

# CURRICULUM VITAE

## Julio Daniel Rossi

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- Degree. Licenciado en Ciencias Matemáticas, Univ. de Buenos Aires, March 1993.
- PhD. Doctor en Ciencias Matemáticas, Univ. de Buenos Aires, May 1996.

### Positions

- Full Professor. Math Dep. FCEyN, Univ. de Buenos Aires, Argentina. 2016–...

#### Previous positions

- Teaching assistant. Math Dep. FCEyN, Univ. de Buenos Aires, Argentina. 1992–1996.
- Assistant Professor. Math Dep. FCEyN, Univ. de Buenos Aires, Argentina. 1996–2006.
- Assistant Professor. Math. Dep. PUC. Chile. 2003.
- Associate Professor. Math Dep. FCEyN, Univ. de Buenos Aires, Argentina. 2006–2016.
- "Ramon y Cajal" research position. CSIC, Madrid, Spain. 2004–2006.
- Professor IMDEA. Madrid, Spain. 2008–2009.
- Professor. Alicante University. Spain. 2010–2014.

### Advise

#### PhD Thesis

- Pablo Groisman, Univ Buenos Aires, 2003.
- Cesar Gomez Sierra, Univ Nac. de Colombia, 2011.
- Pablo Blanc. Univ. Buenos Aires, 2018.
- Bruna Cassol, Univ Sao Paulo, Brazil. 2021.

## Postdocs

- Raul Vidal, 2015 – 2017.
- Marccone Pereira, 2016.
- Gastón Beltritti, 2016 – 2018.
- Joao Vitor Da Silva, 2016 – 2018.
- Miguel Navarro Burgos. 2018 – 2019.
- Pablo Blanc. 2022.

## **Publications**

Subject: Analysis, Partial Differential Equations, Numerics.

282 papers, 3 books. Cited 4234 times by 1867 authors,  $h$ -index 32 (MathSciNet database).

### Selected publications

- D. F. Rial – J. D. Rossi. *Blow-up results and localization of blow-up points in an  $n$ -dimensional smooth domain*. Duke Mathematical Journal. Vol. 88 (2), 391–405, (1997).
- F. Quiros – J. D. Rossi – J. L. Vazquez. *Thermal avalanche for blow-up solutions of semilinear heat equations*. Communications on Pure and Applied Mathematics. Vol. LVII, No. 1, 59–98, (2004).
- J. Fernandez Bonder – E. Lami Dozo – J. D. Rossi. *Symmetry properties for the extremals of the Sobolev trace embedding*. Annales de l’Institut Henri Poincaré, C. Analyse Non Linéaire. Vol. 21 (6), 795–805, (2004).
- E. Chasseigne – M. Chaves – J. D. Rossi. *Asymptotic behavior for nonlocal diffusion equations*. Journal de Mathématiques Pures et Appliquées. Vol. 86, 271–291, (2006).
- L. I. Ignat – J. D. Rossi. *A nonlocal convection-diffusion equation*. Journal of Functional Analysis. Vol. 251(2), 399–437, (2007).
- C. Cortazar – M. Elgueta – J. D. Rossi – N. Wolanski. *How to approximate the heat equation with Neumann boundary conditions by nonlocal diffusion problems*. Archive for Rational Mechanics and Analysis. Vol. 187(1), 137–156, (2008).
- J. J. Manfredi – M. Parviainen – J. D. Rossi. *On the definition and properties of  $p$ -harmonious functions*. Annali della Scuola Normale Superiore di Pisa, Classe di Scienze. Vol. XI(2), 215–241, (2012).
- J. M. Mazón – J. D. Rossi – J. Toledo. *An optimal transportation problem with a cost given by the Euclidean distance plus import/export taxes on the boundary*. Revista Matemática Iberoamericana. Vol. 30(1), 277–308, (2014).
- P. Juutinen – M. Parviainen – J. D. Rossi. *Discontinuous gradient constraints and the infinity*

*Laplacian*. International Mathematics Research Notices. Vol. 2016(8), 2451–2492, (2016).

– J. D. Rossi – J. V. da Silva. *The limit as  $p \rightarrow \infty$  in free boundary problems with fractional  $p$ -Laplacians*. Transactions of the American Mathematical Society. Vol. 371(4), 2739–2769, (2019).

– A. Gárriz – F. Quirós – J. D. Rossi. *Coupling local and nonlocal evolution equations*. Calculus of Variations and Partial Differential Equations. Vol 59(4), artículo 112, (2020).

– J. D. Rossi. *Nonlocal Diffusion Equations with Integrable Kernels*. Notices AMS. Vol. 67, Number 8, September 2020, 1125–1134.

– P. Blanc – F. Charro – J. J. Manfredi – J. D. Rossi. *A nonlinear mean value property for Monge-Ampère*. Journal of Convex Analysis. JOCA. Vol. 28(2), 353–386, (2021).

– L. M. Del Pezzo – A. Quaas – J. D. Rossi. *Fractional convexity*. Mathematische Annalen. Vol 383, 1687–1719, (2022).

### Books

F. Andreu-Vaillo – J. M. Mazón – J. D. Rossi – J. J. Toledo-Melero. **Nonlocal Diffusion Problems**. American Mathematical Society. Mathematical Surveys and Monographs 2010. Vol. 165. 256 pp.

J. M. Mazón – J. D. Rossi – J. J. Toledo-Melero. **Nonlocal Perimeter, Curvature and Minimal Surfaces for Measurable Sets**. Birkhauser. Frontiers in Mathematics. 2019. 124 pp

P. Blanc – J. D. Rossi. **Game Theory and Partial Differential Equations**. De Gruyter Series in Nonlinear Analysis and Applications Vol. 31. 2019. 218 pp.

## Editorial Boards

”Nonlinear Analysis: Theory, Methods & Applications”. 2010 – 2016.

”Boundary Value Problems (BVP)”. 2010 – 2018.

”Abstract and Applied Analysis”. 2012 – 2022.

”Revista de la Unión Matemática Argentina”. 2016,...

”Advances in Operator Theory (AOT)”. 2016,...

”Journal of Nonlinear Functional Analysis (JNFA)”. 2017,...

”SEMA Journal”. 2020,...

”Journal of Mathematical Analysis and Applications (JMAA)”. 2021,...

## Grants

Researcher. TX47. UBA (Argentina). 1998-2000.

Researcher. TX48. UBA (Argentina). 1998-2000.

Researcher. PICT. No 03-00000-00137 (Argentina). 1998-2000.

Researcher. ANPCYT (Argentina). PICT. No 05009. 2000-2003.

PI. Fundación Antorchas (Argentina). 1999. 2000.

PI. X431. Universidad de Buenos Aires (Argentina). 2003.

PI. PEI 6388. CONICET (Argentina). 2003.

PI X066. Universidad de Buenos Aires (Argentina). 2004-2007.

PI, Cooperation agreement Argentina-Brazil-Chile, (PROSUL) CNPQ. Processo 490189/2005-9. 2005-2006.

Researcher. MEC MTM2005-064880 (Spain). 2005-2008.

PI. X196. Universidad de Buenos Aires (Argentina). 2008-2011.

PI, Cooperation Spain-Argentina-Brasil-Chile, CEAL. 2009-2010.

Researcher. MEC MTM2004-02223 (Spain). 2007-2010.

Researcher. MEC MTM2010-18128 (Spain). 2010-2013.

Researcher. MEC MTM2011-27998 (Spain). 2011-2014.

PI. PIP GI No 11220150100036CO. CONICET (Argentina). 2015–2017.

PI. 20020160100155BA. UBACyT (Argentina). 2017–2020.

Researcher. GHAI. Rise project European Union. Proposal number: 777822. 2018–2022.

PI. PICT-2018-03183. (Argentina). 2019 – 2023.

## **Awards**

Prize to the best PhD Thesis in Mathematics in 1994-1997.

Prize "Angel R. Larrotonda" to the best young mathematician in Argentina (under 40) 2006.

Prize "Houssay" in Physics, Mathematics, Computer Science. To the best young scholar in Argentina (under 45). 2010.

Prize "Konex" in Mathematics. To the most relevant 5 mathematicians in Argentina in the last 10 years. 2023.

## **Visitor at the centres**

- Univ. Complutense de Madrid (Spain). - Univ. Autonoma de Madrid (Spain). - Univ. Carlos

III de Madrid (Spain). - Univ. de Valencia (Spain). - Univ. de Granada (Spain). - Univ. de Santiago de Compostela (Spain). - Univ. de Sevilla (Spain). - Univ. de La Laguna (Spain). - Univ. Autònoma de Barcelona (Spain). - Univ. de Castilla la Mancha (Ciudad Real, Spain). - Basque Center for Applied Mathematics, BCAM (Spain).

- Instituto Superior Tecnico (Lisboa, Portugal)

- Univ. Federico II. Napoles (Italy). - Centro di Ricerca Matematica Ennio di Giorgi. Pisa (Italy).

- Univ. Libre de Bruselas (Belgium).

- Univ. de Versailles (France). - Ecole Normale Supérieure (Paris, France). - Univ. F. Rebelais, (Tours, France).

- Institutul de Matematica "Simion Stoilow" (Bucharest, Romania).

- Max Planck Institute for Gravitational Physics (Germany). - MFO, Oberwolfach (Germany).

- Technische Universität Berlin (Germany).

- Cambridge University (Cambridge, UK).

- Jyväskylä University (Jyväskylä, Finland).

- Mittag Leffler Institute, the royal swedish academy of sciences (Sweden).

- Courant Institute (New York, USA). - University of Pittsburgh (Pittsburgh, USA). - Texas University (Austin, USA). - Wayne State University (Detroit, USA).

- Univ. Católica de Chile (Santiago, Chile). - Univ. de Chile, CMM/DIM (Santiago, Chile). - Univ. de Concepción (Chile).

- Univ. de Cordoba (Argentina). - Univ. del Litoral (Argentina). - Univ. de Bahía Blanca (Argentina).

- Univ. de Campinas (Brazil). - Univ. Federal de Rio de Janeiro (Brazil). - PUC - Rio. Rio de Janeiro (Brazil).

- Univ. Nacional de Colombia (Bogotá, Colombia).

- Univ. de la República (Uruguay).