

7th June		14:00	Registration (Check in from 15:00)	
		18:00	Welcome Reception and Buffet Dinner	
8th June	Industrial Challenges and Perspectives Mark Jolly	07:30	Breakfast	
		09:00	Andrew Kao and Catherine Tonry, University of Greenwich	Conference Opening Ceremony
		09:20	Nick Green, The University of Birmingham	Advanced Research into Crystal Anisotropy and Nucleation Effects in single crystals (ARCANE) – industrial challenges to casting modelling for innovation
		10:00	Brian G Thomas, Colorado School of Mines	Efficient Thermal–Mechanical Model of Steady and Dynamic Bulging
		10:20	Coffee Break	
		10:50	Hadi Barati, K1-MET GmbH	Simulation of solidification and remelting of accretion (mushroom) on AOD tuyere
	Brian G Thomas	11:10	Mark Jolly, University of Greenwich	In Search of Advanced Sedimentation Techniques for the Mitigation of Inclusions in Aerospace-Grade Structural Aluminium Alloy Casting
		11:30	Caleb Shrad, Purdue University	A comparison of experimental and predicted results for vacuum arc remelting
		11:50	Charles-André Gandin, MINES Paris	Control of hot cracking susceptibility by inter-layer heating strategies during L-PBF of IN738 parts
		12:10	Alexander Vakhrushev, Montanuniversität Leoben	Effects of the slag band physical properties on the heat and mass transfer during initial solidification in continuous casting process
		12:30	Lunch	
		Defects and Fluid Flow Miha Založnik	14:00	Jun Li, Shanghai Jiao Tong University
	14:20		Mostafa K. A. Salem, University of Sheffield	Phase-Field–Crystal Plasticity Modeling of Solidification and Type-III Residual Stress in Nickel-Based Superalloy CM247LC
	14:40		Alan A Luo, The Ohio State University	Modeling of externally solidified crystal formation in aluminum high pressure die casting: physics-based and machine learning approaches
	15:00		Anna Katsiavria, University of Dundee	Process parameter optimisation to prevent overdwel defects in vertically upwards continuous casting of dilute Cu-Mg alloys
	15:20		Coffee Break	
	15:40		Miha Založnik, Institut Jean Lamour	Characterization of Drag and Permeability of Equiaxed Dendritic Grains by Numerical Simulations
	16:00		Anna Ivanova, Colorado School of Mines	Modeling of Mushy-Zone Dynamics in Continuous Casting with Temperature Corrections at Phase Boundaries
16:20	Jan Bohacek, Brno University of Technology		Thermal Boundary Conditions from Experiments: Classical and Adjoint Inverse Heat Conduction	
16:40	Spencer Hunt, Los Alamos National Laboratory		Exploring Processing Space for Radiological Castings using Fluid Flow Modeling	
17:00	Poster Preview Session			
		17:40	Free Time	
		18:00	Poster session and Barbeque	

9th June	Microstructure Formation Damien Tournet	07:30	Breakfast		
		09:00	Janin Eiken, Access e.V.	Solidification of Aluminum Wrought Alloys with Elevated Hydrogen Content	
		09:40	Ifzal Hussain, Institut Jean Lamour	3D mesoscopic modeling of equiaxed grain growth in a thin sample	
		10:00	Fengxin Mao, MAGMA GmbH	Simulation of mechanical property evolution for die-cast Al7SiMg castings with subsequent heat treatments	
		10:20	Coffee Break		
		10:50	Yasushi Shibuta, The University of Tokyo	Coarse-Grained Molecular Dynamics Simulation of Solidification Dynamics in Al–Cu Alloys	
		11:10	Ahmed Kaci Boukellal, Institut Jean Lamour	Phase-field modelling of secondary dendrite arm fragmentation in a Fe–C alloy during solidification	
		11:30	Jyothirmai Bethanapalli, IIT Bombay	Cellular Automata Simulation coupled with CALPHAD Based Interface Response Functions for Dendritic Solidification	
		11:50	Ayano Yamamura, Kyoto Institute of Technology	A data assimilation system for estimating interfacial anisotropy parameters and crystal orientation in polycrystalline zinc dendrites	
	Tomahiro Takaki	12:10	Yuanding Huang, Helmholtz-Zentrum Hereon	Casting and solidification of magnesium alloys	
		12:30	Lunch		
		Multiphysics Modelling and Numerical Methods Peter Soar	14:00	Jakob Olofsson, Jönköping University	On statistical evaluation and characterisation of local damage and material performance in megacastings
			14:20	Koulis A Pericleous, University of Greenwich	Producing Green Hydrogen from Liquid Aluminium
			14:40	Paolo Airoldi, Flow Science Mediterranean	Fully Coupled Cellular Automaton–Finite Volume Model for Grain Evolution
			15:00	Tadej Dobravec, University of Ljubljana	A new generation of finite difference methods for the phase-field modelling of dendritic solidification based on the strong-form local meshless methods
			15:20	Coffee Break	
			15:40	Božidar Šarler, University of Ljubljana	Three-dimensional point automata method for simulation of ECT and CET in continuous casting of steel
			16:00	Takumu Yamamura, The University of Tokyo	Free Energy Surface of Nucleation via Metadynamics
16:20	Shaun R Cooke, The University of British Columbia		Accelerated defect prediction for part-scale powder bed fusion builds using semi-analytical modelling and machine learning techniques		
16:40	Chenbo Xu, Montanuniversität Leoben		Influence of rotating magnetic field on the precipitation of $\alpha$ -Fe phase during unidirectional solidification of Al-6Si-4Cu-2Fe alloy		
17:00	Poster Preview Session				
17:40	Conference Photograph				
18:00	Poster Session and Hog Roast	(Vegetarian and vegan alternatives available)			

### Supported By



# MCWASP XVII

## 17th INTERNATIONAL CONFERENCE ON Modelling of Casting, Welding & Advanced Solidification Processes 7th-12th JUNE 2026 Winchester, UK

10th June	Symposium for Christoph Beckermann John Dantzig and Michel Rappaz	07:30	Breakfast	
		09:00	John Dantzig, Charles-André Gandin, Michel Rappaz and Brian G. Thomas	Advancing Solidification Science: The Impact and Legacy of Christoph Beckermann
		09:40	Menghuai Wu, Montanuniversität Leoben	Volume average modeling of alloy solidification and applications
		10:00	Murali Uddagiri, Ruhr University Bochum	Phase field as a front propagation method for modeling grain growth and texture evolution in additive manufacturing
		10:20	Coffee Break	
		10:50	Jürgen Jakumeit, Access e.V.	Multi-Modal Investigation of Porosity in Aerospace Investment Casting: from Micrographs and CT-imaging via simulation to AI Models
		11:10	Fengxin Mao, MAGMA GmbH	Probabilistic Prediction of Local Mechanical Properties applied to High-Pressure Die Castings
		11:30	Peter Soar, University of Greenwich	Dendrite Growth behaviour under coupled fluid flow and structural mechanics
		11:50	Akankshya Sahoo, University of Alberta	A Local Eutectic Growth (LEG) Map For Al-10Si-0.4Sc (Wt.%) Alloy"
		12:10	Lunch	
	13:00	Social Trip Coach Departs	Stonehenge	
	13:40	Social Trip Coaches Depart	MRT Castings, Bombay Sapphire, Winchester	
	18:00	Scientific Committee Meeting/Free Time		
	19:00	Dinner		
	11th June	In Situ Experiments and Machine Learning Natalia Shevchenko Andre Phillion	07:30	Breakfast
09:00			Enzo Liotti, University of Oxford	Investigating the solidification of 'dirty' recycled aluminium alloys with X-ray imaging and artificial intelligence
09:20			Nadira E Surghani, Lawrence Livermore National Laboratory	Solidification and fluid flow model validation using in-situ proton radiography (pRad) imaging
09:40			Tatu Pinomaa, VTT Technical Research Centre of Finland	Multi-scale in situ experiment/simulation integration to predict rapid solidification microstructures in additively manufactured AlCu
10:00			Rajesh Kumari Rajendran, CNRS- SU-INSP	Directional melting dynamics of the irregular Al-Al3Ni eutectic
10:20			Coffee Break	
10:50			Natalia Shevchenko, Helmholtz-Zentrum Dresden-Rossendorf	Synchrotron-Based High-Resolution Imaging of the Ternary Ga-In-Bi Alloy
11:10			Harry E. Chapman, University College London	In situ experiments for quantitative validation of core physics during external field assisted additive manufacturing processes
11:30			Hideyuki Yasuda, Kyoto University	Interface Energy Anisotropy in Hexagonal Alloys Revealed by Time-Resolved In-Situ Tomography
11:50			Taka Narumi, The University of Tokyo	Development of 4D tomographic observation of grain motion and microstructure evolution during semisolid deformation using synchrotron radiation X-rays
12:10		Shaun McFadden, Ulster University	Exploring the Forest – Computer Vision and Image Processing Applied to In-situ Competitive Dendritic Growth Video Sequences	
11th June		Casting and other process models C Tony Koullis Pericleous	12:30	Lunch
	14:00		Alan Hughes, Whitechapel Bell Foundry	English Bells: the Sound of Castings
	14:40		Mehdi Medjkoune, Institut Jean Lamour	Microstructure evolution of peritectic Cu-24%Sn alloy during stationary melting under a thermal gradient: insights from experiments and phase-field simulations
	15:00		Araf Al Rafi, McMaster University	Modelling the Effect of Bulging Driven Fluid Flow on Centerline Segregation in Steel Continuous Casting
	15:20		Coffee Break	
	15:40		Christian Gomes Rodrigues, Montanuniversität Leoben	Industrial-Scale Validation of a CFD Model for Ingot Casting Using the Rotating Casting Mold Technique
	16:00		Qiang Du, SINTEF Industry	The integration of multi-scale process modelling with virtual commissioning of Aluminium billet DC-casting equipment
	16:20		Ali Asgarian, University of Toronto	Towards an Intelligent Continuous Caster Mould: Unifying Full-Scale Water Modelling and CFD
	16:40		Erwin Reberger, Technical University of Munich	Melt-flow-induced loading on multilayer sand cores in high-pressure die casting
	17:00		Paschal Ateb Ubi, Cranfield University	Exploring Plasma Transferred Arc Processing for Metallic Glass Claddings
	18:00	Bus to Conference Dinner Venue		
	18:30	Conference Dinner		
22:00	Bus to hotel			
12th June	Additive Manufacturing and Welding Peter Lee Hector C Basoalto	07:30	Breakfast	
		09:00	Tomahiro Takaki, Kyoto Institute of Technology	Toward full-scale melt pool dynamics simulation and scan-strategy-based microstructure prediction in laser powder bed fusion
		09:40	Tatu Pinomaa, VTT Technical Research Centre of Finland	Multiscale modelling of additive manufacturing microstructures
		10:00	Hector C. Basoalto, University of Sheffield	On the micromechanics of nanoscale solidification void formation during 3D printing of a nickel-based superalloy
		10:20	Coffee Break	
		10:50	Qiang Zhu, Southern University of Science and Technology	Correlation between Solidification Microstructure and Thermal Flow of the Molten Pool in Laser Additive Manufacturing
		11:10	Imants Kaldre, University of Latvia	Exploiting Electromagnetic Forces for Improved Control of Melt Flow in Metal Additive Manufacturing
		11:30	Kai Kang, McMaster University	Cellular Automaton Simulation of Grain Refinement in LPBF of Al-10Si: Influence of Laser Rescanning Parameters and Scanning Strategies
		11:50	Neng Ren, Shanghai Jiao Tong University	Multiple physical fields of laser powder bed fusion of nickel-based superalloys.
		12:10	Philip Carr, Carrs Welding	Coupling ultrasound and adjustable ring mode beam shaping during laser welding of AA6063 extrusions alloy.
	12:30	Andrew Kao and Catherine Tonry, University of Greenwich	Conference Closing Ceremony	
	12:40	Lunch		
14:00	Last Shuttle Bus Departs			