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The Hong Kong University of Science & Technology

Department of Mathematics

PhD Student Seminar

Guarantees of Riemannian Optimization for Low-Rank Tensor Completion

By

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Abstract

Tensor completion is an important task which is to recover a low-rank tensor from its partial entries. The Riemannian optimization technique is studied for this problem. Taking order-3 tensor with dimension-(d, d, d) and Tucker rank-(r, r, r) as example, we show that with one-step initialization Riemannian gradient descent can reconstruct it with high probability from as few as $O((r^{7/2}d^{3/2}+r^7d)}log(d))$ known entries.

Date: Friday, 4 May 2018

Time: 2:00 p.m.- 3:00 p.m.

Venue: Room 5508 (near lift 25, 26)

All are welcome!