

Title: **Considering Copositivity Locally**

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Abstract:

In this talk we characterise the cone of feasible directions for a copositive matrix $A \in \mathcal{COP}^n$, i.e., the convex cone of symmetric matrices B such that there exists $\delta > 0$ satisfying $A + \delta B \in \mathcal{COP}^n$. This furnishes characterisations of the tangent cone, the minimal face and the minimal exposed face for A in $\mathcal{COP}^n$. All of the characterisations are in the form of sets of linear inequalities constructed from the (minimal) zeros of A .