Spectral Analysis Of Saddle Point Matrices With Indefinite Leading Blocks

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After a brief introduction to the spectral analysis of saddle point matrices, in this talk we present new estimates for the eigenvalue intervals for symmetric saddle-point and regularised saddle-point matrices in the case where the (1,1) block may be indefinite. These generalise known results for the definite (1,1) case. We also discuss spectral properties of the equivalent augmented formulation, which is an alternative to explicitly dealing with the indefinite (1,1) block.

This is joint work with Nick Gould, Rutherford Appleton Laboratory, Chilton, Oxfordshire.