

| SessionCode | Paper No. | Type         | Session Title  | Paper Title  | Date         | Time        | Session Room  |
|-------------|-----------|--------------|--|--|--------------|-------------|---------------|
| TuA1-1      | P00011    | Oral/Invited | Micro/Nano Mechanics, Coatings, and Thin Films-1             | Optimization of the Fabrication Process of Copper Electrodes on PVDF Films using Bovine Serum Albumin  | Nov. 3, 2020 | 13:40-14:05 | Boardroom I   |
| TuA1-2      | P00073    | Oral         | Micro/Nano Mechanics, Coatings, and Thin Films-1             | Poly(vinylidene fluoride)/TiO <sub>2</sub> Film Fabrication with Microwave-assisted Solvent Evaporation: An Experimental and Molecular Dynamics Study                                | Nov. 3, 2020 | 14:05-14:20 | Boardroom I   |
| TuA1-3      | P00068    | Oral         | Micro/Nano Mechanics, Coatings, and Thin Films-1             | Observation of Mechanical and Fractal Properties of Poly(ethylene terephthalate) with Glycol/Carbon Nanotube Nanocomposite Films under the Accelerated Weathering Conditions         | Nov. 3, 2020 | 14:20-14:35 | Boardroom I   |
| TuA2-1      | P00105    | Oral/Invited | Functional Materials, Structural Materials, and Composites-1 | Very High Cycle Fatigue Property of Carbon Fiber Reinforced Quasi-isotropic Laminate Obtained by Ultrasonic Fatigue Testing Method   | Nov. 3, 2020 | 13:40-14:05 | Boardroom III |
| TuA2-2      | P00161    | Oral         | Functional Materials, Structural Materials, and Composites-1 | Analysis on Adhesive Contact of Coated Spheres by Extended JKR Theory  | Nov. 3, 2020 | 14:05-14:20 | Boardroom III |
| TuA2-3      | P00147    | Oral         | Functional Materials, Structural Materials, and Composites-1 | Toward the Environmental Aging of Polymer Nanocomposites: Sequential Scale Bridging Analysis   | Nov. 3, 2020 | 14:20-14:35 | Boardroom III |
| TuB1-1      | P00265    | Oral/Invited | Micro/Nano Mechanics, Coatings, and Thin Films-2             | Harnessing Dynamic Wrinkling Surfaces of Film/substrate Bilayer Systems for Smart Displays   | Nov. 3, 2020 | 14:40-15:05 | Boardroom I   |
| TuB1-2      | P00088    | Oral         | Micro/Nano Mechanics, Coatings, and Thin Films-2             | Flexible Strain Sensor Based on MWCNT and ZnO Nanoparticles in PDMS Matrix   | Nov. 3, 2020 | 15:05-15:20 | Boardroom I   |
| TuB1-3      | P00061    | Oral         | Micro/Nano Mechanics, Coatings, and Thin Films-2             | Finite Element Analysis of Shape Memory Fiber Reinforced Epoxy Adhesives   | Nov. 3, 2020 | 15:20-15:35 | Boardroom I   |
| TuB1-4      | P00028    | Oral         | Micro/Nano Mechanics, Coatings, and Thin Films-2             | Efficient Heat Dissipation by Reduced Graphene Oxide Network   | Nov. 3, 2020 | 15:35-15:50 | Boardroom I   |
| TuB2-1      | P00287    | Oral/Invited | Functional Materials, Structural Materials, and Composites-3 | Design of thermal diodes using asymmetric thermal deformation of a Kirigami structure  | Nov. 3, 2020 | 14:40-15:05 | Boardroom III |
| TuB2-2      | P00124    | Oral         | Functional Materials, Structural Materials, and Composites-2 | Effects of Uncertainty in Internal Structures on Damage Behavior of Plain-Woven Composites   | Nov. 3, 2020 | 15:05-15:20 | Boardroom III |
| TuB2-3      | P00085    | Oral         | Functional Materials, Structural Materials, and Composites-2 | Effect of Anodizing Treatment on Mechanical Properties of CFRTP Prepared by Film Stacking Method   | Nov. 3, 2020 | 15:20-15:35 | Boardroom III |
| TuB2-4      | P00090    | Oral         | Functional Materials, Structural Materials, and Composites-2 | Effects of Internal Damage on Material Properties of CFRTP Laminates Using PEEK Resin by Hot Press Forming   | Nov. 3, 2020 | 15:35-15:50 | Boardroom III |
| TuC2-1      | P00126    | Oral         | Functional Materials, Structural Materials, and Composites-3 | Implementation of Inelastic Two-Scale Analysis for Composites into Finite Element Analysis Software  | Nov. 3, 2020 | 16:10-16:25 | Boardroom III |
| TuC2-2      | P00097    | Oral         | Functional Materials, Structural Materials, and Composites-3 | An Efficient Manufacturing Method of CFRP Lattice Structures by Using the Electrodeposition Resin Impregnation Method  | Nov. 3, 2020 | 16:25-16:40 | Boardroom III |
| TuC2-3      | P00053    | Oral         | Functional Materials, Structural Materials, and Composites-3 | Effects of the Cellulose Nanofiber/Resin Layer Inserted in CFRP on the Charpy Impact and Bending Properties  | Nov. 3, 2020 | 16:40-16:55 | Boardroom III |
| TuC2-4      | P00288    | Oral         | Functional Materials, Structural Materials, and Composites-3 | Thermal and Tensile Properties of Polyethylene Based Heat Storage Composite Containing Phase Change Material and Copper Sheet  | Nov. 3, 2020 | 16:55-17:10 | Boardroom III |
| TuC2-5      | P00009    | Oral         | Functional Materials, Structural Materials, and Composites-3 | Carbon Fiber Reinforced Thermoplastic (CFRTP) Origami  | Nov. 3, 2020 | 17:10-17:25 | Boardroom III |
| ThA1-1      | P00220    | Oral         | Nondestructive Testing and Evaluation-1                      | Fatigue Strength Evaluation of Aluminium alloy based on Dissipated Energy Measurement  | Nov. 5, 2020 | 09:00-09:15 | Emerald A     |
| ThA1-2      | P00276    | Oral         | Nondestructive Testing and Evaluation-1                      | Quantitative Study on Area Fraction of Precipitated Carbide of HP40Nb Steel as a Function of Service Period  | Nov. 5, 2020 | 09:15-09:30 | Emerald A     |
| ThA1-3      | P00270    | Oral         | Nondestructive Testing and Evaluation-1                      | Thermographic Analysis for Measuring Fatigue Limit of Circular Hole notched Metals   | Nov. 5, 2020 | 09:30-09:45 | Emerald A     |
| ThA1-4      | P00091    | Oral         | Nondestructive Testing and Evaluation-1                      | A Novel Method to Evaluate Residual Stress Using Instrumented Indentation Testing  | Nov. 5, 2020 | 09:45-10:00 | Emerald A     |
| ThA2-1      | P00033    | Oral/Invited | Fracture, Fatigue, and Creep-1                               | An Optimized Algorithm for Crack Growth Calculation under Cyclic and Sustained Loads   | Nov. 5, 2020 | 09:00-09:25 | Emerald B     |
| ThA2-2      | P00020    | Oral         | Fracture, Fatigue, and Creep-1                               | Effect of Secondary Orientation on Creep Properties of Nickel-Base Single Crystal Superalloy DD6   | Nov. 5, 2020 | 09:25-09:40 | Emerald B     |
| ThA2-3      | P00199    | Oral         | Fracture, Fatigue, and Creep-1                               | High Temperature Low Cycle Fatigue Behavior of Alloy-152 Weld Metal Using Strain Controlled Experiment   | Nov. 5, 2020 | 09:40-09:55 | Emerald B     |
| ThA3-1      | P00071    | Oral/Invited | Hydrogen and Environmentally Assisted Failure-1              | The Role of Stress Concentration in Hydrogen Environment Assisted Cracking in X70 Pipeline Steel   | Nov. 5, 2020 | 09:00-09:25 | Sapphire A    |
| ThA3-2      | P00203    | Oral         | Hydrogen and Environmentally Assisted Failure-1              | Evaluation of Fatigue Life using the Tensile Test of 316L austenite stainless steel in Gaseous Hydrogen Environment  | Nov. 5, 2020 | 09:25-09:40 | Sapphire A    |
| ThA3-3      | P00201    | Oral         | Hydrogen and Environmentally Assisted Failure-1              | A Quantitative Prediction of Time to PWSCC Initiation in Alloy 690   | Nov. 5, 2020 | 09:40-09:55 | Sapphire A    |
| ThA4-1      | P00182    | Oral         | Student Paper Competition (BS/MS)-1                          | Crystallinity-Induced Acceleration of Intergranular Cracking in Thin-Film Interconnections under High Current Density  | Nov. 5, 2020 | 09:00-09:15 | Sapphire B    |
| ThA4-2      | P00180    | Oral         | Student Paper Competition (BS/MS)-1                          | Acceleration Mechanism of Intergranular Cracking of SUS316L under Creep-Fatigue Loading at Elevated Temperatures   | Nov. 5, 2020 | 09:15-09:30 | Sapphire B    |
| ThA4-3      | P00212    | Oral         | Student Paper Competition (BS/MS)-1                          | Investigation of the Effect of Element Density on the Prediction of System Behavior Under Dynamic Load of Class 1 Safety Nuclear Power Plant Component Using Finite Element Analysis | Nov. 5, 2020 | 09:30-09:45 | Sapphire B    |
| ThA4-4      | P00267    | Oral         | Student Paper Competition (BS/MS)-1                          | Development of a Simplified Fibre Path Modelling Technique to Predict Mechanical Behaviour of Open-Hole Fibre-Reinforced Composite   | Nov. 5, 2020 | 09:45-10:00 | Sapphire B    |

| SessionCode | Paper No. | Type         | Session Title  | Paper Title  | Date         | Time        | Session Room |
|-------------|-----------|--------------|--|--|--------------|-------------|--------------|
| ThB1-1      | P00138    | Oral/Invited | Nondestructive Testing and Evaluation-2  | Theory and Methods for the Quantitative Evaluation of Microstructural Damage and Remaining Fatigue Life  | Nov. 5, 2020 | 10:00-10:25 | Emerald A    |
| ThB1-2      | P00087    | Oral         | Nondestructive Testing and Evaluation-2  | Multimodal Nondestructive Evaluation for Structural Health Monitoring Using Deep Learning Methods  | Nov. 5, 2020 | 10:25-10:40 | Emerald A    |
| ThB1-3      | P00054    | Oral         | Nondestructive Testing and Evaluation-2  | Evaluation of Yield Properties Considering Stress Field Analysis of Polyethylene Pipe Using Flat-ended Cylindrical Indentation                           | Nov. 5, 2020 | 10:40-10:55 | Emerald A    |
| ThB2-1      | P00150    | Oral         | Fracture, Fatigue, and Creep-2   | Primary Creep Deformation Mechanisms of Single Crystal Ni-Base Superalloy at 700°C   | Nov. 5, 2020 | 10:00-10:15 | Emerald B    |
| ThB2-2      | P00107    | Oral         | Fracture, Fatigue, and Creep-2   | Crack Growth and Failure Behaviors of TP304 Stainless Steel Base and Weld Metals under Large Amplitude Load-controlled Cyclic Loads                      | Nov. 5, 2020 | 10:15-10:30 | Emerald B    |
| ThB2-3      | P00099    | Oral         | Fracture, Fatigue, and Creep-2   | Orientation Dependence of Low Cycle Fatigue Behaviours in Single Crystal Nickel-based Superalloy   | Nov. 5, 2020 | 10:30-10:45 | Emerald B    |
| ThB2-4      | P00050    | Oral         | Fracture, Fatigue, and Creep-2   | Comparison of FE Elastic-Plastic J for Welding Residual Stresses with R6 Analytical Estimation Results   | Nov. 5, 2020 | 10:45-11:00 | Emerald B    |
| ThB3-1      | P00177    | Oral         | Hydrogen and Environmentally Assisted Failure-2                                    | Microstructure and IASCC of Proton-irradiated 316 Stainless Steel  | Nov. 5, 2020 | 10:00-10:15 | Sapphire A   |
| ThB3-2      | P00175    | Oral         | Hydrogen and Environmentally Assisted Failure-2                                    | Tensile Properties of Thermally Hydrogen Charged 304 Stainless Steel at Low Temperature  | Nov. 5, 2020 | 10:15-10:30 | Sapphire A   |
| ThB3-3      | P00122    | Oral         | Hydrogen and Environmentally Assisted Failure-2                                    | Irradiation Assisted Stress Corrosion Cracking of Austenite Stainless Steel 304L   | Nov. 5, 2020 | 10:30-10:45 | Sapphire A   |
| ThB3-4      | P00118    | Oral         | Hydrogen and Environmentally Assisted Failure-2                                    | The Effect of Hydrogen on the Sealing Materials Exposed to High Pressure Hydrogen  | Nov. 5, 2020 | 10:45-11:00 | Sapphire A   |
| ThB4-1      | P00113    | Oral         | Student Paper Competition (BS/MS)-2  | Impact Absorption Characteristics of CFRP Crash Box in Front of Automobile: Fundamental Consideration on Member Includes Structural Part                 | Nov. 5, 2020 | 10:00-10:15 | Sapphire B   |
| ThB4-2      | P00112    | Oral         | Student Paper Competition (BS/MS)-2  | CFRP Cylindrical Shell Member to Change Lamination Property Parity: Fundamental Consideration on Impact Absorption Performance                           | Nov. 5, 2020 | 10:15-10:30 | Sapphire B   |
| ThB4-3      | P00047    | Oral         | Student Paper Competition (BS/MS)-2  | Effect of Crystallinity on the Mechanical Behavior of Carbon Fiber Reinforced Polyethylene Terephthalate Composites                                      | Nov. 5, 2020 | 10:30-10:45 | Sapphire B   |
| ThB4-4      | P00043    | Oral         | Student Paper Competition (BS/MS)-2  | Debonding Technique for Carbon Fiber Reinforced Polymer (CFRP) by Hybrid Filament Heating  | Nov. 5, 2020 | 10:45-11:00 | Sapphire B   |
| ThC1-1      | P00007    | Oral/Invited | Computational Mechanics and Multiphysics-1   | Deformation Mode Analysis by Eigenvalue/vectors of Atomic Elastic Stiffness: Application to Twin Deformation in Fe                                       | Nov. 5, 2020 | 11:20-11:45 | Emerald A    |
| ThC1-2      | P00264    | Oral         | Computational Mechanics and Multiphysics-1   | Creep-Cyclic Plasticity Behaviour of Pressure Reducing Valve under Cyclic Bending, Internal Pressure, and Thermal Loadings                               | Nov. 5, 2020 | 11:45-12:00 | Emerald A    |
| ThC2-1      | P00277    | Oral/Invited | Fracture, Fatigue, and Creep-3   | Effects of Processing Parameters on Creep Behavior of 316L Stainless Steel Produced Using Selective Laser Melting  | Nov. 3, 2020 | 11:20-11:45 | Emerald B    |
| ThC2-2      | P00067    | Oral         | Fracture, Fatigue, and Creep-3   | Observation and Prediction of the Crack Propagation of Aluminium Scroll Compressor Using the C-Specimen  | Nov. 5, 2020 | 11:45-12:00 | Emerald B    |
| ThC2-3      | P00003    | Oral         | Fracture, Fatigue, and Creep-3   | The Distributions of Geometrically Necessary Dislocation under Different Crystal Orientations in Fretting Fatigue of Ni-based Single-crystal Superalloys | Nov. 5, 2020 | 12:00-12:15 | Emerald B    |
| ThC3-1      | P00283    | Oral         | [OS] Development of Advanced Designers for Highly-reliable Mechanical Components-1 | A Study on Freezing Protection System for Flow Control   | Nov. 5, 2020 | 11:20-11:35 | Sapphire A   |
| ThC3-2      | P00109    | Oral         | [OS] Development of Advanced Designers for Highly-reliable Mechanical Components-1 | A Study on the Improvement of Impact Resistance According to the Layer's Seat Array Change of A3 Grade Safety Guard Using Lamination Method              | Nov. 5, 2020 | 11:35-11:40 | Sapphire A   |
| ThC3-3      | P00075    | Oral         | [OS] Development of Advanced Designers for Highly-reliable Mechanical Components-1 | Numerical Analysis for Performance Evaluation of Water Mist Nozzles Used in Fire Suppression System  | Nov. 5, 2020 | 11:40-11:55 | Sapphire A   |
| ThC3-4      | P00060    | Oral         | [OS] Development of Advanced Designers for Highly-reliable Mechanical Components-1 | Estimation of Failure Probability of Roller Bearing by Using Performance Index of Statistical Process Control  | Nov. 5, 2020 | 11:55-12:20 | Sapphire A   |
| ThC4-1      | P00282    | Oral         | Student Paper Competition (BS/MS)-3  | Torsional Fatigue Strength of SUS304N1 with Small Scratches  | Nov. 5, 2020 | 11:20-11:35 | Sapphire B   |
| ThC4-2      | P00280    | Oral         | Student Paper Competition (BS/MS)-3  | Effects of Small Defects on the Fatigue Strength of Ni-resist Cast Iron  | Nov. 5, 2020 | 11:35-11:40 | Sapphire B   |
| ThC4-3      | P00121    | Oral         | Student Paper Competition (BS/MS)-3  | Assessment of a Thermal Fatigue Test Conducted Under Cyclic Non-proportional Loading Using Open Source CAE and Finite Element Analysis Methods           | Nov. 5, 2020 | 11:40-11:55 | Sapphire B   |
| ThC4-4      | P00078    | Oral         | Student Paper Competition (BS/MS)-3  | Effects of Vacuum Environment on Crack Closure Properties of High Strength Steel   | Nov. 5, 2020 | 11:55-12:20 | Sapphire B   |
| ThD1-1      | P00260    | Oral         | Computational Mechanics and Multiphysics-2   | Reconstruction of Representative Volume Elements with Actual Noncircular Fibers using Relocation-Based Optimization                                      | Nov. 5, 2020 | 13:40-13:55 | Emerald A    |
| ThD1-2      | P00259    | Oral         | Computational Mechanics and Multiphysics-2   | X-ray Computed Tomography aided Modeling of Unidirectional Composites and Validation under a Transverse Tensile Loading                                  | Nov. 5, 2020 | 13:55-14:10 | Emerald A    |
| ThD2-1      | P00137    | Oral         | Fracture, Fatigue, and Creep-4   | Three-Dimensional Aspects of Fracture and Fatigue  | Nov. 5, 2020 | 13:40-13:55 | Emerald B    |
| ThD2-2      | P00095    | Oral         | Fracture, Fatigue, and Creep-4   | Securing Integrity of High-temperature Pressure Boundary Components in Supercritical Thermal Plants with Application of Nuclear-grade Design Rule        | Nov. 5, 2020 | 13:55-14:10 | Emerald B    |
| ThD2-3      | P00096    | Oral         | Fracture, Fatigue, and Creep-4   | Development of High-temperature Design Evaluation Platform for Pressure Vessel and Piping Subjected to High-temperature Operation in Creep Range         | Nov. 5, 2020 | 14:10-14:25 | Emerald B    |

| SessionCode | Paper No. | Type         | Session Title  | Paper Title   | Date         | Time        | Session Room |
|-------------|-----------|--------------|--|---|--------------|-------------|--------------|
| ThD3-1      | P00059    | Oral         | [OS] Development of Advanced Designers for Highly-reliable Mechanical Components-2 | Derivation of Pareto Set in Optimized Solutions Using Evolutionary Algorithm for Bed Structure of Grinding Machine                          | Nov. 5, 2020 | 13:40-13:55 | Sapphire A   |
| ThD3-2      | P00115    | Oral         | [OS] Development of Advanced Designers for Highly-reliable Mechanical Components-2 | A Study on Miniaturization of EGR Cooler Using Numerical Analysis   | Nov. 5, 2020 | 13:55-14:10 | Sapphire A   |
| ThD3-3      | P00114    | Oral         | [OS] Development of Advanced Designers for Highly-reliable Mechanical Components-2 | A Study on the Design of EGR Cooler Using Computational Fluid Dynamics  | Nov. 5, 2020 | 14:10-14:25 | Sapphire A   |
| ThD4-1      | P00056    | Oral         | Student Paper Competition (BS/MS)-4  | A Study of Vacuum Pressure Effect on Small Surface Crack Propagation in Ti-6Al-4V   | Nov. 5, 2020 | 13:40-13:55 | Sapphire B   |
| ThD4-2      | P00049    | Oral         | Student Paper Competition (BS/MS)-4  | Application of the Enhanced Reference Stress Method to Simplified J-integral Evaluation Using Open Source CAE                               | Nov. 5, 2020 | 13:55-14:10 | Sapphire B   |
| ThD4-3      | P00021    | Oral         | Student Paper Competition (BS/MS)-4  | Non-destructive Fatigue Damage Inspection of Magnesium Alloy Using Positron Annihilation Method   | Nov. 5, 2020 | 14:10-14:25 | Sapphire B   |
| ThD4-4      | P00069    | Oral         | Student Paper Competition (BS/MS)-4  | Crack Growth Simulation of SA508 Gr.1a Surface Cracked Pipe Under Fully-reversed Large-amplitude Cyclic Bending Loading                     | Nov. 5, 2020 | 14:25-14:40 | Sapphire B   |
| ThE1-1      | P00236    | Oral/Invited | Biomaterials and Biomechanics-1  | Cardiac Microtissue Adaptation on the Artificial 3D Fibrous Platform by Laser-direct Writing  | Nov. 5, 2020 | 14:40-15:05 | Emerald A    |
| ThE1-2      | P00242    | Oral         | Biomaterials and Biomechanics-1  | Enhancement of Mechanical Properties on UHMWPE Surfaces using Atomic Layer Deposition   | Nov. 5, 2020 | 15:05-15:20 | Emerald A    |
| ThE2-1      | P00141    | Oral/Invited | Machine Learning and Optimal Design-1  | Designing Adhesive Pillar Shape with Deep Learning-based Optimization   | Nov. 5, 2020 | 14:40-15:05 | Emerald B    |
| ThE2-2      | P00191    | Oral/Invited | Machine Learning and Optimal Design-1  | Grid Search and Gradient-Based Optimization of Parameters in Tersoff Interatomic Potential Model to Predict Mechanical Behavior of Silicene | Nov. 5, 2020 | 15:05-15:30 | Emerald B    |
| ThE4-1      | P00019    | Oral         | Student Paper Competition (BS/MS)-5  | Effect of Hybrid Structure having Additively-manufactured and Conventionally-melted Parts on Fatigue Properties of Ti-6Al-4V Alloy          | Nov. 5, 2020 | 14:40-14:55 | Sapphire B   |
| ThE4-2      | P00184    | Oral         | Student Paper Competition (BS/MS)-5  | Two-dimensional Pressure Distribution Sensor Using Area-arrayed Carbon Nanotube Bundles   | Nov. 5, 2020 | 14:55-15:10 | Sapphire B   |
| ThE4-3      | P00084    | Oral         | Student Paper Competition (BS/MS)-5  | Nondestructive Evaluation of Welded Joints by Nonlinear Feature Guided Waves  | Nov. 5, 2020 | 15:10-15:25 | Sapphire B   |
| ThE4-4      | P00102    | Oral         | Student Paper Competition (BS/MS)-5  | Investigation of Hydrogen Gaseous Environmental Effect on Fracture Resistance of API-X70 by Using XFEM                                      | Nov. 5, 2020 | 15:25-15:40 | Sapphire B   |
| ThF1-1      | P00186    | Oral         | Biomaterials and Biomechanics-2  | Recent Progress in Hyperlens Imaging  | Nov. 5, 2020 | 16:00-16:15 | Emerald A    |
| ThF1-2      | P00183    | Oral         | Biomaterials and Biomechanics-2  | All-dielectric Metasurface Imaging Platform for Resolution Enhancement and Applicability to Conventional Optical System                     | Nov. 5, 2020 | 16:15-16:30 | Emerald A    |
| ThF2-1      | P00215    | Oral/Invited | Machine Learning and Optimal Design-2  | Defect Structure Classification and Defect Energy Calculation for Nuclear Materials Using Machine Learning                                  | Nov. 5, 2020 | 16:00-16:25 | Emerald B    |
| ThF2-2      | P00222    | Oral/Invited | Machine Learning and Optimal Design-2  | Welding Electrode Condition Monitoring Using Dynamic Resistance and Unsupervised Learning Method  | Nov. 5, 2020 | 16:25-16:50 | Emerald B    |
| ThF3-1      | P00166    | Oral         | [OS] Materials Harvesting from Decommissioning Nuclear Power Plants-1              | The Activity Calculation Considering Operation History for the Decommissioning Plant  | Nov. 5, 2020 | 16:00-16:20 | Sapphire A   |
| ThF3-2      | P00145    | Oral         | [OS] Materials Harvesting from Decommissioning Nuclear Power Plants-1              | Research of Neutron Irradiation Effect on PWR Reactor Internals   | Nov. 5, 2020 | 16:20-16:40 | Sapphire A   |
| ThF4-1      | P00119    | Oral         | Student Paper Competition (BS/MS)-6  | Simulation and Analysis of Single Lap Joint Bonded with the Combination of Structural Adhesive and Double-sided Tape                        | Nov. 5, 2020 | 16:00-16:15 | Sapphire B   |
| ThF4-2      | P00080    | Oral         | Student Paper Competition (BS/MS)-6  | Influence of Surface Contamination on Adhesive Bonding of CFRP  | Nov. 5, 2020 | 16:15-16:30 | Sapphire B   |
| ThF4-3      | P00281    | Oral         | Student Paper Competition (BS/MS)-6  | New Experimental Procedure for Investigation of Shear-Mode Fatigue Crack Growth Behaviors   | Nov. 5, 2020 | 16:30-16:45 | Sapphire B   |
| ThF4-4      | P00100    | Oral         | Student Paper Competition (BS/MS)-6  | Material Behavior of the Energy Absorbing Egg-box Panel Made of Woven Fabric Composite  | Nov. 5, 2020 | 16:45-17:00 | Sapphire B   |
| ThG2-1      | P00266    | Oral/Invited | Machine Learning and Optimal Design-3  | An Application of Artificial Neural Networks to the Prediction of Mechanical Properties for Stamping Processes                              | Nov. 5, 2020 | 16:50-17:15 | Emerald B    |
| ThG2-2      | P00197    | Oral/Invited | Machine Learning and Optimal Design-3  | Machine Learning in Prediction of Critical Temperature of Cuprates Superconductors  | Nov. 5, 2020 | 17:15-17:40 | Emerald B    |
| ThG2-3      | P00257    | Oral/Invited | Machine Learning and Optimal Design-3  | Detecting Microstructural Features in Al-Cu Binary Alloys from Atomistic Calculations   | Nov. 5, 2020 | 17:40-18:05 | Emerald B    |
| ThG3-1      | P00224    | Oral         | [OS] Materials Harvesting from Decommissioning Nuclear Power Plants-2              | TGSCC and IGSCC of Alloy 690 in Simulated PWR Primary Water   | Nov. 5, 2020 | 17:00-17:20 | Sapphire A   |
| ThG3-2      | P00014    | Oral         | [OS] Materials Harvesting from Decommissioning Nuclear Power Plants-2              | Stress Analyses of a RV1 Baffle Structure with Different Reactor Flows  | Nov. 5, 2020 | 17:20-17:40 | Sapphire A   |

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|-------------|-----------|--------------|--|--|--------------|-------------|--------------|
| THG4-1      | P00181    | Oral         | Student Paper Competition (BS/MS)-7                | Molecular Dynamics Analysis of the Degradation of the Strength of a Grain Boundary Due to the Accumulation of Atomic-Scale Defects           | Nov. 5, 2020 | 17:00-17:15 | Sapphire B   |
| THG4-2      | P00108    | Oral         | Student Paper Competition (BS/MS)-7                | Molecular Dynamics Simulation of the Polymerization Process of Epoxy-Amine Thermosets and its Effect on the Macroscale Mechanical Properties | Nov. 5, 2020 | 17:15-17:30 | Sapphire B   |
| THG4-3      | P00037    | Oral         | Student Paper Competition (BS/MS)-7                | Effect of Al Concentration on Microstructural Evolution of Fe-Cr-Al System: A Phase-field Approach   | Nov. 5, 2020 | 17:30-17:45 | Sapphire B   |
| THG4-4      | P00036    | Oral         | Student Paper Competition (BS/MS)-7                | -A Computational ApproachEffect of Pore Size on Effective Conductivity of UO <sub>2</sub>  | Nov. 5, 2020 | 17:45-18:00 | Sapphire B   |
| FA1-1       | P00204    | Oral/Invited | Deformation Behavior and Damage Evolution-1        | Effect of cerium on fatigue fracture behavior of magnesium single crystals   | Nov. 6, 2020 | 09:00-09:25 | Emerald A    |
| FA1-2       | P00274    | Oral         | Deformation Behavior and Damage Evolution-1        | Experimental and Numerical Investigation of the Progressive Failure Behaviour of the Dovetail Specimens having Manufacturing Defects         | Nov. 6, 2020 | 09:25-09:40 | Emerald A    |
| FA1-3       | P00263    | Oral         | Deformation Behavior and Damage Evolution-1        | A Local Heat-assisted Cold Stamping Process for Martensitic Steel and Application to an Auto Part  | Nov. 6, 2020 | 09:40-09:55 | Emerald A    |
| FA2-1       | P00237    | Oral         | Adhesion, Adhesive, Bonding, Welding, and Joints-1 | Fatigue Crack Behavior on Thin Steel Sheets Welded by Friction Stir Spot Welding   | Nov. 6, 2020 | 09:00-09:15 | Emerald B    |
| FA2-2       | P00208    | Oral         | Adhesion, Adhesive, Bonding, Welding, and Joints-1 | Solid State Joining of Dissimilar SUS316L and SUS410 by Electrically Assisted Pressure Joining   | Nov. 6, 2020 | 09:15-09:30 | Emerald B    |
| FA2-3       | P00207    | Oral         | Adhesion, Adhesive, Bonding, Welding, and Joints-1 | Electrically Assisted-brazing of Heat Exchanger Composed of Multiple Thin Copper Sheets  | Nov. 6, 2020 | 09:30-09:45 | Emerald B    |
| FA2-4       | P00081    | Oral         | Adhesion, Adhesive, Bonding, Welding, and Joints-1 | A Study on the Adhesive Strength of S45C Carbon Steel/Carbon Fiber Reinforced Plastic Joint by Accelerated Weathering Tests                  | Nov. 6, 2020 | 09:45-10:00 | Emerald B    |
| FA3-1       | P00034    | Oral         | Student Paper Competition (BS/MS)-8                | Topology Optimization of Stent Geometrical Configuration to Reduce Restenosis Occurrence   | Nov. 6, 2020 | 09:00-09:15 | Sapphire A   |
| FA3-2       | P00029    | Oral         | Student Paper Competition (BS/MS)-8                | Investigation of Threshold Stress Level of Radially Reprecipitated Hydrides: A Phase-field Approach  | Nov. 6, 2020 | 09:15-09:30 | Sapphire A   |
| FA3-3       | P00013    | Oral         | Student Paper Competition (BS/MS)-8                | Integrity Assessment of Vertically and Obliquely Dropping Spent Fuel Assembly  | Nov. 6, 2020 | 09:30-09:45 | Sapphire A   |
| FA3-4       | P00132    | Oral         | Student Paper Competition (BS/MS)-8                | Finite Element Residual Stress Analysis of Welds in Core Shroud of Reactor Internals   | Nov. 6, 2020 | 09:45-10:00 | Sapphire A   |
| FA4-1       | P00159    | Oral         | Student Paper Competition (Ph.D.)-1                | Temperature Variation of Rubber Sphere under Steady State Compressive Cyclic Loading   | Nov. 6, 2020 | 09:00-09:15 | Sapphire B   |
| FA4-2       | P00048    | Oral         | Student Paper Competition (Ph.D.)-1                | A Study on Resistive Random Access Memory Composed of Reduced Graphene Oxide Based on Intense Pulsed Light Annealing                         | Nov. 6, 2020 | 09:15-09:30 | Sapphire B   |
| FA4-3       | P00243    | Oral         | Student Paper Competition (Ph.D.)-1                | Measurement of articular cartilage material properties by using an image-based finite element optimization method                            | Nov. 6, 2020 | 09:30-09:45 | Sapphire B   |
| FA4-4       | P00193    | Oral         | Student Paper Competition (Ph.D.)-1                | Research on Debonding Damage Prediction Algorithm on Spar-web Joint of Wind Turbine Blade using Artificial Neural Network                    | Nov. 6, 2020 | 09:45-10:00 | Sapphire B   |
| FB1-1       | P00151    | Oral         | Deformation Behavior and Damage Evolution-2        | Deformation and Fracture of Medium-grained 6XXX Aluminum Alloy at High Temperature   | Nov. 6, 2020 | 10:00-10:15 | Emerald A    |
| FB1-2       | P00250    | Oral         | Deformation Behavior and Damage Evolution-2        | Study on Bolt Force of Leaf Spring of Small Truck Rear Axle  | Nov. 6, 2020 | 10:15-10:30 | Emerald A    |
| FB1-3       | P00211    | Oral         | Deformation Behavior and Damage Evolution-2        | The Effect on the Strength and Delamination of Cu-graphene composites by Cu Thickness  | Nov. 6, 2020 | 10:30-10:45 | Emerald A    |
| FB1-4       | P00140    | Oral         | Deformation Behavior and Damage Evolution-2        | Numerical Analyses of Shearing Mechanism during Trimming of Sheet Metals   | Nov. 6, 2020 | 10:45-11:00 | Emerald A    |
| FB2-1       | P00214    | Oral         | Adhesion, Adhesive, Bonding, Welding, and Joints-2 | Strength Improvement of Adhesive Joints by Double-sided Tape   | Nov. 6, 2020 | 10:00-10:15 | Emerald B    |
| FB2-2       | P00079    | Oral         | Adhesion, Adhesive, Bonding, Welding, and Joints-2 | Fatigue Properties of Adhesively Bonded Single and Double Lap Joints between Carbon Fiber Reinforced Plastic/S45C Carbon Steel               | Nov. 6, 2020 | 10:15-10:30 | Emerald B    |
| FB3-1       | P00252    | Oral         | Student Paper Competition (BS/MS)-9                | Compression-compression Fatigue Test of Lattice-structured Ti-6Al-4V Additively Manufactured by EBM  | Nov. 6, 2020 | 10:00-10:15 | Sapphire A   |
| FB3-2       | P00251    | Oral         | Student Paper Competition (BS/MS)-9                | Local Deformation Behavior Measurement in Tensile Test of Al/Steel Dissimilar FSW Joint Using DIC  | Nov. 6, 2020 | 10:15-10:30 | Sapphire A   |
| FB4-1       | P00190    | Oral         | Student Paper Competition (Ph.D.)-2                | A Study on Evaluation of Adhesive Strength of Steel/CFRP Multi-materials for Commercial Vehicles with Changes in Surface Roughness           | Nov. 6, 2020 | 10:00-10:15 | Sapphire B   |
| FB4-2       | P00133    | Oral         | Student Paper Competition (Ph.D.)-2                | Progressive Adhesive Failure Analysis for Adhesive Joint of 5MW Class Wind Turbine Composite Blade using FE Model                            | Nov. 6, 2020 | 10:15-10:30 | Sapphire B   |
| FB4-3       | P00092    | Oral         | Student Paper Competition (Ph.D.)-2                | Fatigue Performance of Direct Energy Deposition 718 Alloy by Surface Modification  | Nov. 6, 2020 | 10:30-10:45 | Sapphire B   |
| FB4-4       | P00089    | Oral         | Student Paper Competition (Ph.D.)-2                | Smart CFRP Structure with SHM and Energy Harvesting Capability   | Nov. 6, 2020 | 10:45-11:00 | Sapphire B   |

| SessionCode | Paper No. | Type         | Session Title  | Paper Title   | Date         | Time        | Session Room |
|-------------|-----------|--------------|--|---|--------------|-------------|--------------|
| Fc1-1       | P00123    | Oral         | Deformation Behavior and Damage Evolution-3              | Puncture Impact Testing of Glass Plate Fitted with Shatterproof Film  | Nov. 6, 2020 | 11:20-11:35 | Emerald A    |
| Fc1-2       | P00023    | Oral         | Deformation Behavior and Damage Evolution-3              | Prediction of Slip Operation of Polycrystalline $\alpha$ -Titanium by Slip Operation Factor   | Nov. 6, 2020 | 11:35-11:50 | Emerald A    |
| Fc1-3       | P00134    | Oral         | Deformation Behavior and Damage Evolution-3              | Predicting Fracture Criterion of A356 alloy with RVE based Full-field Homogenization  | Nov. 6, 2020 | 11:50-12:05 | Emerald A    |
| Fc1-4       | P00045    | Oral         | Deformation Behavior and Damage Evolution-3              | Revealing the Small Post-necking Elongation in Twinning-induced Plasticity Steels   | Nov. 6, 2020 | 12:05-12:20 | Emerald A    |
| Fc2-1       | P00120    | Oral         | Experimental Techniques for Materials Characterization-1 | Novel Specimen for the Effective Measurement of the Fracture Strain according to Stress Triaxiality and Lode Parameter                | Nov. 6, 2020 | 11:20-11:35 | Emerald B    |
| Fc2-2       | P00086    | Oral         | Experimental Techniques for Materials Characterization-1 | Experimental Approaches of Recycling for Mechanical Joints between Metals and Composites  | Nov. 6, 2020 | 11:35-11:50 | Emerald B    |
| Fc2-3       | P00065    | Oral         | Experimental Techniques for Materials Characterization-1 | Development of the Lifetime Prediction Model of the Grease for Ball Bearings Based on Multivariate Statistical Approaches             | Nov. 6, 2020 | 11:50-12:05 | Emerald B    |
| Fc2-4       | P00022    | Oral         | Experimental Techniques for Materials Characterization-2 | Design Method of a Segment-type Ring Burst Test Device to Estimate Burst Property of Composite Pressure Vessels                       | Nov. 6, 2020 | 12:05-12:20 | Emerald B    |
| Fc3-1       | P00155    | Oral/Invited | Failure Analysis and Health Monitoring-1                 | Investigation of Transgranular Stress Corrosion Cracking Damages in PVC Reactor Lower Head  | Nov. 6, 2020 | 11:20-11:45 | Sapphire A   |
| Fc3-2       | P00210    | Oral         | Failure Analysis and Health Monitoring-1                 | Prediction on path of fatigue crack growth with implanted flaw by using finite element method   | Nov. 6, 2020 | 11:45-12:00 | Sapphire A   |
| Fc3-3       | P00179    | Oral         | Failure Analysis and Health Monitoring-1                 | Determination of Thermal Stratification Conditions and Local Temperatures of Piping using Computational Fluid Dynamics Analyses       | Nov. 6, 2020 | 12:00-12:15 | Sapphire A   |
| Fc4-1       | P00015    | Oral         | Student Paper Competition (Ph.D.)-3                      | Fire Hazard Analyses in Operating Room of a Research Reactor  | Nov. 6, 2020 | 11:20-11:35 | Sapphire B   |
| Fc4-2       | P00057    | Oral         | Student Paper Competition (Ph.D.)-3                      | Prediction of Behavior and Stress Distribution of Mechanical Structures via Deep Learning Approach Using Convolutional Neural Network | Nov. 6, 2020 | 11:35-11:50 | Sapphire B   |
| Fc4-3       | P00016    | Oral         | Student Paper Competition (Ph.D.)-3                      | Thermal Barrier Coating for Carbon Fiber Reinforced Polymer (CFRP) Protection   | Nov. 6, 2020 | 11:50-12:05 | Sapphire B   |
| Fd1-1       | P00041    | Oral         | Deformation Behavior and Damage Evolution-4              | Finite Element analysis of Self-healing Ceramics  | Nov. 6, 2020 | 13:40-13:55 | Emerald A    |
| Fd1-2       | P00044    | Oral         | Deformation Behavior and Damage Evolution-4              | Prediction of Scatter of Ceramic Strength using FEM: Effect of Sintering Temperature  | Nov. 6, 2020 | 13:55-14:10 | Emerald A    |
| Fd1-3       | P00206    | Oral         | Deformation Behavior and Damage Evolution-4              | Investigation of Pop-in Behavior in Pure Mg Single Crystals Using Indentation Tests   | Nov. 6, 2020 | 14:10-14:25 | Emerald A    |
| Fd1-4       | P00194    | Oral         | Deformation Behavior and Damage Evolution-4              | Bending Deformation Behavior of Pure Zinc Single Crystals   | Nov. 6, 2020 | 14:25-14:40 | Emerald A    |
| Fd2-1       | P00012    | Oral         | Experimental Techniques for Materials Characterization-2 | Strain Distributions and Stress Triaxiality Behaviors of Notched Al6061-T6 Plates   | Nov. 6, 2020 | 13:40-13:55 | Emerald B    |
| Fd2-2       | P00239    | Oral         | Experimental Techniques for Materials Characterization-2 | Experiment on Power Density of Intermediate Sized AMTEC (Alkali-metal Thermal-to-Electric Converting) Cell                            | Nov. 6, 2020 | 13:55-14:10 | Emerald B    |
| Fd2-3       | P00196    | Oral         | Experimental Techniques for Materials Characterization-2 | A study on improving the accuracy of displacement measurement of in-situ SEM tensile specimens using digital image correlation        | Nov. 6, 2020 | 14:10-14:25 | Emerald B    |
| Fd3-1       | P00176    | Oral         | Failure Analysis and Health Monitoring-2                 | Weld Hot Cracking of Additively Manufactured 316L Stainless Steel   | Nov. 6, 2020 | 13:40-13:55 | Sapphire A   |
| Fd3-2       | P00146    | Oral         | Failure Analysis and Health Monitoring-2                 | Fatigue Failure Analysis of Small-bore Piping Socket Weld Joint under Vibration Condition   | Nov. 6, 2020 | 13:55-14:10 | Sapphire A   |
| Fd4-1       | P00154    | Oral         | Student Paper Competition (Ph.D.)-4                      | Fracture Mechanics Methodology to Investigate S-N curve of 780EWF AHSS under Tension-compression and Bending Loading condition        | Nov. 6, 2020 | 13:40-13:55 | Sapphire B   |
| Fd4-2       | P00268    | Oral         | Student Paper Competition (Ph.D.)-4                      | Self-healing Blayer Film for Corrosion Protection   | Nov. 6, 2020 | 13:55-14:10 | Sapphire B   |