

# Raphael Hora

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Department of Mathematics  
Universidade Federal de Santa Catarina  
Campus Universitário Trindade  
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## Employment

**Assistant Professor, Universidade Federal de Santa Catarina, 2013-present.**

## Education

**Purdue University**  
**Ph.D. Mathematics** 2013  
Advisor: Antônio Sá Barreto  
Thesis: “Scattering and Inverse Scattering on Asymptotically Hyperbolic Manifolds”

**Universidade Federal de Pernambuco, Recife, Brazil**  
**M.S. Mathematics** 2006  
Advisor: Fernando Cardoso  
Thesis: “Scattering Theory on Asymptotic Hyperbolic Manifolds”

**Universidade Federal de Pernambuco, Recife, Brazil**  
**B.S. Mathematics *Laurea Universitária*** (Highest Honors) 2004  
Advisor: Claudio Cuevas  
Dissertation: “Bounded and Convergent Solutions for a System of Difference Equations”

## Research Interest

**Partial differential equations:** scattering theory, microlocal analysis and inverse problems.

## Academic Awards and Fellowships

2013 C.E.T.A. Teaching Award, Purdue University, 2013  
2012 Excellence in Teaching Award, Purdue University, 2012  
Gerald R. MacLane Memorial Award, Outstanding Graduate Student in Mathematics, Purdue University, 2008  
CNPq (Brazilian Research Council) Master of Science Fellowship, 2005-2006  
*Laurea Universitária* (Highest Honors), Federal University of Pernambuco, Brazil, 2005  
CNPq (Brazilian Research Council) Undergraduate Research Fellowship, 2003-2004

## Publications

Inverse Scattering with Partial data on Asymptotically Hyperbolic Manifolds. With A. Sá Barreto, arXiv:1307.8402.  
Resolvent Estimates on Asymptotically Hyperbolic Spaces, preprint.

## Teaching Experience

**Universidade Federal de Santa Catarina, Florianópolis, Brazil**  
Assistant Professor 2013 - present

- MTM 5183: Cálculo 1 (2013.2)
- MTM 5207: Cálculo 3 para Eng. de Materiais (2013.3)

**Purdue University, West Lafayette, IN**

Teaching Assistant

2006-2013

Instructor

- MATH 232: Calculus For The Life Sciences II (Fall 2012)
- MATH 262: Linear Algebra And Differential Equations (Fall 2011)
- MATH 224: Introductory Analysis II (Business Calculus II) (Spring 2008)
- MATH 152: College Algebra (Fall 2007)

Recitation Instructor

- MATH 504: Real Analysis (Fall 2010)
- MATH 162: Plane Analytic Geometry And Calculus II (Spring 2007)
- MATH 261: Multivariate Calculus (Fall 2006)

Course Grader

- MATH 341: Foundations Of Analysis (Spring 2012)
- MATH 544: Real Analysis And Measure Theory (Fall 2009)
- MATH 542: Introduction to Distribution Theory (Fall 2008)
- MATH 511: Linear Algebra With Applications (Fall 2008)

**Universidade Federal de Pernambuco, Recife, Brazil**

Lecturer

January-July 2006

- Business Calculus II (January-May 2006)
- Business Calculus I (June-July 2006)

Recitation Instructor

April-December 2003

- Calculus I (April-August 2003)
- Linear Algebra (September-December 2003)

**Conferences Attended**

- Pasi-CIPPDE 2012 “Inverse Problems and PDE control”, Catholic University of Chile, 2012
- Microlocal Methods in Spectral and Scattering Theory, University of Chicago, 2011
- NSF-CBMS Conference “Global Harmonic Analysis Lecturs given by Prof. Steven Zelditch”, University of Kentucky, 2011
- Topics in Spectral and Scattering Theory, Penn State University, 2010
- BIRS Workshop on Geometric Scattering Theory, Banff International Research Station, 2010
- Summer School on Seismic Imaging, University of Washington, 2009
- Workshop on Inverse Problems, Mathematical Sciences Research Institute, 2009
- Singularities @ MIT: A Conference in Honor of Richard Melrose, MIT, 2009
- Clay Mathematics Institute Summer School, ETH, Zurich, Switzerland, 2008
- II Symposium on Scattering and Spectral Theory, Recife, Brazil, 2008
- XXV Brazilian Mathematics Colloquium, IMPA, Rio de Janeiro, Brazil, 2005
- XIV Brazilian Topology Meeting, UNICAMP, Campinas, Brazil, 2004
- Symposium on Scattering and Spectral Theory, Serrambi, Brazil, 2003

## Languages

Portuguese (mother-tongue), English (fluent), German (fluent), Spanish (fluent)

## References

Dr. Antônio Sá Barreto, [sabarre@math.purdue.edu](mailto:sabarre@math.purdue.edu)

- Professor, Department of Mathematics, Purdue University
- 150 N. University Street, West Lafayette, IN, 47907, USA
- Dr. Sá Barreto is my graduate advisor.

Dr. Plamen Stefanov, [stefanov@math.purdue.edu](mailto:stefanov@math.purdue.edu)

- Professor, Department of Mathematics, Purdue University
- 150 N. University Street, West Lafayette, IN, 47907, USA

Dr. Maarten De Hoop, [mdehoop@math.purdue.edu](mailto:mdehoop@math.purdue.edu)

- Professor, Department of Mathematics, Purdue University
- 150 N. University Street, West Lafayette, IN, 47907, USA

Dr. Rita Saerens, [saerens@purdue.edu](mailto:saerens@purdue.edu)

- Dr. Saerens is able to attest to my teaching record.
- Dr. Saeren is currently retired from Purdue University.