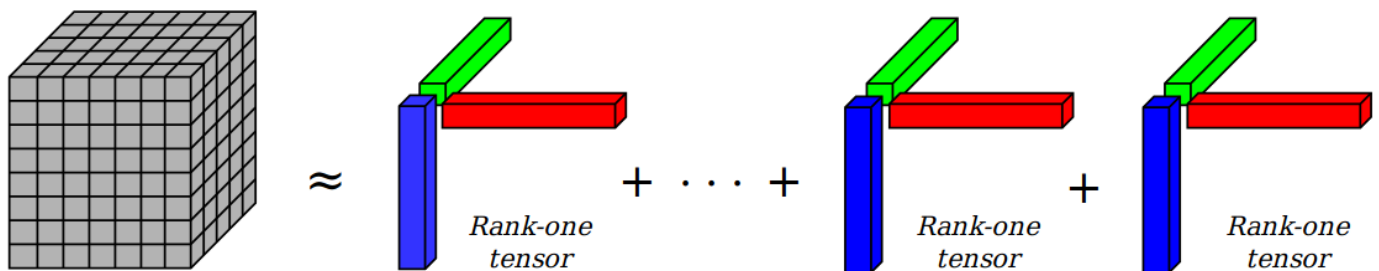


Graduate Mathematics Seminar

Modewise methods for tensor dimension reduction

Dr. Elizaveta Rebrova

University of California, Los Angeles



Abstract: The celebrated Johnson-Lindenstrauss lemma is a powerful tool for dimension reduction via simple (often random) projections that approximately preserve the geometry of the larger dimensional objects. I will discuss an extension of this result to low CP-rank tensors. I show how modewise tensor projections preserve tensor geometry in the analogous way, without doing any initial tensor matricization or vectorization. Then I will explain the relation to the least squares fitting CP model for tensors. Based on our joint work with Mark Iwen, Deanna Needell, and Ali Zare.

When: Monday, March 30, 2020, 6:00 – 7:00 pm

Where: Zoom

One University Drive, Camarillo, California 93012-8599 Tel: (805) 437-8967 Fax: (805) 437-8864 www.csuci.edu