

Wednesday		Thursday		Friday	
K-J17-102		K-J17-101		K-J17-102	
8:35	OPENING				
8:45	P1: Yu Win Mai Micro-grain Weibull strength distribution and fracture toughness of brittle ceramics				
9:00			K4: Brian Falzon From Nano to Macro: Engineering Fracture Toughness in Multiphase Epoxy Composites		
9:30	K1: Brad Boyce Impeding Crack Nucleation and Enabling Crack Healing in Nanocrystalline Metals		K5: Michael Preuss Linking localized plasticity to crack initiation		K3: Sarah Zang High-performance epoxy-based nanocomposite adhesives incorporating carbon nanofibers and carbon nanotubes for enhanced bond strength, fracture toughness, and high-temperature performance
10:00-10:30		MORNING TEA		MORNING TEA	
10:30	O1-01: Dong Ruan Mechanical behavior of the 3D printed continuous fiber-reinforced composite gyroid structure under quasi-static and dynamic compression	O4-01: Francis Rose Can delaminations be modelled as a reduction in bending stiffness?	O5-01: Jamie Kruzic Enhancing the mechanical properties of a laser powder bed fusion fabricated bulk metallic glass	O7-01: Zane Hills Early Crack Detection with Distributed Fibre Optic Sensors on an F/A-18 Hornet Centre-barrel	O2-01: Emmanuel Flores-Johnson Experimental and numerical study of the inelastic and failure behaviour of IG-110 nuclear graphite
10:50	O1-02: Andrei Kotousov Fatigue life evaluation under variable amplitude loading	O4-02: Wenyl Yan A new approach to calibrate Goldak's heat source model for additive manufacturing	O5-02: James Vidler Effect of heat treatment on fatigue properties of Stainless Steel and Inconel fabricated using laser powder bed fusion	O7-02: Michael Jones Monitoring fatigue crack growth through the use of automated crack cameras in a full-scale component damage tolerance test	O2-02: Wengui Li Graphene reinforced cement-based triboelectric nanogenerator for efficient energy harvesting in civil infrastructure
11:20	O1-03: Giang Nguyen Controlling snapback in indirect tensile testing of brittle materials	O4-03: Chi Wu Topology Optimization for Multi-Component Robotic Arms under Time-Varying Loads	O5-03: Rais Taufiq Factors Controlling Residual Stress Formation in Laser Powder Bed Fusion Components	O7-03: Isaac Field Recrystallised annealed titanium fatigue crack nucleation and growth in a combat aircraft structure	O2-03: Zhao Sha Controlling snapback in indirect tensile testing of brittle materials
11:40	O1-04: Zhongpu Zhang Fracture Analysis and Design Optimisation of Dental Structures: An XFEM-Based Study	O4-04: Md Mohiuddin Hemispherical hollow dome crash worthiness analysis	O5-04: Wendy Ji The development and validation of finite element models of additive manufacturing	O7-04: Ben Main Failure analysis of service fatigue cracks in aircraft structures - going further	O2-04: Jojibabu Panta Effect of continuous wave laser irradiation power and beam diameter on thermal degradation of carbon fibre-reinforced polymer (CFRP) composites
12:00	O1-05: Bosong Li The Role of Intermetallic Phases on the Damage Tolerance of Crossover Aluminum Alloys	O4-05: Wenkai Chang Prediction of Micro-Crack Networks in Carbon Fibre Composites at Cryogenic Temperatures	O5-05: Markus Domogala Structural Integrity and Defect Analysis of Wire-Arc Additively Manufactured 316L Stainless Steel Components	O7-05: Aditya Khanna Fatigue crack growth rate testing of non-crimp fabric composite laminates	O2-05: Shiyao Zhu Experimental and numerical study of laser paint stripping on CFRP
12:20	O1-06: Bibek Shah Impact of processing parameters and base plate preheating on the structure-mechanical performance relationships of a laser powder bed fusion fabricated hot work tool steel	O4-06: Yanan Xu Topology optimization of CFRP laminated structures considering Tsai-Wu failure criterion and experimental validation	O5-06: Min-Chang Wu Quantifying Hydrogen-induced Nano-Void Coalescence in Additively Manufactured Stainless Steel	O7-06: Tingyuan Yin Enhancing Electromagnetic Acoustic Transducer (EMAT) Performance Using Amplitude-Modulated Signals for Nonlinear Wave Mixing and Structural Health Monitoring	
12:40-14:00		LUNCH		LUNCH	
14:00	K2: Christopher Hutchinson Enhancing the high-cycle fatigue performance of precipitate strengthened Al alloys		K8: Stefanie Feih Impact of Manufacturing Imperfections on Structural Performance in Advanced Manufacturing		
14:30	O1-07: Raj Das Rapid fatigue evaluation of additive manufacturing specimens containing different types of defects	O4-07: Xiaorui Chen Wearable Ultrasound with Sensor Array for Doppler-Based Blood Flow Monitoring	O5-07: Pritam Biswas Influence of Laser Cladding in Microstructural Evolution of Stellite 21 On Light Rail	O7-07: Zhongqing Su Optoacoustic Characterization of Three-Dimensional, Nanoscopic Interior Features of Microchips Using Ultrafast Laser	
14:50	O5-08: Milad Bemani Lirgeshas A study on the thickness-related fatigue resistance, fracture toughness, and ductility of additive manufacturing specimens	O4-08: Benjamin Pollock Multiojective column layout optimisation to balance structural performance and resource efficiency whilst ensuring structural integrity	O5-08: Ibrahim Ibrahim Automated Image-Based Analysis of Deleterious Phases in Stainless Steel and Correlation with Mechanical Properties	O7-08: Kashmira Raghu Analysis of Crystal Defects by Electron Channeling Contrast Imaging (ECCI) for Advanced Failure Analysis	
15:10	O1-09: Alireza Mohammadi Niaei High-Cycle Fatigue Evaluation for High-Strength Grade Blind Bolts as Shear Connectors	O4-09: Shuai Yao Design of Simultaneous Energy Harvesting and Sensing Systems for Bridge Health Monitoring	O5-09: Enyong Zhao Structural Reliability Analysis Through Adaptive Sampling Surrogate-assisted Most Probable Point Capturing Method	O9-01: Arcady Dyskin Coalescence of many fractures or non-planar growth of a single fracture?	
15:30-16:00		AFTERNOON TEA			
				O1: Damage & failure mechanisms: deformation, fracture & fatigue	
16:00	K6: Ondrej Muranski Bridging Scales: Multiscale Insights into Manufacturing, Materials Behavior and Structural Integrity		K7: Qing Li Topology optimization of lightweight structures for fracture criteria		
16:30	O1-10: Yang Jiang Phase field fracture modelling for elastoplastic shell incorporated with stress-based fracture initiation criterion	O4-10: Janzen Choi Surrogate-Model-Assisted Multi-Objective Calibration of Crystal Plasticity Finite Element Method (CPFEM) Models	O8-01: Weihua Li Exploring Hybrid Conductive Composite for Flexible Sensors	O9-02: Elena Atrhoshchenko Reliability-based analysis and design of steel-reinforced timber columns	O2: Ceramics, polymers & composites
16:50	O1-11: Andrei Kotousov On the development of compliance-based techniques for the evaluation of crack tip opening loads and effective stress intensity factor range	O4-11: Patrick Kamlade Damage Assessment of Fibre Reinforced Polymer Composite Laminates Subjected to Laser Irradiation	O8-02: Boyang Wan Biomechanical Assessment of fixation Plate used for Mandibular Reconstruction	O9-03: Jiayang Xu Simultaneous Identification of Bridge Properties and Road Roughness from Drive-By Inspection by Integrating Kalman Filter and Optimization Approach	O4: Theoretical analysis, modelling, & design including AI & Machine Learning
17:10	O6-01: Andres Felipe Calderon Hurtado Innovative Data-Driven Approaches for Bridge Structural Health Monitoring via Drive-By Inspection	O4-12: Jessie Lum Creep-fatigue damage evaluation of very high-temperature reactor systems by ASME BPVC rules			
17:30	O6-02: Kamila Nowosad Towards Uncertainty Quantification of the ASTM E1921 Reference Temperature, T0	O4-13: Yuhang Tian Virtual modelling framework based elastoplastic analysis on mechanical metamaterials			
17:50	O6-03: Zhi Zhu Structural Integrity and Vibration Analysis of Pressurised Liquid Container Brackets: Numerical and Experimental Insights	O4-14: Fernando Valiente-Dies Numerical Simulations of the Wire-Arc Additive Manufacturing (WAAM) Process			
18:00-19:00		CONFERENCE DINNER			
18:45-21:45					
				O9: Civil engineering, geology & mining	