

Georgios Sakellaris

Email: gsakell@math.auth.gr
Webpage: users.auth.gr/gsakell/

Curriculum Vitae

Last updated: December 2023

Employment

- June 2022 - present **Assistant Professor**, *Aristotle University of Thessaloniki, Greece.*
- February 2021 - March 2021 **Postdoctoral researcher**, *Institut de Matemàtica, Universitat de Barcelona.*
- 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. **The Neumann Green function and scale invariant regularity estimates for elliptic equations with Neumann data in Lipschitz domains**, with Seick Kim.
Submitted, arXiv:2302.00132.
2. **Scale invariant regularity estimates for second order elliptic equations with lower order coefficients in optimal spaces.**
Journal de Mathématiques Pures et Appliquées **156** (2021), 179-214.
3. **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.
4. **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.
5. **Boundary value problems in Lipschitz domains for equations with lower order coefficients.**
Transactions of the AMS **372** (2019), no. 8, 5947-5989.
6. **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.
7. **Boundary value problems in Lipschitz domains for equations with drifts.**
PhD Thesis. arXiv: 1701.08332

Research Projects and Grants

- 10/10/23 – **Critical scaling coefficients in second order PDE (CRITPDE)**,
9/10/25 14952, Hellenic Foundation for Research and Innovation (HFRI, Greece).
PI: Georgios Sakellaris, Aristotle University of Thessaloniki. 105.000 €.
- 21/09/17 – **Mathematical Analysis**,
21/11/20 Postdoctoral grant, part of H2020-665919-P-SPHERE, European Commission.
PI: Georgios Sakellaris, Universitat Autònoma de Barcelona. 146.700 €.

Talks

- June 2023 Analysis Seminar, School of Applied Mathematical and Physical Sciences,
National Technical University of Athens.
- November 2022 Department of Mathematics Colloquium, *University of Patras.*
- July 2022 Second Congress of Greek Mathematicians, *National Technical University of Athens.*
- June 2022 Graduate seminar on Advanced topics in PDE, *University of Bonn.*
- May 2022 Harmonic Analysis and PDE in Seoul Conference, *Yonsei University, Seoul.*
- March 2022 Greek Mathematical Seminar (online).
- December 2021 Yonsei Math Seminar (online), *Yonsei University.*
- 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

- 2022-2023 **Instructor**, *Aristotle University of Thessaloniki*.
 Winter semester: Introduction to Real Analysis, Partial Differential Equations
 Spring Semester: Differential Equations, Partial Differential Equations (graduate class)
- 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
- 2014-2015, **Instructor**, *University of Chicago*.
 2013-2014 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*, *Calculus of Variations and PDE*,
Complex Variables and Elliptic Equations.