

Dr. Gabriele Benedetti

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Date of birth: 16/06/1987
Nationality: Italian
Gender: Male

Field of research

I study those dynamical features of a Hamiltonian system that are related with the symplectic topology and geometry of the underlying phase space, using tools from the calculus of variation. As a concrete example, I am interested in the motion of a charged particle in a magnetic field.

Post-doctoral appointments

- 2016 – 2022 **Universität Leipzig – Academic Assistant**
Part of the Differential Geometry group led by prof. Hans-Bert Rademacher.
- 2014 – 2016 **WWU Münster – Postdoctoral fellowship**
Part of the Symplectic Geometry group led by prof. Peter Albers and prof. Kai Zehmisch.
Supported by the grant “SFB 878: Groups, Geometry & Actions”.

Education

- 2011 – 2014 **University of Cambridge – PhD in Pure Mathematics.**
- *Title of the thesis:* The contact property for magnetic flows on surfaces.
- *Advisor:* prof. Gabriel P. Paternain.
- 2006 – 2011 **Scuola Normale Superiore di Pisa – Diploma di Licenza.**
- *Title of the final dissertation:* Exact magnetic flows on closed orientable surfaces.
- 2009 – 2011 **University of Pisa – M.Sc. Mathematics.**
- *Title of the thesis:* An approach to the Weinstein conjecture via J-holomorphic curves.
- *Advisor:* prof. Alberto Abbondandolo.
- 2006 – 2009 **University of Pisa – B.Sc. Mathematics.**
- *Title of the thesis:* The Peter-Weyl Theorem for compact groups and their homogeneous spaces (in Italian).
- *Advisor:* prof. Fulvio Ricci.

Awarded scholarships

- 2011 – 2014 External Research Scholarship at Trinity College (Cambridge).
2006 – 2011 5 years full support studentship at Scuola Normale Superiore di Pisa.

Invited Talks

- 2018 *A minicourse on "Systolic inequalities in contact and symplectic geometry"*.
Winter school in Hamiltonian dynamics and symplectic topology, University of Padova.
- 2017 *Systolic inequalities in contact and symplectic geometry*.
Workshop on Conservative Dynamics and Symplectic Geometry, IMPA, Rio de Janeiro
- 2016 *The Bangert's Waist Theorem for magnetic flows*.
Bochum-Dortmund joint Differential Geometry Seminar
- 2015 *The Lusternik-Fet Theorem for magnetic flows*.
Non-linear Analysis Seminar, Gdańsk University of Technology
A minicourse on "Critical point theory for the free-period Lagrangian action functional and its applications to the study of periodic orbits of magnetic flows".
CIMPA Research School 2015 - Hamiltonian and Lagrangian Dynamics
- 2014 *Contact property and Symplectic Cohomology of non-exact magnetic flows on the two-sphere*.
Symplectic Geometry Seminar, WWU Münster
Differential Geometry Seminar, University of Cambridge.
Seminario di Analisi e Sistemi Dinamici, Università degli studi Roma 3.
- 2013 *Contact property of symplectic magnetic flows on the two-sphere*.
Algebraic and Symplectic Geometry Seminar, University of Oxford.
Séminaire de géométrie et dynamique, ENS Lyon.
Periodic motions of dynamical systems preserving a volume form.
Junior Geometry Seminar, Imperial College, London.
A mathematical introduction to Catastrophe Theory.
Joint mathematics-chemistry seminar on *Catastrophe Theory*, University of Cambridge.

Organizational experience

- 2014 – 2015 Co-organizer of the *Symplectic Geometry Seminar* at WWU-Münster.
2012 – 2013 Co-organizer of the meeting *Research groups in Cambridge* for the differential geometry and topology group, where PhD students presented their research to master students.

Languages

Italian (Native), **English** (Proficient), **German** (Proficient).

Last updated: June 28, 2017