

CURRICULUM VITAE

PERSONAL INFORMATION

Name: Serena
Surname: Federico
Date of birth: 01/11/87
Place of birth: Crotone, Italy
Nationality: Italian
Address: University of Bologna, Department of Mathematics, Piazza di Porta San Donato 5, 40126, Bologna (BO), Italy.
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RESEARCH INTERESTS

Local solvability of Partial differential equations, Degenerate Partial differential operators, Pseudo-differential operators, a priori estimates, Microlocal Analysis, Hypocoellipticity, Carleman estimates, dispersive equations.

ACTUAL POSITION

03/2017 - now: Research Fellow in Mathematics, University of Bologna, Italy.

EDUCATION

2013-2017 PhD in Mathematics, University of Bologna, Italy.
Title of the thesis: *Local solvability of a class of degenerate second order operators.*
Supervisor: Prof. Alberto Parmeggiani.
Date of defense: 30/01/2017. Committee: M. Cicognani, D. Del Santo, G. Mendoza.

2010-2012 Master Degree in Mathematics, University of Bologna, Italy.
Title of the thesis: *Convolution equations.*
Supervisor: Prof. A. Parmeggiani.

2006-2010 Bachelor Degree in Mathematics, University of Bologna, Italy.
Title of the thesis: *Il metodo COS per la valutazione dei derivati.*
Supervisor: Prof. Andrea Parcucci.

TEACHING ACTIVITY

2017-2018 Teaching assistant for the course of Analysis 2 of Prof. Fausto Ferrari and Prof. Alberto Parmeggiani, Bachelor of Science in Electronics and Telecommunication Engineering and Bachelor of Science in Chemical and Biochemical Engineering, University of Bologna.

2016-2017 Teaching assistant for the course of Analysis 1 of Prof. Annalisa Baldi,

	Bachelor of Science in Electrical Engineering, University of Bologna.
2015-2016	Teaching assistant for the course of Analysis 2 of Prof. Carlo Ravaglia, Bachelor of Science in Computer Engineering, University of Bologna.
2015-2016	Teaching assistant for the course of General Mathematics of Prof. Alberto Parmeggiani, Bachelor of Economics in Management and Marketing, University of Bologna.
2014-2015	Teaching assistant for the course of General Mathematics of Prof. Alberto Parmeggiani, Bachelor of Economics in Management and Marketing, University of Bologna.
2014-2015	Teaching assistant for the course of Analysis 1 of Prof. Carlo Ravaglia, Bachelor of Science in Computer Engineering, University of Bologna.
2013-2014	Teaching assistant for the course of Analysis 2 of Prof. Carlo Ravaglia, Bachelor of Science in Computer Engineering, University of Bologna.

OTHER TITLES

Qualification à maître de conférences sections 25 et 26 campagne 2018.

LANGUAGES

Italian: mother tongue

English: fluent

RESEARCH VISITS

Jan 2016 -Apr 2016 Visiting student at the Massachusetts Institute of Technology, Cambridge, Massachusetts.
Tutor: Prof. Gigliola Staffilani.

GIVEN SEMINARS

March 2017	<i>Local solvability of a class of degenerate second order operators</i> , Bruno Pini Analysis Seminar, University of Bologna, Italy.
June 2016	<i>Local solvability of a class of degenerate second order operators with smooth and non smooth coefficients</i> , Graduate Student Seminar, Centre d'analyse et de mathématique sociales (CAMS), Paris.
March 2016	<i>Local solvability of a class of degenerate second order operators with smooth and non smooth coefficients</i> , Analysis Seminar, Temple University, Philadelphia.
March 2016	<i>Local and global well-posedness for the $H^1(\mathbb{R}^n)$ subcritical nonlinear Schrödinger</i> , Graduate Student Seminar, Temple University, Philadelphia.
May 2013	<i>Weighted estimates for the $\bar{\partial}$-operator</i> , Analysis Seminar, University of Bologna
May 2013	<i>Compactness of the $\bar{\partial}$-operator</i> , Analysis Seminar, University of Bologna.

CONFERENCES AND SCHOOLS

30 Nov-1 Dec *Simposio di Analisi Matematica in occasione dei 70 anni di Ferruccio*

2017	<i>Colombini, Pisa.</i>
17-28 July 2017	Summer graduate School: <i>Nonlinear dispersive PDE, quantum many particle systems and the world between</i> , Cortona, Italy.
12-15 Sept 2017	Summer School: <i>Harmonic Analysis, Spectral Theory and PDE's</i> , Rome, Italy.
9-10 June 2016	<i>Two-day Meeting on linear and nonlinear PDE's in honor of the 65th birthday of Cristian Gutierrez</i> , Bologna, Italy.
14-18 Sept 2015	<i>Shocks, Singularities and Oscillations in Nonlinear Optics and Fluid Mechanics</i> , INDAM, Rome.
9-11 June 2015	<i>2th Advanced Course in Operator Theory and Complex Analysis</i> , Bologna.
9-11 March 2015	<i>School/Workshop Phase transition problems and nonlinear PDEs</i> , Bologna.
4-6 March 2015	<i>Mini-courses and workshop on Geometric Analysis in the Heisenberg group</i> , Bologna.
22-24 Jan 2014	<i>Fifth Itinerant Workshop on PDEs</i> , De Giorgi Center, Pisa.
1-4 July 2014	<i>Linear and Nonlinear Hyperbolic Equations</i> , De Giorgi Center, Pisa.
15-16 March 2013	<i>Proprietà Geometriche Microlocali delle Equazioni alle Derivate Parziali</i> , Cesena.

PUBLICATIONS

- S. Federico, A. Parmeggiani, *On the local solvability of a class of degenerate second order operators with complex coefficients*, submitted.
- S. Federico, *Local solvability of a class of degenerate second order operators*, Bruno Pini Mathematical Analysis Seminar, Vol. 8 (2017) 185-203.
- S. Federico, *A model of solvable second order PDE with non smooth coefficients*, J. Math. Anal. Appl. 440 (2016) 661-676.
- S. Federico, A. Parmeggiani, *Local solvability of a class of degenerate second order operators*, Comm. Partial Differential Equations 41 (03) (2016) 484-514.