Georgios Sakellaris

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Curriculum Vitae

Last updated: April 2024

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 –
9/10/25 — **Critical scaling coefficients in second order PDE (CRITPDE),**
14952, Hellenic Foundation for Research and Innovation (HFRI, Greece).
PI: Georgios Sakellaris, *Aristotle University of Thessaloniki*. 105.000 €.

21/09/17 –
21/11/20 — **Mathematical Analysis,**
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

2022-2024	**Instructor**, *Aristotle University of Thessaloniki*.
	Winter '23-'24: Calculus I, Partial Differential Equations
	Spring '23-'24: Differential Equations, Functional Analysis (graduate class)
	Winter '22-'23: Introduction to Real Analysis, Partial Differential Equations
	Spring '22-'23: 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, 2013-2014	**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, Calculus of Variations and PDE, Complex Variables and Elliptic Equations.