



# Georgios Psaradakis

## *Curriculum Vitae*

### Personal Information

Name	Georgios
Surname	Psaradakis
Birth date - place	22 July 1979 - Heraklion, Crete, Greece
Nationality	Hellenic (Mandatory military service: 2006-2007)
Marital status	Married (two children)

### Education

- 10.2007-01.2012 **Doctoral Diploma of Applied Mathematics**, *School of Sciences and Engineering, University of Crete - Greece*, ADVISOR: STATHIS FILIPPAS
- 10.2003-11.2005 **Postgraduate Specialization Diploma in Pure Mathematics**, *School of Sciences and Engineering, University of Crete - Greece*
- 10.1998-03.2003 **Degree (Ptychion) in Mathematics directed to Applied Analysis and Mathematical Physics**, *School of Natural Sciences, University of Patras - Greece*

### Positions

- Since 02.03.23 *Assistant Professor - Subject area: Mathematical Analysis.* University of Western (elected 01.09.22) Macedonia - Department of Mathematics, Kastoria, Greece.
- 01.09.22-01.03.23 *Teacher.* Secondary education of Lasithi, Crete, Greece.
- 01.09.21-31.08.22 *Assegnista di Ricerca.* University of Campania “Luigi Vanvitelli” - Department of Mathematics and Physics, Caserta, Italy.
- 11.08.21-31.08.22 *Teacher on unpaid annual leave.* Secondary education of Lasithi, Crete, Greece.
- 01.10.16-31.12.20 *Wissenschaftlicher Mitarbeiter.* University of Mannheim - Institute for Mathematics, Mannheim, Germany.
- 06.01.13-05.10.15 *Postdoctoral Research Fellow.* Technion: Israel Institute of Technology - Mathematics Department, Haifa, Israel.

## Research visits

- 25.05-08.06.2019 INdAM/GNAMPA Visiting professor (U-FMBAZ-2018-001525 18-12-2018). University of Campania “Luigi Vanvitelli” - Department of Mathematics and Physics, Caserta, Italy.
- 04.06-03.09.2018 Visiting researcher (D.R. 0950-2017). University of Campania “Luigi Vanvitelli” - Department of Mathematics and Physics, Caserta, Italy.
- 11.2015-07.2016 Visiting researcher. University of Crete - Department of Mathematics and Applied Mathematics, Heraklion, Greece.

## Scholarships

- 09.2021-08.2022 Research fellowship financed under the intra-University “VAIN-HOPES” competition project - Programma Valere 2019
- 01.2013-10.2015 Fine Trust Postdoctoral Scholarship (Technion)
- 11.2008-12.2011 Fellow State Scholarships Foundation of Greece (I.K.Y.) (received after written examinations)
- 10.2007-09.2008 Maria M. Manassaki bequest scholarship (for excellent performance in postgraduate studies)

## Teaching

### Autonomous teaching at the University of Western Macedonia (in Greek)

- *Spring 2023* - Infinitesimal Calculus IV, Operator Theory

### Autonomous teaching at the University of Mannheim (in English)

- *Advanced Analysis(MSc)* - Fall 2020
- *Calculus of Variations and Applications(MSc)* - Fall 2019
- *Advanced Analysis(MSc)* - Spring 2019
- *Asymptotic Analysis(MSc+BSc)* - Fall 2018
- *Advanced Analysis(MSc)* - Spring 2018
- *Introduction to Partial Differential Equations(MSc)* - Fall 2017
- *Advanced Analysis(MSc)* - Spring 2017

### Teaching assistantship at the University of Mannheim (in English)

- *Asymptotic Analysis(MSc+BSc)* (L. Chen) - Fall 2016

### Teaching assistantship as doctoral student (Univ. Crete)

- *Analysis I* (S. Kamvissis) - Applied Math Dept., Winter 2011/12
- *Infinitesimal Calculus I* (T. Mitsis) - Math Dept., Spring 2010/11
- *Instructor in day-long workshop problems* (T. Garefalakis - A. Tertikas) - Math Dept., Winter 2010/11
- *Analysis I* (T. Mitsis) - Math Dept., Spring 2009/10
- *Infinitesimal Calculus III* (T. Mitsis) - Math Dept., Winter 2009/10
- *Analysis II* (T. Mitsis) - Math Dept., Spring 2008/09
- *Analysis I* (T. Mitsis) - Math Dept., Winter 2008/09
- *Infinitesimal Calculus II* (K. Athanassopoulos) - Computer Science Dept., Spring 2007/08

### Teaching assistantship as postgraduate student (Univ. Crete)

- *Methods of Applied Mathematics I* (E. Vairaktaris) - Applied Math Dept., Spring 2004/05
- *Introduction in Applied Mathematics I* (V. Stefanopoulos) - Applied Math Dept., Winter 2004/05

## Publications (In order of submission date)

- *Blow up of solutions for the heat equation with supercritical nonlinearity*. Postgraduate Thesis (in Greek), University of Crete 2005.
- *Hardy inequalities in general domains*. Doctoral Thesis, University of Crete 2011.
- 1.  *$L^1$  Hardy inequalities with weights*.  
**Journal of Geometric Analysis** 23 (4), 1703-1728, 2013.
- 2. *An optimal Hardy-Morrey inequality*.  
**Calculus of Variations and Partial Differential Equations** 45 (3-4), 421-441, 2012.
- 3. *A Leray-Trudinger inequality*. (with D. SPECTOR)  
**Journal of Functional Analysis** 269 (1), 215-228, 2015.
- *On optimal Hardy inequalities in cones*. (with B. DEVYVER and Y. PINCHOVER)  
**Bruno Pini Mathematical Analysis Seminar** 67-82, 2014.
- 4. *Optimal Hardy inequalities in cones*. (with B. DEVYVER and Y. PINCHOVER)  
**Proceedings of the Royal Society of Edinburgh Section A: Mathematics** 147 (1), 89-124, 2017.
- 5. *On positive solutions of the  $(p,A)$ -Laplacian with potential in Morrey space*. (with Y. PINCHOVER)  
**Analysis & PDE** 9 (6), 1317-1358, 2016.
- 6. *The Hardy-Morrey & Hardy-John-Nirenberg inequalities involving distance to the boundary*. (with S. FILIPPAS)  
**Journal of Differential Equations** 261 (6), 3107-3136, 2016.
- 7. *Hardy-Sobolev-Maz'ya and related inequalities in the half-space*.  
**Journal of Elliptic and Parabolic Equations** 3, 127-134, 2017.
- 8. *A weighted anisotropic Sobolev type inequality and its applications to Hardy inequalities*. (with G. DI BLASIO and G. PISANTE)  
**Mathematische Annalen** 379 (3-4), 1343-1362, 2021.
- 9. *Limiting case of an isoperimetric inequality with radial densities and applications*.  
**Communications in Analysis and Geometry** 2022-to appear (draft on hal: 02159701v2)
- 10. *An elementary proof of the one dimensional Poincaré inequality and the Jacobi lemma*.  
(draft on hal: 02873488)
- 11. *Optimal non-homogeneous improvements for the series expansion of Hardy's inequality*. (with K. T. GKIKAS)  
**Communications in Contemporary Mathematics** 24 (8), 2150031, 2022.
- 12. *On weighted  $L^p$ -Hardy inequality on domains in  $\mathbb{R}^n$* . (with D. GOEL and Y. PINCHOVER)  
**Pure and Applied Functional Analysis** 7 (3), 1025-1035, 2022. (Special issue dedicated to SHMUEL AGMON)
- 13. *The optimal Leray-Trudinger inequality*. (with G. DI BLASIO and G. PISANTE)  
Submitted-**arXiv:2208.05430** 2022.

## Service

Reviewer for MathSciNet (since 10/2015) and zbMATH (since 04/2017)

Reviewed over 75 articles and one book so far.

### Referee for articles submitted in:

- Applied and Computational Harmonic Analysis
- Calculus of Variations and Partial Differential Equations
- Complex Analysis and Operator Theory
- Complex Variables and Elliptic Equations
- Czechoslovak Mathematical Journal
- 2× Forum Mathematicum
- 2× Israel Journal of Mathematics
- Journal of Differential Equations
- Journal of Functional Analysis
- Journal of Geometric Analysis
- Journal of Inequalities and Applications
- Journal of Mathematical Analysis and Applications
- Journal of Physics A: Mathematical and Theoretical
- 2× Mathematical Inequalities and Applications
- 2× Nonlinear Analysis
- Partial Differential Equations and Applications
- Potential Analysis
- 4× Proceedings of the Royal Society of Edinburgh Section A: Mathematics
- Pure and Applied Analysis
- Pure and Applied Functional Analysis
- Revista Matemática Iberoamericana
- Transactions of the American Mathematical Society

## Invited talks

- *Optimal Leray-Trudinger inequality*. Summer School in Analysis and PDEs . Dept. of Math. and Physics (DMF), **Univ. Campania “L.V.”**, Italy. 06/07/2022
- *An isoperimetric inequality with radial densities*. (virtual). University of Salerno. **Salerno**, Italy. 04/11/2021
- *Some functional inequalities with geometric content* (virtual). University of Ioannina. **Ioannina**, Greece. 20/11/2020
- *Some functional inequalities with geometric content* (virtual). Aristoteleio University. **Thessaloniki**, Greece. 10/06/2020
- *Inequalities of Hardy-Sobolev type that involve the distance to a point*. Università degli Studi di Napoli Federico II. **Naples**, Italy. 18/07/2018
- *Inequalities of Hardy-Sobolev type that involve the distance to a point*. Math Inst. of LMU. **Munich**, Germany. 23/06/2018
- *The Hardy-Morrey and the Hardy-John-Nirenberg inequalities*. Mini-symposium in Nonlinear PDE’s and Functional Inequalities (hosted by the International Conference on Elliptic and Parabolic Problems held in Gaeta, Italy, 22-26/05/2017). **Gaeta**, Italy. 25/05/2017
- *Inequalities of Hardy-Sobolev type that involve the distance to the boundary*. Math Inst. of LMU. **Munich**, Germany. 29/01/2017
- *The Hardy-Morrey and the Hardy-John-Nirenberg inequalities*. 15th Panhellenic Conference of Mathematics Analysis. **Heraklion**, Greece. 28/05/2016
- *$L^1$  vs  $L^p$  Hardy’s inequality with weights*. A one day workshop on Hardy’s inequalities. **Bologna**, Italy. 18/03/2014
- *Remainder terms in various Hardy inequalities*. Nonlinear Analysis Seminar, Mathematical Institute - Univ. of Cologne, **Cologne**, Germany. 30/01/2012
- *The optimal Hardy-Morrey-Sobolev inequality*. A Weekend of Mathematical Analysis for Young Researchers. Univ. of Athens, **Athens**, Greece. 28/11/2010

## Seminar talks

- *An isoperimetric inequality with radial densities* (virtual). Students Seminar, Faculty of Mathematics - **Univ. Mannheim**, Germany. **27/04/2020**
- *The Kantorovich duality*. Applied Analysis Seminar, Faculty of Mathematics - **Univ. Mannheim**, Germany. **05/03/2019**, **12/03/2019** and **19/03/2019**
- *Dobrushin’s stability theorem and the mean field limit*. Seminar on Kinetic Models, Faculty of Mathematics - **Univ. Mannheim**, Germany. **18/11/2016** and **22/11/2016**
- *Critical Sobolev improvements to Hardy inequalities*. Applied Analysis Seminar, Faculty of Mathematics - **Univ. Mannheim**, Germany. **04/10/2016**
- *Critical Sobolev improvements to Hardy inequalities*. Nonlinear Analysis and Optimization Seminar, Faculty of Mathematics - **Technion**, Israel. **27/04/2014**
- *$L^1$  Hardy’s inequality with weights*. PDEs and Applied Mathematics Seminar, Faculty of Mathematics - **Technion**, Israel. **12/03/2013**

## Other talks

- *Hardy inequalities in general domains*. Univ. of Crete, **Greece**. 13/12/2011
- *Blow up of solutions for the heat equation with supercritical nonlinearity*. Univ. of Crete, **Greece**. 04/10/2005
- *Curvature of hypersurfaces in  $\mathbb{R}^{n+1}$* . Univ. of Crete, **Greece**. 28/06/2005
- *Uniqueness for a scalar conservation law*. Univ. of Crete, **Greece**. 23/06/2004

## Conferences, Schools and Workshops (non virtual)

- Mini workshop: *Effective equations for many particle Coulomb system*. Universität Mannheim, **Germany**. 10-11/01/2020
- Workshop: *Analysis of Effective One-Particle Equations and their Derivation II*. Math. Inst., LMU, Munich, **Germany**. 22-23/06/2018
- Conference: *Recent results on quantum many-body systems*. Haus der Bayerischen Landwirtschaft, Herrsching, **Germany**. 07-09/05/2018
- Mini workshop: *Effective equations for many particle Coulomb system*. Universität Mannheim, **Germany**. 15-16/12/2017
- Modern Trends in Structures Forming Systems. Heidelberg, **Germany**. 07-11/08/2017
- International Conference on Elliptic and Parabolic Problems. Gaeta, **Italy**. 22-26/05/2017
- Workshop: *Spectral Days 2017*. Stuttgart, **Germany**. 03-07/04/2017
- Workshop: *Mean Field Description of Fermionic Systems*. Math. Inst., LMU, Munich, **Germany**. 28-29/01/2017
- Workshop: *Effective One-particle Equations for Fermionic Many-particle Coulomb System: Derivation and Properties*. Universität Mannheim, **Germany**. 22-23/10/2016
- Seminar: *Kinetic Models*. Universität Mannheim, **Germany**. Fall 2016
- 15th Panhellenic Conference of Mathematics Analysis. University of Crete, **Greece**. 27-29/05/2016
- *Contemporary Algebra and Geometry in Greece*. Academic Village of Anogeia, Crete, **Greece**. 25-26/05/2016
- *Espalia 2015*: 3 days in PDEs and calculus of variations between Italy and Spain. Sapienza, Università di Roma, Rome, **Italy**. 17-19/06/2015
- Conference on Algebraic Geometry, Braids, Analysis (on the occasion of Prof. Vladimir Lin's 80th birthday). Technion, Haifa, **Israel**. 18-21/05/2015
- International Conference on Complex Analysis and Dynamical Systems VII. Nahariya, **Israel**. 10-15/05/2015
- Summer School: *Getting started with PDE*. Technion, Haifa, **Israel**. 14-18/09/2014
- Workshop: *Analysis of PDEs: Theory, Methods and Applications*. Protaras, **Cyprus**. 30-03/07/2014
- *A one day workshop on Hardy's inequalities*. Bologna, **Italy**. 18/03/2014
- *New Trends in Calculus of Variations and PDEs*. Accademia Pontaniana, Napoli, **Italy**. 21-23/11/2013
- International Conference on Applied Mathematics. Heraklion, **Greece**. 16-20/09/2013
- Workshop: *Convex Geometric Analysis*. Heraklion, **Greece**. 10-13/09/2012
- Workshop: *Continuum and Kinetic Methods in the Theory of Shocks, Fronts, Dislocations and Interfaces*. ACMAC, Heraklion, **Greece**. 20-24/06/2011
- *A Weekend of Mathematical Analysis for Young Researchers*. Department of Mathematics, University of Athens, **Greece**. 26-28/11/2010
- GNAMPA-ERC Summer School: *Analytic Techniques for Geometric and Functional Inequalities*. Ischia, **Italy**. 13-18/06/2010
- Summer School: *PDEs from Geometry*. University of Cologne, **Germany**. 21-25/07/2008
- Conference: *Discontinuous Change in Behavior Issues in PDEs*. Academic Village of Anogia, Crete, **Greece**. 10-16/06/2006

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## Languages

Greek Native  
English Proficient  
German Upper Intermediate

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## References

- LI CHEN, Professor at the University of Mannheim, Germany  
[chen@math.uni-mannheim.de](mailto:chen@math.uni-mannheim.de)
- STATHIS FILIPPAS, Professor at the University of Crete, Greece  
[filippas@uoc.gr](mailto:filippas@uoc.gr)
- VITALY MOROZ, Professor at the University of Swansea, United Kingdom  
[v.moroz@swansea.ac.uk](mailto:v.moroz@swansea.ac.uk)
- YEHUDA PINCHOVER, Emeritus Professor at the Technion, Israel  
[pincho@technion.ac.il](mailto:pincho@technion.ac.il)
- GIOVANNI PISANTE, Associate Professor at the University of Campania “Luigi Vanvitelli”, Italy  
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