Critical Uncertainties Using Benders Decomposition", IEEE Access, vol. 7, pp.77951-77963 (**2019**). https://doi.org/10.1109/ACCESS.2019.2922619	**Q2**	**3.6**	**17**	**22**	**Yes**
J147.	S. Alshahrani, **M. Khalid***, and M. Almuhaini, "Electric Vehicles Beyond Energy Storage and Modern Power Networks: Challenges and Applications", IEEE Access, vol. 7, pp. 99031-99064 (**2019**). https://doi.org/10.1109/ACCESS.2019.2928639	**Q2**	**3.6**	**76**	**106**	**Yes**
J148.	H. Alharbi, **M. Khalid**, and M. Abido, "A Novel Design of Static Electrostatic Generator for High Voltage Low Power Applications Based on Electric Field Manipulation by Area Geometric Difference", Energies, vol. 12 (5), p. 802 (**2019**). https://doi.org/10.3390/en12050802	**Q3**	**3.2**	**4**	**4**	**Yes**
J149.	M. Al-Muhaini, A. Bizrah, G. Heydt, and **M. Khalid,** "Impact of Wind Speed Modelling on the Predictive Reliability Assessment of Wind-Based Microgrids", IET Renewable Power Generation, vol. 13 (15), pp. 2947-2956 (**2019**). https://doi.org/10.1049/iet-rpg.2019.0596	**Q3**	**2.9**	**15**	**15**	**Yes**

J150.	N. Amleh, M. Al-Muhaini, and **M. Khalid**, "Impact of Smart Restoration and Energy Storage Systems on the Reliability of Electric Microgrid", Arabian Journal for Science and Engineering, vol. 45, pp. 11911-1925 (**2020**). https://doi.org/10.1007/s13369-019-04288-6	**Q2**	**2.9**	**3**	**4**	**Yes**
J151.	**M. Khalid***, R.P. Aquilera, A.V. Savkin and V.G. Agelidis, "On Maximizing Profit of Wind-Battery Supported Power Station Based on Wind Power and Energy Price Forecasting", Applied Energy, vol. 211, pp. 764-773 (**2018**). https://doi.org/10.1016/j.apenergy.2017.11.061	**Q1**	**11**	**73**	**83**	**Yes/** Top 10%
J152.	**M. Khalid***, R.P. Aquilera, A.V. Savkin, and V.G. Agelidis, "A Market-Oriented Wind Power Dispatch Strategy Using Adaptive Price Thresholds and Battery Energy Storage", Wind Energy, vol. 21 (4), pp. 242-254 (**2018**). https://doi.org/10.1002/we.2158	**Q2**	**3.3**	**16**	**18**	**Yes**
J153.	**M. Khalid***, M. AlMuhaini, R.P. Aguilera, and A.V. Savkin, "Method for Planning a Wind–Solar–Battery Hybrid Power Plant with Optimal Generation-Demand Matching", IET Renewable Power Generation, vol. 12 (15), pp.1800-1806 (**2018**). https://doi.org/10.1049/iet-rpg.2018.5216	**Q3**	**2.9**	**46**	**83**	**Yes**
J154.	**M. Khalid**, U. Akram, and S. Shafiq, "Optimal Planning of Multiple Distributed Generating Units and Storage in Active Distribution Networks", IEEE Access, vol. 6, pp. 55234-55244 (**2018**). https://doi.org/10.1109/ACCESS.2018.2872788	**Q2**	**3.6**	**53**	**69**	**Yes**
J155.	A. Ahmed and **M. Khalid***, "An Intelligent Framework for Short-Term Multi-Step Wind Speed Forecasting Based on Functional Networks", Applied Energy, vol. 225, pp. 902-911 (**2018**). https://doi.org/10.1016/j.apenergy.2018.04.101	**Q1**	**11**	**55**	**67**	**Yes/** Top 10%
J156.	U. Akram and **M. Khalid**, "A Coordinated Frequency Regulation Framework Based on Hybrid Battery-Ultracapacitor Energy Storage Technologies", IEEE Access, vol. 6, pp.7310-7320 (**2018**). https://doi.org/10.1109/ACCESS.2017.2786283	**Q2**	**3.6**	**65**	**87**	**Yes**
J157.	U. Akram, **M. Khalid**, and S. Shafiq, "An Improved Optimal Sizing Methodology for Future Autonomous Residential Smart Power Systems", IEEE Access, vol. 6, pp. 5986-6000 (**2018**). https://doi.org/10.1109/ACCESS.2018.2792451	**Q2**	**3.6**	**63**	**84**	**Yes**
J158.	U. Akram, **M. Khalid**, and S. Shafiq, "Optimal Sizing of a Wind/Solar/Battery Hybrid Grid-Connected Microgrid System", IET Renewable Power Generation, vol. 12 (1), pp. 72-80 (**2018**). https://doi.org/10.1049/iet-rpg.2017.0010	**Q3**	**2.9**	**225**	**375**	**Yes**

J159.	U. Akram, **M. Khalid**, and S. Shafiq, "An Innovative Hybrid Wind-Solar and Battery-Supercapacitor Microgrid System-Development and Optimization", IEEE Access, vol. 5, pp. 25897-25912 (**2017**). https://doi.org/10.1109/ACCESS.2017.2767618	**Q2**	**3.6**	**123**	**153**	**Yes**
J160.	Savkin, A. V., **M. Khalid**, and Agelidis, V. G. (2016). A Constrained Monotonic Charging/Discharging Strategy for Optimal Capacity of Battery Energy Storage Supporting Wind Farms. IEEE Transactions on Sustainable Energy, *7*(3), 1224-1231. Article 7437467. https://doi.org/10.1109/TSTE.2016.2528222	**Q1**	**10**	**59**	**68**	**Yes**/ Top 5%
J161.	**M. Khalid**, Ahmadi, A., Savkin, A. V., & Agelidis, V. G. (2016). Minimizing the energy cost for microgrids integrated with renewable energy resources and conventional generation using controlled battery energy storage. Renewable Energy, *97*, 646-655. https://doi.org/10.1016/j.renene.2016.05.042	**Q1**	**9.1**	**71**	**87**	**Yes**/ Top 20%
J162.	**M. Khalid*** and A. V. Savkin, "Minimization and Control of Battery Energy Storage for Wind Power Smoothing: Aggregated, Distributed and Semi-Distributed Storage", Renewable Energy, vol. 64, pp. 105-112 (**2014**). https://doi.org/10.1016/j.renene.2013.09.043	**Q1**	**9.1**	**79**	**95**	**Yes**/ Top 20%
J163.	**M. Khalid*** and A. V. Savkin, "Closure to Discussion on "A Method for Short-Term Wind Power Prediction with Multiple Observation Points", IEEE Transactions on Power Systems, vol. 28 (2), pp. 1898-1899 (**2013**). https://doi.org/10.1109/TPWRS.2013.2255351	**Q1**	**7.2**	**0**	**33**	**Yes**/ Top 10%
J164.	A. Khatamianfar, **M. Khalid,** A. V. Savkin, and V. G. Agelidis, "Improving Wind Power Dispatch in the Australian Electricity Market with Battery Energy Storage Using Model Predictive Control", IEEE Transactions on Sustainable Energy, vol. 4, no. 3, pp. 745-755 (**2013**). https://ieeexplore.ieee.org/document/6478862	**Q1**	**10**	**93**	**113**	**Yes**/ Top 5%
J165.	**M. Khalid*** and A. V. Savkin, "A Method for Short-Term Wind Power Prediction with Multiple Observation Points", IEEE Transactions on Power Systems, vol. 27(2), pp. 579-586 (**2012**). **(Ex-PhD)** https://doi.org/10.1109/TPWRS.2011.2160295	**Q1**	**7.2**	**130**	**159**	**Yes**/ Top 10%
J166.	**M. Khalid*** and A. V. Savkin, "An Optimal Operation of Wind Energy Storage System for Frequency Control Based on Model Predictive Control", Renewable Energy, vol. 48, pp. 127-132 (**2012**). **(Ex-PhD)** https://doi.org/10.1016/j.renene.2012.03.038	**Q1**	**9.1**	**61**	**80**	**Yes**/ Top 20%

J167.	**M. Khalid*** and A. V. Savkin, "A Model Predictive Control Approach to the Problem of Wind Power Smoothing with Controlled Battery Storage", Renewable Energy, vol. 35, pp. 1520–1526 (**2010**). **(Ex-PhD)** https://doi.org/10.1016/j.renene.2009.11.030	**Q1**	**9.1**	**160**	**214**	**Yes**/ Top 20%

4.5 Contribution to Undergraduate Research, Uxplore and SURE Program

I actively contributed to the Undergraduate Research (EE497), Uxplore, and SURE programs at the university in the following ways:

1. **KFUPM Summer UG Research Program:** I am currently contributing to the program by supervising a student for Semester 233. The aim is to empower the student to explore innovative solutions and to develop a strong research foundation.

2. **EE497 Undergraduate Course:** I served as an advisor for the EE497 undergraduate course during Terms 231, 222, and 212, guiding students through their research projects and academic inquiries.

3. **Uxplore Program:** I have annually supervised undergraduate students participating in the Uxplore program, specifically under the auspices of the IRC for Sustainable Energy Systems and SDAIA-KFUPM Joint Research Center for Artificial Intelligence in the Terms 232, 231, 211, 202, providing mentorship and research direction.

4. **SURE Program:** I actively participated in the SURE program and mentored a team during the Summer Session of 2020, offering expert advice and support to enhance their research outcomes.

5. **RES200 Research Course:** I have contributed in the newly launched UG Research program in the Terms 241 and 251.

5. COMMUNITY AND PROFESSIONAL SERVICES

(Please report required information (at Current Rank **only**)

5.1 Professional Activities

5.1.1 Conference Organization

No.	Conference Name	Location	Role	Date MM/YY
1.	Saudi Arabian Renewable Energy Conference & Exhibition (SARECE2026)	KFUPM, Dhahran	General Chair	**12/26**
2.	IEEE PES Innovative Smart Grid echnologies (ISGT) Middle East	Dubai, UAE	Workshop Team	**11/25**
3.	Smart Mobility and Logistics Ecosystems (SMiLE)	KFUPM, Dhahran	Technical Committee Member	**02/26**
4.	The 8th International Conference on Power and Energy Applications (ICPEA 2025) & 1st IEEE PCCC Yangtze River Delta Forum	Shanghai, China	Technical Committee Member	**10/25**
5.	IEEE PES Australasian Universities Power Engineering Conference (AUPEC2024)	Australia	Publicity and Sponsorship Chair	**11/24**
6.	11th International Conference on Power and Energy Systems Engineering (CPESE2024)	Japan	Technical Committee Member	**09/24**
7.	Smart Mobility and Logistics Ecosystems (SMiLE)	KFUPM, Dhahran	Technical Committee Member	**09/24**
8.	21st International Multi-Conference on Systems, Signals and Devices Edition (SSD'24)	Erbil, Iraq	Scientific Committee Member	**04/24**
9.	IEEE International Conference on Energy Technologies for Future Grids (IEEE ETFG 2023)	Wollongong, Australia	Call for Participation, Promotion and Publicity - Committee Member	**12/23**
10.	IEEE International Conference on Energy Technologies for Future Grids (IEEE ETFG 2023)	Wollongong, Australia	Poster Awards Evaluation - Committee Member	**12/23**
11.	IEEE International Conference on Energy Technologies for Future Grids (IEEE ETFG 2023)	Wollongong, Australia	Technical Session Chair	**12/23**
12.	IEEE IAS Global Conference on Renewable Energy and Hydrogen Technologies (GlobConHT 2023)	Male, Maldives	Technical Committee Member	**11/23**
13.	20th International Multi-Conference on Systems, Signals and Devices Edition (SSD'23)	Mahdia, Tunisia	Scientific Committee Member	**05/23**

No.	Conference Name	Location	Role	Date MM/YY
14.	IEEE Green Technologies Conference (GreenTech 2023)	Denver, Colorado	Special Session Organizer	**04/23**
15.	IEEE Green Technologies Conference (GreenTech 2022)	Houston, Texas	Technical Session Chair	**04/22**
16.	IEEE PES Innovative Smart Grid Technologies-Asia (ISGT Asia 2021)	Brisbane, Australia	Technical Session Chair	**12/21**

5.1.2 Conference Presentations

No.	Conference Title	Location	Date MM/YY
1.	IEEE International Conference on Smart Grid Communications, Control, and Computing Technologies (SmartGridComm 2025)	Toronto, Canasda	**09/2025**
2.	IEEE PES T&D Conference & Exposition (T&D 2024)	Los Angeles, US	**05/2024**
3.	The 25th IEEE International Conference on Industrial Technology (ICIT 2024)	Bristol, UK	**03/2024**
4.	IEEE International Conference on Energy Technologies for Future Grids (ETFG 2023)	Wollongong, Australia	**12/2023**
5.	International Conference on Control, Automation and Diagnosis (ICCAD 2023)	Rome, Italy	**05/2023**
6.	Saudi Arabia Smart Grid (SASG 2022)	Riyadh, Saudi Arabia	**12/2022**
7.	IEEE Electrical Power and Energy Conference (EPEC 2022)	Virtual	**12/2022**
8.	IEEE PES 14th Asia-Pacific Power and Energy Engineering Conference (APPEEC 2022)	Melbourne, Australia	**11/2022**
9.	IEEE Green Technologies Conference (GreenTech 2022)	Houston Texas, USA	**03/2022**
10.	5th International Conference on Power Electronics and their Applications (ICPEA 2022)	Hail, Saudi Arabia	**03/2022**
11.	2021 IEEE PES Innovative Smart Grid Technologies-Asia (ISGT Asia)	Brisbane, Australia	**12/2021**

5.1.3 Invited Talks/Lectures

Invited Talk (**IT**), Lecture (**L**)				
No.	**Title**	**Location**	**Type of Talk**	**Date MM/YY**
1.	Artificial Intelligence and Digitalization in Energy Sector	SDAIA, SA	**IT**	**12/2022**
2.	Renewable Energy: Transition & Transformation	KFUPM, SA	**IT**	**11/2022**

Invited Talk (**IT**), Lecture (**L**)				
No.	**Title**	**Location**	**Type of Talk**	**Date** MM/YY
3.	Power Firming Filter for Solar PV System Coupled with Battery Storage System	MoE, SA	**IT**	**11/2022**
4.	IBL Experience Sharing Session	KFUPM, SA	**IT**	**03/2022**

5.1.4 Review of Technical/Journal Papers, Proposals and Reports (if any)

Journal Paper (**JP**), Technical Proposal (**TP**), Technical Report (**TR**)			
No.	**Journal Title, or Organization/Institution**	**Review Type**	**Date** MM/YY
1.	IEEE Transactions on Industrial Informatics	**JP**	**06/2024**
2.	AIP Advances	**JP**	**06/2024**
3.	IET Renewable Power Generation	**JP**	**05/2024**
4.	IEEE Transactions on Industrial Informatics	**JP**	**05/2024**
5.	IEEE Power and Energy Technology Systems Journal	**JP**	**04/2024**
6.	IEEE Open Access Journal of Power and Energy	**JP**	**04/2024**
7.	International Transactions on Electrical Energy Systems	**JP**	**04/2024**
8.	Automatika	**JP**	**04/2024**
9.	IEEE Access	**JP**	**04/2024**
10.	Energy Reports	**JP**	**10/2023**
11.	IEEE Transactions on Sustainable Energy	**JP**	**07/2023**
12.	IEEE Transactions on Power Delivery	**JP**	**12/2021**
13.	IEEE Transactions on Power Systems	**JP**	**12/2020**
14.	IEEE Transactions on Smart Grids	**JP**	**04/2024**
15.	Renewable and Sustainable Energy Reviews	**JP**	**10/2021**
16.	Journal of Energy Storage	**JP**	**01/2021**
17.	Sustainability	**JP**	**08/2022**
18.	IEEE Access	**JP**	**04/2024**
19.	Applied Energy	**JP**	**07/2023**
20.	Energy Strategy Reviews	**JP**	**07/2023**
21.	Energies	**JP**	**08/2023**
22.	Applied Sciences	**JP**	**11/2021**
23.	Designs		**10/2022**
24.	Alexandria Engineering Journal	**JP**	**08/2023**

Journal Paper (**JP**), Technical Proposal (**TP**), Technical Report (**TR**)			
No.	**Journal Title, or Organization/Institution**	**Review Type**	**Date** MM/YY
25.	Deanship of Research	**TP**	**04/2022**
26.	Deanship of Research	**TP**	**06/2022**
27.	Interdisciplinary Research Center for Sustainable Energy Systems (**IRC-SES**)	**TP**	**12/2023**
28.	Interdisciplinary Research Center for Sustainable Energy Systems (**IRC-SES**)	**TP**	**04/2022**
29.	Renewable Energy Technical Incubator (**RETI**)	**TP**	**12/2023**
30.	50K Competition under Renewable Energy Technical Incubator (**RETI**) by **NIDLP** and **IRC-SES**	**TP**	**03/2024**

5.1.5 Membership of Refereed Journal Editorial Boards

Editor-in-Chief/Editor (**ED**), Senior Editor (**SE**), Associate Editor (**AE**), Editorial Board (**EB**), Advisory Board (**AB**)				
	Journal Title	**Membership**		
		Type	**Duration (From -To)**	
1.	Arabian Journal of Science and Engineering (AJSE)	**AE**	01/2022	Present
2.	Frontiers in Energy Research (Special Issue)	**SE**	01/2024	Present
3.	Sustainability *(Special Issue 1)*	**SE**	01/2023	01/2024
4.	Sustainability *(Special Issue 2)*	**SE**	01/2021	12/2022

5.2 Outreach Activities

5.2.1 National Committees and Councils/Boards (Off-Campus)

1.	IEEE, Senior Member, Joined 2009
2.	IEEE, PES Member Joined 2022
3.	Engineers Australia, Joined 2007
4.	KES International, UK, Joined 2009
5.	Saudi Engineering Council, Joined 2023
6.	Pakistan Engineering Council, Joined 2000

5.2.2 Social, Community and Other Activities / Involvements

1.	As a current member of the Community Life Committee (2023-24), I spearheaded the proposal for a new initiative dedicated to providing comprehensive support for incoming faculty, staff, and postdoctoral scholars, aligning with our broader efforts to enhance community welfare through strategic planning and resource allocation.
2.	I actively participated in the Renewable Energy Week (2022) organized by the Electrical Engineering Department, where I not only attended various events but also contributed significantly by delivering an invited lecture. My involvement helped enrich the program and fostered knowledge sharing among students and attendees, contributing to the success of the event and promoting awareness and understanding of renewable energy technologies within the department and broader community.
3.	I provided support to various student clubs at the university consistently, including the EE Student Club, IEEE Student Branch, and Environmental Student Club. This support extended beyond advice, as I regularly delivered lectures to these clubs, sharing insights and expertise to enrich their activities and promote learning and engagement among members.
4.	I actively contributed to Committee on Convocation, Honors, and Public Events of the University on multiple occasions, offering valuable insights and expertise to ensure the successful planning and execution of various public events. My involvement included assisting in event logistics, programming, and coordination, ultimately enhancing the overall experience for attendees and supporting the committee's mission to promote a vibrant campus community.
5.	During my international visits, I actively promoted KFUPM, significantly enhancing its reputation on a global scale. Through strategic engagements, I organized public lectures and facilitated talks by internationally renowned professors, both virtually and on campus. These efforts not only increased visibility but also enriched academic discourse, fostering knowledge exchange and collaboration opportunities for our University.
6.	I actively participated in the Departmental Resources Assessment Committee of Electrical Engineering, focusing on evaluating laboratory resources, faculty office space, and available facilities. My contributions aided in optimizing resource allocation, ensuring efficient use of space and equipment to support the department's teaching, research, and administrative needs effectively.
7.	I actively participated in numerous evaluations for student awards, including senior design project awards, RETI 50K Competitions, and beyond, contributing to the recognition of outstanding student achievements and the advancement of excellence within our academic community.
8.	I actively engaged in the University's Open Day (s) or Career Day (s), and Expos, where I played a pivotal role in promoting the university's programs, with a particular emphasis on Electrical Engineering. By providing valuable information and insights about the department's offerings, I contributed to attracting prospective students and fostering a deeper understanding of the opportunities available within the field of Electrical Engineering at our University.
9.	I provided mentorship to new faculty and postdoctoral scholars at Electrical Engineering Department, offering guidance, support, and valuable insights to facilitate their settling, professional growth, and successful integration into the academic community, thereby contributing to the development of a supportive and collaborative environment within the University.
10.	I organized educational visits for my undergraduate students to solar and hydrogen process facilities and research institutes, enhancing their practical understanding of renewable energy technologies and research methodologies, and fostering community awareness of sustainable practices.

11.	I consistently served as a regular reviewer for research-based courses, including EE600, EE606, and EE701, within the M.Sc. and Ph.D. programs under the Energy Research Group of the electrical engineering department.
12.	Recognizing the critical role of social media in enhancing the University's visibility, I have embarked on efforts to bolster our reputation on prominent platforms like LinkedIn and others. By strategically leveraging these platforms, we aim to increase visibility, engage with a broader audience, and showcase the institution's achievements, academic offerings, and contributions to the global community. This proactive approach underscores our commitment to embracing modern communication channels to amplify our impact and attract prospective students, faculty, and partners.
13.	I am serving on the Scientific Committee organizing the inaugural AJSE Symposium "AI Transforming Systems" which will be hosted under the auspices of the Arabian Journal for Science and Engineering at KFUPM in November 2024.
14.	I made a significant contribution to KFUPM's Research Strategy Day 2024, themed "Research Identity for a Better KSA and World" by showcasing a research poster and a prototype developed in my research laboratory.
15.	I had the privilege of guiding and supporting an elementary student within the Mawhiba (IBADA) program. This program is dedicated to nurturing scientific creativity and knowledge development among pre-college students
16.	I made substantial contributions to the department's accreditation efforts by ensuring the timely submission of comprehensive data and documentation.
17.	I played a significant role by actively engaging in various surveys and discussions, notably completing Times Higher Education (THE) surveys, and providing valuable data and insights for continuous improvements.

5.2.3 Public Seminars, Lectures and Workshops (On and Off-Campus)

Public Seminar (**PS**), Public Lecture (**PL**) and Workshop (**WS**)				
No.	**Title**	**Location**	**Type of Presentation**	**Date** MM/YY
1.	LaTeX for Academic Writing: An Introductory Workshop	KFUPM, SA	**PS**	**09/2025**
2.	Renewable Energy at Electrical Engineering	KFUPM, SA	**PS**	**04/2024**
3.	Smart Electrified Transportation Solutions (SETS) Laboratory for Advancing Electric Vehicles and Renewable Energy Technologies in Saudi Arabia	RDIA, SA	**PS** ***(Executive Committee)***	**12/2023**
4.	Digital Technologies and Modern Energy Transition - An Overview	Dhahran, SA	**PS**	**07/2023**
5.	Introduction to LaTeX – A Scientific Document Preparation System	KFUPM, SA	**WS**	**02/2023**
6.	Artificial Intelligence and Digitalization in Energy Sector	Dhahran, SA	**PS**	**12/2022**
7.	Power Firming Filter for Solar PV System Coupled with Battery Storage System	MoE, SA	**PS** ***(Executive Committee)***	**11/2022**

Public Seminar (PS), Public Lecture (PL) and Workshop (WS)				
No.	**Title**	**Location**	**Type of Presentation**	**Date** MM/YY
8.	Solid-State Transformer Prototype Development for Smart Grid Applications	KFUPM, SA	**PS** ***(Executive Committee)***	**11/2022**
9.	Renewable Energy: Transition & Transformation	KFUPM, SA	**PL**	**11/2022**
10.	Solid State Transformers and Smart Grids: *KFUPM-UNSW Collaboration Opportunities*	UNSW, Sydney	**PS** ***(Power Group @ EE)***	**08/2022**
11.	IBL Experience Sharing Session	KFUPM, SA	**PS**	**03/2022**
12.	Hydrogen and Renewable Energy Systems: An Overview	KFUPM, SA	**PS**	**02/2021**
13.	LaTeX for Scientific Writing	KFUPM, SA	**WS**	**02/2021**
14.	Smart Grids and Sustainability	KFUPM, SA	**PL**	**03/2021**

5.3 Committee Work (On Campus)

5.3.1 Administrative Assignments

Position	Year	Type
Coordinator, Innovation Goals (A-5-2), National Research Priority: Electric Vehicles and EV Batteries, Interdisciplinary Research Center for Sustainable Energy Systems, KFUPM	2024-Present	Additional Assignment
Coordinator, MX in Sustainable and Renewable Energy (SRE), Electrical Engineering Department, KFUPM	2023-Present	Additional Assignment
Coordinator, Renewable Energy Research Track at EE, KFUPM	2023-Present	Additional Assignment
Coordinator, MX SRE Projects, Electrical Engineering Department, KFUPM	2023-Present	Additional Assignment
Coordinator, Control Systems Research Group, Electrical Engineering Department, KFUPM	2018-2023	Additional Assignment

5.3.2 Departmental, College and University Committees

Over the past 3.5 years, I have actively been engaged in numerous committees spanning departmental, college, and university levels. Below is a summary of the diverse range of committee assignments I have enthusiastically undertaken from the Academic year **2020 to Date**.

Type: **S** = Standing, A= Ad-Hoc, Role: **C** = Chairperson, **M** = Member				
No.	**Committee Name**	**Academic Year-Term**	**Type**	**Role**
	University Committees			
1.	The Internal Promotion Committee (IPC), KFUPM	**25-1**	**A**	**M**
2.	The Community Life Committee, KFUPM	**23-2**	**S**	**M**
3.	The Community Life Committee, KFUPM	**23-1**	**S**	**M**
4.	The Promotion Committee, *Interdisciplinary Research Center for Sustainable Energy Systems, Research Positions*	**22-2**	**A**	**C**
5.	Updating the Research & Innovation Environment, Infrastructure, and Operation, KFUPM	**22-1**	**A**	**M**
6.	The Promotion Committee, *Interdisciplinary Research Center for Sustainable Energy Systems, Research Positions*	**21-2**	**A**	**M**
7.	The Promotion Committee, *Interdisciplinary Research Center, Staff Positions*	**21-2**	**A**	**C**
8.	The Admissions & Academic Standing Committee, KFUPM	**21-1**	**S**	**M**
9.	The University Research Committee, KFUPM	**20-2**	**S**	**M**
10.	The Promotion Committee, *Center of Energy and Geo Processing, Research Positions*	**20-1**	**A**	**M**
	College Committees			
11.	Installation of Solar Panels Received from ARAMCO	**22-1**	**A**	**M**
	Department Committees			
12.	EE311 Design Course Revision Committee	**242-2**	**A**	**C**
13.	EE Graduate Admission Committee	**251-1**	**A**	**M**
14.	EE Graduate Admission Committee	**23-2**	**A**	**M**
15.	EE Graduate Admission Committee	**23-1**	**A**	**M**
16.	Faculty Search Committee *(invited member)*	**22-1**	**A**	**M**
17.	Graduate Program Committee (GPC)	**22-1**	**A**	**M**
18.	PhD Comprehensive Exam Committee, *Coordinator in Power*	**22-1**	**A**	**M**
19.	Faculty Search Committee *(invited member)*	**22-2**	**A**	**M**
20.	Graduate Program Committee (GPC)	**21-2**	**A**	**M**
21.	Graduate Admission Committee (GAC)	**21-2**	**A**	**M**
22.	Faculty Search Committee *(invited member)*	**21-2**	**A**	**M**
23.	PhD Comprehensive Exam Committee, *Coordinator in Power*	**21-1**	**A**	**M**
24.	Graduate Admission Committee (GAC)	**21-1**	**A**	**M**
25.	Faculty Search Committee *(invited member)*	**21-1**	**A**	**M**

Type: **S** = Standing, A= Ad-Hoc, Role: **C** = Chairperson, **M** = Member				
No.	**Committee Name**	**Academic Year-Term**	**Type**	**Role**
26.	Graduate Program Committee (GPC)	**21-1**	**A**	**M**
27.	Graduate Admission Committee (GAC)	**20-2**	**A**	**M**
28.	Energy Lab Development by Schneider Electric Company	**20-2**	**A**	**M**
29.	Graduate Admission Committee (GAC)	**20-1**	**A**	**M**
30.	Concentrations and Professional Master Committee	**20-1**	**A**	**M**

	Briefly describe your role/achievements in **major** committees **only**
1.	**Com-1**: I proposed "KFUPM Connect" as an essential digital solution to streamline integration for new faculty, postdocs, and staff at KFUPM. It provides a central platform for accessing orientation materials, language learning resources, housing options, healthcare info, and more, fostering a supportive environment and enhancing social interaction and accessibility within the KFUPM community. Under the auspices of the KFUPM Welcoming Community initiative, I developed the comprehensive proposal.
2.	**Com-2**: I played a pivotal role in evaluating applications for promotion to higher ranks, encompassing support staff and officers, serving both as a committee member and as chair, ensuring rigorous assessment, maintaining the integrity of the promotion process, and adherence to promotion criteria.
3.	**Com-07**: I made significant contributions to the finalization of research proposals submitted to Deanship of Research, aiding in the selection of research awards, and proposing comprehensive guidelines for the evaluation of both awards and proposals, thereby ensuring a fair and transparent process.
4.	**Com-10**: I played a key role in efficiently and promptly shortlisting M.Sc. and Ph.D. admissions applications in Electrical Engineering Department, specifically focusing on power systems, managing a large volume of applicants with precision and timeliness.
5.	**Com-12**: I contributed to identifying and selecting suitable faculty members in the field of control systems, assisting in shortlisting applications and ensuring the recruitment of top talent.
6.	**Com-13**: I actively contributed to the Graduate Program Committee (GPC) of Electrical Engineering Department, where I played a key role in evaluating and overseeing various aspects of the graduate program, including policy and procedures implementation, as well as managing comprehensive exams for Ph.D. students, ensuring the program's effectiveness and adherence to high standards.
7.	**Com-26**: As a member of the Concentrations and Professional Master Committee of the department, I played a crucial role in reviewing new concentration applications and MX programs, ensuring they aligned with the department's standards and objectives. Additionally, I participated in the approval or rejection of proposed concentrations and professional programs, utilizing analytical skills to assess their viability and relevance. Furthermore, I contributed to the analysis of existing concentrations and programs, identifying areas for improvement and enhancement to better serve the needs of students and the department.

5.3.3 Other Committees, Councils, and Boards (if any)

No.	Board/Council Name	Year	Level	Role
1.	AJSE Editorial Board - Springer	2021 – to date	Senior	Associate Editor

APPENDIX A: Details of Teaching Evaluation

(Since the last Promotion date, **only**)

(Please report information, here in term-wise, then report summary under **item 2.1**)

No.	Course(s) Taught	Term	Dpt.	Section(s) if any)	No. of Students	Students' Evaluation (10)
1.	EE-360-58: Electric Energy Engineering Lab	**20-1**	EE	58	18	8.84
2.	EE-583-01: Energy Storage & Hydrogen Sys	**20-1**	EE	01	26	9.91
3.	EE-629-02: Special Topics in Power Systems	**20-1**	EE	02	25	9.29
					Term's AVR	**9.35**
1.	EE-360-06: Electric Energy Engineering	**20-2**	EE	06	29	9.39
2.	EE-360-51: Electric Energy Engineering Lab	**20-2**	EE	51	13	9.82
3.	EE-360-55: Electric Energy Engineering Lab	**20-2**	EE	55	15	9.20
					Term's AVR	**9.47**
1.	EE-360-01: Electric Energy Engineering	**20-3**	EE	01	29	9.39
					Term's AVR	**9.39**
1.	EE 306: Electromechanical Devices	**21-1**	EE	02	30	8.82
2.	EE 306: Electromechanical Devices	**21-1**	EE	09	28	9.12
3.	EE 468: Renewable Energy	**21-1**	EE	02	29	8.72
					Term's AVR	**8.89**
1.	EE 306: Electromechanical Devices	**21-2**	EE	60	13	8.69
2.	EE 306: Electromechanical Devices	**21-2**	EE	62	13	8.51
3.	EE 629: Special Topics in Power Systems	**21-2**	EE	01	11	8.70
					Term's AVR	**8.63**
1.	EE-581: Renewable Energy Integration	**21-3**	EE	01	23	7.81
					Term's AVR	**7.81**
1.	EE 468: Renewable Energy	**22-1**	EE	01	23	8.88
2.	EE 361:	**22-1**	EE	53	14	9.06

No.	Course(s) Taught	Term	Dpt.	Section(s) if any)	No. of Students	Students' Evaluation (10)
	Electric Energy Engineering Lab					
3.	EE 361: Electric Energy Engineering Lab	**22-1**	EE	58	10	8.79
					Term's AVR	**8.91**
1.	EE 629: Special Topics in Power Systems	**22-2**	EE	01	11	9.84
3.	EE-360 Electric Energy Engineering	**22-2**	EE	06	24	8.66
					Term's AVR	**9.25**
1.	EE 581: Renewable Energy Integration	**22-3**	EE	01	26	9.0
					Term's AVR	**9.0**
2.	EE 360 Electric Energy Engineering	**23-1**	EE	07	26	8.48
3.	EE 583 Electric Energy Engineering	**23-1**	EE	01	21	8.50
					Term's AVR	**8.49**
	EE461: Smart Grids	**23-2**	EE	01	22	9.08
	EE 629: Special Topics in Power Systems	**23-2**	EE	01	23	9.33
					Term's AVR	**9.20**
1.	EE 581: Renewable Energy Integration	**23-3**	EE	01	21	9.46
					Term's AVR	**9.46**
1.	EE 360 Electric Energy Engineering	**24-1**	EE	07	14	8.88
2.	EE 583 Electric Energy Engineering	**24-1**	EE	01	28	8.81
					Term's AVR	**8.84**
1.	EE 629: Special Topics in Power Systems	**24-2**	EE	01	23	9.17
2.	EE-360 Electric Energy Engineering	**24-2**	EE	F-01	12	9.33
3.	EE-360 Electric Energy Engineering	**24-2**	EE	02	12	9.96

No.	Course(s) Taught	Term	Dpt.	Section(s) if any)	No. of Students	Students' Evaluation (10)
					Term's AVR	**9.49**
		13 Terms		**Total:**	**630**	
					AVR / Course	**9.03**
					AVR / Term	**9.01**

APPENDIX B: Supporting Documents (if any)

You may wish to add any **supporting document**(s) related to **Teaching**, **Research** and/or University **and Community Services**, only when necessary and these documents would add significant value in supporting your application.

Note: The certificates have been placed in the shared folder.

APPENDIX C: Additional Information (if found necessary)

Additional Information (max, a total of two pages)

List of ***Unsponsored/Independent*** Research Projects under the Current Rank (recent first)
Role: Principal Investigator (**PI**), Co-Investigator (**CI**), Project Consultant (**PC**)
Status: (Completed, **CP**), (In progress, **IP**), (Accepted, **A**)

No.	Project Title	Role	Status	Start	End
1.	**M. Khalid**, M. Abido, M. Almehemedi, **et al.**, "Design of Advanced Multi-Energy Storage Systems for Renewable Applications", Proof of Concept (PoC), *submitted to* KACARE in collaboration with Gulf Battery Company, 2020-2021.	**PI**	The proposal was shortlisted in all evaluation phases like technical, feasibility, financial, and impact, among a large pool of applicants. However, it did not receive final funding.		

- **Others (R&D) Contributions**

- As a Principal Investigator (PI), I submitted a pre-proposal for the Baseload Applied Grant (**BAG, 2025**) to the Research Development and Innovation Authority (RDIA) under the Saudi Applied Research and Technology (SART) Program. The pre-proposal, titled "Hardware-Integrated AI for Smart Energy Systems: Real-Time Adaptive Control of Renewables, EVs, and Storage," has successfully passed the initial evaluation phase, and full proposals are now being invited.
- As a PI, I submitted a pre-proposal for the Basic Science Grant (**BSG, 2025**) to the Research Development and Innovation Authority (RDIA) under the Saudi Basic Science (SBS) Program. The pre-proposal, titled "AI-Driven Framework for Emission Reduction and Renewable Integration in Saudi Grid Infrastructure," has successfully advanced through the initial evaluation stage, and full proposals are now being invited.
- As a PI, I submitted a proposal for the Technology Development Grant (**TDG, 2023**) to the Research Development and Innovation Authority (RDIA) under the Saudi Applied Research & Technology Initiative. The proposal, titled "EVARE (Electric Vehicle Analytics: Reliability and Efficiency)," successfully passed the initial evaluation phases.
- As a PI, I submitted a proposal for the Baseload Applied Grant (**BAG, 2023**) to the Research Development and Innovation Authority (RDIA) under the Saudi Applied Research & Technology Initiative. The proposal, titled "Renewable Energy Forecasting Integrated with Hydrogen Fuel Cells Coupled with Battery Energy Storage: Modeling and Optimization,"also successfully passed the initial evaluation phases.
- Currently working with the Technology Advancement & Prototyping Center (TAPC) - Innovation & Technology Transfer at KFUPM to upscale my completed PoC project to a product development and commercialization titled "Solid-State Transformer Prototype Development for Smart Grid Applications".

*End of Additional Information (**Max two pages**)*

RESPONSES TO EVALUATION CRITERIA

(a) Give Statement of Research Leadership

Over the course of my academic career at King Fahd University of Petroleum & Minerals (KFUPM), I have established myself as a research leader with a clear vision: to develop transformative solutions in renewable energy, energy storage, hydrogen systems, and electrified transportation. My work reflects not only sustained scholarly excellence but also the ability to build research capacity, secure competitive funding, and mobilize interdisciplinary collaborations that align with both national priorities and global scientific challenges.

A defining feature of my leadership has been the establishment of state-of-the-art laboratories that serve as national hubs for innovation. I spearheaded the creation of the Smart Electrified Transportation Solutions (SETS) Laboratory, securing SAR 1.5 million in competitive funding from the Research, Development, and Innovation Authority (RDIA). These facilities are not routine infrastructure upgrades; they represent strategic investments in Saudi Arabia's transition toward sustainable mobility and renewable energy. By leading the transformation of existing resources into cutting-edge research ecosystems, I demonstrated both foresight and institutional leadership. Likewise, my pivotal role in initiating the concept of Saudi National Battery Assessment Laboratory, in partnership with K·A·CARE, has laid the groundwork for the Kingdom's first national-level facility dedicated to battery research and assessment (under development). These achievements exemplify leadership that extends beyond individual projects to institution- and country-wide capacity building.

My leadership is further evidenced in research funding and project execution. I have directed more than thirty funded projects, serving as Principal Investigator in the majority. These projects, amounting to over SAR 2.1 million in competitive funding, span collaborations with the Ministry of Energy, Gulf Battery Company, and international partners. More importantly, they have produced tangible outputs, including proof-of-concept demonstrations for solid-state transformers and local microgrids, which are now progressing toward commercialization. This transition from fundamental research to real-world applications is the hallmark of research leadership: creating impact not only within academia but also in industry and society. My ability to attract fellowships from highly competitive agencies such as SDAIA (2022) and K·A·CARE (2023) further reflects my standing as a trusted leader capable of aligning research with national strategic goals.

Equally central to my leadership record is scholarly output and global recognition. I have authored over 400+ scholarly outcomes, including ISI-indexed journal papers, top rated conferences, U.S. patents, books, book chapters, editorials, and technical reports. As a whole, approximately 70% of my research outcomes and projects list me as the corresponding author, affirming my leadership role in shaping research direction and outcomes.

Research leadership, however, is not only about personal output; it is equally about building human capital. I have supervised eighteen master's and four doctoral students to completion,

with many continuing their studies at top universities worldwide. My current supervision of several doctoral and master's students further demonstrates ongoing commitment to developing future leaders in energy research. My mentorship of undergraduates has resulted in multiple international achievements, including the IEEE Power & Energy Society Outstanding Student Scholarship in 2023 and a second-place award at the 2021 Undergraduate Research Competition in Abu Dhabi. I have also played a pivotal role in attracting distinguished postdoctoral fellows and faculty to KFUPM, significantly strengthening the university's research ecosystem. These outcomes highlight my leadership in nurturing talent, transferring knowledge, and ensuring institutional sustainability.

In parallel, I have advanced KFUPM's national and global research profile through strategic collaborations and conference leadership. I serve as the Innovation Goals Coordinator for the National Research Priority on Electric Vehicles and Batteries, aligning KFUPM's research direction with Vision 2030 objectives. My collaborations with the University of New South Wales, University of Sydney, University of Maryland (CALCE), and LUMS Pakistan have opened channels for joint projects, student exchanges, and technology transfer. Furthermore, my leadership in organizing major academic events—such as AJSE's AI Symposium (2024) and the forthcoming Saudi Arabian Renewable Energy Conference & Exhibition (2026)—positions KFUPM as a focal point in global scientific dialogue. These activities reflect an outward-facing leadership that strengthens institutional visibility and forges enduring partnerships across academia, industry, and government.

Taken together, these achievements present clear evidence of research leadership that is both comprehensive and impactful. I have consistently demonstrated the ability to conceive and deliver high-value initiatives, secure competitive resources, build national and international collaborations, and mentor the next generation of scholars. My work goes beyond personal scholarship to create research ecosystems, align with strategic priorities, and produce outcomes that are measurable in terms of recognition, funding, infrastructure, and societal impact. This sustained trajectory of leadership positions me to continue advancing KFUPM's mission and to play a decisive role in shaping the future of sustainable energy research globally.

Ultimately, my career reflects a sustained trajectory of research leadership that integrates infrastructure building, high-impact scholarship, and alignment with national strategy. What distinguishes my contributions is not simply their breadth, but the way they converge to advance institutional growth and national priorities. By combining vision with execution, and mentorship with global collaboration, I have demonstrated how research leadership can extend beyond academic outputs to deliver lasting societal impact. This record underscores my role as a leader whose influence operates across institutional, national, and international levels, positioning KFUPM as a visible and credible contributor to the global energy transition.

(b) Indicate the Impact of Publication Work – A Statement

My H-index of 46 (Google Scholar) and 41 (Scopus), coupled with 8,800+ citations and a Field-Weighted Citation Impact of 1.92, demonstrates sustained influence in the field. These metrics demonstrate that my publications are consistently read, cited, and built upon by peers worldwide. Recognition among the top 2% of scientists worldwide by Stanford University (2021, 2023, 2025) and international awards—including Silver and Bronze Medals at the 2024 International Exhibition of Inventions in Geneva—underscore that the impact is acknowledged by the global scientific community.

The scientific impact of my publications lies in introducing new models, optimization frameworks, and control strategies for microgrids, solid-state transformers, and hydrogen-integrated energy systems. Many of these contributions have been adopted by peers as reference methods in power system optimization and renewable integration.

The applied impact is evident in the translation of publications into patents and proof-of-concept projects—including a solid-state transformer prototype and a local microgrid system—which are now advancing toward commercialization. This shows how my research outputs move beyond academia to influence industry practice and support Saudi Arabia's Vision 2030 goals.

Finally, the human-capital impact of my publication work is significant. Many of my graduate and undergraduate students have published under my supervision, some receiving international recognition such as the IEEE PES Outstanding Student Scholarship (2023) and the URC'21 Renewable Energy Award. This reflects how my publication record not only advances global knowledge but also cultivates future leaders.

Overall, the impact of my publication work can be seen in its academic influence, adoption in scientific practice, translation into patents and technologies, and its role in developing future researchers—establishing KFUPM as a visible global contributor in sustainable energy research.

(c) The Scientific Contribution of Each Paper

Given the large volume of research outputs (167 journal papers and 34 patents), presenting the scientific contribution of each paper individually would be excessively lengthy and repetitive. To ensure clarity, coherence, and accessibility, the contributions have instead been classified into major research themes.

For each theme, a concise contribution statement is provided, highlighting the novelty, significance, and impact of the associated body of work. Publications and patents are referenced through their dossier numbers (Jxx for journals, Pxx for patents) under the most suitable thematic category. The classification reflects the best possible thematic alignment of works, ensuring full coverage of contributions while avoiding redundancy and preserving clarity.

Thus, the scientific contribution of each paper is embedded and represented in the contribution statement of its respective theme, ensuring that the collective advancements across domains are clearly articulated and systematically demonstrated.

Theme 1: Battery Energy Storage Systems (BESS)

Contributions:
Developed optimal sizing methods, hybrid control strategies, and power-quality enhancement frameworks for BESS. Patented controllers demonstrate industrial applicability and support grid stability.

Publications (J numbers)	Patents (P numbers)
J19, J20, J21, J22, J23, J24, J25, J26, J27, J28, J29, J30, J31, J32, J33, J34, J35, J36, J37, J38, J39, J40, J41, J42, J43, J44, J45, J46, J47, J122, J124, J125, J132	P3, P30

Theme 2: Renewable Integration & Microgrids

Contributions:
Designed robust controllers and predictive dispatch models for renewable-dominant microgrids. Patented converterless PV and hybrid microgrid systems improved efficiency and reliability under uncertainty.

Publications (J numbers)	Patents (P numbers)
J48, J49, J50, J51, J52, J53, J54, J55, J56, J57, J58, J59, J60, J61, J62, J63, J64, J65, J66, J67, J68, J69, J70, J71, J72, J73, J74, J75, J76, J77, J78, J79, J80, J81, J82, J83, J84, J85, J128, J129, J130, J131	P4, P5, P6, P7, P19, P20, P22, P23, P24, P28, P31

Theme 3: Hydrogen & Hybrid Systems

Contributions:
Pioneered hybrid hydrogen-battery frameworks and integrated electrolyzers into energy hubs. Contributions link long-duration storage to net-zero energy transition strategies.

Publications (J numbers)	Patents (P numbers)
J2, J86, J87, J88, J89, J90, J91, J92, J93, J94, J96, J97, J98, J99, J100, J101, J102	P26

Theme 4: Electrification & Power Electronics (EVs, SSTs, Inverters)

Contributions:
Developed solid-state transformers, efficient inverter topologies, and EV drive controls. Patents demonstrate advances in EV integration, reduced stress capacitor inverters, and fast-charging controllers.

Publications (J numbers)	Patents (P numbers)
J95, J103, J104, J105, J106, J107, J108, J109, J111, J112, J113, J114, J115, J116, J117, J118, J119, J120, J121, J127, J133, J134, J135, J136, J137	P1, P2, P8, P21, P25, P27, P33, P34

Theme 5: Cyber-Physical Security & Resilient Grids

Contributions:
Introduced resilient load-frequency controllers under cyber-attacks, FDI detection, and CPS-aware supervisory schemes. Demonstrates leadership at the energy–cybersecurity nexus.

Publications (J numbers)	Patents (P numbers)
J138, J139, J140, J141, J142, J143, J144, J145, J146, J147, J148, J149, J150	P30, P31, P32

Theme 6: UAVs & Emerging Applications

Contributions:
Applied robust nonlinear controllers and disturbance observers to UAVs, extending energy control expertise into aerospace. Patents highlight cross-disciplinary innovation.

Publications (J numbers)	Patents (P numbers)
J151, J152, J153, J154, J155, J156, J157	P32

Theme 7: AI & Data-Driven Energy Systems

Contributions:
Advanced AI/ML for renewable forecasting, seismic reconstruction without labels, and predictive degradation models. These contributions reduce reliance on labeled datasets and enable predictive, data-driven energy management.

Publications (J numbers)	Patents (P numbers)
J1, J4, J5, J6, J7, J8, J9, J10, J11, J12, J13, J14, J15, J16, J17, J18, J123	P29

Theme 8: Policy, Reviews & Techno-Economic Studies

Contributions:
Produced highly cited reviews and policy-level studies on smart grids, geothermal, and transition pathways, shaping national and international strategies.

Publications (J numbers)	Patents (P numbers)
J3, J110, J126, J158, J159, J160, J161, J162, J163, J164, J165, J166, J167	—

Theme 9: Innovation & Patents Portfolio

Contributions:
Comprehensive patent portfolio demonstrates translational impact. Covers PV recovery controllers, solid-state transformers, EV controllers, converterless PV, and electrostatic generators.

Publications (J numbers)	Patents (P numbers)
—	P1-P21 (Granted), P22-P34 (Under review)

End of Dossier!