



# THE SECOND SAUDI INTERNATIONAL CONFERENCE ON (NUCLEAR POWER ENGINEERING (SCOPE-2

**Monday, 3 November 2025**

**(Ground-103 - Lecture Hall (13:00 - 14:00/60 - Reactor Physics: Advancements in Small Modular Reactors (SMR**

**Conveners: Mohammad Alrwashdeh; Yonghee Kim-**

time	id] title]	presenter
13:00	Neutronic Analysis of the SMART Core [25353]	
13:30	Robust Model Identification for Pressurized Water Reactor Systems [25257] using Sparse Identification of Nonlinear Dynamics	
13:45	PEBBLE BED RACTOR DESIGN DEVELOPMENT FOR INDONESIA [25396]	

**(Ground-103 - Lecture Hall (14:15 - 15:15/60 - Reactor Physics: Reactor Physics Methods and Applications**

**Conveners: Husam Khalefih; Saeed Alameri-**

time	id] title]	presenter
14:15	Calculation and Verification of OPAL Research Reactor Neutronics [25232] using OpenMC	
14:30	Preliminary results for the C5G7-2D Pin cells using the QUANTRA code [25233]	
14:45	An Automatic Soluble Boron Scenario Based on a Sliding Mode [25256] Observer During Daily Load Follow Operation in APR1400	

# Tuesday, 4 November 2025

## (Ground-103 - Lecture Hall (10:00 - 11:00/60 - Reactor Physics: Nuclear Reactors Design

Conveners: Agnieszka Boettcher; Antonio Cammi-

time	id] title]	presenter
10:00	Multi-Objective Optimization of APR-1400 Core Reload Pattern using [25225] Metaheuristic Algorithm	
10:15	PWR fuel assembly burnup with and without thorium addition [25325]	
10:30	Evaluation of U3Si2 as an alternate Accident Tolerant Fuel for Extended [25310] Cycle Operation in APR-1400	
10:45	Criticality and Burnup Analysis of a Generic VVER-1200 for Core [25390] Lifetime Prediction Using Hybrid Burnable Poisons using OpenMC and ORIGEN Codes	

## (Ground-103 - Lecture Hall (13:00 - 14:35/60 - (Reactor Physics: Advancements in Molten Salt Reactors (MSR

Conveners: April Novak; Belal Al Momani-

time	id] title]	presenter
13:00	Invited Talk: Challenges and Advancements in Multiphysics Simulation [25458] of Nuclear Energy Systems	NOVAK, April
13:20	Dynamics of the Molten Salt Fast Reactor Through Parametric Dynamic [25255] Mode Decomposition	
13:35	Feasibility Assessment of Cl-37 Enrichment Reduction in a Long-Life [25262] Maritime Molten Salt Fast Reactor	
13:50	:Validation of OpenMC for Gen IV Graphite-Moderated Reactors [25214] Insights from Benchmarking the UFTR	