



THE UNIVERSITY OF  
**CHICAGO**

THE COMMITTEE ON  
COMPUTATIONAL AND  
APPLIED MATHEMATICS

## COLLOQUIUM

---

NICK TREFETHEN

School of Engineering and Applied Sciences  
Harvard University

### THE AAA ALGORITHM FOR RATIONAL APPROXIMATION

**FRIDAY, APRIL 12TH, at 2:30 PM**

Jones 303, 5747 S. Ellis Ave. Chicago, IL 60637

#### 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.

---

#### Organizers:

Jeremy Hoskins, Department of Statistics (CAMI), [jeremyhoskins@statistics.uchicago.edu](mailto:jeremyhoskins@statistics.uchicago.edu) & Yuehaw Khoo, Department of Statistics (CAMI), [ykhoo@galton.uchicago.edu](mailto:ykhoo@galton.uchicago.edu)  
CAM Colloquium URL: <https://cam.uchicago.edu/events/cam-colloquium/>

If you wish to subscribe to our email list, please visit the following website:  
[https://lists.uchicago.edu/web/subscribe/cam\\_colloquium/](https://lists.uchicago.edu/web/subscribe/cam_colloquium/).