Europass
Curriculum Vitae

Personal informations

NAME	**Francesca De Marchis**
DATE AND PLACE OF BIRTH	born on July 22, 1983 in Rome
NATIONALITY	Italian
STATUS	Married - Two children
E-MAIL	demarchis@mat.uniroma1.it

Current position

INSTITUTION	University of Rome Sapienza
POSITION	assistant professor (Rtd-B)
DATES	since March 2017

Past positions

INSTITUTION	University of Rome Sapienza
POSITION	postdoctoral research fellow
SUPERVISOR	Professor Emanuele Caglioti
DATES	January 2016 - December 2017
MATERNITY LEAVE	August 3, 2016 – February 3, 2017

INSTITUTION	University of Rome Sapienza
POSITION	postdoctoral research fellow
SUPERVISOR	Professor Emanuele Caglioti
DATES	December 2014 - November 2015

INSTITUTION	University of Rome Tor Vergata
POSITION	postdoctoral research fellow
SUPERVISOR	Professor Gabriella Tarantello
DATES	June 2012 - November 2014
MATERNITY LEAVE	September 4, 2013 – March 5, 2014

INSTITUTION	University of Rome Sapienza
POSITION	postdoctoral research fellow
SUPERVISOR	Professor Filomena Pacella
DATES	May 2011 - April 2012

Education

DEGREE	Ph.D. in Mathematical Analysis
INSTITUTION	International School for Advanced Studies (SISSA), Trieste
THESIS	Existence and multiplicity of solutions for problems in Geometrical Analysis
ADVISOR	Professor Andrea Malchiodi
DATES	From November 2007 to October 2010 – Ph.D. Defense 29/10/2010

DEGREE	SISSA's Master Degree (Diploma Percorso Formativo Comune)
INSTITUTION	International School for Advanced Studies (SISSA), Trieste
DATES	October 2005 - March 2008

DEGREE	Master's degree in Mathematics
GRADE	110 out of 110 cum laude
INSTITUTION	University of Trieste
THESIS	Variational methods for a mean field equation on compact surfaces
ADVISOR	Professor Andrea Malchiodi
DATES	October 2005 - July 2007
DEGREE	Bachelor's degree in Mathematics
GRADE	110 out of 110 cum laude
INSTITUTION	University of Rome Sapienza
THESIS	Finite perimeter sets and BV functions
ADVISOR	Professor Luigi Orsina
DATES	October 2002 - July 2005

Grants and Awards

DATE	December 2011
	Prize for the best PhD in Mathematics in memory of "Marco Cuozzo", awarded by University of Rome Tor Vergata.
DATES	November 2007 - October 2010
	Three-years fellowship for Ph.D. course in Mathematical Analysis, instituted by SISSA.
DATES	October 2005 - September 2007
	Two-years fellowship for Master's Degree in Mathematics (Diploma Percorso Formativo Comune), instituted by SISSA, with a curriculum for a high level training in Mathematics.
DATE	October 2005
	"Cesare e Giustina Labonia" Graduation Prize for the best female graduate student in Mathematics in Rome, awarded by FILDIS.
DATE	October 2005
	Prize for the best undergraduate student in Mathematics, awarded by the Department of Mathematics of University of Rome Sapienza.
DATES	October 2002 - September 2005
	Three-years fellowship for Degree in Mathematics, instituted by Istituto Nazionale Di Alta Matematica.

Research visits

DATES	April 2016
INSTITUTION	ETH, Zürich, Switzerland
DATES	May 2015
INSTITUTION	ETH, Zürich, Switzerland
DATES	November 2014
INSTITUTION	Università degli Studi di Napoli, Italy
DATES	October 2014
INSTITUTION	Universidad de Granada, Spain

DATES	January 2013
INSTITUTION	Universität Giessen, Germany
DATES	November 2010 - December 2010
INSTITUTION	SISSA, Italy
DATES	September 2008 - November 2008
INSTITUTION	Princeton University, USA
	During the special Program on Geometric Partial Differential Equations at the IAS

Organization Activity

DATES	February 2015
	Session on *Nonlinear analysis and elliptic PDEs* during the "Congreso de la RSME 2015", Granada, Spain

Projects and groups

AVVIO ALLA RICERCA SAPIENZA 2016	*Nonlinear problems with geometrical or physical motivations*
ROLE	Principal Investigator
PRIN 2015	*Variational methods, with applications to problems in mathematical physics and geometry*
ROLE	Participant (PI: Andrea Malchiodi)
AVVIO ALLA RICERCA SAPIENZA 2015	*Nonlinear PDES with power or exponential type nonlinearities*
ROLE	Principal Investigator
SAPIENZA AWARD 2015	*Nonlinear PDES: qualitative analysis of solutions*
ROLE	Participant (PI: Massimo Grossi)
GNAMPA 2014	*Blow up phenomena for semilinear parabolic problems*
ROLE	Principal Investigator
PRIN 2012	*Variational and perturbation aspects of nonlinear differential problems*
ROLE	Participant (PI: Susanna Terracini)
PROGETTO ATENEO 2012	*Nonlinear differential problems: existence and qualitative properties of solutions*
ROLE	Participant (PI: Filomena Pacella)
FIRB-IDEAS 2009-2013	*Analysis and Beyond*
ROLE	Participant (PI: Andrea Malchiodi)
PRIN 2009	*Nonlinear elliptic problems in the study of vortices and related topics*
ROLE	Participant (PI: Andrea Malchiodi)
INDAM group	GNAMPA
ROLE	Participant, 2009-2016

Publications

AUTHORS	F. De Marchis, R. Lopez Soriano, D. Ruiz
TITLE	*Compactness, existence and multiplicity for the singular mean field problem with sign-changing potentials,*
JOURNAL	submitted paper. arXiv:1612.020801612.02080

AUTHORS	T. D'Aprile, F. De Marchis, I. Ianni
TITLE	*Prescribed Gauss curvature problem on singular surfaces,*
JOURNAL	submitted paper. arXiv:1612.03657

AUTHORS	F. De Marchis, T. Ricciardi
TITLE	*Existence results for turbulent flows with arbitrary intensities,*
JOURNAL	submitted paper. arXiv:1607.07051

AUTHORS	F. De Marchis, I. Ianni, F. Pacella
TITLE	*A Morse index formula for radial solutions of Lane-Emden problems,*
JOURNAL	submitted paper. arXiv:1605.03357

AUTHORS	F. De Marchis, I. Ianni, F. Pacella
TITLE	*Asymptotic profile of positive solutions of Lane-Emden problems in dimension two,*
JOURNAL	J. Fix. Point Theory A. 19 (2017), no. 1, 889-916

AUTHORS	F. De Marchis, I. Ianni, F. Pacella
TITLE	*Asymptotic analysis for the Lane-Emden problem in dimension two,*
JOURNAL	to appear on Lectures Notes of the London Mathematical Society, Proceedings of the CIMPA school in honor of Abbas Bahri. arXiv:1602.06919

AUTHORS	F. De Marchis, I. Ianni, F. Pacella
TITLE	*Exact Morse index computation for nodal radial solutions of Lane–Emden problems,*
JOURNAL	Math. Ann. 367 (2017), no. 1, 185–227

AUTHORS	F. De Marchis, R. Lopez-Soriano
TITLE	*Existence results on the singular Nirenberg problem,*
JOURNAL	Calc. Var. Partial Differential Equations 55 (2016), no. 2, Art. 36, 35 pp.

AUTHORS	F. De Marchis, I. Ianni, F. Pacella
TITLE	*Morse index and sign changing bubble towers for Lane-Emden problems,*
JOURNAL	Ann. Mat. Pura Appl. 195 (2016), no. 2, pp. 357-369.

AUTHORS	F. De Marchis, I. Ianni
TITLE	*Blow up of solutions of semilinear heat equations in non radial domains of $\mathbb{R}^2$,*
JOURNAL	Discrete and Contin. Dyn. Systems - A, 35 (2015), no. 3, 891-907.

AUTHORS	F. De Marchis, I. Ianni, F. Pacella
TITLE	*Asymptotic analysis and sign changing bubble towers for Lane-Emden problems,*
JOURNAL	J. Eur. Math. Soc. 17 (2015), no. 8, 2037-2068.

AUTHORS	D. Bartolucci, F. De Marchis
TITLE	*Supercritical Mean Field Equations on convex domains and the Onsager's statistical description of two-dimensional turbulence,*
JOURNAL	Arch. Ration. Mech. Anal. 217 (2015), no. 2, 525-570.

AUTHORS	F. De Marchis, I. Ianni, F. Pacella
TITLE	*Sign changing solutions of Lane Emden problems with interior nodal line and semilinear heat equations,*
JOURNAL	J. Differential Equations 254, n.8, (2013), pp. 3596-3614.

AUTHORS	D. Bartolucci, F. De Marchis
TITLE	*On the Ambjorn-Olesen Electroweak condensates,*
JOURNAL	J. Math. Phys. 53, n.7, (2012), 073704, 15 pp.

AUTHORS	D. Bartolucci, F. De Marchis, A. Malchiodi
TITLE	*Supercritical conformal metrics on surfaces with conical singularities,*
JOURNAL	Int. Mat. Res. Not., n.24, (2011), 5625-5643.
AUTHOR	F. De Marchis
TITLE	*Multiplicity of solutions for a mean field equation on compact surfaces,*
JOURNAL	Boll. U.M.I., 4, n.2, (2011), 245-257.
AUTHOR	F. De Marchis
TITLE	*Existence and multiplicity of solutions for problems in Geometrical Analysis,*
PHD THESIS	SISSA Trieste, 2010.
AUTHOR	F. De Marchis
TITLE	*Generic multiplicity for a scalar field equation on compact surfaces,*
JOURNAL	J. Funct. Anal., 259, n.8, (2010), 2165-2192.
AUTHOR	F. De Marchis
TITLE	*Multiplicity result for a scalar field equation on compact surfaces,*
JOURNAL	Comm. Partial Differential Equations, 33, n.10-12, (2008), 2208-2224.

Reviewing activity

▷	Referee for Transactions of the American Mathematical Society, Journal of Functional Analysis, Manuscripta Mathematica, Discrete and Continuous Dynamical Systems, Abstract and Applied Analysis, Journal of Fixed Point Theory and Applications, Bollettino UMI, Annali della Scuola Normale Superiore di Pisa.

Invited talks

DATE	May 2017
PLACE	Gaeta, Italy
EVENT	*European conference on elliptic and parabolic problems*
DATE	May 2017
PLACE	Università degli Studi di Roma Sapienza
EVENT	AMACA:Analisi MAtematica al CAstelnuovo
DATE	June 2016
PLACE	Institut Mittag-Leffler, Djursholm, Sweden
EVENT	Summer school *Geometric and physical aspects of Trudinger-Moser type inequalities*
DATE	June 2016
PLACE	Cogne, Italy
EVENT	*International conference on Variational Methods and Nonlinear PDE's*
DATE	May 2016
PLACE	Gaeta, Italy
EVENT	*9th European conference on elliptic and parabolic problems*
DATE	May 2016
PLACE	Torino, Italy
EVENT	*Conference Bruxelles - Torino talks in PDE's*
DATE	April 2016
PLACE	Università degli Studi di Roma Sapienza

DATE	April 2016
PLACE	ETH, Zürich, Switzerland
DATE	September 2015
PLACE	Siena, Italy
EVENT	*XX Congresso dell'Unione Matematica Italiana*
DATE	July 2015
PLACE	Lyon, France
EVENT	*Conference EquaDiff 2015*
DATE	March 2015
PLACE	Università degli Studi di Roma Sapienza
DATE	December 2014
PLACE	Venezia
EVENT	*Two-day meeting in honor of Antonio Ambrosetti*
DATE	November 2014
PLACE	Università degli Studi di Napoli Federico II
DATE	October 2014
PLACE	Universidad de Granada
DATE	July 2014
PLACE	Madrid
EVENT	*AIMS Conference Series on Dynamical Systems and Differential Equations. Special section: Recent trends in nonlinear Schrodinger systems*
DATE	March 2014
PLACE	University of Oxford
EVENT	Workshop *Women in Partial Differential Equations & Calculus of Variations*
DATE	May 2013
PLACE	Università di Roma Tor Vergata
DATE	January 2013
PLACE	Universität Giessen
DATE	January 2012
PLACE	Università degli Studi di Roma Sapienza
DATE	January 2012
PLACE	TATA Institute of Fundamental Research, Bangalore
EVENT	School *Cocompact embeddings, profile decompositions, and their applications to PDE*
DATE	December 2011
PLACE	Università di Roma Tor Vergata
EVENT	Workshop *New entries at Tor Vergata 2011*
DATE	November 2011
PLACE	Pienza
EVENT	Workshop *Nonlinear Differential Equations*

DATE	May 2011
PLACE	Università degli Studi di Roma Sapienza
DATE	May 2010
PLACE	ULB, Bruxelles
EVENT	Spring School in *Nonlinear Partial Differential Equations*
DATE	October 2009
PLACE	CIRM, Luminy
EVENT	Workshop *Loss of compactness in nonlinear problem: new trends and applications*
DATE	August 2009
PLACE	SMI, Cortona
EVENT	Summer school in *Geometric Aspects in Non-Linear Analysis*
DATE	May 2009
PLACE	Centro De Giorgi, Pisa
EVENT	Trimester on *Geometric Flows and Geometric Operators*

Posters

DATE	January 2011
PLACE	Istituto Canossiano, Venezia
EVENT	*Variational and perturbative methods for nonlinear differential equations*
DATE	March 2009
PLACE	CIRM, Luminy
EVENT	Workshop *Aspects géométriques des equations aux derivées partielles*

Teaching experiences

DATES	winter semester A.Y. 2015/2016
ASSIGNMENT	Teaching assistant for the course *Mathematical Analysis II*, Department of Mathematics, University of Rome Sapienza
DATES	winter semester A.Y. 2015/2016
ASSIGNMENT	Teaching assistant for the course *Mathematical Analysis I*, Faculty of Engineering, University of Rome Tor Vergata
DATES	September 2015
ASSIGNMENT	Precorso di Matematica, Faculty of Architecture, University of Rome Sapienza
DATES	spring semester A.Y. 2014/2015
ASSIGNMENT	Teaching assistant for the course *Mathematical Analysis I*, Department of Mathematics, University of Rome Sapienza
DATES	winter semester A.Y. 2014/2015
ASSIGNMENT	Teaching assistant for the course *Mathematical Analysis I*, Faculty of Engineering, University of Rome Tor Vergata
DATES	September 2014
ASSIGNMENT	Precorso di Matematica, Faculty of Architecture, University of Rome Sapienza

April 26, 2017

DATES	winter semester A.Y. 2012/2013
ASSIGNMENT	Teaching assistant for the course *Mathematical Analysis II*, Department of Industrial Engineering, University of Rome Tor Vergata
DATES	winter semester A.Y. 2011/2012
ASSIGNMENT	Tutoraggio OFA (Obblighi Formativi Aggiuntivi), Faculty of Sciences, University of Rome Sapienza
DATES	September 2011
ASSIGNMENT	Precorso di Matematica, Faculty of Architecture, University of Rome Sapienza
DATES	spring semester A.Y. 2010/2011
ASSIGNMENT	Teaching assistant for the course *Algebra I*, Department of Mathematics, University of Rome Sapienza
DATES	November – December 2010
ASSIGNMENT	Minicourse of 4 seminars: *Some results on Liouville-type equations*, SISSA, Trieste
DATES	spring semester A.Y. 2009/2010
ASSIGNMENT	Teaching assistant for the course *Meccanica Analitica*, Department of Mathematics and Informatics, University of Trieste