

Dr. Abraham D Smith

Mathematics, Statistics & Computer Science Department
College of Science, Technology, Engineering, Mathematics and
Management

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Personal website: www.curieux.us/abe

Research Interests: Differential Geometry and Differential Equations. Geometric and Topological Data Analysis.

Languages

- French (Beginner)
- German (Beginner)

Office Hours

Day	Time
Mo Th Fr	2:30 - 4:30

Education

- **Ph D Mathematics**
Duke University
Durham, NC, United States, 2009
- **MA Mathematics**
Duke University
Durham, NC, United States, 2004
- **BS Mathematics and Physics**
University of Wisconsin
Madison, WI, United States, 2003

Work Experience

Academic - Post-Secondary

- **Fordham University**, Mathematics Department
Peter M. Curran Visiting Assistant Professor
August 2011 - July 2015
- **McGill University**, Department of Mathematics and Statistics
NSF/MSRI Postdoctoral Fellow
August 2009 - May 2011

Intellectual Contributions

Journal Article

- Smith, A. (Submitted). Exterior Differential Systems, from Elementary to Advanced. .
- Smith, A. (2015). Constructing Involutive Tableaux with Guillemin Normal Form. *Symmetry, Integrability and Geometry: Methods and Applications (SIGMA)*, 11(053), 14.

- Smith, A. (2010). Integrable GL(2) Geometry and Hydrodynamic Partial Differential Equations. *Communications in Analysis and Geometry*, 18(4), 743 – 790.

Working Paper

- Smith, A. (Revising to Resubmit). Degeneracy of the Characteristic Variety. *Communications in Analysis and Geometry*(arXiv:1410.6947).

Presentations

Seminar

- Smith, A. (January 22, 2016). Best Practices for Scientific Computing in Python. Mathematics Colloquium, Menomonie, WI, United States.

Oral Presentation

- Smith, A. (December 11, 2015). How to Build Involutive PDE. Math-Physics Seminar, Minneapolis, MN, United States.

Applied Research

Uncategorized

- **Geometric Data Analytics, Inc. (geomdata.com)**
Customized data analysis for government labs. (2015 - Present)

Awards, Fellowships, Honors, and Scholarships

Fellowship

- All-Institutes Postdoctoral Fellow, National Science Foundation via the Mathematical Science Research Institute (June 2009)

Professional Memberships

- Mathematical Association of America (MAA)
- American Association for the Advancement of Science (AAAS)
- Society for Industrial and Applied Mathematics (SIAM)
- American Mathematical Society (AMS)

Service

University

UW Stout

- **Advisory Board Member**, Racial and Ethnic Studies and Global Perspectives Curriculum (RESGLP) Advisory Committee (July 1,2016 - June 30, 2019)

Community

- **Board of Directors**, Friends of the Red Cedar Trail and Hoffman Hills (December 15,2016 - Present)