

Nikolaos Eptaminitakis

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Education

PhD in Mathematics	<i>University of Washington, Seattle</i>
<i>Advisers: Prof. C. Robin Graham & Prof. Gunther Uhlmann.</i>	<i>2014-2020</i>
<i>Thesis title: Geodesic X-Ray Transform on Asymptotically Hyperbolic Manifolds</i>	
Program Associate, Microlocal Analysis	<i>Mathematical Sciences Research Institute</i>
	<i>August - December 2019</i>
Visiting Graduate Student	<i>Stanford University</i>
	<i>February - March 2019</i>
MSc in Mathematics	<i>University of Washington, Seattle</i>
	<i>2014-2018</i>
BSc (Ptychion) in Mathematics	<i>Aristotle University of Thessaloniki</i>
	<i>2009 - 2013</i>
LLP-Erasmus Exchange Program	<i>Karlsruhe Institute of Technology (KIT)</i>
	<i>April-August 2012</i>

Employment

Institut für Differentialgeometrie, Leibniz Universität Hannover	<i>2022-Present</i>
<i>Wissenschaftlicher Mitarbeiter</i>	<i>Hannover, Germany</i>
Purdue University	<i>2020-2022</i>
<i>Golomb Visiting Assistant Professor</i>	<i>West Lafayette, IN</i>
University of Washington	<i>2019-2020</i>
<i>Lead TA</i>	<i>Seattle, WA</i>
<i>Administrative responsibility for training all incoming Teaching Assistants (TAs), supervising the TA Mentor team, and mentoring new TAs.</i>	
University of Washington	<i>2014-2019</i>
<i>Teaching Assistant/Research Assistant</i>	<i>Seattle, WA</i>

Fellowships, Honors and Awards

Excellence in Teaching Award	<i>2019</i>
<i>Department of Mathematics, University of Washington</i>	
Graduate Fellowship	<i>2018</i>
<i>Department of Mathematics, University of Washington</i>	
Academic Merit Award	<i>2014</i>
<i>Department of Mathematics, University of Washington</i>	
Nikolaos Danikas Award	<i>2013</i>
<i>Department of Mathematics, Aristotle University of Thessaloniki</i>	

Thomas Papamichailides Fellowship

2011-2013

Aristotle University of Thessaloniki

Scholarship of Honor

2009 & 2011

State Scholarships Foundation

Scholarship

2010

State Scholarships Foundation

The Great Moment for Education Fellowship

2009

Eurobank

Research Interests

Inverse Problems in Geometry and in Partial Differential Equations, Geometric Analysis, Microlocal and Singular Analysis, Differential Geometry.

Publications and Preprints

The covariance metric in the Blaschke locus

With Xian Dai

Under Review, arXiv:2301.05289

Weakly nonlinear geometric optics for the Westervelt equation and recovery of the non-linearity

With Plamen Stefanov

Under Review, arXiv:2208.13945

The Solid-Fluid Transmission Problem

With Plamen Stefanov

Under Review, arXiv:2111.03218

Stability Estimates for the X-Ray Transform on Simple Asymptotically Hyperbolic Manifolds

Pure Appl. Anal. 4 (2022), no. 3, 487-516., arXiv:2104.01674

Local X-Ray Transform on Asymptotically Hyperbolic Manifolds via Projective Compactification

With C. Robin Graham

New Zealand Journal of Mathematics (2021) 52:733-763., arXiv:2111.13631

Asymptotically Hyperbolic Manifolds with Boundary Conjugate Points but No Interior Conjugate Points

With C. Robin Graham

J. Geom. Anal. (2021) 31:6819-6844., arXiv:1912.04856

Selected Invited Talks

Analysis and PDE Seminar, University of Bonn

December 9, 2022

Title: The Solid-Fluid Transmission Problem

Geometrical Inverse Problems Workshop, Linz, Austria

November 10, 2022

Title: Stability for the X-Ray Transform on Asymptotically Hyperbolic Manifolds

Second Congress of Greek Mathematicians, Athens, Greece

July 6, 2022

Title: Inverse Problems for the X-Ray Transform on Asymptotically Hyperbolic Manifolds

Conformal Geometry, Analysis, and Physics Conference, Seattle, WA

June 13, 2022

Title: Stability for the X-ray Transform on Asymptotically Hyperbolic Manifolds

Inverse Problems: Modeling and Simulation Conference, Malta <i>Title: The Solid-Fluid Transmission Problem</i>	<i>May 25, 2022</i>
Geometry Seminar, University of Texas at Dallas <i>Title: Local Geodesic X-Ray Transform on Asymptotically Hyperbolic Manifolds</i>	<i>March 7, 2022</i>
Zoom International Inverse Problems Seminar <i>Title: The Solid-Fluid Transmission Problem</i>	<i>February 17, 2022</i>
Spectral and Scattering Theory Seminar, Purdue University <i>Title: The Solid-Fluid Transmission Problem</i>	<i>December 6, 2021</i>
PDE Seminar, Purdue University <i>Title: Stability for the X-Ray Transform on Asymptotically Hyperbolic Manifolds</i>	<i>March 18, 2021</i>
Geometry Seminar, Aristotle University of Thessaloniki <i>Title: Simple and Non-Simple Asymptotically Hyperbolic Manifolds</i>	<i>January 26, 2021</i>
Inverse Problems Seminar, University of California, Irvine <i>Title: Geodesic X-Ray Transform on Asymptotically Hyperbolic Manifolds</i>	<i>February 07, 2020</i>
Math Colloquium, Seattle University <i>Title: Radon Transform: Classical Results, Generalizations and Applications</i>	<i>January 30, 2020</i>

Selected Teaching Experience

At Leibniz Universität Hannover (in German)

Exercises in Complex Differential Geometry (Summer 2023)

Exercises in Differential Topology (Winter 2022)

At Purdue University

MA 30300: Differential Equations and Partial Differential Equations for Engineering and the Sciences (Fall 2021, Spring 2022)

MA 26600: Ordinary Differential Equations (Fall 2020, Spring 2021)

At University of Washington

Math 120: Precalculus (Spring 2018)

Math 324: Advanced Multivariable Calculus (Summer 2016, Winter 2017, Autumn 2017, Winter 2018, Spring 2020)

Mentoring Experience

Washington Directed Reading Program

Mentor for the undergraduate reading project Topology and Geometry of Surfaces (Winter 2020)

Mentor for the undergraduate reading project Mathematics of Medical Imaging (Autumn 2018 & Spring 2019)

Washington Experimental Mathematics Lab

Mentor for the undergraduate research project Number Theory and Noise (Spring 2017-Winter 2018)

Departmental Service

Member of the Undergraduate Program Committee

2019-2020

Department of Mathematics, University of Washington

Language proficiencies

Greek (native), English (fluent), German (advanced), Italian (basic)