

Space-Filling Points

ABSTRACT – Space-filling designs are a set of points that can be used to fill a given space. Popular space-filling designs include minimax, maximin, uniform, Latin hypercube designs, and combinations of them. In this talk, I will present some advancements of space-filling designs such as MaxPro designs, minimum energy designs, and support points and show how they can be used for solving complex problems in chemical, materials, aerospace, mechanical, and industrial engineering applications involving uncertainty quantification, optimization, simulation, inverse design, and machine learning.



Dr. Roshan Joseph

A. Russell Chandler III Chair and Professor
Stewart School of Industrial and Systems Engineering
Georgia Tech

SPEAKER BIO – Dr. Roshan Joseph is A. Russell Chandler III Chair and Professor in the Stewart School of Industrial and Systems Engineering at Georgia Tech, Atlanta. He holds a Ph.D. degree in Statistics from the University of Michigan, Ann Arbor. His research focuses on computational and applied statistics with applications to engineering. He is a recipient of CAREER Award from NSF in 2005, Jack Youden Prize from the ASQ in 2005, Best Paper Award from IIE Transactions in 2009, Edelman Laureate from INFORMS in 2017, SPES Award from the ASA in 2019, SPAIG Award from the ASA in 2020, and Lloyd S. Nelson Award from ASQ in 2021. He is a Fellow of the ASA and ASQ. He is currently serving as the Editor-in-Chief of Technometrics.