

# Diego Martínez (cv)

<b>Institution</b>	<i>KU Leuven</i>
<b>Position</b>	<i>Postdoctoral researcher</i>
<b>Website</b>	<a href="https://diego-mmg.github.io/">https://diego-mmg.github.io/</a>
<b>Email</b>	<a href="mailto:diego.martinez@kuleuven.be">diego.martinez@kuleuven.be</a>

## WORK EXPERIENCE

<b>FWO</b>	FWO senior postdoctoral researcher <b>Supervisor:</b> Prof. Gábor Szabó	<b>University:</b> <i>KU Leuven, Department of Mathematics</i> from October 2025 until now
<b>Postdoc</b>	Postdoctoral researcher <b>Supervisor:</b> Prof. Gábor Szabó	<b>University:</b> <i>KU Leuven, Department of Mathematics</i> from September 2024 until September 2025
<b>Postdoc</b>	Postdoctoral researcher <b>Supervisor:</b> Prof. Wilhelm Winter	<b>University:</b> <i>University of Münster, Mathematical Institute</i> from October 2021 until August 2024
<b>PhD</b>	Ph.D. student <b>Institutions:</b> <i>Universidad Carlos III de Madrid</i> and <i>Instituto de Ciencias Matemáticas</i> <b>Supervisor:</b> Prof. Fernando Lledó	from April 2017 until March 2021
<b>Master</b>	Master's student <b>Supervisor:</b> Prof. Fernando Lledó	<b>University:</b> <i>Universidad Autónoma de Madrid, Departamento de Matemáticas</i> from September 2016 to August 2017

## EDUCATION

<b>Ph.D.</b>	University: <i>Universidad Carlos III de Madrid</i> (UC3M) and <i>Instituto de Ciencias Matemáticas</i> (ICMAT) Supervisor: <i>Prof. Fernando Lledó</i> , Program: <i>Ph.D. in Mathematics</i> (international distinction)	
	<b>Thesis:</b> <i>Amenability and coarse geometry of (inverse) semigroups and C*-algebras</i>	
	<b>Grade:</b> <i>excellent - cum laude</i>	from September 2016 to March 2021
<b>Master</b>	University: <i>Universidad Autónoma de Madrid</i> (UAM) Supervisor: <i>Fernando Lledó</i> , Program: <i>Master Program in Mathematics and Applications</i> (60 ects)	
	<b>Thesis:</b> <i>Amenability, paradoxical decompositions and applications</i>	
	<b>Grade:</b> <i>10/10</i>	from September 2015 to July 2016
<b>Degree</b>	University: <i>Universidad Autónoma de Madrid</i> (UAM) Program: <i>Graduate program in Computer Engineering</i>	from September 2010 to June 2015
<b>Degree</b>	University: <i>Universidad Autónoma de Madrid</i> (UAM) Program: <i>Graduate program in Mathematics</i>	from September 2010 to June 2015
	<b>Thesis:</b> <i>Entropía y códigos de Huffman</i> (in Spanish, <b>grade</b> 10/10)	

## PUBLICATIONS

- [13] Becky Armstrong, Lisa Orloff Clark, Astrid an Huef, D. Martínez and I. Tolich, *A Dichotomy for Inverse–Semigroup Crossed Products via Dynamical Cuntz Semigroups*, <https://arxiv.org/abs/2601.07100> (2026).
- [12] D. Martínez and N. Szakács, *Algebraic singular functions are not always dense in the ideal of C\*-singular functions*, <https://arxiv.org/abs/2510.01947> (2025).

- [11] A. Buss and D. Martínez, *Essential groupoid amenability and nuclearity of groupoid  $C^*$ -algebras*, <https://arxiv.org/pdf/2501.01775> (2025).
- [10] D. Martínez and F. Vigolo, *A rigidity framework for Roe-like algebras*, <https://arxiv.org/abs/2403.13624> (2024).
- [9] D. Martínez and F. Vigolo, *Roe algebras of coarse spaces via coarse geometric modules*, accepted for publication in JNCG (2025).
- [8] D. Martínez and F. Vigolo,  *$C^*$ -rigidity of bounded geometry metric spaces*, Publ. Math. IHES (2025) DOI: 10.1007/s10240-025-00155-3.
- [7] Y. C. Chung, D. Martínez and N. Szakács, *Quasi-countable inverse semigroups as metric spaces, and the uniform Roe algebras of locally finite inverse semigroups*, to appear in Groups, Geom. Dyn. (2025).
- [6] A. Buss and D. Martínez, *Approximation properties of Fell bundles over inverse semigroups and non-Hausdorff groupoids*, Adv. Math. **431** (2023) 109251 (pp. 54) DOI: 10.1016/j.aim.2023.109251.
- [5] D. Martínez, *A note on the quasi-diagonality of inverse semigroup reduced  $C^*$ -algebras*, J. Oper. Th. **90** (2023) (pp. 17) DOI: 10.7900/jot.2021nov29.2424.
- [4] F. Lledó and D. Martínez, *A note on commutation relations and finite dimensional approximations*, Expo. Math. (2022) DOI: 10.1016/j.exmath.2022.08.004.
- [3] F. Lledó and D. Martínez, *The uniform Roe algebra of an inverse semigroup*, J. Math. Anal. Appl. **499** (2021) 124996 (pp. 28) DOI: 10.1016/j.jmaa.2021.124996.
- [2] P. Ara, F. Lledó and D. Martínez, *Amenability and paradoxicality in semigroups and  $C^*$ -algebras*, J. Funct. Anal. **279** (2020) 108530 (pp. 43) DOI: 10.1016/j.jfa.2020.108530.
- [1] F. Lledó and D. Martínez, *Notions of infinity in quantum physics*, 60 Years Alberto Ibort Fest Classical and Quantum Physics, Chapter 14, Springer (2019) (pp. 14) DOI: 10.1007/978-3-030-24748-5\_14.

## SELECTED INTERNATIONAL TALKS

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- *Rigidity and outer automorphisms of Roe algebras*,  
Operator Algebras and Applications, Mini-Workshop, Erlangen, Germany July 2025
- *Finite distortion operators, Roe algebras, and coarse invariants*,  
Functional and Metric Analysis, and their Interactions, BIRS, Spain May 2025
- *Cartan subalgebras, cp maps, and their inductive limits*,  
Cartan Subalgebras in Operator Algebras, and Topological Full Groups, BIRS, Canada Nov. 2024
- *Amenability of essential inverse semigroup  $C^*$ -algebras*,  
Plenary talk, SEMIGROUPS, grOUpoids and  $C^*$ -aLgebras, KIAS, Korea July 2024
- *Roe algebras are rigid*,  
Analysis Seminar, Newcastle University, UK May 2024
- *Amenability notions and Fell bundles*,  
Combinatorial  $*$ -algebras, MFO, Oberwolfach March 2024
- *Large-scale geometry of group-like objects*,  
Colloquium, University of Göttingen May 2023
- *Minicourse on  $C^*$ -algebras, their diagonals, and (inverse) semigroup actions*,  
Topics in Geometric Semigroup Theory, University of York June 2022
- *Exactness and geometric properties of inverse semigroups*,  
Non-commutativity in the North, Göteborgs Universitet March 2022
- *$C^*$  vs coarse properties of inverse semigroups*,  
Analysis online seminar, University of Glasgow Oct. 2021
- *Schützenberger graphs and property A, or how to see exactness of the reduced semigroup  $C^*$ -algebra*,  
 $C^*$ -algebras and geometry of groups and semigroups, University of Oslo March 2021

- *Non-group like metrics appearing in group-like objects*,  
UK Virtual Operator Algebras Seminar, United Kingdom Dec. 2020
- *Some quasi-isometric invariants for inverse semigroups*,  
York semigroup (online talk), University of York, United Kingdom May 2020
- *Coarse geometry and inverse semigroups*,  
Colloquium talk, University of Montana, USA Nov. 2019
- *Traces in inverse semigroup Roe algebras*,  
YMC\*A, University of Copenhagen, Denmark Aug. 2019
- *Amenability in inverse semigroups*,  
SandGAL-2019, University of Cremona, Italy June 2019
- *Amenability in inverse semigroups and C\*-algebras*,  
II Joint Meeting Spain-Brazil in Mathematics, Universidad de Cádiz, Spain Dec. 2018

## TEACHING

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- **Master's Thesis**, at KU Leuven, Fall 25/Spring 26
- **Functional Analysis**, at KU Leuven, Fall 25/Spring 26
- **Bachelor's Final Degree Project**, at KU Leuven, Spring 2025
- **Master Thesis Reader**, at KU Leuven, Spring 2025
- **Student Teaching Assistant**, at KU Leuven,  
*Differentiaalvergelijkingen* (differential equations), Reeks 11+12. Bachelor in Bio-engineering. Fall 2024
- **Cartan Subalgebras**, at the University of Münster  
Reading seminar Fall 2022
- **TFG committee member**, at UC3M Fall 2020
- **Quasi-diagonality and the Tikuisis–White–Winter Theorem**, at Texas A&M Fall 2019  
Reading seminar
- **TFG committee member**, at UC3M Spring 2019
- **Student Teaching Assistant**, at UC3M Fall 2018  
*Cálculo I* (calculus I), group 45. Bachelor in Aerospace Engineering
- **Student Teaching Assistant**, at UC3M Fall 2017  
*Álgebra lineal I* (linear Algebra I), group 49. Bachelor in Energy Engineering

## PARTICIPATION IN COMMITTEES

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- Member of the **Party Committee**,  
at KU Leuven 2024 – present.
- Member of the **Early Career Committee**,  
at the University of Münster 2023 – 2024.

## REVIEWER OF

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- zbMATH Open 2022 – present.
- MathSciNet 2023 – present.

## SCHOLARSHIPS AND AWARDS

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- **FWO Senior Postdoctoral Researcher** (FWO) - Research Foundation, Flanders 2025 – now  
*Grant for senior postdoctoral researchers in the Flanders region, Belgium. Allows to conduct research as one sees fit. Funds all of the researcher's salary and travel funds.*
- **Formación de personal investigador** (FPI) - Severo Ochoa 2017 – 2021  
*Grant supporting the fulfillment of the PhD from the MINECO (Spanish Ministry of Economy)*

- **Mathematics Department Scholarship** (UAM) 2015 – 2016  
*Grant intended to support the study of the Master in Mathematics (one of the top 5)*
- **BIT Summer School in Beijing** 2012  
*Grant awarded to pay for an intensive course on Chinese culture and language*

## RESEARCH VISITS

- **University of Wollongong**, Australia Oct.–Nov. 2023
- **Texas A&M**, USA Aug.–Dec. 2019  
Department of Mathematics
- **UAB**, Spain 2017 & 18  
Centre de Recerca Matemática
- **University of Münster**, Germany May 2016  
Institute of Theoretical Mathematics

## ORGANIZER OF

- **Junior Seminar**, ICMAT Sep. 2018–June 2021  
*Local seminar for Ph.D. students*
- **OAGAQI** thematic semester, March–June 2019  
*Thematic semester about operator algebras, groups and applications to quantum information*
- **JAE School**, ICMAT June 2017  
*School that serves as an introduction to research for undergraduate students*

## OUTREACH

- **Outreach newspaper** article in *El País* 2019  
– *Ganar juegos usando la mecánica cuántica*
- **Outreach newspaper** article in *El País* 2017  
– *Dándole vueltas al infinito*

## LANGUAGES

- **Spanish:** Native
- **English:** Proficient (C2)
- **German:** Beginner (A2)
- **Dutch:** Beginner (A1)