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The University of South Florida presents

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Interdisciplinary Data Sciences Consortium
& MATHEMATICS AND STATISTICS COLLOQUIUM

September 28, 2018 3:00-4:00pm
Location: CMC 130

Featuring Dr. Anderson-Cook
Los Alamos National Laboratory

Title: HOSTING A DATA COMPETITION: STRATEGIC DESIGN AND ANALYSIS TO GET MORE THAN JUST A WINNER

Abstract: Leveraging the depth and breadth of expertise available through crowdsourcing can be a powerful accelerator to methodology development and improved solutions for high consequence problems. Participating in data science competitions has become quite popular and prevalent in the data science community. However, the implementations of the competitions by hosts are highly variable and can sometimes lead to selecting an unintended winner, whose solution does not closely match to the real problem of interest. This talk outlines considerations when hosting a competition, including (1) how to construct the competition datasets to drive the best solutions, (2) how to construct an ideal leaderboard scoring metric to select the desired winners, and (3) how to extract as much detailed understanding about the strengths and weaknesses of the solutions through a post-competition analysis. The methods are illustrated using a recently-completed competition to evaluate algorithms capable of detecting, locating, and characterizing radioactive materials in an urban environment.

To learn more, visit: https://www.lanl.gov/expertise/profiles/view/christine-anderson-cook

Biography: Dr. Christine M. Anderson-Cook is a Research Scientist at Los Alamos National Laboratory. She is a Fellow of the American Statistical Association and the American Society for Quality (ASQ). She has published over 200 peer-reviewed papers and co-authored two books. She has won the ASQ Statistics Division's William G. Hunter Award, the ASQ Shewhart Medal, and the National Nuclear Security Administration's Defense Programs Award of Excellence. Her research areas include reliability, design of experiments, multiple criterion optimization, and response surface methodology.

IDSC Contact: Dr. K. Ramachandran
University of South Florida 4202
E Fowler Ave, CMC317 Tampa, FL 33620-5700
E-mail: ram@usf.edu
Telephone: (813) -974-1270