

Colloquium

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Thursday, April 15, 2021, 13:30

Zoom

Abstract

We study the problem of decomposing a low-rank matrix into a factor with binary entries, either from $\{\pm 1\}$ or from $\{0, 1\}$, and an unconstrained factor. Such binary component decompositions are appropriate for applications where the latent factor reflects an exclusive choice (e.g. “on” and “off” in electrical engineering; “connected” or “disconnected” in graph theory; “yes” and “no” in survey data; “like” and “dislike” in collaborative filtering; or “active” and “inactive” in genomics). Our research answers fundamental questions about the existence and uniqueness of these decompositions. It also leads to tractable factorization algorithms that succeed under a mild deterministic condition. This is joint work with Joel Tropp (Caltech).

online: ZOOM

Thu, Apr 15, 2021 01:30 PM (CET)

<https://jku.zoom.us/j/94976157659?pwd=SjVVM2k5VF1uNzYzWitYU25BR1RuUT09>

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