

## CURRICULUM VITAE

MARCO MAZZUCHELLI

### Contact Details

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### Personal Data

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*Date of birth:* May 24, 1981

*Place of birth:* Legnano (Italy)

*Citizenship:* Italian

*Spoken languages:* Italian (native speaker), English, French and Spanish (fluent)

### Employment

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*Aug. 2011 – June 2014:* **Pennsylvania State University** (University Park, Pennsylvania)  
S. Chowla Research Assistant Professorship

*Sep. 2010 – Aug. 2011:* **École Normale Supérieure de Lyon** (France)  
Postdoctoral fellowship

*Sep. 2009 – Aug. 2010:* **Max Planck Institute for Mathematics in the Sciences** (Leipzig, Germany)  
Postdoctoral fellowship

### Education

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*2006 – 2009:* **Università di Pisa** (Italy)  
Ph.D. in Mathematics  
*Advisor:* Prof. Alberto Abbondandolo  
*Thesis title:* Periodic orbits of Tonelli Lagrangian systems  
*Defense date:* July 29, 2009

*2003 – 2005:* **Politecnico di Milano** (Italy)  
M.A. in Computer Engineering (score 110/110 cum laude)  
*Advisor:* Prof. Alessandra Cherubini  
*Thesis title:* Application of automata theory to the word problem in inverse semigroups (*in italian*)

*2000 – 2003:* **Politecnico di Milano** (Italy)  
B.A. in Computer Engineering (score 110/110 cum laude)

## Publications and Preprints

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### Papers:

- **On the multiplicity of isometry-invariant geodesics on product manifolds**  
*submitted for publication*
- **A simple proof of the Conley conjecture for Hamiltonian diffeomorphisms  $C^1$ -close to the identity**  
*submitted for publication*
- **On the multiplicity of non-iterated periodic billiard trajectories**  
Pacific Journal of Mathematics **252** (2011), no. 1, 181–205
- (with Peter Albers) **Periodic bounce orbits of prescribed energy**  
International Mathematics Research Notices **2011**, no. 14, 3289–3314
- **The Lagrangian Conley Conjecture**  
Commentarii Mathematici Helvetici **86** (2011), no. 1, 189–246
- (with Alessandra Cherubini) **On the Decidability of the Word Problem for Amalgamated Free Products of Inverse Semigroups**  
Semigroup Forum **76** (2008), no. 2, 309–329

### Books:

- **Critical Point Theory for Lagrangian Systems**  
Progress in Mathematics, vol. **293** (2011), Birkhäuser

## Visiting Periods

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- Dec. 2010:* **Purdue University** (West Lafayette, Indiana)  
Visiting Peter Albers.
- Apr. 2010:* **Institute for Advanced Study** (Princeton, New Jersey)  
Visiting Peter Albers.
- Feb. 2010:* **Centro de Investigación en Matemáticas** (Guanajuato, Mexico)  
Visiting Gonzalo Contreras.
- May 2009 – June 2009:* **Max Planck Institute for Mathematics in the Sciences** (Leipzig, Germany)  
Visiting researcher, supported by Vigoni Grant.
- Dec. 2008:* **Universität Leipzig** (Germany)  
Visiting researcher in the symplectic topology group directed by Matthias Schwarz.
- Sep. 2007 – June 2008:* **Stanford University** (California)  
Visiting researcher in the symplectic topology group directed by Yakov Eliashberg.

## Invited Talks

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- Feb. 29, 2012:* **Symplectic Dynamics Seminar**  
Institute for Advanced Study, Princeton (New Jersey)
- Nov. 14, 2011:* **Center for Dynamics and Geometry Seminar**  
Penn State University (University Park, Pennsylvania)
- Sep. 16, 2011:* **Topology/Geometry Seminar**  
Penn State University (Altoona, Pennsylvania)

- June 24, 2011:* **Summer school on Closed orbits and variational methods**  
Université de Neuchâtel (Switzerland)
- May 13, 2011:* **Séminaire Géométries**  
Institut Camille Jordan (Lyon, France)
- Mar. 10, 2011:* **Séminaire de Topologie, Géométrie et Algèbre**  
Laboratoire de Mathématiques Jean Leray, Nantes (France)
- Feb. 24, 2011:* **Séminaire KAM Faible**  
École Normale Supérieure de Lyon (France)
- Jan. 21, 2011:* **Séminaire Gaston Darboux**  
Université Montpellier 2 (France)
- Dec. 7, 2010:* **Department of Mathematics Colloquium**  
Purdue University, West Lafayette (Indiana)
- Dec. 2, 2010:* **Symplectic Geometry Seminar**  
Purdue University, West Lafayette (Indiana)
- Oct. 10, 2010:* **Rencontre KAM faible**  
Calvi (France)
- Oct. 7, 2010:* **Séminaire KAM faible**  
Université d'Avignon (France)
- June 9, 2010:* **Conference "Symplectic Geometry with Algebraic Techniques"**  
Instituto Superior Técnico, Lisbon (Portugal)
- Apr. 20, 2010:* **Geometry - Dynamical Systems Seminar**  
Institute for Advanced Study, Princeton (New Jersey)
- Feb. 11, 2010:* **Seminario de Sistemas Dinamicos**  
CIMAT, Guanajuato (Mexico)
- Oct. 28, 2009:* **Dynamic Analysis Seminar**  
VU University, Amsterdam (Netherlands)
- June 23, 2009:* **SFB Colloquium**  
Berlin (Germany)
- June 22, 2009:* **Lecture Event**  
Humboldt Universität, Berlin (Germany)
- May 25, 2009:* **Max Planck Institute for Mathematics in the Sciences**  
Leipzig (Germany)
- May 18, 2009:* **Bruxelles-Köln seminar on symplectic and contact geometry**  
Université Libre de Bruxelles (Belgium)
- Nov. 13, 2008:* **Seminario del Departamento de Geometría**  
Universidad Complutense (Madrid, Spain)
- Oct. 21, 2008:* **Progressi Recenti in Geometria Reale e Complessa**  
Levico (Italy)
- Mar. 10, 2008:* **Symplectic Geometry Seminar**  
Stanford University (California)
- Aug. 3, 2007:* **Scuola Matematica Interuniversitaria**  
Cortona (Italy)

## Workshops, Conferences and Schools attended

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- Oct. 10–14, 2011:* **Workshop on Symplectic Dynamics**  
Institute for Advanced Study, Princeton (New Jersey)
- Aug. 1–5, 2011:* **Workshop on Conservative Dynamics and Symplectic Geometry**  
IMPA, Rio de Janeiro (Brazil)
- June 21–25, 2011:* **Summer school on Closed orbits and variational methods**  
Université de Neuchâtel (Switzerland)
- May 30 – June 10, 2011:* **Summer school in Contact and Symplectic topology**  
Laboratoire de Mathématiques Jean Leray, Nantes (France)
- May 23–27, 2011:* **Thematic week on generating functions**  
Laboratoire de Mathématiques Jean Leray, Nantes (France)
- Jan. 27–29, 2011:* **Workshop on Symplectic Geometry, Contact Geometry, and Interactions**  
Uppsala Universitet (Sweden)
- Nov. 8–12, 2010:* **From Dynamical Systems to Symplectic Topology**  
ETH Zurich (Switzerland)
- Oct. 9–14, 2010:* **Rencontre KAM faible**  
Calvi (France)
- June 14–23, 2010:* **Jornades d'introducció als sistemes dinàmics i a les EDP's**  
Universitat Politècnica de Catalunya, Barcelona (Spain)
- June 9–12, 2010:* **Symplectic Geometry with Algebraic Techniques**  
Instituto Superior Técnico, Lisbon (Portugal)
- Oct. 19–23, 2009:* **Fall School in Weak Kam Theory**  
CIRM, Luminy (France)
- Aug. 3–7, 2009:* **Workshop on Conservative Dynamics and Symplectic Geometry**  
IMPA, Rio de Janeiro (Brazil)
- Nov. 24–26, 2008:* **Automata Theoretic Methods in Algorithmic Algebra**  
Comenius University, Bratislava (Slovak Republic)
- Oct. 20–24, 2008:* **Progressi Recenti in Geometria Reale e Complessa**  
CIRM, Levico Terme (Italy)
- June 9–13, 2008:* **Contact structures, dynamics and the Seiberg-Witten equations in dimension 3**  
MSRI, Berkeley (California)
- May 19–23, 2008:* **Workshop on Floer Theory and Symplectic Dynamics**  
Centre de Recherches Mathématiques, Montreal (Canada)
- July 15 – Aug. 3, 2007:* **Geometry and Analysis of Manifolds with Reduced Holonomy**  
Cortona (Italy)

## Scientific Activity

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### Referee for:

- Discrete and Continuous Dynamical System - Series A (AIMS)
- Geometriae Dedicata (Springer)
- International Mathematics Research Notices (Oxford Journals)
- Journal of Fixed Point Theory and Applications (Birkhäuser)
- Journal of Functional Analysis (Elsevier)
- Journal of Geometric Analysis (Springer)
- Journal of Symplectic Geometry (International Press)

- Journal of Topology and Analysis (World Scientific)
- Proceedings of the Edinburgh Mathematical Society (Cambridge University Press)

## Teaching Activity

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*2011/2012:* **Instructor at Penn State University:**

Math 220: Matrices

*2008/2009:* **Teaching assistant at Università di Pisa:**

Calculus and Statistics (Prof. Marco Abate)

*2007/2008:* **Course coordinator at Stanford University:**

Math 51: Linear Algebra and Multivariable Calculus

**Grader for graduate classes at Stanford University:**

Math 210A: Algebra (Prof. James Milgram),

Math 217A: Differential Geometry (Prof. Richard Schoen),

Math 227: Partial Differential Equations and Diffusion Processes (Prof. James Nolen)