Tuesday - October 3	
17:00-19:00	Registration at Hotel Lobby
19:00-21:00	Welcome Cocktail at Westport Pub
Wednesday - October 4	
08:00-09.20	Registration and Opening, Hall 1
09:20-10:40	KEYNOTE SESSION 1, HALL 1
10:40-11.10	Coffee Break
11:10-12:30	ORAL PRESENTATION SESSION 1, HALL 1
12:30-13:30	Lunch Break
13:40-15:20	ORAL PRESENTATION SESSION 2, HALL 1
15:20-15:50	Coffee Break
15:50-17:30	ORAL PRESENTATION SESSION 3, HALL 1
19:00-22:00	Bosphorus Boat Tour
Thursday - October 5	
09:00-09.10	Registration
09:10-10.30	KEYNOTE SESSION 2, HALL 1
10:30-11.00	Coffee Break
11:00-12:20	ORAL PRESENTATION SESSION 4, HALL 1
12:20-13:30	Lunch Break
13:40-15:00	ORAL PRESENTATION SESSION 5, HALL 1&2
15:00-16:30	Poster Presentations & Coffee Break
16:30-17:50	ORAL PRESENTATION SESSION 6, HALL 1
19:30	Conference Dinner at Patriça Fish Restaurant
Friday - October 6	
09:00-09.10	Registration
09:10-10.30	KEYNOTE SESSION 3, HALL 1
10:30-11.00	Coffee Break
11:00-12:20	ORAL PRESENTATION SESSION 7 HALL 1
12:20-13:30	Lunch Break
13:40-15:20	ORAL PRESENTATION SESSION 8, HALL 1&2
15:20-15:50	Coffee Break
15:50-16:50	ORAL PRESENTATION SESSION 9, HALL 1&2
16:50-17:10	Closing of the Conference, Hall 1
Keynote presentations: 40 minutes, Oral presentations: 20 minutes (including Q&A)	

Tuesday - October 3	
17:00-19:00	Registration at hotel lobby
19:00-21:00	Welcome Cocktail at Westport Pub
Wednesday - October 4	
08:00-09.00	Registration
09:00-09.10	Openning talk: Tuncay Yalçınkaya
KEYNOTE SESSION 1, HALL 1	
09:10-09.50	Parametrically-Upscaled Constitutive Model (PUCM) and Crack Nucleation Model (PUCNM) for Fatigue Predictions in Ti Alloys ***Somnath Ghosh**, Johns Hopkins University, USA*
09:50-10.30	Stress Redistribution in Dwell Fatigue of Titanium Alloy from In-Situ Characterisation and Crystal Plasticity Modelling ***Fionn Dunne**, Imperial College London, UK*
10:30-11.00	Coffee Break
ORAL PRESENTATION SESSION 1, HALL 1	
11:00-11:20	Recent Advances in Modelling and Experimental Evaluation of Plasticity-Induced Fatigue Crack Closure ***Andrei Kotousov**, James Vidler, James Hughes, Aditya Khanna and Chris Wallbrink*
11:20-11:40	A Comparative Study on Fatigue Behavior of Recycled Aluminum Alloys and Their Welded Joints ***Aritra Sarkar**, Luigi Mario Viespoli, Bård Nyhus and Nima Razavi*
11:40-12:00	Fatigue Crack Nucleation Modelling for Macroscopic Defects ***Danish Khan**, Davide Leonetti and Johan Maljaars*
12:00-12:20	Integrated Model Calibration for Anisotropy, Hardening and Rupture - Application to the Clinching Process ***Abhishek Kumar**, Ahmed Kacem and Sandrine Thuillier*
12:20-13:30	Lunch Break
ORAL PRESENTATION SESSION 2, HALL 1	
13:40-14:00	Microplane Model for Inelasticity and Fracture of Transversely Isotropic Polymer Composites ***Ferhun Caner** and Saeed Sabounchi*
14:00-14:20	A Continuous-discontinuous Constitutive Model for High-Fidelity Analysis of Bondline Failure in Polymeric Matrix Composites ***Guillaume Seon**, Sarvenaz Ghaffari, Yuri Nikishkov and Andrew Makeev*
14:20-14:40	Numerical Simulation of Low-Velocity Impact on [05/903]s CFRP Beam Considering Accurate Experimental Conditions ***Onur Ali Batmaz**, Mirac Onur Bozkurt, Ercan Gurses and **Demirkan Çöker***
14:40-15:00	Numerical Modeling for Shearing of Unidirectional Carbon Fiber Reinforced Plastic Laminates by Means of Near-Net-Shape Blanking ***Thomas Stoel**, Lars Uhlmann, Frank Schweinshaupt, Martina Müller, Tim Herrig and Thomas Bergs*
15:00-15:20	Phase-field Crack Propagation in Viscoelastic Elastomers *Jacopo Ciambella, **Giovanni Lancioni** and Nico Stortini*
15:20-15:50	Coffee Break
ORAL PRESENTATION SESSION 3, HALL 1	
15:50-16:10	On Multi-scale Strain Localization in Twinning Magnesium ***Can Aydıner***
16:10-16:30	Microstructure- and Damage-Nucleation-Based Crystal Plasticity Finite Element Modeling for the Nucleation of Multi-type Voids During Plastic Deformation of Al Alloys ***Mengyan Fei**, Pengfei Gao and Mei Zhan*
16:30-16:50	A Crystal Plasticity Study of the Effect of the Initial Misorientation on Nanoindentation Response ***Tevfik Ozan Fenercioğlu**, Michael Budnitzki, Enes Günay, Tuncay Yalçınkaya and Stefan Sandfeld*
16:50-17:10	A Thermo-Mechanical Investigation of Textured Magnesium in an Effort to Validate Crystal Plasticity Simulations ***Necdet Ali Özdür**, Sefer Can Erman, Rian Seghir, Laurent Stainier and C. Can Aydıner*
17:10-17:30	Modeling of Al-Cu Solid Solution Compression with Accounting of Phase Transitions and Dislocation Plasticity ***Natalya Grachyova**, Evgenii Fomin and Alexander Mayer*
17:30-17:40	Closing of Day 1
19:00-22:00	Bosphorus boat tour

Thursday - October 5		
09:00-09.10	Registration	
KEYNOTE SESSION 2, HALL 1		
09:10-09.50	Spatially Resolved Eigenstrain Analysis Across the Scales: Methods, Distributions, Insights ***Alexander M. Korsunsky**, University of Oxford, UK*	
09:50-10.30	Simulations of the Directed Energy Deposition Process to Manufacture Parts in M4 High Speed Steel ***Anne-Marie Habraken**, University of Liège, Belgium*	
10:30-11.00	Coffee Break	
ORAL PRESENTATION SESSION 4, HALL 1		
11:00-11:20	Phase-Field Simulation of Self-Healing AlMg Alloy ***Héctor Sepúlveda**, **Anne Marie Habraken**, Aude Simar, Jocelyn Delahaye, Sophie De Raedemacker, Julie Gheysen, Julie Villanova, Laurent Duchêne and Seifallah Fetni*	
11:20-11:40	Micropolar Crystal Plasticity and Orientation Phase Field for Evolution of Grain Microstructure ***Izzet Tarık Tandogan**, Michael Budnitzki and Stefan Sandfeld*	
11:40-12:00	A Stochastic Phase-Field Approach for Ductile-Like Fracture of Rubber-Like Materials ***Kemal Açıkgöz**, Bülent Efe Tanış and Hüsnü Dal*	
12:00-12:20	Field-Split Preconditioning via Schur Complement for Phase-Field Fracture Mechanics with Finite Element Method ***Mohd Afeef Badri** and Giuseppe Rastiello*	
12:20-13:30	Lunch Break	
ORAL PRESENTATION SESSION 5		
	HALL1	HALL2
13:40-14:00	Peridynamics as a Simulation Method for Dynamic Fracture ***Kai Partmann** and Kerstin Weinberg*	Emergent Core-Shifted Grain Boundaries at Free Surfaces ***Xiaopu Zhang***
14:00-14:20	Fatigue Crack Initiations in Metallic Sealing Rings Subjected to Complex Deformation History ***Zebang Zheng**, Pandi Zhao, Mei Zhan, Hongwei Li and M. W. Fu*	Study of Temperature-Dependent Motion of GBs in Pure Aluminium by Cellular Automation and Machine Learning Methods ***Evgenii Fomin***
14:20-14:40	Microstructure-based Numerical Simulation to Predict Mechanical Properties of 316CW Stainless Steel ***Hwan-Jae Joo** and Yoon-Suk Chang*	Machine Learning and Data Mining for Enhanced Efficiency of Dislocation Simulations and Microstructure-Property Relations ***Aytekin Demirci** and Stefan Sandfeld*
14:40-15:00	DIC for Multi-Scale Model Validation and Structural Integrity for Fusion ***Allan Harte**, Rory Spencer, Ben Poole, Dave Lunt, Chris Hardie and Cory Hamelin*	
15:00-16:30	Poster Presentations & Coffee Break	
ORAL PRESENTATION SESSION 6, HALL 1		
16:30-16:50	Effect of Nozzle Diameter on Tensile and Fracture Behavior of 3D-Printed FDM-PLA Samples *Shadi Salamatian, Amir Nabavi-Kivi, **Majid R. Ayatollahi** and Michal Petru*	
16:50-17:10	Short Fiber-Reinforced Acrylonitrile Butadiene Styrene for Additive Manufacturing: Process-Structure-Property Analysis *Evgeniy Lobov, Anastasia Dobrydneva, Ilia Vindokurov and **Mikhail Tashkinov***	
17:10-17:30	Simulation of Cranial Damage and Fracture and Validation with a Head Model ***Ricardo Alves De Sousa**, Fabio Fernandes, Afonso Silva and Gustavo Carmo*	
17:30-17:50	Finite Element Analysis of JCO-E Fabrication Process and its Influence on the Material Properties and Collapse Capacity of Offshore Pipelines ***Ilias Gavriilidis**, Aris Stamou and Spyros Karamanos*	
17:50-18:00	Closing of Day 2	
19:30	Conferance dinner at Patriça Fish Restaurant	

Friday - October 6		
09:00-09.10	Registration	
KEYNOTE SESSION 3, HALL 1		
09:10-09.50	Damage and Fracture in Deformation of Materials and Deformation-Based Manufacturing ***Mingwang Fu**, The Hong Kong Polytechnic University, Hong Kong*	
09:50-10.30	Fatigue Crack Propagation in Laser Peened Materials: A Holistic Simulation Approach ***Benjamin Klusemann**, Leuphana Universität Lüneburg, Germany*	
10:30-11.00	Coffee Break	
ORAL PRESENTATION SESSION 7, HALL 1		
11:00-11:20	Experimental and Numerical Investigation of Ductile Damage and Fracture Under Biaxially Loaded Reverse Loading Conditions ***Zhichao Wei**, Steffen Gerke and Michael Brünig*	
11:20-11:40	Thermomechanical Analysis of the Shear Zone During Fine Blanking of Quenched and Tempered Steel ***Frank Schweinshaupt**, Thomas Stoel, Martina Müller, Tim Herrig and Thomas Bergs*	
11:40-12:00	On Applying the Neuber's Rule to Spectral Fatigue Damage Estimation Under Elasto-Plastic Strain ***Aliyye Kara** and Denis Benasciutti*	
12:00-12:20	Laser and Spectral Diagnostics for Structural Materials: A Review ***Ali Serpengüzel***	
12:20-13:30	Lunch Break	
ORAL PRESENTATION SESSION 8		
	HALL1	HALL2
13:40-14:00	Finite Element Simulation of Crack Propagation in Brittle Plates ***Igor Gribanov**, Ahmed Elruby and Rocky Taylor*	Fracture Forming Limit Curve Prediction by Ductile Fracture Models ***Toros Arda Akşen**, Bora Şener, Emre Esener, Ümit Kocabıçak and Mehmet Fırat*
14:00-14:20	Evaluating the Delamination Resistance on Metal Sandwich Panel under Four Points Bending Condition ***Shahrum Abdullah**, M. Khairul Faidzi, Salvinder Singh Karam Singh and M. Faizal Abdullah*	A Homogenized Constitutive Model for the Anisotropic Plastic Deformation of Perforated Sheets ***Huan Luo**, Xiaoguang Fan and Mei Zhan*
14:20-14:40	Assessing Fatigue Life Characteristics of API X65 Steel under the Effects of Corrosion in Deep-Sea Environment *Muhammad Ali Khan, **Salvinder Singh**, Shahrum Abdullah and Musa Bashir*	Effects of Temperature and Time on Mechanical Properties during Artificial Aging of 6082 Aluminum Alloy ***Mehmet Mutlu**, Aptullah Karakaş and Tuncay Yalcinkaya*
14:40-15:00	Fatigue Crack Growth Behavior of Friction Stir Welded SS304-Al5083 Dissimilar Joints ***Jignesh Nakrani**, Wenyi Yan and Amber Shrivastava*	Effect of Static Strain Aging of AISI 4140 Steel After Flow Forming ***Talha Özbay**, Aptullah Karakaş and Tuncay Yalcinkaya*
15:00-15:20	Effect of Ferromagnetic Materials Composition on Magnetic Flux Leakage Signals during Fatigue Crack Growth in Steel ***Azli Arifin**, S. Abdullah, A. K. Ariffin and S .S. K Singh*	Investigation of Recrystallization Behaviors of CuZn30 Alloy After Flow Forming ***Hakan Kuşdemir** and Mehmet Mutlu*
15:20-15:50	Coffee Break	
ORAL PRESENTATION SESSION 9		
	HALL1	HALL2
15:50-16:10	Modeling of Coupled Behavior and Microcracking of Multifunctional Composite Structures for Energy Storage ***Imren Uyar** and Ercan Gürses*	Tensile, Fracture and Damage Resistance Characterization of 3D Printed PLA with Morse Code Architectures ***Deepesh Yadav** and Nagamani Jaya Balila*
16:10-16:30	Implementation of Through the Thickness Compressive Stress on the Retardation of Delamination Initiation in Ply-Drop Off Regions ***Fırat Ergin** and Altan Kayran*	The Effect of Process Parameters in the Ironing Process ***Buse Yarşılıkal Solmaz**, Murat Güneş, Emre Özaslan, Mehmet Yiğit and Mustafa Acar*
16:30-16:50	Investigation of Roughness Effect on Dynamic Behaviour of Frictional Interfaces ***Tutku Ilgin Ozcan**, Aydin Amireghbali and Demirkan Coker*	Damage Detection in Marine Propeller in Service *Rachid Azzi and **Farid Asma***
16:50-17:10	Closing	

Poster Presentations
Evolution of Cathode Surface Morphology and Distribution of Oxides During TIG Welding ***Leila Belgacem*** *and Samira Benharat*
Effect of Prooxidants on LDPE and LDPE/Thermoplastic Starch Blends Properties ***Souad Djellali****, Ahmad Djenane and Sofiane Akhrib*
Nanoscratching of Polycrystalline Copper Examined Through Strain Gradient Crystal Plasticity ***Enes Günay****, Merthan Özdemir and Tuncay Yalcinkaya*
Investigation of the Stress State around the Forming Zone during the Flow Form Process ***Emre Özaslan****, Ali Yetgin, Bülent Acar, Ahmet Kürşat Şimşek, Erdem Adıgüzel and Gökhan Mert*
Effect of Stress Relief Annealing on Stress Corrosion Cracking of CuZn30 Alloy After Flow Forming ***Mehmet Mutlu****, Aptullah Karakaş and Tuncay Yalcinkaya*
Hot-Dip Aluminizing of Flow-formed AISI 4140 Steel ***Aptullah Karakas*** *and Murat Baydogan*
Crack Formation after Diffusion Annealing of Hot-Dip Aluminized AISI 4140 Steel ***Aptullah Karakas*** *and Murat Baydogan*
Investigation of Cross-ply Curved Composite Laminates under Pure Transverse Loading ***Ahmet Çevik****, Denizhan Yavaş and Demirkan Çöker*
Uncoupled Damage Models for Ductile Failure in Flow Forming Processes ***Hande Vural****, Tevfik Ozan Fenercioğlu and Tuncay Yalcinkaya*
Ductile Crack Path Prediction Through Phase Field and Uncoupled Damage Models ***Iremnaz Yücel****, Can Erdogan, Orhun Bulut and Tuncay Yalcinkaya*
Phase Field Fracture Modeling of Crack Initiation and Propagation in Dual-Phase Microstructures ***Berkehan Tatli****, Can Erdogan and Tuncay Yalcinkaya*
Dwell Fatigue Fracture in Ti Microstructures Through Crystal Plasticity and Phase Field Fracture Frameworks ***Orhun Bulut,*** *Can Erdoğan, Enes Günay and Tuncay Yalcinkaya*
Investigation of Failure Mechanisms in Dual-Phase Steels through Micromechanics-Based Frameworks ***İlbilge Umay Aydıner****, Berkehan Tatlı and Tuncay Yalcinkaya*
Hydrogen Assisted Cracking Through Mixed-Mode Hydrogen-Sensitive Cohesive Zone Model ***Berkehan Tatlı****, Izzet Erkin Unsal and Tuncay Yalcinkaya*

Pre-Recorded Presentations
Strength and Ductility Loss of Magnesium-Gadolinium due to Corrosion in Physiological Environment ***Dirk Steglich***
Numerical Simulation of Plastic Softening at Elevated Temperatures Using Gradient Damage Methodology ***Sandipan Baruah*** *and Indra Vir Singh*
Study of Different Initiation and Propagation Criteria in the XFEM Modelling of Scarf Adhesive Joints *Guilherme Pinheiro, Inês Araújo,* ***Raul Campilho****, João Valente, Miguel Queirós and Kouider Madani*
Cohesive zone evaluation of different design solutions for adhesive joints in canoeing boats *João Santos,* ***Raul Campilho****, Raul Moreira and Kouider Madani*
Surface Transverse Crack Growth in Steam Turbine Shaft ***Anatoliy Bovsunovsky***
Formulation of a Bilinear Traction-Separation Interface Law in Boundary Elements with Homogenization ***Ahmet Arda Akay****, Serdar Göktepe and Ercan Gürses*
Fracture Characteristics of 3D-Printed Polymer Parts: Role of Manufacturing Process ***Mohammad Reza Khosravani*** *and Tamara Reinicke*
Innovative Seismic Retrofitting Techniques for Reducing Vulnerability of Reinforced Concrete Structures ***Adil Ziraoui****, Benaissa Kissi and Hassan Aaya*
Damping in Functionally Graded Shafts under Torsion: an Analytical Approach ***Victor Rizov***
Considering the Time Factor in Longitudinal Fracture Analysis of Functionally Graded Constructions ***Victor Rizov***
Accounting for Viscoelastic Non-linearity and Temperature Influence in Delamination Analysis ***Victor Rizov***
Optimized Neural Networks for Structural Damage Prediction Based on Modal Analysis ***Abdelwahhab Khatir***, Roberto Capozucca, Samir Khatir, Erica Magagnini and Abdelmoumen Oulad Brahim
Impact of Cure Temperature and suspension viscosity on the Mechanical Properties of Carbon Nanofiber Reinforced Epoxy Resin Nanocomposites ***João Parente****, Paulo Reis and Abílio Silva*
Numerical Simulation of TiN Thin Films Fracture - Cohesive Elements and XFEM Method Case Study ***Konrad Perzynski***, Grzegorz Cios, Piotr Bała and Lukasz Madej
Effect of Pressure Sensitivity on Hypervelocity Impact Damage ***Rohan Kulkarni***, Arun Kamble and Parag Tandaiya

Formulation of a Bilinear Traction-Separation Interface Law in Boundary Elements with Homogenization
***Ahmet Arda Akay**, Serdar Göktepe and Ercan Gürses*

Localizing Implicit Gradient Damage Based Modelling of Quasi-brittle Failure with Non-planar Cracks
***Bekir Kaçmaz** and İzzet Özdemir*

Critical Issues Related to the Effect of Residual Stresses on Mixed-Mode Crack Growth Phenomenon
Murat Saribay

Progressive Failure Analysis of Composite Open-Hole Tension Tests Based on Schapery and Crack Band Theories
***Özgün Şener** and Altan Kayran*

Novel bio-filler for additive manufacturing based on geothermal waste materials
***Fefria Tanbar**, Muhammad Maheswara Wibisono, Hifni Muchtar Ariyadi, Ariyana Dwiputra Nugraha, Muhammad Rakhadzaky Indra Darmawan and Muhammad Akhsin Muflikhun*

Influence of Ply Thickness in Laminated Composite Under In-Plane Compression Loading
***Yogesh Kumar**, Mohammad Rezasefat, Haoyang Li, Patricia Dolez and James Hogan*

On the Dynamics of a Granular Medium Subjected to Multiple Impact Loads
*Koji Uenishi and **Yuichi Kato***

Nomenclature of Yield Criteria for Isotropic Materials
***Vladimir A. Kolupaev**, Holm Altenbach and Philipp L. Rosendahl*

Fixture for 2D Compression Test with Uniaxial Testing Machine
Vladimir A. Kolupaev

Application of Adelaide University Snapback Indirect Tensile test (AUSBIT) on 3D Printed Cement-based Materials
***Zili Huang**, Weiyi Yang, Rupesh Verma, Giang Nguyen, Tran Tung and Murat Karakus*

On the Diversity of Fracture Behavior in a Brittle Solid with Sets of Preexisting Small-Scale Cracks
***Koji Uenishi**, Mao Fujimoto and Kaichi Akimoto*

Failure Criterion Taking into Account Porosity and Microstructural Anisotropy
***Lívia Nogueira**, Daniel Castello and Lavinia Borges*

Impact of Element Layout and Notching Technique on the Fracture Toughness of FFF-Processed Thermoplastics
***Albert Patterson**, Charul Chadha, Iwona Jasiuk and James Allison*

Impact of Compact Tension Specimen Size on Fracture Toughness of FFF-Processed Thermoplastics
***Jose Beltra Mira**, Vanessa Restrepo, Bhaskar Vajipeyajula and Albert Patterson*

Fuel Tank Design at Inner Pressure
***Vladimir A. Kolupaev** and Marian Bulla*

Optimization of Strain Energy in Crack Structure via Fracture Mechanic Based Microdefects using Peridynamic Informed Topology Optimization
Peyman Lahe Motlagh

Prediction of Yield Surface and Hysteresis Loop for Cyclic Mechanical Loading for Laser Powder Bed Manufactured Ti6Al4V ***Venkateshwaran Ravi Narayanan*** *and Leila Ladani*
Delamination Behaviour of Elastic Surface Coatings Subjected to Thermal Shock ***Mehmet N. Balci*** *and M. Aybars Yalcin*
Unified Mechanics Theory: An Entropy-Based Uncertainty Quantification for Monotonic Tensile Failure of A36 Steel ***Kandhalvi Asaali****, Johna Belle Agramon, Prince Joshua Chiong, Tanog Asaali, Edgardo Cruz and Rayda Gammag*
Excellent Structure of Water Filtration System Manufactured Using Additive Manufacturing ***Ariyana Dwiputra Nugraha****, Rachmat Dzanzani, Jamasri Jamasri and Muhammad Akhsin Muflikhun*
An Adaptive Acceleration Scheme for Phase-Field Fatigue ***Jonas Heinzmann****, Pietro Carrara, Amir Mohammad Mirzaei and Laura De Lorenzis*
Finite Element Simulation and Experimental Study on Defects in CuZn40Pb2 Brass Alloy Water Valve Covers During Hot Forging *Mehmet Ceviz and* ***IŞık Cetintav***
Efects of Print Orientation on Mode-I Fracture Toughness of Addi┐tively Manufactured PLA: Simulation by XFEM ***Bahman Paygozar*** *and R. M. Gorguluarslan*
Watching the grain boundaries slide ***Shalou Wei*** *and C. Cem Tasan*
Fracture, deformation route, and mechanical performance of welded cold-formed ultra-high strength steel S1100 ***Shahriar Afkhami****, T. Skriko, K. Lipiäinen and T. Björk*