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PERSONAL INFORMATION

Name: Renato Velozo Ruiz.
Citizenship: Chilean.
E-mail: rav25@cam.ac.uk
Languages: Spanish, English.

EDUCATION

- 2018 - 2022 **PhD in Mathematics** at University of Cambridge.
- Advisors: Mihalis Dafermos and Clément Mouhot.
- 2017 - 2018 **Master of Science in Mathematics** at Pontificia Universidad Católica de Chile.
- Advisor: Jairo Bochi.
- 2013 - 2016 **Bachelor in Mathematics** at Pontificia Universidad Católica de Chile.

RESEARCH INTERESTS

Analysis. General Relativity and Kinetic Theory. Geometric Analysis and Dynamical Systems.

SCIENTIFIC WORK

- 2021 Stability of Schwarzschild for the spherically symmetric Einstein–massless Vlasov system; in preparation.
- 2021 Decay for the massive Vlasov equation in Schwarzschild; in preparation.
- 2021 Exponential decay for the Vlasov equation in hyperbolic space; in preparation.
- 2020 Gevrey regularity for the Vlasov-Poisson system; Ann. Inst. H. Poincaré Anal. Non Linéaire 38 (2021), no. 4, 1145-1165.
- 2020 Characterization of uniform hyperbolicity for fibre-bunched cocycles; Dyn. Syst. 35 (2020), no. 1, 124-139.
- 2017 Rate distortion theory, metric mean dimension and measure theoretic entropy (joint with Anibal Velozo); arXiv:1707.05762, submitted.

ACADEMIC VISITS

- Nov 2019 Department of Mathematics at Princeton University, invited by Mihalis Dafermos.
- Ag 2019 Department of Mathematics at PUC¹, invited by Duvan Henao.

ACADEMIC HONORS

- 2018 - 2022 Scholarship for PhD in Mathematics, CONICYT-Chile Cambridge Scholarship, Cambridge Trust, University of Cambridge.
- 2018 - 2022 Scholarship for PhD in Mathematics, National Commission for Scientific and Technological Research, Chile.
- 2020 Smith-Knight & Rayleigh-Knight Prize, Faculty of Mathematics, University of Cambridge.
- 2018 Scholarship for Master of Science, National Commission for Scientific and Technological Research, Chile.

¹From now on we refer to Pontificia Universidad Católica de Chile as PUC.

- 2017 Scholarship for Master of Science, Department of Mathematics, PUC.
- 2016 Teaching Assistant of First Category, Department of Mathematics, PUC.
- 2013 - 2016 Scholarship Rolando Chuaqui (awarded to the two best students of the year), Department of Mathematics, PUC.
- 2012 Silver Medal at Chilean Mathematical Olympiad.

TEACHING AND OUTREACH

Outreach

- 2017 - 2018 Instructor in program ‘Introduction to Mathematical Reasoning’ (TRM) at PUC destined to talented high school students.
- 2016 - 2017 Instructor of the Chilean team for international math olympiads (IMO and Iberoamerican).

Selected Teaching Activities

- Mich 2021 Part III Analysis and PDEs, University of Cambridge.
- Lent 2021 Part IB Electromagnetism, University of Cambridge.
- Mich 2020 Part II Linear Analysis, University of Cambridge.
- Mich 2020 Part II Integrable Systems, University of Cambridge.
- Lent 2020 Part II Differential Geometry, University of Cambridge.
- Spring 2017 Topology, PUC.
- Winter 2017 Ordinary Differential Equations, PUC.
- Spring 2016 Field theory and Galois theory, PUC.
- Fall 2015 Multivariable Calculus, PUC.

INVITED TALKS

- Jul 2021 Mathematical GR and Hyperbolic PDE Seminar.
- Jun 2021 Junior Analysis Seminar, Imperial College London.
- May 2021 CMI Student Seminar Series, University of Cambridge.
- Jan 2021 Seminar of Kinetic Theory, University of Cambridge.
- Dec 2020 CDT Student Conference, Cambridge.
- Nov 2020 Seminar of Partial Differential Equations, DIM, Universidad de Chile.
- Sep 2019 Seminar of Analysis and Geometry, PUC.
- Sep 2019 Graduate Student Seminar, PUC.
- Jul 2018 Seminar of Dynamical Systems, PUC.
- Jul 2018 Seminar of Dynamical Systems, Pontificia Universidad Católica de Valparaíso.

SERVICE

- Dec 2020 Co-organizer of MAFRAN Winter School: Particle Systems, PDEs and Inequalities.
- East 2020 Co-organizer of joint Cambridge Analysts’ Knowledge Exchange - OxPDE Student Seminar, University of Cambridge and University of Oxford.
- Lent 2020 Co-organizer of the Cambridge Analysts’ Knowledge Exchange seminar, University of Cambridge.
- 2017 - 2018 Organizer of the Graduate Student Seminar of Differential Geometry, PUC.