

TENSORS AND THEIR EIGENVECTORS

Bernd Sturmfels

UC Berkeley, USA

bernd@berkeley.edu

Eigenvectors of square matrices are central to linear algebra. Eigenvectors of tensors are a natural generalization. The spectral theory of tensors was pioneered by Lim and Qi a decade ago, and it has found numerous applications. We present an introduction to this theory, with focus on results on eigenconfigurations due to Abo, Cartwright, Robeva, Seigal and the author. We also discuss a count of singular vectors due to Friedland and Ottaviani.