

## TS 11: FRIDAY MORNING, JUNE 8

09:20 AM	09:38 AM	09:56 AM	10:14 AM	10:32 AM		
<b>Room: DaVinci B</b>	<b>#S318</b>	<b>Mechanics of Multifunctional 2D Materials - Graphene and Beyond, Chair(s): Elena Besley, Ellad Tadmor</b>				
<p>**Flexibility and Curvature of Two-dimensional Supramolecular Arrays and Graphene</p> <p><i>Vladimir Korolkov, Simon Svatek, Matteo Baldoni, Kenji Watanabe, Takashi Taniguchi, Peter Beton, Elena Besley*</i></p>	<p>Fast Clean-Up of Crude Oil Enabled by In Situ Heated Graphene-Wrapped Sponge</p> <p><i>YongChao Wang*, ShuHong Yu, HengAn Wu</i></p>	<p>Interfacial Load Transfer Mechanisms in Graphene-based Nanocomposites</p> <p><i>Huck Beng Chew, Soumendu Bagchi*</i></p>	<p>Interfacial Mechanics and Design of Graphene-Based Composites</p> <p><i>HengAn Wu*</i></p>			
<b>Room: Florence</b>	<b>#S334</b>	<b>Fracture and Lifetime of Materials - In Honor of Prof. Alexander Chudnovsky's 80th Birthday, Chair(s): Eduard Karpov and Didem Ozevin</b>				
<p>Creep Damage Detection in 410 Stainless Steel using Acoustic Micro Imaging</p> <p><i>Nilofar Nabili Tehrani, Zeynab Abbasi, Ernesto Indacochia, Didem Ozevin*</i></p>	<p>Stress Corrosion Cracking of Copper Tubing, Examination of Copper Tubing and Closed Cell Insulation</p> <p><i>Zhenwen Zhou*, Alexander Chudnovsky</i></p>	<p>Time-Dependent Delamination of Thin Film and Its Computer-Vision-Based Blister Profile Analyzer</p> <p><i>Haiying Zhang*, Yang Chen, Alexander Chudnovsky, Hoang Pham</i></p>	<p>Size Effect in Concrete Fracture: Statistical Analysis and Numerical Simulation</p> <p><i>Masoud Rezaei, Mohsen Issa*, Alexander Chudnovsky</i></p>	<p>Reflections on the Role of Microdefects in Brittle Fracture</p> <p><i>Alexander Chudnovsky*</i></p>		
<b>Room: Grand Ballroom F</b>	<b>#S363</b>	<b>Mechanics for Manufacturing of Composite Structure, Chair(s): Hui Cheng</b>				
<p>Dynamic Modeling of Curing Process of Carbon/Epoxy Prepreg</p> <p><i>Tenglong Gao, Yingjie Xu*, Weihong Zhang, Jianbo Xi, Enwei Yan</i></p>	<p>Fabrication and Bending Behavior of Thermoplastic Composite Curved Corrugated Sandwich Beam with Interface Enhancement</p> <p><i>Chen Liming*, Du Bing</i></p>	<p>Effect of Interference Percentage on Damage Mechanism of Carbon Fiber Reinforced Composite Bolting Joint with Sleeve</p> <p><i>Guanhua Xu*, Fan Zhou, Peng Zou, Ping Liu</i></p>	<p>Solid State Manufacturing of a Malleable Carbon Fiber-reinforced Polymer Composites Based on Covalent Adaptable Network Powders</p> <p><i>Chengpu Zhu, Luxia Yu*, Xiaohao Sun, Jacob Salter, Hengan Wu, Wei Zhang, Rong Long</i></p>	<p>Composite Manufacturing by Frontal Polymerization: A Faster and Energy Efficient Approach</p> <p><i>Nancy Sottos, Mostafa Yourdkhani, Elyas Goli*, Nil Parikh, Scott White, Philippe Geubelle, Jeffrey Moore</i></p>		

**TS 12: FRIDAY MORNING, JUNE 8**

11:00 AM	11:18 AM	11:36 AM	11:54 AM	12:12 PM	
<b>Room: DaVinci B</b>	<b>#S343</b>	<b>Mechanics of Advanced Manufacturing Processes: Cutting, Forming and Tribology, Chair(s): Koushik Viswanathan</b>			
Modeling of Distortional Hardening via an Evolving Effective Stress Definition  <i>Brian Lester*, William Scherzinger</i>	Bending of Soft Sheets  <i>Tian Yu*, James Hanna</i>	In-situ Neutron Diffraction and Crystal Plasticity Finite Element Modeling to Study the Effect of Retained Austenite on Rolling Contact Fatigue in Bearings  <i>Rohit Voothaluru*, Vikram Bedekar</i>			
<b>Room: Florence</b>	<b>#S334</b>	<b>Fracture and Lifetime of Materials - In Honor of Prof. Alexander Chudnovsky's 80th Birthday, Chair(s): Didem Ozevin and Eduard Karpov</b>			
Configurational Forces in Mechanochemistry of Chemical Reaction Fronts and in Biomechanics of Growth  <i>Alexander Freidin*</i>	Fracture and Failure in Earthen Structural Materials  <i>Craig Foster*, Mohammad Hosein Motamedi, Adam Tennant, David Weed</i>	Reproducing Kernel Collocation Method for the Phase-Field Fracture Model  <i>Ashkan Mahdavi, Sheng-Wei Chi*</i>	Beyond Classical Thermodynamics: Crystal Plasticity  <i>Victor Berdichevsky*</i>	Probabilistic Fatigue Assessment of High-Speed Railway Axles due to Foreign Object Damage  <i>S.C. Wu*, Z.W. Xu, C.H. Li, G.Z. Kang</i>	
<b>Room: Grand Ballroom F</b>	<b>#S363</b>	<b>Mechanics for Manufacturing of Composite Structure, Chair(s): Yingjie Xu</b>			
Multiscale Mechanical Modeling of Damage Behavior in Unidirectional CFRP Interference Bolting with Sleeve  <i>Hui Cheng*, Fan Qu</i>	Effects of Thickness and Properties of Functional Graded Interphase on the Viscoelastic Response of Fiber Reinforced Composite  <i>Yi Cheng*, Kaifu Zhang, Hui Cheng, Sipeng Cao</i>	Sequentially Coupled Thermo-mechanical Model for Drilling of Unidirectional CFRP Composites  <i>Ximing Li, Xiaojun Chen, Guoyi Hou*</i>	Interlayer Gap and Its Induced Damage at Interface in Drilling Low-stiffness CFRP/Ti Stacks  <i>Bin Luo*, Shunuan Liu, Kaifu Zhang</i>		

**TS 13: FRIDAY AFTERNOON, JUNE 8**

02:50 PM	03:08 PM	03:26 PM	03:44 PM	04:02 PM	04:20 PM
<b>Room: DaVinci B</b>	<b>#S343</b>	<b>Mechanics of Advanced Manufacturing Processes: Cutting, Forming and Tribology, Chair(s): Rohit Voothaluru</b>			
Mechanics of Cutting of Gummy Metals  <i>Koushik Viswanathan*, Anirudh Udupa, James Mann, Srinivasan Chandrasekar</i>	Effect of Cutting Fluid in Diamond Scribing of Silicon  <i>Arkadeep Kumar*, Shreyes N. Melkote</i>	Bingham-type Flow Rheology in Shear Band Formation  <i>Dinakar Sagapuram*, Koushik Viswanathan</i>	Mechanics of Cutting with Superimposed Modulation  <i>Srinivasan Chandrasekar, James Mann*</i>	Materials Informatics Approaches for the Study of Machining Process-Structure-Property Relationships  <i>Patxi Fernandez-Zelaia*, Shreyes N. Melkote</i>	
<b>Room: Florence</b>	<b>#S334</b>	<b>Fracture and Lifetime of Materials - In Honor of Prof. Alexander Chudnovsky's 80th Birthday, Chair(s): Sheng-Wei Chi and Craig Foster</b>			
Variational Coupling of DG and CG Methods for Local Damage in Multi-Constituent Materials  <i>Arif Masud*, Pinlei Chen</i>	Challenges in Defining the Structure of Nanocomposites of Discrete Carbon Nanotubes in Various Materials during Deformation  <i>Clive Bosnyak*, Kurt Swogger</i>	Structural and Material Failure Prediction Based on Multiscale Space-time Approach  <i>Rui Zhang*, Shogo Wada, Clint Nicely, Dong Qian</i>	Predicting Fracture and Lifetime Without Curve Fitting: Unification of Newtonian Mechanics & Thermodynamics  <i>Cemal Basaran*</i>	Granular Media Entropy Revisited  <i>Yuri Schreiber*, Alexander Chudnovsky</i>	
<b>Room: Grand Ballroom F</b>	<b>#S363</b>	<b>Mechanics for Manufacturing of Composite Structure, Chair(s): Bin Luo</b>			
Physical and Mechanical Degradation Behavior of Carbon Fibre Reinforced Polymer Composites in Saline and Acid Corrosion Environments  <i>Ping liu, Kelin Deng, Hailin Li*, Yi Liang</i>	Vibration Response Characteristics and Fatigue Analysis of CFRP Laminates with Interference-fit Joints in Elevated Temperature  <i>Yu Yang*, Junshan Hu, Dajin Li</i>	Stress Modeling around the Hole of Interference-fit Bolt Jointing on CFRP Laminates  <i>Shunuan Liu*, Ning Wang, Wenqiang Xia</i>			

**TS 14: FRIDAY EVENING, JUNE 8**

04:30 PM	04:48 PM	05:06 PM	05:24 PM	05:42 PM	06:00 PM
<b>Room: DaVinci B</b>	<b>#S343</b>	<b>Mechanics of Advanced Manufacturing Processes: Cutting, Forming and Tribology, Chair(s): Dinakar Sagapuram</b>			
Intrinsic Behavior of Abrasive Products in Industrial Process Simulations  <i>Chris Arcona*, Anand Tanikella</i>	Study of Polishing in Magnetorheological Fluids  <i>Arun Srinivasa, Naveen Thomas*, Satish Bukkapatnam</i>	Stable Tensile Deformation to Large Strains by Continuous-bending-under-tension (CBT)  <i>Camille Poulin, Marko Knezevic, Timothy Barrett, Yannis Korkolis*, Brad Kinsey</i>	Mechanical Behavior of Structurally Gradient Nickel Alloys  <i>Jie Ding, Xinghang Zhang*</i>	Superplastic Nanoimprinting of Crystalline Metals Below their Melting Temperatures  <i>Ze Liu*</i>	
<b>Room: Florence</b>	<b>#S334</b>	<b>Fracture and Lifetime of Materials - In Honor of Prof. Alexander Chudnovsky's 80th Birthday, Chair(s): Craig Foster and Sheng-Wei Chi</b>			
Fatigue and Fracture Mechanical Behavior for Chinese A5083 Steel at Room Temperature  <i>Kaikai Shi*, Jun Tian</i>	Stochastic Analysis of the Lifetime Evaluation of Polyethylene Pipes Based on the Crack Layer Theory  <i>Jung-Wook Wee, Byoung-Ho Choi*</i>	Scaling Law Describing the Failure and Its Application in Predicting the Failure Time  <i>Shengwang Hao*, Lei Yang, Guojun Du</i>	The Effects of Ply Thickness and Orientation in Fracture of Thin-ply Composites  <i>Thomas Gmür, Guillaume Frossard, Joel Cugnoni, John Botsis*</i>		
<b>Room: Grand Ballroom F</b>	<b>#S344</b>	<b>Mechanics of Many-particle Systems under Environmental Excitations, Chair(s): Huiming Yin</b>			
Role of PCM Particles on Shrinkage Cracking of Cementitious Composites Under Restrained Conditions  <i>Zhenhua Wei*, Hyukmin Kweon, Huiming Yin</i>	Phase Field Method for Freeze Casting of Bio-inspired Materials  <i>Chuin-Shan David Chen*, Shu-Wei Chang, Yang-Shan Lin</i>	Design of Thermal Metamaterials with Concentrating and Rotating Effects at the Same Time  <i>T. Chen*, Y.L. Tsai, C.N. Weng</i>	The Three-dimensional Thermal-mechanical Analysis for Quasicrystal Laminated Films  <i>Yang Li, Lianzhi Yang*, Yang Gao</i>	Boundary Condition of Dry Dense Granular Flow: How Grain Rotation Modifies Effective Wall Friction Coefficient  <i>Fu-Ling Yang*, Cheng-Chuan Lin</i>	