

Thomas R. Cameron

The College of Idaho
Mathematics and Physical Sciences
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Current Position

Visiting Assistant Professor, Mathematics and Physical Sciences, The College of Idaho

Areas of Specialization

Numerical Analysis, linear algebra, and partial differential equations. Particular interests include:
numerical methods for the linear and non-linear eigenvalue problem
factorization and normal forms
pseudo-spectrum, numerical range, and spectral geometry

Appointments Held

current	Visiting Assistant Professor, The College of Idaho
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Education

2013-2016	Ph.D. in Mathematics, Washington State University
2012-2013	M.Sc. in Mathematics, Washington State University
2009-2012	B.Sc. in Mathematics, University of Minnesota Duluth

Honors & Awards

2015	MSRI Summer Graduate School on Spectral Geometry, University of Montreal
2015	Radziemski Fellowship, Washington State University
2012	Sylvan D. Burgstahler Memorial Scholarship, University of Minnesota Duluth

Publications & Presentations

JOURNAL ARTICLES

2017	Thomas R. Cameron and Panayiotis J. Psarrakos, <i>On the generalization of Descartes' rule of signs for matrix polynomials</i> , In Progress.
2017	Thomas R. Cameron and Nikolas I. Steckley, <i>On the application of Laguerre's method to the polynomial eigenvalue problem</i> , https://arxiv.org/abs/1703.08767 .
2017	Thomas R. Cameron and Dave Rosoff, <i>A motivated introduction to determinants</i> , In Review.

- 2016 Thomas R. Cameron, *On the reduction of matrix polynomials to Hessenberg form*, Electronic Journal of Linear Algebra, 31 (2016), 321-334.
- 2015 Thomas R. Cameron, *Spectral bounds for matrix polynomials with unitary coefficients*, Electronic Journal of Linear Algebra, 30 (2015), 585-591.

TALKS

- 2017 *Descartes' Rule of Signs for matrix polynomials*, AMS Spring Western Sectional Meeting, Washington State University.
- 2016 *A conjecture on Descartes' Rule of Signs for matrix polynomials*, CLaN Seminar, Washington State University.
- 2016 *Spectral bounds for unitary matrix polynomials*, Analysis Seminar, Washington State University.
- 2015 *Constructive proof of Hessenberg form for matrix polynomials*, CLaN Seminar, Washington State University.
- 2015 *Another approach to Jordan form*, CLaN Seminar, Washington State University.
- 2015 *How do we really find eigenvalues?*, Colloquium, University of Minnesota Duluth.
- 2014 *Hyman's method for matrix polynomials*, CLaN Seminar, Washington State University.
- 2014 *Factorization of matrix polynomials*, CLaN Seminar, Washington State University.
- 2014 *The nonlinear eigenvalue problem*, Colloquium, University of Minnesota Duluth.
- 2013 *The Ehrlich-Aberth method for matrix polynomials*, CLaN Seminar, Washington State University.
- 2013 *When does Newton's method fail?*, CLaN Seminar, Washington State University.

POSTERS

- 2015 *Hessenberg form for matrix polynomials*, SIAM LA 15, Atlanta, GA.
- 2014 *Eigenvalue computation for tridiagonal matrix polynomials*, PNWNAS 14, Portland, OR.

REFeree EXPERIENCE

LAA: Linear Algebra and Applications
 ELA: Electronic Journal of Linear Algebra
 MAA: Mathematical Association of America: Mathematics Magazine

REVIEW EXPERIENCE

Macmillan: J. Holt, Linear Algebra with Applications

Teaching

COURSES TAUGHT

- 2016-2017 MAT 101: Survey of Algebra and Probability, MAT 102: Functions, CSC 150: Computer Science 1, MAT 252: Discrete Mathematics, CSC 270: Applied Databases, MAT 498: Upper Division Seminar, MAT 494: Independent Study, The College of Idaho
- 2015-2016 Math 273: Calc 3, Math 220: Linear Algebra, Math 103 (online): Algebra Methods, Washington State University
- 2014-2015 Math 220: Linear Algebra, Math 105: Exploring Mathematics, Washington State University
- 2013-2014 Math 106: Pre-Calc, Math 202: Business Calc 2, Math 220: Linear Algebra, Washington State University
- 2012-2013 Math 201: Business Calc 1, Math 106: Pre-Calc, Washington State University

SUPERVISED UNDERGRADUATE RESEARCH

- 2016 Sam Chandler, Will Callahan, Johanna Mori, and Leo Trujilo, *Numerical algorithms for the solution of ordinary differential equations, presented at the 2016 Murdock Undergraduate Conference*, The College of Idaho.
- 2016 Nick Steckley, *A personalized grade management system using MySQL and PHP*, Washington State University.
- 2015-2016 Grant Hutchings, *Numerical algorithms for matrix computations and applications*, Washington State University.
- 2014-2015 Michael Newsham, *Bernstein polynomials and companion matrices*, Washington State University.

Community Involvement

- 2016 The Bird Stop: Developed website for a local business.