

# Scientific Program MoD-PMI 2023

Aachen, 29-31 May 2023

## Program overview

35 min

30 min

20 min

35 min

1h 45 min

Monday 29 May	Tuesday 30 May	Wednesday 31 May
08:45 - 09:05 Opening		
<b>Session 1. Chair: -</b>	<b>Session 5. Chair: -</b>	<b>Session 9. Chair: -</b>
09:05 - 09:35 I1 K. Heinola	09:00 - 09:35 R2 T. Latychevskaia	09:00 - 09:35 R4 R. Kirchheim
09:35 - 10:05 I2 J. Song	09:35 - 10:05 I9 B. Lee	09:35 - 10:05 I16 J. Mougnot
10:05 - 10:25 O1 T. Vuoriheimo	10:05 - 10:25 O4 J. Dominguez	10:05 - 10:25 O7 Y. Silva-Solis
10:25 - 11:00 coffee break	10:25 - 11:00 coffee break	10:25 - 11:00 coffee break
<b>Session 2. Chair: -</b>	<b>Session 6. Chair: -</b>	<b>Session 10. Chair: -</b>
11:00 - 11:30 I3 M. Landeiro	11:00 - 11:30 I10 G. Banerjee	11:00 - 11:30 I17 S. Dwivedi
11:30 - 12:00 I4 T. Hickel	11:30 - 12:00 I11 X. Yi	11:30 - 11:50 O8 D. Nguyen-Manh
12:00 - 12:30 I5 J. Tranchida	12:00 - 12:30 I12 D. Mason	11:50 - 12:50 Discussion
12:30 - 14:15 lunch break	12:30 - 14:15 lunch break	12:50 - 13:00 Closing
<b>Session 3. Chair: -</b>	<b>Session 7. Chair: -</b>	
14:15 - 14:50 R1 F. Djurabekova	14:15 - 14:50 R3 Y. Hatano	
14:50 - 15:20 I6 M. A. Cusentino	14:50 - 15:20 I13 U. Bhardwaj	
15:20 - 15:40 O2 P. Grigoriev	15:20 - 15:40 O5 U. von Toussaint	
15:40 - 16:15 coffee break	15:40 - 16:15 coffee break	
<b>Session 4. Chair: -</b>	<b>Session 8. Chair: -</b>	
16:15 - 16:45 I7 S. Starikov	16:15 - 16:45 I14 D. Sobieraj	
16:45 - 17:15 I8 Z. Yang	16:45 - 17:15 I15 P. Bittner	
17:15 - 17:35 O3 B.-C. Xu	17:15 - 17:35 O6 T. Oda	

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## Program Day 2 – Tuesday 30 May

### Session 5. Chair: -

09:00 - 09:35 R2 T. Latychevskaia	Potentials of individual atoms by convergent beam electron diffraction (CBED)
09:35 - 10:05 I9 B. Lee	Thermal conductivity change during irradiation and its impact on irradiated damage in W from atomistic calculations
10:05 - 10:25 O4 J. Dominguez	Exploring interatomic potentials and dislocation plasticity mechanisms in nanoindentation of crystalline tungsten

10:25 - 11:00 coffee break

### Session 6. Chair: -

11:00 - 11:30 I10 G. Banerjee	Tailoring ion irradiation to emulate neutron damage in core structural materials of nuclear reactors – Recent results from VECC using experiments and simulation
11:30 - 12:00 I11 X. Yi	Damage microstructure, hardening and deuterium retention in neutron irradiated CVD tungsten
12:00 - 12:30 I12 D. Mason	Atomistic studies of hydrogen retention in highly irradiated tungsten

12:30 - 14:15 lunch break

### Session 7. Chair -

14:15 - 14:50 R3 Y. Hatano	Enhanced vacancy annihilation in irradiated W by addition of Re and Cr - What is the mechanism? -
14:50 - 15:20 I13 U. Bhardwaj	ML algorithms & tools for cascades analysis: cascade & defect morphologies
15:20 - 15:40 O5 U. von Toussaint	Thermodynamic and morphological aspects of iterated collision cascades: Do we reach an 'equilibrium' state - and in which state variables?

15:40 - 16:15 coffee break

### Session 8. Chair: -

16:15 - 16:45 I14 D. Sobieraj	Phase stability and short-range ordering of W-Cr-Y-Zr SMART materials and W-Ta-Ti-Cr-V high-entropy alloys from the first principles thermodynamic study
16:45 - 17:15 I15 P. Bittner	On the durability of the WCrY SMART material for the first wall of fusion reactors
17:15 - 17:35 O6 T. Oda	Effects of W/Cu interface on steady-state tritium inventory in plasma-facing W by atomic-resolution rate model and equilibrium theory