

MARCO SANSOTTERA

Curriculum Vitae

2012.11.12

Personal Information

Name: Marco

Surname: Sansottera

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Email (personal): marco.sansottera@gmail.com

Nationality: Italian

Date of birth: 1983.03.29

Current position

2011.10.01 – now FSR Postdoctoral Researcher at the University of Namur (FUNDP). “FSR Incoming Post-doctoral Fellowship of the Académie universitaire Louvain, co-funded by the Marie Curie Actions of the European Commission”.

Research experience

2011.11.25 Awarded of a “INdAM-COFUND Fellowship in Mathematics and/or Application for Experienced Researchers cofunded by Marie Curie” outgoing type (not accepted because already beneficiary of a “FSR Incoming Post-doctoral Fellowship co-funded by the Marie Curie Actions”).

2010.11.01 – 2011.04.30 Post-Doctoral position at the University of Rome “Tor Vergata”. Research project: “Stabilità dei sistemi planetari, aspetti teorici e computazionali” (i.e., “Stability of planetary systems, theory and computations”), under the direction of Dr. U. Locatelli.

2007.11.05 – 2011.02.11 Ph.D. in Mathematics at the University of Milan with full marks and honors (i.e., the highest possible grade in the Italian system). Thesis: “Effective Stability of Hamiltonian Planetary Systems”. Supervisors: Prof. A. Giorgilli and Dr. U. Locatelli.

Teaching experience

Academic year 2012 Charge of the course “Applications des systèmes dynamique” at the Second Master in Mathematics, University of Namur (FUNDP).

Second semester 2009 Teaching assistant of the course “Metodi e Modelli Matematici per le Applicazioni” (i.e., “Mathematical Methods and Model for Applications”) charged by Dr. S. Paleari at the third year of the “Laurea triennale” in Mathematics, University of Milan.

First semester 2009 Charge of the course “MiniMat” (i.e., “Introduction to Mathematics”) at the University of Milan.

First semester 2008 Charge of the course “MiniMat” (i.e., “Introduction to Mathematics”) at the University of Milan.

Education

2005.07.22 – 2007.07.16 Master degree (“Laurea Specialistica”) in Mathematics at the University of Milano-Bicocca with full marks and honors (i.e., the highest possible grade in the Italian system). Thesis: “Stabilità nel senso di Nekhoroshev di tori KAM” (i.e. “Stability in Nekhoroshev sense of KAM tori”). Supervisors: Prof. A. Giorgilli and Dr. U. Locatelli.

2002.09.17 – 2005.07.18 Bachelor degree (“Laurea di Primo Livello”) in Mathematics at the University of Milano-Bicocca with full marks and honors (i.e., the highest possible grade in the Italian system). Thesis: “Funzioni a variazione limitata” (i.e. “Function of bounded variations”). Supervisor: Prof. A. Cellina.

Talks at National and International Conferences

- [1] “*On the secular evolution of extrasolar planetary systems*” at the “Dynamics, Topology and Computations (DyToComp)”, Będlewo, Poland (2012).
- [2] “*On the secular evolution of extrasolar planetary systems*” at the “Tenth Workshop on Interactions Between Dynamical Systems and Partial Differential Equations (JISD 2012)”, Barcelona, Spain (2012).
- [3] “*On the secular evolution of extrasolar planetary systems*” at the “Annual meeting Graduate School Complex”, Bruxelles, Belgium (2012).
- [4] “*Explicit Construction of Elliptic Tori for Planetary Systems*” at the “8th Alexander von Humboldt Colloquium for Celestial Mechanics”, Bad Hofgastein, Salzburg, Austria (2010).
- [5] “*Explicit Construction of Elliptic Tori for Planetary Systems*” at the “Applications of Computer Algebra, (ACA’10)”, Vlora, Albania (2010).
- [6] “*Towards stability results for planetary problems with more than three bodies*” at the “Computer Algebra and Differential Equations (CADE 2009)”, Pamplona, Spain (2009).
- [7] “*Towards stability results for planetary problems with more than three bodies*” (joint talk with Dr. U. Locatelli) at the “CELMEC V, The Fifth International Meeting on Celestial Mechanics”, San Martino al Cimino, Viterbo, Italia (2009).

Lectures at Schools

- [1] “*Methods of algebraic manipulation in perturbation theory*” at the “Third La Plata International School on Astronomy and Geophysics”, La Plata, Argentina (2011).

Attended Conferences, Workshops and Schools

- [1] “Dynamics, Topology and Computations (DyToComp)”, Będlewo, Poland (2012).
- [2] “Tenth Workshop on Interactions Between Dynamical Systems and Partial Differential Equations (JISD 2012)”, Barcelona, Spain (2012).
- [3] “Annual meeting Graduate School Complex”, Bruxelles, Belgium (2012).
- [4] “8th Alexander von Humboldt Colloquium for Celestial Mechanics”, Bad Hofgastein, Salzburg, Austria (2011).
- [5] “XXXV Scuola Estiva di Fisica Matematica”, Ravello, Italy (2010).
- [6] “Applications of Computer Algebra, (ACA’10)”, Vlora, Albania (2010).
- [7] “Emerging Topics in Dynamical Systems and Partial Differential Equations (DSPDEs’10)”, Barcelona, Spain (2010). [poster]

- [8] “Computer Algebra and Differential Equations (CADE 2009)”, Pamplona, Spain (2009).
- [9] “Assemblea Scientifica G.N.F.M.”, Montecatini Terme, Pistoia, Italy (2009).
- [10] “CELMEC V, The Fifth International Meeting on Celestial Mechanics”, San Martino al Cimino, Viterbo, Italia (2009).
- [11] “New Connections between Dynamical Systems and PDEs” Naples, Italy (2009)
- [12] “Workshop on Stability and Instability in Mechanical Systems: Applications and Numerical Tools”, Barcelona Spain (2008)
- [13] “Advanced Course on Specific Algebraic Manipulators”, Barcelona, Spain (2007)

Papers and preprints

- [1] M. Sansottera, U. Locatelli and A. Giorgilli: “*On the convergence of an algorithm constructing the normal form for lower dimensional elliptic tori in planetary systems*”, preprint (2012).
- [2] A.-S. Libert and M. Sansottera: “*On the extension of the Laplace-Lagrange secular theory to order two in the masses for extrasolar systems*”, submitted (2012).
- [3] A. Giorgilli and M. Sansottera: “*Methods of algebraic manipulation in perturbation theory*”, Workshop Series of the Asociacion Argentina de Astronomia, **3**, 147–183 (2011).
- [4] M. Sansottera, U. Locatelli and A. Giorgilli: “*A Semi-Analytic Algorithm for Constructing Lower Dimensional Elliptic Tori in Planetary Systems*”, Celestial Mechanics and Dynamical Astronomy, Volume 111, Number 3, 337–361 (2011). DOI: 10.1007/s10569-011-9375-x
- [5] M. Sansottera, U. Locatelli and A. Giorgilli: “*On the stability of the secular evolution of the planar Sun-Jupiter-Saturn-Uranus system*”, *Mathematics and Computers in Simulation* (2011). DOI: 10.1016/j.matcom.2010.11.018
- [6] A. Giorgilli, U. Locatelli and M. Sansottera: “*Su un’estensione della teoria di Lagrange per i moti secolari*”, Rendiconti dell’Istituto Lombardo Accademia di Scienze e Lettere, Volume 143, 221–238 (2010).
- [7] A. Giorgilli, U. Locatelli and M. Sansottera: “*Kolmogorov and Nekhoroshev theory for the problem of three bodies*”, Celestial Mechanics and Dynamical Astronomy, Volume 104, Numbers 1-2, 159-173 (2009). DOI: 10.1007/s10569-009-9192-7

Additional Informations

IT Skills Experienced in C, FORTRAN, Mathematica, Maple, Matlab, CUDA and other mathematical software. T_EXnician and GNU/Linux expert.

Languages Italian (mothertongue); English (fluent); French (intermediate level).

Other Active member of Debianitalia (<http://www.debianitalia.org/>) and ILDN (Italian Linux Distro Network, <http://www.ildn.net/>), two Italian projects that aim to spread GNU/Linux and Free Software in Italy.