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Elena Cherkaev* (elena@math.utah.edu), Salt Lake City, UT 84112. *Matrix Pade approximations of Herglotz-Nevanlinna Functions and Applications to Model Order Reduction.*

Pade approximations of Stieltjes and Herglotz-Nevanlinna functions play a central role in the operator theory connecting the moment problem with continuous fractions, Jacobi matrices, orthogonal polynomials, the spectral theory, and approximation problems. The talk will discuss matrix Pade approximations and reduced order representations of spectral decompositions of operators arising in homogenization and inverse problems. (Received August 31, 2020)