



# JSM 2021 Online Program

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## Legend:

\* = applied session    ! = JSM meeting theme

## Activity Details

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Sun, 8/8/2021, 1:30 PM - 3:20 PM

Virtual

**Computation, Design, and Quality Assurance of Physical Science and Engineering Applications — Contributed Speed**

## Section on Physical and Engineering Sciences

*Chair(s): Ana Maria Estrada Gomez, Georgia Institute of Technology*

- 1:35 PM [Model-Independent Detection of New Physics Signals Using Interpretable Semi-Supervised Classifier Tests](#)  
**Purvasha Chakravarti, Imperial College London;**  
 Mikael Kuusela, Carnegie Mellon University; Jing Lei, Carnegie Mellon University; Larry Wasserman, Carnegie Mellon University
- 1:40 PM [Missing-Data Coherency Estimation](#)  
**Charlotte Haley, Argonne National Laboratory**
- 1:45 PM [Scalable Statistical Inference of Photometric Redshift via Data Subsampling](#)  
**arindam fadikar, argonne national laboratory;** Stefan M Wild, argonne national laboratory; Jonas Chaves-Montero, Donostia International Physics Centre
- 1:50 PM [Statistical Computation of Thermal Conductivity in Neutron Star Matter 'Pastas'](#)  
**Guillermo Frank, Universidad Tecnológica Nacional, Facultad Regional Buenos Aires;** Claudio Dorso, Instituto de Física de Buenos Aires, CONICET; Alejandro Strachan, School of Materials Engineering, Purdue University
- 1:55 PM [Measurements of Photoncity in Optically-Dense, Multiphoton-Reactive Systems](#)  
**Peter Hovey, University of Dayton;** Mark Masthay, University of Dayton; Wenye Wang, University of Dayton; David Johnson, University of Dayton; Merritt Helvenston, New Mexico Highlands University
- 2:00 PM [Determining the Accuracy and Precision of DEEP2 Spectroscopic and Photometric Galaxy Redshift Measurements Using a Measurement Error Model](#)  
**Richard Anthony Bilonick, R. A. Bilonick Statistics Consultancy LLC**
- 2:05 PM [Latent Function Calibration to Estimate Shock Hugoniot](#)  
**Scott Vander Wiel, Los Alamos National Laboratory**

- 2:10 PM [Learning and Deploying Active Subspaces on Black Box Simulators](#)  
**Nathan Wycoff, Virginia Tech**; Mickaël Binois, INRIA;  
Stefan M Wild, argonne national laboratory; Robert B Gramacy, Virginia Tech
- 2:15 PM [Statistical Emulation with Dimension Reduction for Complex Forward Models in Remote Sensing](#)  
**Gang Yang, University of Cincinnati**; Emily Kang, University of Cincinnati; Bledar Alex Konomi, University of Cincinnati; Jonathan Hobbs, Jet Propulsion Laboratory, California Institute of Technology
- 2:20 PM [Comparing Initial Designs for Bayesian Optimization](#)  
**Kasia Dobrzycka, North Carolina State University Statistics Department**; Jon Stallrich, North Carolina State
- 2:30 PM [Empirical Estimation of the Effect of Frequency Content of Earthquake Ground Motions on Structural Collapse Risk Based on Generalized Linear Model](#)  
Min Shu, University of Wisconsin Stout; Ruiqiang Song, Michigan Technological University
- 2:35 PM [Statistical Analysis of Oil and Gas Pipelines to Predict Pipe Grade Using Power BI](#)  
**William V Harper, DNV**; Thomas A Bubenik, DNV; Tara P McMahan, DNV; Benjamin R Hanna, DNV; Steven J Polasik, DNV; Adriana P Nenciu, Otterbein University; Stacy G Hickey, DNV; David J Stucki, Otterbein University
- 2:40 PM [Estimating and Comparing the Stable Crack Growth Region for Additively Manufactured Metals](#)  
**Lucas Koepke, National Institute of Standards and Technology**; Jolene Splett, National Institute of Standards and Technology; Nik Hrabe, National Institute of Standards and Technology; Jake Benzing, National Institute of Standards and Technology; Timothy Quinn, National Institute of Standards and Technology
- 2:45 PM [Multiple Objective Latin Hypercube Designs for Computer Experiments](#)

**Damola Akinlana, University of South Florida; Lu Lu, University of South Florida**

- 2:50 PM [Neural Network for Prediction of Functional Data](#)  
**Weiru Han, Department of Mathematics & Statistics, University of South Florida; Lu Lu, University of South Florida; Jiangfeng Zhou, Department of Physics, University of South Florida**
- 2:55 PM [A Generalized Bayesian CUSUM Control Chart](#)  
**Chelsea Jones, Virginia Commonwealth University; D'Arcy Mays, Virginia Commonwealth University; AbdelSalam AbdelSalam, Qatar University**
- 3:00 PM [Robust Multivariate CUSUM for Phase II Profile Monitoring](#)  
**AbdelSalam AbdelSalam, Qatar University**
- 3:05 PM [Risk Score Monitoring Using Change Point Detection and its Application in Health Management](#)  
**Yuhui Yao, The University of Alabama; Subha Chakraborti, The University of Alabama; Xin Yang, The University of Alabama; Jason Parton, The University of Alabama; Dwight Lewis, The University of Alabama; Matthew Hudnall, The University of Alabama**
- 3:10 PM [Modified Control Chart for Monitoring the Process Dispersion](#)  
**Felipe Schoemer Jardim, Fluminense Federal University; Subha Chakraborti, The University of Alabama; Tiago Landim, Federal University of São Carlos ; Pedro Oprime, Federal University of São Carlos**
- 3:15 PM **Floor Discussion**

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