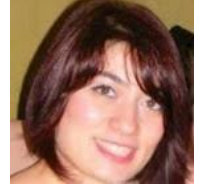


CURRICULUM VITAE



Fatma Gamze DÜZGÜN

October 24, 1983

Department of Mathematics, Faculty of Science Hacettepe University,
06800 Beytepe -Ankara, Turkey
e-mail: gammeduz@hacettepe.edu.tr, gammeduz@gmail.com

Educational Background

- PostDoc, University of Florence, Italy, Feb 2014-Feb 2015
- PhD in Mathematics, Hacettepe University, Turkey, 2014
- M.Sc in Mathematics, Hacettepe University, Turkey, 2008
- B.Sc in Mathematics, Hacettepe University, Turkey, 2005

Theses

- Ph.D Thesis: “*Investigation of Class of Nonlinear Diffusion Equations*” (2014, Supervisor Prof. Dr. Kamal Soltanov, Faculty of Science, Department of Mathematics, Hacettepe University).
- M.Sc Thesis: “*Investigation of the 3. Type Boundary Value Problem of an Emden-Fowler Type Equation*” (2008, Supervisor Prof. Dr. Kamal Soltanov, Faculty of Science, Department of Mathematics, Hacettepe University).

Research Interest

Nonlinear Differential Equations (Parabolic type, Elliptic type), Nonlinear Diffusion Problems, Fractional Laplacian Operators, Anisotropic equations, Existence, Uniqueness and Behavior of Solutions, Holder Regularity of Solutions, Harnack Estimates, Data Science

Foreign Languages

- English (advanced)
- Italian (advanced)
- French (intermediate)
- Spanish (intermediate)
- Greek (beginning)

Work Experience

- Assoc. Prof. of Analysis and Theory of Functions, Department of Mathematics, Hacettepe University, Beytepe-Ankara, Turkey, November 2018-present.
- Co-head of Department of Mathematics, Hacettepe University 2018-2021
- Erasmus Coordinator of Department, Hacettepe University 2018-present
- Academic Visitor in Dept. of Math. “Ulisse Dini” of University of Florence (working with Prof. Dr. Vincenzo Vespri), 14.01.2018-17.06.2018
- Researcher (postdoc under scholarship), University of Florence, Italy, 01.03.2014-28.02.2015
- Academic Visitor in Dept. of Math. “Ulisse Dini” of University of Florence (working with Prof. Dr. Vincenzo Vespri), 01.11.2012-01.05.2013.
- Research Assistant, Department of Mathematics, Hacettepe University, Beytepe-Ankara, Turkey, 2005-2018

Papers

- Duzgun F. G., Iannizzotto A., Vespri V. “A clustering theorem in fractional Sobolev spaces”, *Annales Fennici Mathematici* (submitted in Jan 2024, <https://arxiv.org/abs/2305.19965>).
- Chiyo Y., Duzgun F. G., Frassu S., Viglialoro G. “Boundedness Through Nonlocal Dampening Effects in a Fully Parabolic Chemotaxis Model with Sub and Superquadratic Growth”, *Applied Mathematics and Optimization* (Nov 2023 published online, Feb 2024 published).
- Duzgun F. G., Mosconi S., Vespri V., “Harnack and Pointwise Estimates for Degenerate or Singular Parabolic Equations”, Chapter In book: *Contemporary Research in Elliptic PDEs and Related Topics*, 301-368 (July 2019).
- Duzgun F. G., Mosconi S., Vespri V., “Anisotropic Sobolev embeddings and the speed of propagation for parabolic equations”, *Journal of Evolution Equations.*, (September 2019).
- Duzgun F. G., Iannizzotto A., “Three nontrivial solutions for nonlinear fractional Laplacian equations”, *Advances in Nonlinear Analysis*, (May 2018).
- Chiti F., Fantacci R., Duzgun F. G., Vespri V., “A game theory inspired channel allocation policy for multi-radio Ad Hoc Communications” *Wireless Communications and Mobile Computing*, Vol:16, Issue:13, Pages: 1826-1836 (2016)
- Duzgun F. G., Gianazza U., Vespri V., “1-Dimensional Harnack Estimates”, *Discrete and Continuous Dynamical Systems - Series S* 9(3) Pages: 675-685 (2016)
- Duzgun F. G., Soltanov K., “Existence, Uniqueness and Behaviour of Solution for Nonlinear Diffusion type Equation with Third Type Boundary Value”, *EMS Rendiconti Lincei Matematica e Applicazioni*, Vol 26, Issue 4, 445-463 (2015)
- Duzgun F. G., Fornaro S., Vespri V., “Interior Harnack Estimates: The State-of-the-Art for Quasilinear Singular Parabolic Equations” *Milan Journal of Mathematics*, Volume: 83 Issue: 2 Pages: 371-395 (2015).
- Fino A., Duzgun F. G., Vespri V., “Conservation of the Mass for Solutions to a Class of Singular Parabolic Equations”, *Kodai Mathematical Journal*, Volume 37, Number 3, 519- 531 (2014).
- Duzgun F. G., Soltanov K., “Some Mixed Problems for Semilinear Parabolic Type Equation”, *Journal of Applied Analysis and Computation*, Vol. 4, no 3, Pages 271-281 (2014).
- Duzgun F. G., Marcellini P., Vespri V., “Space Expansion for a Solution of an Anisotropic p -Laplacian Equation by Using a Parabolic Approach”, *Riv. Mat. Univ. Parma*, Vol 5 (2014).
- Duzgun F. G., Marcellini P., Vespri V., “An Alternative Approach to the Holder Continuity of Solutions to some Elliptic Equations”, *Nonlinear Analysis: Theory, Methods & Applications*, Vol 94, Pages 133-141 (2014).
- Duzgun F. G., Soltanov K., “On Some Emden-Fowler Type Equations”, *AIP Conf. Proc.*, 1168, 377 (2009)

Projects

- Research Project in Mathematics Dept. of University of Florence, “Regularity Results for a Larger Class of Anisotropic Operators”, 2018.
- Post Doc. Project in Information Eng. of University of Florence, “Sistemi wireless di nuova generazione per comunicazioni mobili professionali per la piattaforma WILIFE”, 2014-2015.
- The Scientific and Technological Research Council of Turkey (TUBİTAK)- The National Academy of Sciences of Ukraine (NASU) project “Solvability of nonlinear dynamical systems of mathematical physics, Exact integrability, and Analytic properties of solution manifolds”, scholarship, 2011-2014.

Conferences and Academic Activities

- Erasmus Teaching Mobility, Dept. of Mathematics and Mathematical Statistics, Umeå University, Sweden, May 2023
- Workshop in Mathematical Modelling and Analysis, Umeå University, Sweden, 2023 (invited speaker)
- Seminar in the Dept. of Mathematics and Mathematical Statistics, Umeå University, Sweden, 2023
- IV Workshop on Trends in Nonlinear Analysis, Cagliari, Italy, 2022 (invited speaker)
- The 26th International Conference on Difference Equations and Applications (ICDEA 2021), online conference, 26-31 July 2021 (speaker)
- Seminario di Calcolo delle Variazioni ed Equazioni alle Derivate Parziali, Dept. of Mathematics, University of Florence, Italy, Sept 2019.
- TURKEY-ITALY Colloquium on Applied Analysis and Differential Equations (TICAD 2019), Hacettepe University, Ankara, Turkey, 10-11 July 2019 (organizer)
- European Women in Mathematics General Meeting 2018, Celebrating 30 years of EWM, Graz, Austria, September 2018 (speaker: PDEs around the world-representation of Asia).
- General Analysis Seminars, Dept. of Mathematics, University of Padova, Italy, April 2018.
- Academic visitor in Math. Dept. "Ulisse Dini" of Florence University (collaboration with Prof. Dr. Vincenzo Vespri), 14.01.2018-17.06.2018.
- III Workshop on Trends in Nonlinear Analysis, Cagliari, Italy, 2017
- The 11th ISAAC Congress, Vaxjo, Sweden, 2017 (speaker).
- Harnack's Inequalities and Nonlinear Operators, Cortona, Italy, 2017 (speaker).
- Research Meeting on Non-Local Operators, Cagliari, Italy, 2016 (invited speaker).
- The 11th AIMS Conference on Dynamical Systems, Differential Equations and Applications, Orlando, USA, 2016 (speaker)
- XL Summer School on Mathematical Physics, Ravello, Italy, 2015 (speaker)
- Workshop in Nonlinear PDEs, Brussels, Belgium, 2015 (speaker)
- Post Doc. in Department of Information Engineering, Florence University, Italy (01.03.2014-28.02.2015)
- CICAM 7- Seventh China-Italy Colloquium on Applied Mathematics, Palermo, Italy, 8-11 September 2014 (speaker).
- CIME-Centro Internazionale Matematico Estiva/ Vector Valued Partial Differential Equations and Applications, Cetraro, Italy, July 2013.
- Academic Visitor in Dept. of Math. “Ulisse Dini” of University of Florence (working with Prof. Dr. Vincenzo Vespri), 01.11.2012-01.05.2013.
- The International Society for Analysis, its Applications and Computation (ISAAC), Moscow, Russia, 2011 (speaker).
- 6th Ankara Mathematics Days, Hacettepe University, Ankara, Turkey, 2011.
- Mathematical Analysis, Differential Equations and Their Applications, Bulgaria, 2010 (speaker).
- 7th International Conference of Numerical Analysis and Applied Mathematics, Crete, Greece, 2009 (speaker).
- XXI. National Mathematics Symposium, Koç University, Istanbul, Turkey, 2008.
- XX. National Mathematics Symposium, Erzurum, Turkey, 2007 (speaker).
- XIX. National Mathematics Symposium, Kütahya, Turkey, 2006.