# Carlos Domingo

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## Current Situation

Data Analyst, at Ubisoft Barcelona Mobile.

Starting date: February 2017.

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#### Education

APR 2016 Ph.D. in Mathematics, Title: Endpoint Estimates via Extrapolation Theory, Ph.D. Advisor: M. J. Carro Rossell, Universitat de Barcelona, Spain.

Cum Laude distinction, International Mention, UB Extraordinary Prize

JUL 2012 M.Sc. in Advanced and Professional Mathematics, Universitat de Barcelona, Spain.

Average: 9.70/10

JUL 2011 B.Sc. in Mathematics, Universitat de Barcelona, Spain.

Average: 9.55/10

## Languages

CATALAN Native Level.

SPANISH Native Level.

ENGLISH **Proficiency Level**, granted by the University of Michigan.

FRENCH Basic Level.

## Professional Experience

## Work Experience

2013 – 2017 **Graduate Researcher**, *Universitat de Barcelona*, Barcelona.

JAN – FEB 2013 High School Teacher, temporary contract at Escola Anna Ravell.

2011 - 2012 Research Internship, at Institut de Matemàtica de la Universitat de Barcelona.

#### Teaching Experience

FALL SEM. 2016 B.Sc. in Mathematics, Real and Functional Analysis, Universitat de Barcelona.

Problem Sessions - 30h

FALL SEM. 2016 B.Sc. in Mathematics, Differential Calculus in Several Variables, Universitat de Barcelona.

Problem Sessions - 15h

FALL SEM. 2015 M.Sc. in Advanced Mathematics, Functional Analysis and Partial Differential Equations,

Universitat de Barcelona.

Theory and Problems - 6h

FALL SEM. 2015 B.Sc. in Mathematics, Introduction to Differential Calculus, Universitat de Barcelona.

FALL SEM. 2015 B.Sc. in Mathematics, Differential Calculus in Several Variables, Universitat de Barcelona.

Problem Sessions - 15h

# International Research Stays

APR – MAY 2015 **Georgia Institute of Technology**, *Atlanta, USA*, with prof. M. Lacey.

# Participation in R&D Projects with Public Funding

- 2014 2016 **Espacios de Funciones y Técnicas de Acotación de Operadores en Análisis**, *Ref.: MTM2013-40985-P*, at the University of Barcelona, by the Spanish government. Researcher ID: M. J. Carro Rossell EUR 39.752.00
- 2014 2016 **Grup de Teoria de Funcions**, *Ref.: 2014SGR289*, at the University of Barcelona, by the Catalan government.

  Researcher ID: M. C. Cascante Canut EUR 30,000.00
- 2011 2013 **Espacios de Funciones y Técnicas de Acotación de Operadores en Análisis**, *Ref.: MTM2010-14946*, at the University of Barcelona, by the Spanish government. Researcher ID: J. Soria de Diego EUR 95,000.00

## Attendance to Conferences and Scientific Meetings

- SEP 2016  $\rightsquigarrow$  Barcelona Analysis Conference, at the University of Barcelona, Barcelona, Spain.
- JAN 2016  $\leadsto$  **European Study Group with Industry**, by the Maths for Industry Network, at the Centre de Recerca Matemàtica, Bellaterra, Spain.
- SEP 2015  $\rightsquigarrow$  **III Young Researchers Conference**, by the Spanish Royal Mathematical Society RSME, at the University of Murcia, Murcia, Spain.
- MAY 2015  $\rightsquigarrow$  XVI Real and Complex Analysis Conference EARCO, at the University of Sevilla, Carmona, Spain.
- DEC 2014  $\rightsquigarrow$  LMS Network Meeting on Harmonic Analysis and PDEs, at the University of Warwick, Coventry, United Kingdom.
- JUL 2014  $\rightsquigarrow$  **Harmonic Analysis to Celebrate Michael Cowling's 65th**, by the ICMAT and the European Mathematical Society, Segovia, Spain.
- MAY 2014  $\rightsquigarrow$  **XV** Real and Complex Analysis Conference EARCO, at Universitat Autònoma de Barcelona, Girona, Spain.
- SEP 2013  $\rightsquigarrow$  **II Young Researchers Conference**, by the Spanish Royal Mathematical Society RSME, at the University of Sevilla, Sevilla, Spain.
- MAY 2013  $\rightsquigarrow$  XIV Real and Complex Analysis Conference EARCO, at the University of Zaragoza, Teruel, Spain.
- JUN 2012 ightharpoonup 9th International Conference on Harmonic Analysis and PDE, El Escorial, Spain.
- APR 2012  $\rightsquigarrow$  VIII Meeting of the Functional Analysis Network, at the University of Murcia, La Manga del Mar Menor, Spain.
- APR 2012  $\rightsquigarrow$  II Workshop on Functional Analysis and Applications, at the University of Murcia, La Manga del Mar Menor, Spain.
- AUG 2011  $\leftrightarrow$  LERU Bright Student Conference, at the University of Lund, Helsingborg, Sweden.
- JUL 2011  $\rightsquigarrow$  **The Millennium Prize Problems Conference**, to celebrate the 100th anniversary of the RSME, at the University of Barcelona, Barcelona, Spain.

#### Attendance to Advanced Courses

- NOV 2014  $\leadsto$  Calderón-Zygmund and Sparse operators, at the University of Birmingham, 6 hours, Birmingham, United Kingdom. by M. C. Reguera
- SEP 2014  $\leadsto$  Dyadic Harmonic Analysis and Related Topics, XV EMS School of Mathematics, 30 hours, Santander, Spain.
  - by T. Hytönen, A. Lerner, C. Thiele, A. Volberg

- JUN 2013 → Extrapolation: Three Lectures in Barcelona, at Universitat Autònoma de Barcelona, 3 hours, Barcelona, Spain.

  by M. Milman
- JUN 2013  $\rightsquigarrow$  **Spring School: Function Spaces and Inequalities**, 20 hours, Paseky, Czech Republic. by L. Diening, J. Duoandikoetxea, C. Pérez, V. Stepanov
- MAY 2013  $\rightsquigarrow$  Carleson measures and applications, at IMUB, 4 hours, Barcelona, Spain. by R. Zhao
- DEC 2012  $\rightsquigarrow$  Heat-flow monotonicity underlying some sharp inequalities in geometric analysis, harmonic analysis and PDE, at the University of Barcelona, 6 hours, Barcelona, Spain. by N. Bez
- MAY 2012  $\rightsquigarrow$  **An Introduction to Embedding Theory**, at the University of Barcelona, 6 hours, Barcelona, Spain. by V. Kolyada

## Contributions to Seminars and Courses

- APR 2016  $\leadsto$  **Analysis Seminar**, at Brown University, Providence, USA. Talk title: Touchdown for Extrapolation Theory
- OCT 2015 Research Group Talk, at the Real and Functional Analysis research group meeting, Barcelona, Spain.

  Talk title: Weighted estimates for the Bochner-Riesz operator and applications
- APR 2015 → **Analysis Seminar**, at Georgia Institute of Technology, Atlanta, USA.

Talk title: Reaching  $L^1$  via Extrapolation Theory

JAN 2015  $\leadsto$  **Short Course**, at the Real and Functional Analysis research group meeting, 3 hours, Barcelona, Spain.

Course title: From Calderón-Zygmund operators to Sparse Operators

- DEC 2014 **Working Seminar**, at the University of Birmingham, Birmingham, United Kingdom. Talk title: Endpoint estimates via Extrapolation Theory. Applications to radial Fourier multipliers
- NOV 2013  $\leadsto$  **SIMBa Seminar**, at the University of Barcelona, Barcelona, Spain. Talk title: Extrapolation Theory and almost everywhere convergence of the Fourier series
- OCT 2012  $\leadsto$  **SIMBa Seminar**, at the University of Barcelona, Barcelona, Spain. Talk title: The Hilbert Transform along the Parabola
- MAY 2012  $\leadsto$  **Research Group Talk**, at the Real and Functional Analysis research group meeting, Barcelona, Spain.

Talk title: Fixed Point Theorems

MAR 2012  $\rightsquigarrow$  Functional, Harmonic and Complex Analysis Seminar, at the University of Barcelona, Barcelona, Spain.

Talk title: Invariant subspaces for the shift operator

NOV 2011  $\leadsto$  **Research Group Talk**, at the Real and Functional Analysis research group meeting, Barcelona, Spain.

Talk title: The Invariant Subspace Problem

MAR 2011  $\rightsquigarrow$  **MQO Seminar**, at the II MQO meeting for young mathematicians, Barcelona, Spain. Talk title: Lomonosov's Theorem on Invariant Subspaces

#### Contributions to Conferences

JAN 2016  $\rightsquigarrow$  **European Study Group with Industry**, at the Centre de Recerca Matemàtica, Bellaterra, Spain.

Working Group - Topic: Developing a mathematical model to prevent burglaries in Catalonia

SEP 2015  $\rightsquigarrow$  III Young Researchers Conference of the RSME, at the University of Murcia, Murcia, Spain.

Short Talk - Talk title: Borderline Variants of the Muckenhoupt-Wheeden Inequality

MAY 2015  $\rightsquigarrow$  XVI Real and Complex Analysis Conference EARCO, at the University of Sevilla, Carmona, Spain.

Invited Talk - Talk title: Endpoint estimates, extrapolation theory and the Bochner-Riesz operator

SEP 2014  $\rightsquigarrow$  XV School on Dyadic Harmonic Analysis and Related Topics, EMS Summer School, Santander, Spain.

Short Talk - Talk title: Reaching weak-type (1,1) estimates via extrapolation

APR 2012  $\rightsquigarrow$  II Workshop on Functional Analysis and Applications, at the University of Murcia, La Manga del Mar Menor, Spain.

Relevant Contribution - Presented Project: Fixed Point Theorems

AUG 2011 ightharpoonup LERU Bright Student Conference, at the University of Lund, Helsingborg, Sweden.

Round Table – Discussion Topic: Sustainable Infrastructures

# Organization of activities

MAY 2016  $\leadsto$  II BGSMath Junior Meeting, Barcelona, Spain, Webpage: www.bgsmath.cat. Conference Organizing Committee

DEC 2015  $\rightsquigarrow$  I BGSMath Junior Meeting, Barcelona, Spain, Webpage: www.bgsmath.cat. Conference Organizing Committee

2013 – PRESENT → Seminar SIMBa, Barcelona, Spain, Webpage: www.ub.edu/simba.

Organizer of the Analysis Section

JUL 2011 → **The Millennium Prize Problems Conference**, to celebrate the 100th anniversary of the RSME, at the University of Barcelona, Barcelona, Spain. **Organizing Committee Support** 

#### Other activities

JAN 2016  $\leadsto$  Collaboration in a project with the Mossos d'Esquadra regional police, at Centre de Recerca Matemàtica, Bellaterra, Spain.

Project: Developing a mathematical model to prevent burglaries in Catalonia

MAR 2014  $\leadsto$  Participation in the Science Area of the Education Fair of Barcelona, representing the University of Barcelona, Barcelona, Spain.

 $\label{eq:continuous} Presented\ Topic:\ The\ Spectrum\ of\ Light\ and\ Fourier\ Analysis$ 

NOV 2013  $\leadsto$  Participation in the Workshops for High-School Students, at the University of Barcelona, Barcelona, Spain.

Topic: Conics and Quadrics - Building Mathematics

MAR 2013  $\leadsto$  Collaboration in the development of the XVIII Cangur Math Contest, at the University of Barcelona, Barcelona, Spain.

## Merits

## Grants and Fellowships

2015 **Grant for a Research Stay**, at Georgia Institute of Technology. By the Ferran Sunyer i Balaguer Foundation

2014 **Grant for a Research Stay**, at the University of Birmingham. By the Spanish Government (FPU program)

2013 – 2016 FPU Fellowship for Graduate Studies.

By the Spanish Government

2011 – 2012 Introduction-to-Research Fellowship.

By the Institute of Mathematics at the University of Barcelona IMUB

#### Prizes and Distinctions

2017 Prize for the Best Academic Record, in the Ph.D. in Mathematics.

By the University of Barcelona

2013 **Prize for the Best Academic Record**, in the M.Sc. in Advanced and Professional Mathematics.

By the University of Barcelona

2012 Prize for the Best Academic Record, in the B.Sc. in Mathematics.

By the University of Barcelona

2010 August Palanques Prize, in Mathematics.

By the University of Barcelona

2007 Caixa de Manresa Distinction, for Academic Excellence.

By the Caixa de Manresa Foundation

2007 High School Extraordinary Distinction, for Academic Excellence.

By the Catalan Government

2007 Distinction on the University Entrance Exam.

By the Catalan Government

## Language Certificates

2012 Certificate of Proficiency in English ECPE.

By the University of Michigan

2007 C-Level in Catalan.

By the Linguistics Department of the Catalan Government

2004 Certificate of Competency in English ECCE.

By the University of Michigan

# **Publications and Preprints**

#### Available electronically at:.

http://www.maia.ub.edu/~domingo

#### **Publications**

- Endpoint estimates for Rubio de Francia operators, M. J. Carro, C. Domingo-Salazar. To appear in Trans. Amer. Math. Soc.
- Weighted weak-type (1,1) estimates for radial Fourier multipliers via extrapolation theory, M. J. Carro, C. Domingo-Salazar.

  To appear in J. Anal. Math.
- The return times property for the tail on logarithm-type spaces, *M. J. Carro, C. Domingo-Salazar*, Discrete Contin. Dyn. Syst. 38 (2018), 2065–2078.
- Stein's square function  $G_{\alpha}$  and sparse operators, M. J. Carro, C. Domingo-Salazar, J. Geom. Anal. 27 (2017), 1624–1635.
- Borderline weak type estimates for singular integrals and square functions, *C. Domingo-Salazar, M. Lacey, G. Rey*, Bull. London Math. Soc. 48 (2016), 63–73.
- Pointwise bounds for integral type operators, *M. J. Carro, C. Domingo-Salazar*, Math. Nachr. 289 (2016), 1386–1395.

#### Others

- Endpoint Estimates via Extrapolation Theory, C. Domingo-Salazar, Ph.D. Thesis. Advisor: M. J. Carro
- Searching for a Predictive Model for Burglaries in Catalonia, C. Domingo-Salazar with M. Aguareles, D. Bikov, M. Canadell, E. Costa-Miracle, J. Fernández-Sánchez, N. Folguera, J. Saludes, A. Stojanova, Z. Varbanov.

  Conference Publication European Study Group with Industry 2016
- The Hilbert Transform along the Parabola, C. Domingo-Salazar, M.Sc. Thesis. Advisor: M. J. Carro

The Invariant Subspace Problem, C. Domingo-Salazar, B.Sc. Thesis.

Advisors: J. Soria and P. Tradacete