UTRGV

School of Mathematical and Statistical Sciences

Distinguished Colloquium Series

Revisiting the Classical Least–Squares Formulation for Computational Learning and Inversion

Dr. Kui Ren

Professor of Applied Physics and Applied Mathematics, Columbia University

<u>Abstract</u>

The classical least-squares formulation has provided a successful framework for the computational solutions of learning and inverse problems. In recent years, modifications and alternatives have been proposed to overcome some of the disadvantages of this classical formulation in dealing with new applications. We will present some recent progress on the understanding of a general weighted least-squares optimization framework in such a setting. The main part of the talk is based on joint works with Bjorn Engquist and Yunan Yang.

Short Bio of the Speaker

Kui Ren received his PhD in applied mathematics from Columbia University. He then spent a year at the University of Chicago as a L. E. Dickson instructor before moving to University of Texas at Austin to become an assistant professor in the Department of Mathematics and the Oden Institute for Computational Engineering and Sciences. He returned to Columbia University in 2018 as a professor in applied mathematics. Kui Ren's recent research interests include inverse problems, mathematical imaging, random graphs, fast algorithms, kinetic modeling, and computational learning.

Date: Friday, November 11, 2022

Time: 4:00-5:00 pm CT

Location: Zoom Only

Zoom: https://utrgv.zoom.us/j/89753298218

For further information or for special accommodations, please contact Dr. Alexey Glazyrin via email alexey.glazyrin@utrgv.edu and Dr. Zhijun Qiao via email zhijun.qiao@utrgv.edu