# Program for EMN Hawaii Meeting & Collaborative Conference on Math-Finance & Statistics 2019

## Tuesday March 26

Onsite registration & Sign up

## Wednesday March 27

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Speaker</th>
<th>University/Institution</th>
</tr>
</thead>
<tbody>
<tr>
<td>08:00-08:25</td>
<td>A01: Reducing Small Channel Effect of UTBB-FDSOI Transistor for Current Mirror Application</td>
<td>Gilles Jacquemod</td>
<td>Nice Sophia Antipolis University, EPOC-UNS, France</td>
</tr>
<tr>
<td>08:25-08:50</td>
<td>A02: Engineering novel structures of nanocarriers for accurate targeting to tumors and specific organs</td>
<td>Hiroshi Matsui</td>
<td>City University of New York/Weill Cornell Medical College, USA</td>
</tr>
<tr>
<td>08:50-09:15</td>
<td>A03: Micro and Nano Assembly of Composite particles</td>
<td>Wai Kian Tan</td>
<td>Toyohashi University of Technology, Japan</td>
</tr>
<tr>
<td>09:15-09:40</td>
<td>A04: Application of Crystal Science to Oxide-Type All-Solid-State Lithium Ion Rechargeable Battery: Facet and Interfacial Designs by Crystal Growth Coupled with Theoretical Prediction</td>
<td>Katsuya Teshima</td>
<td>Shinshu University, Japan</td>
</tr>
<tr>
<td>09:40-10:00</td>
<td>Session Break</td>
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<tr>
<td>10:00-10:25</td>
<td>A05: 3-D Polymer-Nanoparticles Synergies for Biomedical Applications as Theranostic Agents</td>
<td>Rosaria Rinaldi</td>
<td>Università del Salento, Italy</td>
</tr>
<tr>
<td>10:25-10:50</td>
<td>A06: Selective Hydrogen Production from Formate with Polyvinylpyrrolidone-dispersed Platinum Nanoparticle</td>
<td>Yutaka Amao</td>
<td>Osaka City University, Japan</td>
</tr>
<tr>
<td>10:50-11:15</td>
<td>A07: Design of polymer membranes for low-pressure/gravity-driven cleaning of oily wastewater</td>
<td>Antoine Venault</td>
<td>Chung Yuan Christian University, Taiwan</td>
</tr>
<tr>
<td>11:15-11:40</td>
<td>A08: Highly Robust and Stable Graphene-Encapsulated Cu-Grid Hybrid Transparent Electrode Demonstrating Superior Performance in Organic Solar Cells</td>
<td>Hyesung Park</td>
<td>Ulsan National Institute of Science and Technology (UNIST), Korea</td>
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<tr>
<td>11:40-12:05</td>
<td>A09: Dendrimer Nanotechnology for Drug Delivery</td>
<td>Abhay Singh Chauhan</td>
<td>Medical College of Wisconsin, USA</td>
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<tr>
<td>12:10</td>
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<td>Lunch Break</td>
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<tr>
<td>13:35-14:00</td>
<td>A10: The shape, energy, and stability of graphene Möbius bands</td>
<td>Eliot Fried</td>
<td>Okinawa Institute of Science and Technology Graduate University, Japan</td>
</tr>
<tr>
<td>14:00 -14:25</td>
<td>A11: Exciton-Phonon interaction in 2D materials</td>
<td>Jun Zhang</td>
<td>Institute of Semiconductors, CAS, China</td>
</tr>
<tr>
<td>14:25 -14:50</td>
<td>A12: Thermal energy conversion and heat transport at the nanoscale</td>
<td>Jeffrey Urban</td>
<td>Lawrence Berkeley National Laboratory, USA</td>
</tr>
<tr>
<td>14:50-15:05</td>
<td>A13: Surface ordering induced by large nanosheets onto colloidal objects</td>
<td>Regis Guegan</td>
<td>Waseda University, Japan</td>
</tr>
<tr>
<td>15:05-15:20</td>
<td>A14: Extraordinary Sensitivity of Surface-Enhanced Raman Spectroscopy of Molecules on MoS2 (WS2) Nanodomes/Graphene van der Waals Heterostructure Substrates</td>
<td>Samar A. Ghopry</td>
<td>University of Kansas, USA</td>
</tr>
<tr>
<td>15:20-15:40</td>
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<td>Session Break</td>
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<tr>
<td>15:40-16:05</td>
<td>A15: Some ways to deal with skewness in financial instruments pricing &amp; risk management tools</td>
<td>Alain Ruttien</td>
<td>ESCP (Paris) &amp; NEURON sàrl, Luxembourg</td>
</tr>
<tr>
<td>16:05-16:30</td>
<td>A16: Option pricing via path-wise comparison of stochastic processes and market completions</td>
<td>Alexander Melnikov</td>
<td>University of Alberta, Canada</td>
</tr>
<tr>
<td>16:30-16:55</td>
<td>A17: Hedging with Friction</td>
<td>Mete Soner</td>
<td>ETH Zürich, Switzerland</td>
</tr>
<tr>
<td>16:55-17:20</td>
<td>A18: Measuring Credit Risk of Individual Corporate Bonds in US Energy Sector</td>
<td>Takeaki Kariya</td>
<td>Josai International University, Japan</td>
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### Thursday March 28

#### Ilima Room
**Session: Polymer Composites**  
Chair: Rosaria Rinaldi

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<tr>
<th>Time</th>
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<tbody>
<tr>
<td>07:50-08:15</td>
<td>A20: PVdF-HFP and Ionic Liquid-Based Separator for Lithium-Ion Batteries</td>
<td>Hua Wu</td>
<td>Institute for Chemical and Bioengineering, Switzerland</td>
</tr>
<tr>
<td>08:15-08:40</td>
<td>A21: Preparation of Composite Membrane for Fuel Cells by Using Fluorinated Oligomer/Clay Nanocomposite as a Key Intermediate</td>
<td>Hideo Sawada</td>
<td>Hirosaki University, Japan</td>
</tr>
<tr>
<td>08:40-09:05</td>
<td>A22: Numerical calculation of overlap distribution of (2+1)-dimensional directed polymer in random media</td>
<td>Masahiko Ueda</td>
<td>Kyoto University, Japan</td>
</tr>
<tr>
<td>09:05-09:30</td>
<td>A23: Antibacterial biodegradable polyactic acid / magnesium composites</td>
<td>Di Tie</td>
<td>Northeastern University, China</td>
</tr>
<tr>
<td>09:30-09:55</td>
<td>A24: Preparation of Polysaccharide-based Composite Materials through Gelation with Ionic Liquids</td>
<td>Jun-ichi Kadokawa</td>
<td>Kagoshima University, Japan</td>
</tr>
<tr>
<td>09:55-10:10</td>
<td>Session Break</td>
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#### Ilima Room
**Session: Probability Theory and Statistics**  
Chair: Alain Ruttiens

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<tr>
<td>10:10-10:35</td>
<td>A25: Theorems connecting Kurtosis to Tailweight, and Counterexamples to Peakedness</td>
<td>Westfall Peter</td>
<td>University of California at Davis, USA</td>
</tr>
<tr>
<td>10:35-11:00</td>
<td>A26: SOME RELATION BETWEEN BOUNDED BELOW GENERATORS AND STOCHASTIC ANALYSIS</td>
<td>Rémi Léandre</td>
<td>University of Franche-Comté, France</td>
</tr>
<tr>
<td>11:00-11:25</td>
<td>A27: Construction of k-variate survival functions; universal form</td>
<td>Jerzy Filus</td>
<td>Oakton Community College, USA</td>
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<tr>
<td>11:25-11:50</td>
<td>A28: Graph-Based Change-Point Tests for High-Dimensional Data</td>
<td>Yuehua Wu (Amy)</td>
<td>York University, Canada</td>
</tr>
<tr>
<td>11:50-12:15</td>
<td>A29: A Fokker-Planck approach to control crowd motion</td>
<td>Souvik Roy</td>
<td>University of Texas at Arlington, USA</td>
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<tr>
<td>Thursday March 28</td>
<td><strong>Ilima Room</strong></td>
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<tr>
<td><strong>Session</strong>: General I</td>
<td><strong>Chair</strong>: Shibin WANG</td>
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<tr>
<td>13:30-13:55</td>
<td>A30: Hot carrier dynamics in semiconductor microstructures</td>
<td>Susumu Fukatsu</td>
<td>University of Tokyo, Japan</td>
</tr>
<tr>
<td>13:55-14:20</td>
<td>A31: Implement a Smart Wearable Ring for Slowing Down Aging Process</td>
<td>Ching-Sung Wang</td>
<td>Oriental Institute of Technology, Taiwan</td>
</tr>
<tr>
<td>14:20-14:45</td>
<td>A32: Advances in the Synthesis of Single Wall Carbon Nanotubes by the Water-Assisted CVD Method</td>
<td>Don Futaba</td>
<td>National Institute of Advanced Science and Technology (AIST), Japan</td>
</tr>
<tr>
<td>14:45-15:10</td>
<td>A33: Guiding self-propelled Janus spheres by varying boundary conditions</td>
<td>Kun Zhao</td>
<td>Tianjin University, China</td>
</tr>
<tr>
<td>15:10-15:35</td>
<td>A34: Enhancing the interface within CNT-nanocomposites from molecular level</td>
<td>Denvid Lau</td>
<td>City University of Hong Kong, Hong Kong</td>
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<tr>
<td>15:35-16:05</td>
<td><strong>Poster Session</strong></td>
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<tr>
<td>Thursday March 28</td>
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<tr>
<td><strong>Session</strong>: Soft and Mechanical Materials/Sensors and Nanostructures</td>
<td><strong>Chair</strong>: Susumu Fukatsu</td>
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<tr>
<td>16:05-16:30</td>
<td>A35: Recent Progress in Mechanical Characterization of Human Skin</td>
<td>Shibin WANG</td>
<td>Tianjin University, China</td>
</tr>
<tr>
<td>16:30-16:55</td>
<td>A36: RF Biosensor Application by Integrated Passive Device Technology</td>
<td>Nam-Young Steve Kim</td>
<td>Kwangwoon University, Korea</td>
</tr>
<tr>
<td>16:55-17:20</td>
<td>A37: Biocompatible large-scale nanoplasmonic structures for biosensing and long-term monitoring of cell proliferations</td>
<td>Amy Q. Shen</td>
<td>Okinawa Institute of Science and Technology Graduate University, Japan</td>
</tr>
<tr>
<td>17:20-17:45</td>
<td>A38: Dynamics of Telechelic Polymers in Polymer-Colloid Mixtures for Latex Coating Design</td>
<td>Hossein Rezvantalab</td>
<td>Exponent, Inc., USA</td>
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**Ilima Room**
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</table>
| 08:00-08:25 | B1: Recent progress on nano-materials in smart windows | Ping JIN  
Shanghai Institute of Ceramics, CAS, China/AIST, Japan                           |
| 08:25-08:50 | B2: Cavitas biosensors with biocompatible polymers for tear and saliva chemicals | Kohji Mitsubayashi  
Institute of Biomaterials and Bioengineering, Tokyo Medical and Dental University, Japan |
| 08:50-09:15 | B3: Design and validation of an Energy Management System for reusing lithium-ion battery | Wu-Yang SEAN  
Chung Yuan Christian University, Taiwan                                             |
| 09:15-10:00 | Session Break                                |                                                                                     |
| 10:00-10:25 | B4: Photovoltaic properties of Cu2O-based heterojunction solar cells using binary oxide semiconductor thin films as a n-type layer prepared by low damage magnetron sputtering method | Toshihiro Miyata  
Optoelectronic Device System R&D Center, Kanazawa Institute of Technology, Japan |
| 10:25-10:50 | B5: To be updated                            | Xun Cao  
Shanghai Institute of Ceramics, Chinese Academy of Sciences, China                   |
School of Physical Science and Technology, Soochow University, China                   |
| 11:15-11:40 | B7: Vortex phase-induced changes of the coupling efficiency of a partially coherent radially polarized beam into a single-mode fiber | Xinlei Zhu  
School of Physical Science and Technology, Soochow University, China                   |
| 11:40      | Lunch Break                                  |                                                                                     |

**Friday March 29**

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<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Speaker/Institution</th>
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</table>
| 08:00-08:25 | A39: Jump to contact instability: near field dynamics of liquids at nanoscale | Philippe Tordjeman  
Institut de Mécanique des Fluides de Toulouse (IMFT), France                       |
| 08:25-08:50 | A40: Solvent dynamics of nanofluids investigated by X-ray scattering | Koji YOSHIDA  
Department of Chemistry, Faculty of Science, Fukuoka Univ., Japan                   |
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<tr>
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<tbody>
<tr>
<td>08:50-09:15</td>
<td>A:41: Microfluidic synthesis of spherical calcium-alginate hydrogels for antifouling herbicide application</td>
<td>Takasi Nisisako</td>
<td>Tokyo Institute of Technology (Tokyo Tech), Japan</td>
<td></td>
</tr>
<tr>
<td>09:15-09:40</td>
<td>A42: Nanocrystallization of metallic glasses and subsequent structure changes in the resulted nanomaterials</td>
<td>Dmitri Louzguine</td>
<td>Tohoku University, Japan</td>
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<td>09:40-10:00</td>
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<tr>
<td>10:00-10:25</td>
<td>A43: Superlarge-Scale Coarse-Grained Molecular Dynamics Simulations on the Deformation and Fracture Processes of Semicrystalline Polymers</td>
<td>Momoji Kubo</td>
<td>Tohoku University, Japan</td>
<td></td>
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<tr>
<td>10:25-10:50</td>
<td>A44: Hydrogels for the removal of Cu(II) alteration products from bronze</td>
<td>Marta Rossi</td>
<td>University of Florence (CSGI), Italy</td>
<td></td>
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<tr>
<td>10:50-11:15</td>
<td>A45: Spin-Switching Coordination Polymers based on Hofmann-like Frameworks</td>
<td>Takaushi Kitazawa</td>
<td>Toho University, Japan</td>
<td></td>
</tr>
<tr>
<td>11:15-11:40</td>
<td>A46: Friction control in high-strength hydrogels</td>
<td>Kazunari Yoshida</td>
<td>Yamaga University, Japan</td>
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<td>11:40</td>
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<tr>
<td>13:55-14:20</td>
<td>A48: High-quality perovskite CsPbBr3 quantum dots thin films and applications of light-emitting diode</td>
<td>Lung-Chien CHEN</td>
<td>National Taipei University of Technology, Taiwan</td>
<td></td>
</tr>
<tr>
<td>14:20 -14:45</td>
<td>A49: Preparation of chitin nanofiber from crab shell and its commercial applications</td>
<td>Shinsuke IFUKU</td>
<td>Tottori University, Japan</td>
<td></td>
</tr>
<tr>
<td>14:45-15:10</td>
<td>A50: Graphene based materials for biomedical applications</td>
<td>Mariana Ionita</td>
<td>University Politehnica of Bucharest, Romania</td>
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<td>15:10-15:30</td>
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<tr>
<td>15:30-15:55</td>
<td>A51: Nanometric geochemical analysis of the fault gouges of 1999 Chi-Chi earthquake: what had happened underground that night</td>
<td>Wen-Hsien Li</td>
<td>National Central University, Taiwan</td>
<td></td>
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<tr>
<td>15:55-16:20</td>
<td>A52: Computational approach to</td>
<td>Tokuei SAKO</td>
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<tr>
<td>16:20-16:35</td>
<td>A53: Design and Synthesis of Nano Sensitizer for Highly Effective Dynamic and Thermal Therapy</td>
<td>Xianwei Meng</td>
<td>Technical Institute of Physics and Chemistry, CAS, China</td>
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<td>Nihon University, Japan</td>
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<tr>
<td>16:35-16:50</td>
<td>A54: Biodegradable Metal-organic Framework Nanocarriers for Tumor Thermo-chemotherapy</td>
<td>Longfei Tan</td>
<td>Technical Institute of Physics and Chemistry, CAS, China</td>
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<td>Technical Institute of Physics and Chemistry, CAS, China</td>
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<tr>
<td>16:50-17:15</td>
<td>A55: Nanoengineered 3D nm-Thin Biomimetic Membrane for Ultrafast Selective Mass</td>
<td>Siwei Liang</td>
<td>Lawrence Livermore National Laboratory, USA</td>
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<td>17:20</td>
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<td>Dinner Social</td>
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**Poster Session**

**Thursday March 28**

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<tr>
<td>P01</td>
<td>Controlled microstructure and mechanical properties of Al2O3-based nanocarbon composites fabricated by electrostatic adsorption method</td>
<td>Wai Kian Tan</td>
<td>Toyohashi University of Technology, Japan</td>
</tr>
<tr>
<td>P02</td>
<td>Atomistic simulations of phase transformations in freestanding shape-memory nanoparticles</td>
<td>Won-Seok Ko</td>
<td>University of Ulsan, Korea</td>
</tr>
<tr>
<td>P03</td>
<td>Nano-structured surface for superhydrophobic applications to overcome water vulnerability</td>
<td>Seunghyup Lee</td>
<td>Korea Institute of Ceramic Engineering and Technology, Korea</td>
</tr>
<tr>
<td>P04</td>
<td>Study on Protein-Gold Nanoparticles by Absorbance and Fluorescence Method</td>
<td>Xing-Zheng Wu</td>
<td>Fukuoka Institute of Technology, Japan</td>
</tr>
<tr>
<td>P05</td>
<td>Molecular Dynamics Simulations of Separation Membrane Prototypes For Small Gas Molecules</td>
<td>Mariana Ionita</td>
<td>University Politehnica of Bucharest, Romania</td>
</tr>
<tr>
<td>P06</td>
<td>Flexible All-Polymer Solar Cells with High-Viscosity Processing Polymer</td>
<td>Changduk Yang</td>
<td>Ulsan National Institute of Science and Technology (UNIST), Korea</td>
</tr>
<tr>
<td>P07</td>
<td>Fabrication of nylon 6,6 grafted-(carbon nanotubes grafted on carbon fibers) for the multi-scale reinforcement of nylon 6,6 composites</td>
<td>Eun Yeop Choi</td>
<td>Chung-Ang University, Korea</td>
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<tr>
<td>Session</td>
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<td>Speaker</td>
<td>Affiliation</td>
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<tr>
<td>P08</td>
<td>Noncovalent functionalization of multi-walled carbon nanotubes with Grignard reagent-containing pyrene derivatives for high performance of polyketone/multi-walled carbon nanotube composites</td>
<td>Jeong Ung Nam</td>
<td>Chung-Ang University, Korea</td>
</tr>
<tr>
<td>P09</td>
<td>A disposable, on-demand, paper-based microbial fuel cell</td>
<td>KOZO Taguchi</td>
<td>Ritsumeikan University, Japan</td>
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<tr>
<td>P10</td>
<td>To be updated</td>
<td>Jian-Ming Lu</td>
<td>National Center for High-Performance Computing, National Applied Research Laboratories, Taiwan</td>
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Saturday, March 30
One-Day Excursion: Nature, Culture, and Collaboration