

LUCA DI FAZIO, CURRICULUM STUDIORUM

Born	05/05/1995, Catania (Italy)
Contacts	difazio@mat.uniroma1.it Department of Mathematics <i>Guido Castelnuovo</i> , University of Rome <i>La Sapienza</i> , Piazzale Aldo Moro 5, 00185 Roma Room 22, ground floor, 06 49913406
Position	PhD student. Tutor: Prof. E. N. Spadaro
Research Interests	Thin Obstacle Problem, Regularity in Elliptic PDEs, Geometric Measure Theory

Participation to Schools and Courses

- *Geometric Measure Theory and Applications: From Geometric Analysis to Free Boundary Problems* (**Coming Soon**, Cetraro, Cosenza, September 2nd-6th 2019)
- Workshop *MAR: Metric Analysis & Regularity* (Università degli Studi di Catania, Catania, September 24th-28th 2018)
- *Geometric Measure Theory in Verona* (Cloyster S. Maria delle Vittorie, Verona, June 11th-15th 2018)
- Mathematics Summer School sponsored by SMI (*Università di Perugia*, Department of Mathematics and Informatics, July 24th - August 18th 2017)

Courses	Held by	Final Mark
<i>Introduction to Partial Differential Equations</i>	F. Ferrari, R. Servadei	A
<i>Differential Geometry</i>	F. Mercuri	A

Best Student of the course *Introduction to Partial Differential Equations*

- *Novos Talentos Em Matemática, Introducing Partial Differential Equations to undergraduate students* (Lisbon, July 4th-8th 2016)

Grants and Scholarships

- PhD grant at *Università degli Studi di Roma "La Sapienza"* (Rome, 2018-2021) funded by *European Research Council* (ERC) on the subject "*HiCoS: Higher Codimension Singularities, Minimal Surfaces and the Thin Obstacle Problem*". Supervisor: Prof. E. N. Spadaro
- Grant funded by *INPS*, a.y. 2014-15
- Eligibility to "*Concorso a n. 8 Borse di studio per l'avviamento alla Ricerca riservate a iscritti ai corsi di Laurea Magistrale in Matematica per l'A.A. 2016-17*" (Contest: 8 scholarships for starting research, reserved to master students in Mathematics, a.y. 2016-17) funded by *INdAM* (Rome, October 14th 2016)
- Grant funded by *Foundation Calouste Gulbenkian*, in occasion of the summer school "*Novos Talentos Em Matemática, Introducing Partial Differential Equations to undergraduate students*" (Lisbon, July 4th-8th 2016)
- Grant "*Bando per l'assegnazione di premi di studio riservati a studenti iscritti al corso di laurea della classe L-35 Scienze Matematiche (Matematica)*" (Call for study awards, reserved to bachelor

students in Mathematics, class L-35) a.y. 2013-14, renewed for the a.y. 2014-15 and 2015-16

Participation to Meetings and Conferences

- *New trends in PDEs (Catania, May 29th-30th 2018)*
- *4th Conference on Recent Trends in Nonlinear Phenomena (Accademia Peloritana dei Pericolanti, Messina, September 18th-20th 2017)*
- *Harnack Inequalities and Nonlinear Operators (Palazzone in Cortona (SNS), Arezzo, June 22nd-23rd 2017)*
- *INdAM day 2017 (Messina, June 7th 2017)*
- *3rd Weekend on Variational Methods & Differential Equations (Catania, October 28th-29th 2016)*
- *A day on PDEs, International Conference in Memory of Filippo Chiarenza (Catania, June 14th 2016)*
- *Two-day Meeting on linear and nonlinear PDE's in honor of the 65th birthday of Cristian Gutierrez (Bologna, June 9th-10th 2016)*

Education

Master Degree in Mathematics

Università degli Studi di Catania (Catania, 2016-2018)
Final Mark 110/110 cum Laude (October 4th 2018)

Thesis: *Differentiability Properties and Regularity Estimates for Generalized Weak Solutions of Linear Elliptic PDEs (in English)*
Supervisor: Prof. P. Zamboni (*Università degli Studi di Catania*)
Co-supervisor: Prof. G. S. Alberti (*Università degli Studi di Genova*)
Content: regularity properties for generalized weak solutions of linear elliptic equations in divergence form. We show different results which prove that the weak solution of the Dirichlet problem belongs to the class $W^{2,p}$ under suitable differentiability hypotheses on the coefficients

Bachelor Degree in Mathematics

Università degli Studi di Catania (Catania, 2013-2016)
Final Mark 110/110 cum Laude (October 6th 2016)

Thesis: *An introduction to Calculus of Variations – study of an elastic film and brachistochrone curves in gravity fields (in Italian)*
Supervisor: Prof. S. A. Marano (*Università degli Studi di Catania*)
Co-supervisor: Prof. G. Buttazzo (*Università di Pisa*)
Content: classical topics in the Calculus of Variations, the Dirichlet problem and two physical application: stationary configuration of an elastic film, and brachistochrone curves in a particular case of central force

Scientific High School Diploma

Liceo Scientifico Galileo Galilei (Catania, 2008-2013)
Final Grade 100/100 (2013)

Skills and Expertises

Language Certifications

Japanese Language Proficiency Test (JLPT) N5 (2014)
Japanese Language Proficiency Test (JLPT) N4 (2015)

Math Competitions

Math Olympics (*Olimpiadi della Matematica*, UMI)
Honorable Mention (2011, 2012)

Bronze Medal (2013)

Programming Skills

C, C++, R, Singular