

Georgios Sakellaris

Email: gsakellaris@mat.uab.cat
Webpage: mat.uab.cat/~gsakellaris

Curriculum Vitae

Last updated: July 2021

Employment

September 2017 – November 2020 **P-Sphere Marie Curie fellow**, *Universitat Autònoma de Barcelona*.

Education

June 2017 **PhD in Mathematics**, *University of Chicago*.
Advisor: Carlos Kenig

June 2013 **MSc in Mathematics**, *University of Chicago*.

June 2011 **BSc in Mathematics**, *National and Kapodistrian University of Athens, Greece*.

Research Interests

Partial Differential Equations.

- Green's functions and regularity theory for second order pdes
- Boundary value problems for second order elliptic pdes in Lipschitz domains
- Free boundary problems

Publications/Preprints

1. **Scale invariant regularity estimates for second order elliptic equations with lower order coefficients in optimal spaces.**
arXiv: 2005.14086.
To appear in *Journal de Mathématiques Pures et Appliquées*.
2. **Minimizers for the thin one-phase free boundary problem**,
with Max Engelstein, Aapo Kauranen, Martí Prats, and Yannick Sire.
Communications on Pure and Applied Mathematics **74** (2021), no. 9, 1971-2022.
3. **On scale invariant bounds for Green's function for second order elliptic equations with lower order coefficients and applications.**
Analysis and PDE **14** (2021), no. 1, 251–299.
4. **Boundary value problems in Lipschitz domains for equations with lower order coefficients.**
Transactions of the AMS **372** (2019), no. 8, 5947–5989.
5. **Green's function for second order elliptic equations with singular lower order coefficients**, with Seick Kim.
Communications in PDE **44** (2019), no. 3, 228-270.
6. **Boundary value problems in Lipschitz domains for equations with drifts.**
PhD Thesis. arXiv: 1701.08332

Research Projects and Grants

21/09/17 – 20/09/20 **Mathematical Analysis**,
Postdoctoral grant, part of H2020-665919-P-SPHERE, European Commission.
PI: Georgios Sakellaris, *Universitat Autònoma de Barcelona*. 146.700 €.

- 01/01/17 – **Anàlisi real i complexa, i equacions en derivades parcials,**
 31/12/20 2017-SGR-395, Agència de Gestió d'Ajuts Universitaris i de Recerca (Catalunya).
 PI: Xavier Tolsa Domènech, *Universitat Autònoma de Barcelona*. 65.896 €.
- 30/12/16 – **Análisis armónico, teoría geométrica de la medida y aplicaciones,**
 29/12/20 MTM2016-77635-P, Ministerio de Economía y Competitividad (Spain).
 PI: Xavier Tolsa Domènech, *Universitat Autònoma de Barcelona*. 57.475 €.

Talks

- June 2020 Seminari d'Anàlisi de Barcelona (online), *Universitat Autònoma de Barcelona*.
 June 2020 Analysis & PDE Working Seminar (online), *University of Minnesota*.
 December 2019 Analysis Seminar, *Aristotle University of Thessaloniki*.
 October 2019 Calderón-Zygmund Analysis Seminar, *University of Chicago*.
 September 2019 Analysis and PDEs Seminar, *University of Crete, Heraklion*.
 June 2019 Barcelona Analysis Conference 2019, *Universitat de Barcelona*.
 June 2019 Harmonic Analysis and PDE Conference, *University of Helsinki*.
 May 2019 Seminari d'edps i aplicacions, *Universitat Politècnica de Catalunya*.
 December 2018 Seminari d'Anàlisi de Barcelona, *Universitat Autònoma de Barcelona*.
 June 2018 First Congress of Greek Mathematicians, *University of Athens*.
 December 2017 Mathematical Analysis in Athens - Katavolos and Nestoridis, *University of Athens*.
 April 2017 BCAM Seminar, *BCAM, Bilbao*.
 April 2017 Seminari d'Anàlisi de Barcelona, *Universitat Autònoma de Barcelona*.
 December 2016 Analysis Seminar, *University of Athens*.
 October 2016 Calderón-Zygmund Analysis Seminar, *University of Chicago*.
 May 2016 Panhellenic Conference on Mathematical Analysis, *University of Crete, Heraklion*.

Conferences and Summer Schools attended

- November 2019 Workshop in honor of Alessio Figalli's Doctor Honoris Causa at UPC,
Universitat Politècnica de Catalunya.
- June 2019 17th School on Interactions between Dynamical Systems and Partial Differential Equations,
CRM, Barcelona.
- October 2018 PDEs and Geometric Measure Theory, *ETH, Zurich*.
 July 2018 Geometric Function Theory in Fluid Dynamics, *Barcelona*.
 June 2018 Geometric Measure Theory and its Connections, *Helsinki, Finland*.
 May 2018 Workshop on Real Harmonic Analysis and its Applications to Partial Differential Equations
 and Geometric Measure Theory, *ICMAT, Madrid*.
 May 2018 School on Real Harmonic Analysis and its Applications to Partial Differential Equations
 and Geometric Measure Theory, *ICMAT, Madrid*.
 April 2018 Harmonic Analysis of Elliptic and Parabolic Partial Differential Equations,
CIRM, Marseille, France.
 October 2017 Harmonic Analysis and Geometric Measure Theory, *CIRM, Marseille, France*.
 June 2015 Second Chicago Summer School In Analysis, *University of Chicago*.
 September 2014 Harmonic Analysis & Partial Differential Equations: Recent Developments & Future Directions,
University of Chicago.
 June 2014 First Chicago Summer School In Analysis, *University of Chicago*.

Teaching Experience

- 2019-2020 **Teaching Assistant**, *Universitat Autònoma de Barcelona*.
Teaching assistant for a topics class on Singular Integrals (graduate level), and Multivariable Calculus
- 2018-2019 **Teaching Assistant**, *Universitat Autònoma de Barcelona*.
Teaching assistant for Multivariable Calculus
- 2016-2017 **Instructor**, *University of Chicago*.
Taught Calculus 152, 153
- 2015-2016 **Instructor**, *University of Chicago*.
Taught Calculus 152, 153
- 2013-2014, 2014-2015 **Instructor**, *University of Chicago*.
Taught the Calculus 150 Sequences
- 2012-2013 **College Fellow**, *University of Chicago*.
Teaching Assistant for IBL Honors Calculus
- 2012-2016 **Directed Reading Program (DRP) Mentor**, *University of Chicago*.
Mentored six projects on independent study for undergraduate students

Awards

- June 2015 **Lawrence and Josephine Graves Teaching Prize**, *University of Chicago*.
For excellence in undergraduate teaching
- July 2010 **International Mathematics Competition (IMC)**, Blagoevgrad, Bulgaria.
Bronze Medal
- July 2009 **International Mathematics Competition (IMC)**, Budapest, Hungary.
Gold Medal
- March 2009 **South-Eastern European Mathematical Olympiad for University Students (SEEMOUS)**,
Agros, Cyprus.
Silver Medal
- 2007-2011 **Award for Excellence in Undergraduate Studies**, *University of Athens*.
State Scholarship Foundation of Greece
First in rank in academic years 2007-2011
- 2009-2011 **Scholarship for Undergraduate Studies**, *University of Athens*.
Papadakis Endowment

Service

Coorganizer of the "Summer Meeting for Young Researchers in Mathematics"
University of Athens, July 2019.

Refereed articles for:

Mathematical Reviews, *Communications in PDE*, *Complex Variables and Elliptic Equations*.