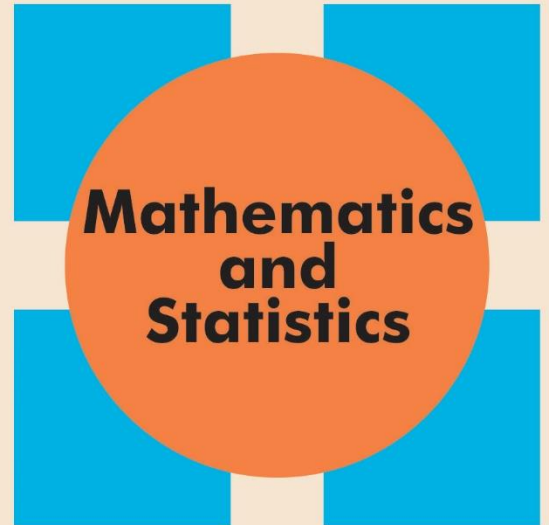


COLLOQUIUM

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What is a positive matrix?



Friday, Feb. 9th, 3:30 PM, RI 209

Abstract:

If I asked this question to non-experts, the typical response is: *positive definite* or *entry-wise positive*. Indeed, classically, these two classes of positive matrices represent fundamental distinct topics in Linear Algebra, and continue to receive considerable research attention today! However, there are many other notions of a "positive matrix" that are studied both for their theoretical value and for their related interesting applications (the Riemann Hypothesis...). Matrix positivity has been an interest of mine since my first days as a graduate student and I continue to be fascinated by the different varieties of a positive matrix and their significance in matrix theory.

In this talk, I will (try) to introduce the subject of matrix positivity and survey the various type of positive matrices. I will discuss connections, differences, some related applications, and, hopefully, provide some rationale for the numerous type of positive matrices. Let me know if you can spot all 25 defined types of positive matrices during this lecture!

No previous knowledge is required and this talk will not be technical in the least. All are welcome to attend and hopefully you leave having learned something new about a positive matrix!