

# Photonics

## White Light Cavities, Exceptional Points, and their applications

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**Time:** 3:00pm – 4:30pm

**In-person:** EEB 248

**Abstract:** We consider the deep relations between concepts which apparently belong to distinct fields: Exceptional points in optical PT-symmetric systems, White light cavities and superluminal group velocity. It is also shown that this relationship is a key for understanding the underlying physics of these concepts as well as for the development of many important practical applications such as flat-top filters, broad band impedance matching and perfect absorption (anti-lasing).



**Biography:** Koby Scheuer received the Ph.D. degree in Electrical Engineering from the Technion—Israel Institute of Technology in 2001. He was a Chief Designer with Lambda Crossing—an optical component startup specializing in microring resonators for two years. Between 2003-2006 he was a research associate with the Department of Applied Physics at the California Institute of Technology, after which he joined the school of Electrical Engineering at Tel-Aviv University. Currently, he is a full professor with the School of Electrical Engineering at Tel-Aviv University. His research interests include nanophotonics, metasurfaces and metamaterials, slow & fast light, and optics in soluble materials.

*Hosted by: Mercedeh Khajavikhan; Michelle Povinelli, Constantine Sideris; Hossein Hashemi; Wade Hsu; Mengjie Yu; Wei Wu; Tony Levi; Alan E. Willner; Andrea Martin Armani*