

Applied Mathematics Seminar

Fritz John's ellipsoid theorem in frame theory

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Abstract: In this talk I will introduce the notion of finite frames and present some of their elementary properties. In particular, I will focus on a class of optimally conditioned frames called tight frames. A question that one could ask is whether one can perfectly precondition a frame, i.e., one can modify it in such a way that it becomes optimally conditioned. In the last part of the talk, I will show how the Fritz John ellipsoid theorem can be used to settle this question. I will conclude by giving various characterizations of the class of perfectly preconditioned frames.

Monday, October 20 at 4:00 PM in SEO 636