

APPLIED MATH COLLOQUIUM

The AAA Algorithm For Rational Approximation



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ABSTRACT:

With the introduction of the AAA algorithm in 2018 (Nakatsukasa-Sete-T., SISC), the computation of rational approximations changed from a hard problem to an easy one. We've been exploring the implications of this transformation ever since. This talk will review the algorithm and then present about 15 demonstrations of applications in various areas including interpolation of missing data, analytic continuation, analysis of solutions of dynamical systems, Wiener-Hopf and Riemann-Hilbert problems, function extension, model order reduction, Dirichlet-to-Neumann maps, and Laplace, Stokes, and Helmholtz calculations.

THURSDAY, NOVEMBER 30, 2023

4:00 PM – 5:00 PM

Building 2, Room 190

<https://math.mit.edu/amc/>