

# INGSM – 21

## Conference Schedule

### Day 1: September 27

Session Chair: Jacob Eapen

Monday	Speaker	Title	Country
8:00 – 8:20 AM	Jacob Eapen Kostadin Ivanov Will Windes	Opening remarks Welcome address Overview of INGSM	United States United States United States
8:20 – 8:50 AM	Derek Tsang	Nuclear graphite research for molten salt reactor in China	China
8:50 – 9:20 AM	Jim Reed	AGR to SMR by 2030: How the experience of the operator of graphite reactors supports that ambition	United Kingdom
9:20 – 9:50 AM	Abbie Jones	AGR to AMR by 2030: UK Fundamental research and innovation to support capabilities.	United Kingdom
9:50 – 10:10 AM	<b>Lifetime Recognition Award to Tim Burchell</b> Presented by Will Windes		
10:10 – 10:30 AM	<b>Break</b>		
10:30 – 11:00 AM	Will Windes	Overview of US DOE GCR graphite activities	United States
11:00 – 11:30 AM	Nidia Gallego	Overview of US DOE MSR graphite activities	United States

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**Day 2: September 28****Session Chair: Nidia Gallego**

<b>Tuesday</b>	<b>Speaker</b>	<b>Title</b>	<b>Country</b>
8:00 – 8:20 AM	Se-Hwan Chi	Comparison of the effects of irradiation on iso-molded, fine grain nuclear graphites	Republic of Korea
8:20 – 8:40 AM	Zhiyang Wang	Impact of pre-existing crystal lattice defects on the irradiation-induced damage of a C/C composite	Australia
8:40 – 9:00 AM	Iyad Al-Qasir	Irradiation induced phonon variations in nuclear graphite	United Arab Emirates
9:00 – 9:20 AM	Chichi Li	Project Blackstone: The EDF energy AGR graphite irradiation programme	Netherlands
9:20 – 9:40 AM	Heleen Uitslag-Doolaard	GAIA: Graphite qualification irradiation for the IMSR	Netherlands
9:40 – 10:00 AM	Anthony Wickham	Reflections on the movement of carbon atoms in irradiated nuclear graphite	United Kingdom
10:00 – 10:20 AM	<b>Break</b>		
10:20 – 10:40 AM	Athanasia Tzelepi	Radiological characterisation of graphite components in advanced gas-cooled reactors	United Kingdom
10:40 – 11:00 AM	Eric Jiang	In situ high temperature loading of irradiated PGA graphite studied by neutron diffraction and DIC	United Kingdom
11:00 – 11:20 AM	Dong Liu	Fracture toughness measurement in two fine-grain graphite at 1100°C with real-time 3D imaging	United Kingdom
11:20 – 11:40 AM	David Arregui-Mena	Neutron induced changes in properties and microstructure of glassy carbon	United States
11:40 – 12:00 PM	Makuteswara Srinivasan	Perspective on irradiation dimensional change of graphites	United States

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**Day 3: September 29**

Session Chair: Anne Campbell

Wednesday	Speaker	Title	Country
8:00 – 8:20 AM	Ke Shen	The importance of optical texture in the understanding of nuclear graphite microstructure	China
8:20 – 8:40 AM	Ke Shen	Thermal and gas purification of natural graphite for nuclear applications	China
8:40 – 9:00 AM	Mathieu Rasson	Feasibility study of irradiated nuclear graphite transmutation	France
9:00 – 9:20 AM	Eric Jiang	Multiple length-scale microstructural characterisation of four grades of fine-grain graphite	United Kingdom
9:20 – 9:40 AM	Alex Theodosiou	A surface/near-surface investigation of Cs+ implanted HOPG using a dual-source XPS approach.	United Kingdom
9:40 – 10:00 AM	James McGladdery	Optical microscopy methods for the characterisation of radiolytic and thermal oxidation in graphite	United Kingdom
10:00 – 10:20 AM	<b>Break</b>		
10:20 – 10:40 AM	Marcus Williamson	High resolution transmission electron microscopy of deformation by nano-indentation in HOPG	United Kingdom
10:40 – 11:00 AM	Thomas Zillhardt	Advanced studies of the deformation and fracture of nuclear graphite using neutron and X-rays	United Kingdom
11:00 – 11:20 AM	Peter Minshall	Validation of predicted release rates of Wigner energy during the disposal of irradiated graphite.	United Kingdom
11:20 – 11:40 AM	David Arregui-Mena	Recent progress in the microstructural characterization and modeling of nuclear graphite	United States
11:40 – 12:00 PM	Dina ElGawaily	Image analysis of graphitic pores	United States

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**Day 4: September 30****Session Chair: Will Windes**

Thursday	Speaker	Title	Country
8:00 – 8:20 AM	Dongbo Xiong	A novel multi-scale model for nuclear graphite under irradiation without load	China
8:20 – 8:40 AM	Andrew McClintock	Modelling the CTE of Gilsocarbon based on experimental data from the micro scale	United Kingdom
8:40 – 9:00 AM	Rahul Rajasekharan Nair	Effects of crack opening on stresses in sealing ring groove walls in an AGR	United Kingdom
9:00 – 9:20 AM	Mirza	A time dependent multiaxial inelastic constitutive model for isotropic & anisotropic graphite	United States
9:20 – 9:40 AM	Anant Raj	Planar defects in graphite	United States
9:40 – 10:00 AM	Josina Geringer	Reviews and future directions in ASME III-5 for graphite qualification & certification	United States
10:00 – 10:20 AM	<b>Break</b>		
10:20 – 10:40 AM	Makuteswara Srinivasan	21st Century SMR graphite component designer and manufacturer communications	United States
10:40 – 11:00 AM	Ryan Paul	Graphite oxidation in HTGR: Information gaps and design rules for cericomponents	United States
11:00 – 11:20 AM	Chengqi Wang	Experiments and numerical study on IG-110 graphite-steam oxidation	United States
11:20 – 11:40 AM	Lorenzo Vergari	Thermodynamics, transport and kinetics of hydrogen in graphite in high-temperature nuclear reactors	United States
11:40 – 12:00 PM	Kevin Graydon	Diffusion of Ru and Ag in nuclear grade graphite	United States

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