University of Tennessee, Knoxville
Department of Mathematics
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Citizenship: Greek
Date of Birth: 27 April 1981

Education

- 2003-2008 Ph.D., Mathematics, Stanford University.
  Dissertation title: $C^{1,\alpha}$ theory for the prescribed mean curvature equation with Dirichlet data.
  Advisor: Leon Simon.

- 1999-2003 Bachelor of Science in Mathematics with High Honors, National University of Athens, Athens, Greece.

Academic Appointments, Research Experience

- 2008-2011, Post-doc position, Max Planck Institute for Gravitational Physics (Albert Einstein Institute), Division: Geometric Analysis and Gravitation.

- 2011-2017, Post-doc position, Freie Universität Berlin, Fachbereich Mathematik und Informatik, Institut für Mathematik, Research group: Geometric Analysis.

- 2017-present, Assistant Professor, University of Tennessee, Knoxville.

Research Interests

- Geometric Analysis, Differential Geometry, Partial Differential Equations, Geometric Measure Theory and Geometric Flows.

Publication List

Published articles

- "$C^{1,\alpha}$ theory for the prescribed mean curvature equation with Dirichlet data", *Journal of Geometric Analysis*, 21(4), 982–1035, 2011.

- "Curvature estimates for surfaces with bounded mean curvature", *joint with Giuseppe Tinaglia, Transactions of the American Mathematical Society* 364(11), 5813–5828, 2012.

- "Density estimates for compact surfaces with total boundary curvature less than 4π", *joint with Giuseppe Tinaglia, Communications in Partial Differential Equations* 37(10), 1870–1886, 2012.

- "$C^{1,\alpha}$-regularity for surfaces with H in L^p" *joint with Giuseppe Tinaglia, Annals of Global Analysis and Geometry*, 46(2), 159–186, 2014.

- "Area minimizing surfaces in mean convex 3-manifolds", *joint with Baris Coskunuzer, Journal für die Reine und Angewandte Mathematik*, 704, 135–167, 2015.

- "Allard-type boundary regularity for $C^{1,\alpha}$ boundaries", *Advances in Calculus of Variations*, 9(2), 143—161, 2016.

- "An Allard type regularity theorem for varifolds with a Hölder condition on the first variation", *joint with Alexander Volkmann, Calculus of Variations and Partial Differential Equations*, 55(3), Art. 46, 23pp, 2016.

- "Type II singularities of two convex immersed mean curvature flow ", *joint with Mat Langford, Geometric Flows*, 2(1), 1–17, 2016.

- "Null mean curvature flow and outermost MOTS", *joint with Kristen Moore, Journal of Differential Geometry*, 111(2), 191–239, 2019.

- "On the existence of translating solutions of mean curvature flow in slab regions", *joint with Mat Langford and Giuseppe Tinaglia*, 2018, *Analysis and PDE*, to appear, arXiv:1805.05173v3.

Other publications

- "$C^{1,\alpha}$ theory for the prescribed mean curvature equation with Dirichlet data", Thesis (Ph.D.)–Stanford University, 2008.

- "Area minimizing surfaces in mean convex 3-manifolds", Oberwolfach Report No. 36/2012 (Calculus of Variations, 2012).

- "Type-II singularities of two-convex immersed mean curvature flow", Oberwolfach Report No. 27/2016 (Nonlinear Evolution Problems, 2016).

- Book chapter: "Minimal Surfaces and the Bernstein Theorem", co-authored with Giuseppe Tinaglia, *Geometry in Advanced Pure Mathematics, Volume 4 in the LTCC Advanced Mathematics Series*.

Preprints

- "A collapsing ancient solution of mean curvature flow in $\mathbb{R}^n$", *joint with Mat Langford and Giuseppe Tinaglia*, 2017, *submitted*, arXiv:1705.06981.

- "Convex ancient solutions to curve shortening flow", *joint with Mat Langford and Giuseppe Tinaglia*, 2018, *submitted*, arXiv:1903.02022.

Invited Speaker

- University of California Irvine, Differential Geometry Seminar, December 2007.

- Albert Einstein Institute, Oberseminar, November 2008.

- University of Granada, Department of Geometry and Topology, 17 December 2008.

- RWTH Aachen, Oberseminar Analysis, 20 January 2009.

- Cambridge University, Geometric Analysis and PDE seminar, 23 February 2009.

- Freie Universität Berlin, Oberseminar Analysis, 09 June 2009, 23 November 2010.

- Kings College London, Geometry seminar, 04 February 2010.

- Johann Wolfgang Goethe-Universität Frankfurt, Institut für Mathematik, Oberseminar Geometric Analysis, 11 January 2011.

- Albert-Ludwigs-Universität Freiburg, Mathematisches Institut, Arbeitsgemeinschaft Geometrische Analysis, 18 January 2011.

- Freie Universität Berlin, SFB Colloquium, 31 May 2011.

- Boğaziçi University Istanbul, Math Department, Colloquium, 08 June 2011.

- Koç University Istanbul, Math Department, Colloquium and Mini Course on "Introduction to Geometric Measure Theory", 09 June 2011.

- Kings College London, Geometry Day II, 11 November 2011.

- Arizona University, Differential Geometry Seminar, 11 April 2012

- MFO Calculus of Variations meeting, Oberwolfach, 22-28 July 2012 and 29 July–04 August 2018.

- University of Athens, Department of Mathematics, Applied Analysis and PDEs Seminar, 15 March 2013.

- Leibniz Universität Hannover, Workshop on Minimal Submanifolds and Related Topics, 26-29 August 2013.

- Friedrich-Alexander Universität Erlangen-Nürnberg, Department of Mathematics, Workshop in New Trends in Shape Optimization, 23–27 September 2013.

- Australian National University, Conference on Geometric Invariance and Nonlinear Partial Differential Equations, Kioloa, 9–14 February 2014.

- University of Athens, Department of Mathematics, Applied Analysis and PDEs Seminar, 04 April 2014.

- Kings College London, Geometry Day IV, 9 May 2014.

- First Joint International Meeting RSME-SCM-SEMA-SIMAI-UMI, Bilbao, June 30–July 4 2014.

- Workshop on Contemporary Differential Geometry, Ioannina, 24–27 September 2014.

- Universität Konstanz, Oberseminar Partielle Differentialgleichungen, 13 November 2014.

- Eberhard Karls Universität Tübingen, Oberseminar Geometrische Analysis und Mathematische Relativitätstheorie, 20 November 2014.

- Workshop on Geometric Flows, Granada, 08–11 April 2015.

- 12th Panhellenic Congress of Geometry, Thessaloniki, 29–31 May 2015.

- Geometry and Analysis Frankfurt Karlsruhe (GAFKA) joint seminar, 24 June 2015.

- Universität Regensburg, Sonderveranstaltung, 16 September 2015.

- Monash University, Geometric Analysis Seminar, 27 November 2015.

- University of Melbourne, School Seminar, 2 December 2015.

- VI Workshop on Differential Geometry, Maceió-Brazil, 14–18 March 2016.

- Oxford University, PDE seminar, 16 May 2016.

- MFO Nonlinear Evolution Problems meeting, Oberwolfach 29 May–4 June 2016.

- Tokyo Institute of Technology, Research Seminar, 20 June 2016.

- Scuola Normale Superiore, Research seminar, 20 July 2016.

- National University of Athens, Mini course on mean curvature flow, 12– 31 March 2017.

- University of Tennessee, Knoxville, Geometric analysis seminar, 21 and 28 September 2017.

- Fordham University, Analysis/Geometry, 01 November 2017.

- Joint Mathematics Meetings in San Diego, session on Geometric Analysis and Geometric Flows, 10–13 January 2018.

- University of Chicago, Geometric Analysis Seminar, 12 February 2018.

- University of Connecticut, PDE and Differential Geometry Seminar, 05 March 2018.

- Recent Advances in Geometric Analysis, Centro De Giorgi, Pisa, 4–8 June 2018

- Geometric Measure Theory in Verona, Verona, 11–15 June, 2018

- First congress of Greek Mathematicians, Geometry session, Differential Equations session, 25–30 June, 2018.

- Partial Differential Equations Seminar, Arizona State University, 5 October, 2018.

- Geometric Analysis workshop, Rutgers, New Brunswick, 14–16 November, 2018.

- Rainwater seminar, University of Washington, 14 May, 2019.

- Women and Mathematics, Topics in Geometric Analysis, Institute for Advanced Studies, Princeton, 18–24 May, 2019.

- Women in Analysis, BIRS Workshop, Banff, Canada, 9–14 June, 2019 (participated via Skype).

- Women in Geometry 2, CMO Workshop, Oaxaca, Mexico, 23–28 June, 2019.

Teaching Experience

- University of Tennessee, Knoxville. Instructor in the classes: Partial Differential Equations I (Math 435), Fall 2017. Calculus of Variations (Math 534), Spring 2018, Probability and Statistics (Mathe 323), Fall 2018, Modern Geometry (Math 667), Spring 2019.

- Freie Universität Berlin. Instructor in the classes: Differential Geometry II (Summer 2011), Partial Differential Equations I (Summer 2013, 2017), II (Winter 2015), III (Summer 2016), Topics in Minimal Surfaces (Summer 2014), Geometric Measure Theory (Summer 2015).

- Freie Universität Berlin, Winter 2011. Led an undergraduate seminar in Partial Differential Equations I.

- Freie Universität Berlin, Tutorials in

    - Analysis I,II and III, Winter 2011, Summer 2012, Winter 2012.
    - Partial Differential Equations II, Winter 2013.
    - Functional Analysis, Winter 2014.

- Freie Universität Berlin, 2011-2015. I was an examiner for 3 Masters and 9 Bachelor theses and I was closely involved in the supervision of 5 of these. I also participated in the committees for the defense of 8 PhDs and one Habilitation.

- Stanford University Teaching Assistant in the Department of Mathematics, 2004-2008.

  - Math 42: Calculus, Winter 2005.
  - Math 42 ACE: a special section organized with the Engineering department intended to provide academic support to incoming Engineering students and increase the retention rate of underrepresented groups in Engineering, Autumn 2007.
  - Math 51: Linear Algebra and Differential Calculus of Several Variables, Autumn 2005, Spring 2007, Winter 2008.

- Stanford Real Analysis Qualifying Exam Seminar, Summer 2007, Summer 2008. Led a class seminar in order to prepare first-year graduate students for the qualifying exam in Real Analysis.

- Stanford University Course Assistant in the Department of Mathematics, 2003-2008. Courses: Matrix theory and Applications, Linear Algebra, Complex Analysis, Partial Differential Equations.

- SUMAC, Summer 2006. Served as a counselor in a summer school for talented high-school students.

Conference and Seminar organization

- "Minimal Surfaces and Geometric Flows", Special session for the Spring 2019 AMS SE Regional Meeting at Auburn. Co-organized with Giuseppe Tinaglia.

- 2018 Barrett Lectures on Mean Curvature Flow. University of Tennessee, May 29-June 1, 2018. Co-organized with Mat Langford.

- Reading and Research Seminar in Geometric Analysis, University of Tennessee, Fall 2018–Spring 2019.

- Forschungsseminar Geometrische Analysis, PhD students seminar, Freie Universität Berlin, Summer 2013, Winter 2013, Winter 2014.

- Topics in Geometric Analysis, joint research seminar, Freie Universität Berlin, University of Potsdam, Albert Einstein Institute, co-organized with Jan Metzger, Ulrich Menne, 2012-2013, 2014-2015 and with Klaus Ecker, Jan Metzger and Ulrich Menne, 2013-2014, 2016.

- Geometric Measure Theory, joint reading seminar, Freie Universität Berlin and Albert Einstein Institute, co-organized with Ulrich Menne, 2012-2015.

Awards

- NSF DMS-1812058, 2018 John Barrett Memorial Lectures, joint with Mat Langford, amount: $25,000, April 01, 2018- March 31, 2019.

- IMA conference award, University of Minnesota, 2018 John Barrett Memorial Lectures, joint with Mat Langford, amount: $5,000, award date: 24 February, 2018.

- Member of SFB 647: Space-Time-Matter, Analytic and Geometric Structures, 2011–2016.

- Teaching and Research Assistantship, Stanford University, 2003-2008.

- Scholarship I.K.Y. (State Scholarships Foundation, Awarded for Academic excellence), National University of Athens 2000-2003.

- Gold Medal, Balkan Mathematical Olympiad, Cyprus, 1998.

- Honorable Mention, International Mathematical Olympiad, Taipei, 1998.

- Gold Medal, National Mathematical Olympiad, Athens, 1996,1998.