Dissipative Systems: Convex Invertible Cones
point of view

Abstract:
Convex cones over a real unital algebra, which in addition are closed under inversion, may seem peculiar. However, Convex Invertible Cones (CICs) naturally appear in stability analysis of continuous-time physical systems.

With this motivation, in this talk we explore examples of CICs over some algebras and establish interconnections among them.

This indicates at the importance of the study of rational functions, of non-commuting variables, with certain positivity properties.

This talk is based on an ongoing research for many years. Some of it in collaboration with Daniel Alpay, Chapman University, California, Nir Cohen, Natal, Brazil and the late Leiba Rodman, from the College of William and Mary, Virginia.

Host: Bill Helton

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