# Travis Askham

Curriculum Vitae

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# Education and Qualifications

2016	Ph.D.	New York University
2010	M.A.	University of California Los Angeles
2010	B.Sc.	University of California Los Angeles

## **Professional Appointments**

2016 – Research Associate of Applied Mathematics, Department of Applied Mathematics, University of Washington

#### **Publications**

#### Journal Articles & Books

Travis Askham and Antoine J Cerfon, An adaptive fast multipole accelerated poisson solver for complex geometries. *Journal of Computational Physics*, 344:1–22, 2017.

Travis Askham, Integral-equation methods for inhomogeneous elliptic partial differential equations in complex geometry. Ph.D. thesis, New York University, 2016.

Travis Askham and Leslie Greengard, Norm-preserving discretization of integral equations for elliptic PDEs with internal layers I: the one-dimensional case. *SIAM Review*, 56(4):625–641, 2014.

#### **Preprints**

Travis Askham and J Nathan Kutz, Variable projection methods for an optimized dynamic mode decomposition. *arXiv preprint arXiv:1704.02343*, 2017.

Manas Rachh and Travis Askham, Integral equation formulation of the biharmonic dirichlet problem. *arXiv preprint arXiv:1705.09715*, 2017.

#### **Honors & Awards**

2016	Wilhelm Magnus Memorial Prize, Courant Institute of Mathematical Sciences
2010	Daus Award in Mathematics, University of California Los Angeles

## **Grants & Fellowships**

2015	Dean's Dissertation Fellowship, New York University
2010-2015	Henry M. MacCracken Fellowship, New York University

## Teaching Experience

University of Washington

Scientific Computing

Courant Institute of Mathematical Sciences

Numerical Methods I (Reader) Analysis I (Teaching Assistant) Ordinary Differential Equations (Teaching Assistant)

#### Research Experience

2012–2015 Research Assistant, Courant Institute of Mathematical Sciences, New York University. Principal Investigator: Leslie Greengard. Project: Novel methods for electromagnetic simulation and design

# **Conference Activity**

## Participation

2017	Talk. Variable projection for Generalizing the Dynamic Mode Decomposition, SIAM
	CSE. Atlanta, GA, USA
2017	Talk. An algorithm for the DMD with unevenly spaced time samples, BIRS Workshop
	on Data-Driven Methods. Banff, Alberta, Canada
2016	Talk. Integral-Equation Methods for Inhomogeneous Elliptic PDEs (and applications),
	SIAM Annual Conference. Boston, MA, USA
2014	Poster. Volume Integrals in Complex Geometry: A Case Study of Poisson's Equation,
	CBMS-NSF Conference: Fast-Direct Solvers for Elliptic PDEs, Dartmouth College.
	Hanover, NH, USA
2013	Poster. On the discretization of integral equations for divergence-form PDEs with
	internal layers, Integral Equations Methods: Fast Algorithms and Applications (BIRS
	Workshop), Banff International Research Station. Banff, Alberta, Canada
2013	Talk. On the discretization of integral equations for elliptic PDEs with internal layers,
	Mid-Atlantic Numerical Analysis Day, Temple University. Philadelphia, PA, USA
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# Organization

2017 Mini-symposium. Data-driven characterization, control, and uncertainty quantification of dynamical systems, SIAM CSE. Atlanta, GA, USA

# Service to Profession

Referee

Journal of Computational Physics

Member

SIAM (since 2011)

#### Skills

# Coding

Mastery Fortran77, MATLAB Proficiency C99/C++, LATEX

Familiarity OpenMP, OpenCL (in C99), Python, Julia, PHP, HTML

Speaking & Reading

English (native)

Spanish (elementary proficiency)

# Biographical

Born 1987

Citizen United States