

Wednesday K-J17-102		K-J17-G02		Thursday K-J17-102		K-J17-G02		Friday K-J17-102		K-J17-G02	
8:35		OPENING									
8:45		P1: Yu Win Mai									
9:00		Micro-grain Weibull strength distribution and fracture toughness of brittle ceramics		K4: Brian Falzon		From Nano to Macro: Engineering Fracture Toughness in Multiphase Epoxy Composites					
9:30		K1: Brad Boyce		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		MORNING TEA		MORNING TEA		MORNING TEA	
10:30		Session chair: Anil Ravindran		Session chair: Ondrej Muránsky		Session chair: Ania Paradowska		Session chair: Zhongqing Su		Session chair: Brian Falzon	
10:30		O1-01: Dong Ruan		O4-01: Francis Rose		O5-01: Jamie Kruzic		O7-01: Zane Hills - CANCELLED		O2-01: Emmanuel Flores-Johnson	
10:30		Mechanical behavior of the 3D printed continuous fiber-reinforced composite gyroid structure under quasi-static and dynamic compression		Can delaminations be modelled as a reduction in bending stiffness?		Enhancing the mechanical properties of a laser powder bed fusion fabricated bulk metallic glass		Early Crack Detection with Distributed Fibre Optic Sensors on an F/A-18 Hornet Centre-barrel		Experimental and numerical study of the inelastic and failure behaviour of IG-110 nuclear graphite	
10:50		O1-02: Andrei Kotousov		O4-02: Wenyi Yan		O5-02: James Vidler		O7-02: Michael Jones		O2-02: Wengui Li	
10:50		Fatigue life evaluation under variable amplitude loading		A new approach to calibrate Goldak's heat source model for additive manufacturing		Effect of heat treatment on fatigue properties of Stainless Steel and Inconel fabricated using laser powder bed fusion		Monitoring fatigue crack growth through the use of automated crack cameras in a full-scale component damage tolerance test		Graphene reinforced cement-based triboelectric nanogenerator for efficient energy harvesting in civil infrastructure	
11:10		O1-03: Giang Nguyen		O4-03: Chi Wu		O5-03: Rais Taufiq		O7-03: Isaac Field		O2-03: Zhao Sha	
11:10		Controlling snapback in indirect tensile testing of brittle materials		Topology Optimization for Multi-Component Robotic Arms under Time-Varying Loads		Factors Controlling Residual Stress Formation in Laser Powder Bed Fusion Components		Recrystallised annealed titanium fatigue crack nucleation and growth in a combat aircraft structure		Controlling snapback in indirect tensile testing of brittle materials	
11:30		O1-04: Zhongpu Zhang		O4-04: Md Mohiuddin - CANCELLED		O5-04: Wendy Ji		O7-04: Ben Main		O2-04: Jojibabu Panta	
11:30		Fracture Analysis and Design Optimisation of Dental Structures: An XFEM-Based Study		Hemispherical hollow dome crash worthiness analysis		The development and validation of finite element models of additive manufacturing		Failure analysis of service fatigue cracks in aircraft structures - going further		Effect of continuous wave laser irradiation power and beam diameter on thermal degradation of carbon fibre-reinforced polymer (CFRP) composites	
11:50		O1-05: Bosong Li		O4-05: Wenkai Chang		O5-05: Markus Domogala		O7-05: Aditya Khanna		O2-05: Shiyao Zhu	
11:50		The Role of Intermetallic Phases on the Damage Tolerance of Crossover Aluminum Alloys		Prediction of Micro-Crack Networks in Carbon Fibre Composites at Cryogenic Temperatures		Structural Integrity and Defect Analysis of Wire-Arc Additively Manufactured 316L Stainless Steel Components		Fatigue crack growth rate testing of non-crimp fabric composite laminates		Experimental and numerical study of laser paint stripping on CFRP	
12:10		O1-06: Bibek Shah		O4-06: Yanan Xu		O5-06: Min-Chang Wu		O7-06: Tingyuan Yin		CLOSING	
12:10		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		Topology optimization of CFRP laminated structures considering Tsai-Wu failure criterion and experimental validation		Quantifying Hydrogen-induced Nano-Void Coalescence in Additively Manufactured Stainless Steel		Enhancing Electromagnetic Acoustic Transducer (EMAT) Performance Using Amplitude-Modulated Signals for Nonlinear Wave Mixing and Structural Health Monitoring			
12:30-14:00		LUNCH		LUNCH		LUNCH		LUNCH		LUNCH	
14:00		K2: Christopher Hutchinson				K8: Stefanie Feih					
14:00		Enhancing the high-cycle fatigue performance of precipitate strengthened Al alloys				Impact of Manufacturing Imperfections on Structural Performance in Advanced Manufacturing					
14:30		Session chair: Giang Nguyen		Session chair: Wenkai Chang		Session chair: James Vidler		Session chair: Ben Main			
14:30		O1-07: Raj Das		O4-07: Xiaorui Chen		O5-07: Pritam Biswas		O7-07: Zhongqing Su			
14:30		Rapid fatigue evaluation of additive manufacturing specimens containing different types of defects		Wearable Ultrasound with Sensor Array for Doppler-Based Blood Flow Monitoring		Influence of Laser Cladding in Microstructural Evolution of Stellite 21 On Light Rail		Optoacoustic Characterization of Three-Dimensional, Nanoscopic Interior Features of Microchips Using Ultrafast Laser			
14:50		O1-08: Milad Bemani Lirgeshas		O4-08: Benjamin Pollock		O5-08: Ibrahim Ibrahim		O7-08: Kashmira Raghu			
14:50		A study on the thickness-related fatigue resistance, fracture toughness, and ductility of additive manufacturing specimens		Multiobjective column layout optimisation to balance structural performance and resource efficiency whilst ensuring structural integrity		Automated Image-Based Analysis of Deleterious Phases in Stainless Steel and Correlation with Mechanical Properties		Analysis of Crystal Defects by Electron Channeling Contrast Imaging (ECCI) for Advanced Failure Analysis			
15:10		O1-09: Alireza Mohammadi Niaei		O4-09: Shuai Yao		O5-09: Enyong Zhao		O9-01: Arcady Dyskin			
15:10		High-Cycle Fatigue Evaluation for High-Strength Grade Blind Bolts as Shear Connectors		Design of Simultaneous Energy Harvesting and Sensing Systems for Bridge Health Monitoring		Structural Reliability Analysis Through Adaptive Sampling Surrogate-assisted Most Probable Point Capturing Method		Coalescence of many fractures or non-planar growth of a single fracture?			
15:30-16:00		AFTERNOON TEA		AFTERNOON TEA		AFTERNOON TEA		AFTERNOON TEA		AFTERNOON TEA	
16:00		K6: Ondrej Muranski				K7: Qing Li				O1: Damage & failure mechanisms: deformation, fracture & fatigue	
16:00		Bridging Scales: Multiscale Insights into Manufacturing, Materials Behavior and Structural Integrity				Topology optimization of lightweight structures for fracture criteria				O2: Ceramics, polymers & composites	
16:30		Session chair: Zhongpu Zhang		Session chair: Md Mohiuddin		Session chair: Qing Li		Session chair: Arcady Dyskin			
16:30		O1-10: Yang Jiang		O4-10: Janzen Choi		O8-01: Weihua Li		O9-02: Chun-Yen Chan		O4: Theoretical analysis, modelling, & design including AI & Machine Learning	
16:30		Phase field fracture modelling for elastoplastic shell incorporated with stress-based fracture initiation criterion		Surrogate-Model-Assisted Multi-Objective Calibration of Crystal Plasticity Finite Element Method (CPFEM) Models		Exploring Hybrid Conductive Composite for Flexible Sensors		Reliability-based analysis and design of steel-reinforced timber columns			
16:50		O1-11: Andrei Kotousov		O4-11: Patrick Kamlade		O8-02: Boyang Wan		O9-03: Jiayang Xu		O5: Metals & alloys + Manufacturing processes (incl Additive Manufacturing)	
16:50		On the development of compliance-based techniques for the evaluation of crack tip opening loads and effective stress intensity factor range		Damage Assessment of Fibre Reinforced Polymer Composite Laminates Subjected to Laser Irradiation		Biomechanical Assessment of fixation Plate used for Mandibular Reconstruction		Simultaneous Identification of Bridge Properties and Road Roughness from Drive-By Inspection by Integrating Kalman Filter and Optimization Approach			
17:10		O6-01: Andres Felipe Calderon Hurtado		O4-12: Jessie Lum						O6: Experimental evaluation & characterisation	
17:10		Innovative Data-Driven Approaches for Bridge Structural Health Monitoring via Drive-By Inspection		Creep-fatigue damage evaluation of very high-temperature reactor systems by ASME BPVC rules							
17:30		O6-02: Kamila Nowosad		O4-13: Yuhang Tian						O7: Industrial applications, structural integrity & failure investigations	
17:30		Towards Uncertainty Quantification of the ASTM E1921 Reference Temperature, T0		Virtual modelling framework based elastoplastic analysis on mechanical metamaterials							
17:50		O6-03: Zhi Zhu		O4-14: Fernando Valiente-Dies						O8: Durability of structures & devices	
17:50		Structural Integrity and Vibration Analysis of Pressurised Liquid Container Brackets: Numerical and Experimental Insights		Numerical Simulations of the Wire-Arc Additive Manufacturing (WAAM) Process							
18:00-19:00		COCKTAIL HOUR								O9: Civil engineering, geology & mining	
18:45-21:45						CONFERENCE DINNER					