

Brief Curriculum Vitae – Helena Judith Nussenzveig Lopes

General Information

Address: Universidade Federal do Rio de Janeiro (UFRJ)
Instituto de Matemática
Av. Athos da Silveira Ramos, 149
Centro Tecnológico Bl. C – Ilha do Fundão
P. O. Box 68530
CEP: 21941-909
Rio de Janeiro, RJ Brasil

Ph: +55 21 3938 7512 ext 241
+55 21 98694 1212 (mobile)

E-mail: hlopes@im.ufrj.br
aggahju@gmail.com

URL: <http://www2.im.ufrj.br/hlopes>

Nationalities: Brazilian and French

Research interests: Partial differential equations and fluid dynamics

Education

- 1986 – 1991** PhD in Mathematics, University of California, Berkeley, Berkeley, CA
Thesis title: An estimate on the Hausdorff dimension of a concentration set
for the incompressible 2D Euler equation.
Advisor: Ronald J. DiPerna (*in memoriam*) and Lawrence Craig Evans.
- 1985 – 1986** M.Sc. in Mathematics, PUC-RJ (Catholic University of Rio de Janeiro), Rio
de Janeiro, RJ Brazil
Dissertation title: O Teorema de David-Journé.
Advisor: Carlos Tomei.
- 1981 – 1984** Undergraduate degree in Mathematics, B.Sc., PUC-RJ, Rio de Janeiro, RJ
Brazil

Employment

With tenure

June 1992 – April 2012: Universidade Estadual de Campinas (tenured 1996, full
professor from 2008)

April 2012 – : Universidade Federal do Rio de Janeiro (full professor)

Visiting positions

August 1991 to May 1992 – University of Kentucky (visiting assistant professor)

January to December, 1997 – Indiana University, Bloomington (visiting assistant professor)
August 2003 – May 2004 – Penn State University (visiting scholar)
August 2011 – January 2012 – University of California Riverside (visiting scholar)
January 2017 – June 2017 – Brown University (Distinguished Visiting Professor of Mathematics)
February 2022 – June 2022 – The Isaac Newton Institute for Mathematical Sciences (Long-term program participant and Simons Fellow)

Honors and Awards

- ◆ Invited/plenary speaker at several conferences since 2005, including IPAM-UCLA, IMA-UMN, ICMS-Edinburgh, ICERM-Brown, Duke Univ., ETH-Zurich.
- ◆ Undergraduate Science Projects – Advisor; Silver Medal, 2006; Bronze Medal, 2010.
- ◆ Admitted to National Order of Merit in Science and Technology, Class “Comendador”, Brazil, 2010.
- ◆ SIAM Fellow, Class of 2016.
- ◆ Invited Speaker, Section 10 – PDE, International Congress of Mathematicians–ICM 2018 (International Mathematical Union).
- ◆ Member of the Brazilian Academy of Sciences (ABC), Class of 2019.
- ◆ AMS Fellow, Class of 2020.
- ◆ TWAS Award in Mathematics, 2022 <https://twas.org/node/15085>.
- ◆ TWAS Fellow, Class of 2023.

Current Funding (Scientific Projects)

- Grant “Cientista do Nosso Estado” Rio de Janeiro, FAPERJ – principal investigator, 2021-2025
- Grant “Bolsa de Produtividade em Pesquisa” CNPq, currently level 1-B, 2023 – 2027 (levels in increased hierarchy: 2, 1-D, 1-C, 1-B and 1-A)

Service and Administration

- Undergraduate vice-chair, Department of Mathematics, UNICAMP, 2000 – 2002.
- Organizing committee, CSCAMM program “Analytical and Computational Challenges of Incompressible Flows at High Reynolds Number”, Univ. of Maryland, 2004.
- Co-organizer, IRES, International Research Experience for Students – UNICAMP, 2006.
- Founder and Co-organizer, I, II, III, IV and V Workshop on Fluids and PDE, (UNICAMP, 2007 and 2011, UFRJ 2008, IMPA 2014, UNICAMP *Online* 2021).
- Scientific Committee – IV Journeys in Undergraduate Research, IMPA, 2008.
- Scientific Committee – 12th, 13th, 14th, 17th Congress on Hyperbolic Problems, Theory, Numerics and Applications, 2008, 2010, 2012, 2018.
- Scientific Committee – 2010 Colloque Franco-Roumain des Mathematiques Appliquees, Poitiers, 2010.

- Co-organizer – 1st and 2nd Franco-Brazilian Schools in Fluid Dynamics, Campinas (1st) and Lyon (2nd), 2010.
- Coordination – V and VI Journeys in Undergraduate Research, IMPA, 2010 and 2012.
- Coordinator, Thematic Program on Incompressible Fluid Dynamics, IMPA, March-June 2014; co-organizer, School Around Vortices, in conjunction with the thematic program.
- Member of the National Advisory Committee for Mathematics – CNPq, 2007-2010.
- Coordinator, Mathematics Advisory Committee, FAPESP, 2007-2011.
- Second Vice-President, Brazilian Society on Applied and Computational Mathematics, 2012-2013.
- Council member, Brazilian Society on Applied and Computational Mathematics, 2015-2017.
- Representative of the Brazilian Society on Applied and Computational Mathematics on the board of ICIAM 2011–2015.
- Scientific Committee – SIAM Conference on Analysis of PDE 2013.
- SIAM Activity Group on Analysis of PDE 2013 Prize Selection Committee.
- Member, Scientific Council of CIMPA – Centre Internationale de Mathématiques Pure et Appliquée, 2013–2020.
- Chair, selection committee, Olga Taussky-Todd Lecture Committee, ICIAM 2015.
- Chair, SIAM Activity Group on Analysis of PDE 2015-2016.
- Chair, Department of Mathematics, Universidade Federal do Rio de Janeiro, 2014-2016.
- Member, Organizing Committee, ICERM Semester Program on "Singularities and Waves In Incompressible Fluids", Spring 2017; ICERM (Brown University).
- Member, Selection Committee SIAM Fellows, 2017-2018.
- Member, SIAM Committee on Section Activities, 2019-2021, reappointed 2021-2024.
- Member, Fellows Canvassing Committee, 2020-2022.
- Member, W.T. and Idalia Reid Prize Selection Committee, 2021 – 2025.
- Panel Section 18, ICM 2022.
- Chair, Organizing Committee SIAM PDE webinar series, 2020 – 2022.
- Scientific Committee, ICIAM 2023.
- Member, AMS Centennial Fellowship Selection Committee, 2024 – 2026.
- Member, CIMPA Governing Board, 2025 – 2029.
- President of CIMPA, 2025 – 2029.
- Program Director, SIAM Activity Group on Analysis of PDE 2025-2026.
- Co-Chair. SIAM Conference on Analysis of PDE 2025.

Editorial service

- Associate Editor, SIAM J. Math. Analysis 2007–2016.
- Editor-in-Chief, Brazilian Math Society Publishing Co., 2008-2010.
- Advisory Editor, Mathematical Methods in the Applied Sciences 2012–2016.
- Member, Editorial Board, SN Partial Differential Equations and Applications, 2019 –
- Member, Editorial Board, Bulletin of the Brazilian Mathematical Society, 2019 –
- Associate Editor, SIAM J. Math. Analysis 2021 –
- Managing Editor, Orbita Mathematicae 2022 –

Publications

70 peer-reviewed articles in international journals

Students

PhD

Rafael Castro Triana (2000),
Lucas Catão de Freitas Ferreira (2005),
Juliana Conceição Precioso (2005),
Josiane Cristina de Oliveira Faria (2008),
Anne Caroline Bronzi (2010),
Luiz Alberto Viana da Silva (2012),
Débora Francisco Albanez (2014),
Maicon José Benvenutti (2014),
David Paternina Salgado (2024),
Carlos Juarez Martins (*current*).

Masters

Gilberlândio Jesus Dias (2002),
Pedro Goulart Motta (2024).

Undergraduate Research

Alexandre de Andrade (1994, 1995),
Gil Ramos Cavalcanti (1996),
Darli Augusto de Arruda Mello (1996),
Alexandre Stehlick Marcondes Noronha Tomei (2010).

Post-docs

Gabriela del Valle Planas (2002),
Fábio Vitoriano e Silva (2006),
Dongjuan Niu (2009),
Huy-Hoang Nguyen (2010),
Eleonora Pinto de Moura (2010),
Aibin Zang (2013),
Jitao Liu (2014).