UNIVERSITY OF CALIFORNIA
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APPLIED MATHEMATICS SEMINAR 291

# Variants of the Randomized Kaczmarz Algorithm and their Applications

Date: **9/13/19**
Time: **3:00 PM**
Location: **COB1 265**


**Anna Ma**
Visiting Assistant Professor
University of California, Irvine



For more information, contact : **Changho Kim**
**ckim103@ucmerced.edu**


## Abstract


Nowadays, data is exploding at a faster rate than computer architectures can handle. For that reason, mathematical techniques to analyze large-scale data need be developed. Stochastic iterative algorithms have gained interest due to their low memory footprint and adaptability for large-scale data. In this talk, we will study the Randomized Kaczmarz algorithm for solving extremely large linear systems of the form Ax=y. In the spirit of large-scale data, this talk will act under the assumption that the entire data matrix A cannot be loaded into memory in a single instance. We consider different settings including when a only factorization of A is available, when x is sparse, and a time-varying model. We will also present applications of these Kaczmarz variants to problems in data science.