
Laurent Cantier

PROFIL

I am Margarita Salas post-doctoral researcher at the Institute of Mathematics of Czech Academy of Sciences/Universitat Autònoma de Barcelona. My investigation is related to algebraic aspects of Operator Algebras, with connections to Ring Theory, Cuntz Semigroups and K-Theory.

EDUCATION

Jan 2022 – Now	MARGARITA SALAS POST-DOCTORAL POSITION Universitat Autònoma de Barcelona & Czech Academy of Sciences
Oct 2020 – Dec 2021	FPI POST-DOCTORAL POSITION Universitat Autònoma de Barcelona
Oct 2016 – Oct 2020	PHD IN MATHEMATICS Universitat Autònoma de Barcelona Advisors: Prof. Antoine and Prof. Perera Title: <i>A new invariant for C*-algebras</i> (Cum Laude)
Oct 2015 – Jun 2016	MASTER DE MATHÉMATIQUES ET APPLICATIONS Université of Paris 6
Sept 2011 – Oct 2015	DIPLOMA ECOLE CENTRALE DE NANTES Engineering Master degree with major in Applied Mathematics
Sept 2009 – Sept 2011	CLASSES PRÉPARATOIRES MPSI/MP* Lycée Masséna, Nice

PUBLICATIONS AND PREPRINTS

PUBLISHED

- [1] L. Cantier, *A systematic approach for invariants of C*-algebras*, *Studia Math.* 273 (2023), pp. 63-99.
- [2] L. Cantier, *The unitary Cuntz semigroup on the classification of non simple C*-algebras*, *J. Math. Anal. Appl.* 522, (2023), no. 2, 127003.
- [3] L. Cantier, *Uniformly based Cuntz semigroups and approximate intertwinings*, *Int. J. Math.* 33, (2022), no. 09, 2250062.
- [4] L. Cantier, *Unitary Cuntz semigroups of ideals and quotients*, *Münster J. of Math.* 14, (2021), pp. 585-606.
- [5] L. Cantier, *A unitary Cuntz semigroup for C*-algebras of stable rank one*, *J. Funct. Anal.* 281, (2021), no. 9, 109175.

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- [1] L. Cantier, *Towards a classification of unitary elements of C*-algebras*, (2023).
- [2] L. Cantier and E. Vilalta, *Fraïssé theory for Cuntz semigroups*, (2023).

TEACHING

2023-2024 (90H)

UAB Matemàtiques - Estructures Algebraiques (2° - Tutorial)
UAB Eng.Telecomunicacions - Àlgebra (1° - Tutorial)
Harbour.Space University - Discrete Mathematics (1° - Lecture & Tutorial)

2022-2023 (45H)

Harbour.Space University - Discrete Mathematics (1° - Lecture & Tutorial)

2021-2022 (192H)

Classes Préparatoires Masséna - Khôlles de Mathématiques (2° - MP)
Classes Préparatoires Stanislas Cannes - Tutorat de Mathématiques (1° - BL)
Skema Business School - Business and Economics Calculus (1° - Lecture & Tutorial)
Harbour.Space University - Algebra and Number Theory (1° - Lecture & Tutorial)

2020-2021 (30H)

UAB Matemàtiques - Estructures Algebraiques (2° - Tutorial)
UAB Matemàtiques - Àlgebra Commutativa (4° - Tutorial)

2019-2020 (30H)

UAB Matemàtiques - Estructures Algebraiques (2° - Tutorial)
UAB Matemàtiques - Àlgebra Commutativa (4° - Tutorial)

2018-2019 (48H)

UAB CC. i Tec. Aliments - Matemàtiques (1° - Practicum)
UAB Biotecnologia - Probabilitat I Estadística (2° - Tutorial)

MATHEMATICAL TRAVELS

CONFERENCES

Twinned Conference on C^* -Algebras and Tensor Categories, Fields Institute, 06 - 10 Nov 2023.

Workshop on Operator Algebras and Applications: Groups and Group Actions, Fields Institute, 02 - 06 Oct, 2023.

Workshop on Operator Algebras and Applications: Symmetry and Structure, Fields Institute, 18 - 22 Sept 2023.

Algebra, Geometry and C^* -algebras, ICMS, Edinburgh, 19 - 23 June, 2023.

C^* -days in Prague, IMCAS, Prague, 30 - 31 May, 2023. [Organizing Committee](#).

Workshop Barcelona Weekend on Operator Algebras III, Centre de Recerca Matemàtica, Barcelona, 27 - 28 Jan, 2023.

Workshop on Cuntz semigroups 2022, University of Kiel, 19 - 23 Sept 2022. [Invited Speaker](#). (*On the Classification of Unitary Elements of a C^* -Algebra.*)

BMS-BGSMath Junior Meeting 2022, Universitat de Barcelona, 05 - 07 Sept, 2022. [Organizing Committee](#).

C^* -Dynamics and Set Theory in Paris (Summer School & Workshop), Cité Universitaire, Paris, July 26 - Aug 5, 2022. [Invited Speaker](#). (*On the Classification of Unitary Elements of a C^* -Algebra.*)

Workshop on Cuntz semigroups 2021, Westfälische Wilhelms-Universität (WWU) Münster, Jul 11 - Jul 16 2021. [Invited Speaker](#). (*The unitary Cuntz semigroup on the classification of non-simple C^* -algebras.*)

Workshop Barcelona Weekend on Operator Algebras II, Centre de Recerca Matemàtica, Barcelona, 19 - 21 Sept, 2019.

Workshop Operator Algebras, Groups and Applications to Quantum Information, ICMAT, Madrid, 10 - 15 March, 2019.

Workshop Barcelona Weekend on Operator Algebras, Centre de Recerca Matemàtica, Barcelona, 17 - 18 Nov, 2018.

CSASC 2018, Bratislava, 11 - 14 Sept, 2017. Invited speaker. (*Introducing the $Cu1$ semigroup.*)

Operator Algebras and Dynamical Systems, Centre de Recerca Matemàtica, Barcelona, March 1 - July 1, 2017. Organizing Committee.

Advanced Course on Groupoids, Crossed Products and Rokhlin Dimension, Centre de Recerca Matemàtica, Barcelona, 13 - 17 March, 2017.

Course on Category Theory, Universitat Autònoma de Barcelona, 10 - 26 Jan, 2017.

RESEARCH STAYS

University of Louisiana at Lafayette with Prof. Robert, Lafayette, Mar 25 - Jun 15, 2019.

Fields Institute, Toronto, Sept 18 - Nov 10, 2023.

SEMINARS

NCG&T Seminar, Czech Academy of Sciences. Jan 2022 - Now. 1 talk.

Seminar of the ULL, University of Louisiana at Lafayette, Mar 2019 - Jun 2019. 2 talks.

Seminar on groupoid C^* -algebras, Universitat Autònoma de Barcelona, Sep 2017 - Jan 2018. 3 talks.

Teoria d'Anells Seminar, Universitat Autònoma de Barcelona, Sep 2016 - Dec 2021. Several talks.

EXPERIENCE

ACADEMIC POSITIONS

Margarita Salas Grant - IMCAS, Prague & CRM, Barcelona (Jan 2022 - Jan 2025)

Post-doctoral FPI Grant - CRM, Barcelona (Oct 2020 - Dec 2021)

Pre-doctoral FPI Grant - CRM, Barcelona (Oct 2017 - Oct 2020)

OTHERS

IT Developer (Intern) - Sopra-Steria, Aix-en-Provence (Apr - Oct 2015)

IT Developer (Intern) - Amadeus Ltd, Nice & London (May 2013 - March 2014)

SKILLS

French - Native speaker

English - Fluent

Spanish - Fluent

Catalan - Good reading/understanding

Programming skills - C, C++, JAVA, PHP, HTML5, CSS, KSH, SQL, Bootstrap, Twig, Scala, Maple, Matlab, Scilab, R, JavaScript, Wordpress, LaTeX, Beamer.

PERSONAL INTERESTS

I am fond of outdoor activities in general, e.g. windsurfing (I taught in a sailing school several summers in Paros, Greece), or skiing (I organized a ski week for 150 students in Centrale Nantes) and climbing, highlining etc... Also, like racket sports and music a lot that I have both practiced since I am a kid.

REFERENCES

PERERA Francesc. (PhD Advisor) Doctor in Mathematics, Professor at Universitat Autònoma de Barcelona. perera@mat.uab.cat

ROBERT Leonel. (Principal Investigator) Doctor in Mathematics, Professor at University of Louisiana, Lafayette. leonel.robert@gmail.com

BECKER Marc. Professor in 'Classes Préparatoires' MP*, in Lycée Massena, Nice. m-becker@orange.fr