Curriculum Vitae of **Dario Bambusi**

PROFESSIONAL AND PERSONAL DATA

1961, February 15: Date of birth.

1986: degree in Physics at ``Università degli studi di Milano'' (cum Laude).

1990: researcher in Mathematical Physics at ``Università degli studi di Milano".

2001: associate professor in Mathematical Physics at ``Universita' degli studi di Milano".

2002: full professor in Mathematical Physics at ``Universita' degli studi di Milano".

ACKNOWLEDGEMENTS

Finzi award 2003 (Istituto Lombardo, Accademia di scienze e lettere).

Invitation to give a talk at ICMP2003.

2013 Socio corrispondente of "Istituto Lombardo, Accademia di scienze e Lettere"

I have been invited to give talks at many international conferences and Universities (I would say around 100).

RESPONSABILITIES

President of the ``Consiglio di Corso di Laurea di Matematica" 2009-2013.

Member of the Academic Senate since 2015.

Member of the "Consiglio scientifico del Gruppo Nazionale di Fisica Matematica" Since July 2017.

CONFERENCE AND WORKSHOP ORGANIZATION (main events)

SPT2001 (Symmetry and Perturbation Theory 2001), in collaboration with G. Gaeta, at Cala Gonone, Sardinia.

``Workshop CMI Symposium and EuroWorkshop on Hamiltonian Systems" in collaboration with W. Craig, S. Kuksin, C.E. Wayne (2001: ICMS, Edinburgh).

``Workshop on Hamiltonian Dynamical systems" in collaboration with W. Craig, S. Kuksin, C.E. Wayne, E. Zehnder (2004: CRM, Montreal).

NATO's Summer School ``Hamiltonian Dynamical Systems and applications" Motreal, June 18-29, 2007 (in collaboration with Walter Craig (Hamilton) Sergei Kuksin (Edimburgo) Anatoly I. Neistadt (Mosca).

Dinamica classica e fondamenti della fisica, Padova 2009, October 16-18 (in collaboration with A. Ponno, D.Noja, A.Posilicano, G.Benettin, a.Giorgilli).

Three Dispersive Days in Milano: 2009, November 11 to 13 (in collaboration with Susanna Terracini).

Solitary and dispersive days, Milano, 2010 December 13-17 (With Susanna Terracini.

Nonlinear Hamiltonian PDEs, Ascona, July 1 - 6, 2012 (with Thomas Kappeler, Joachim Krieger, Wilhelm Schlag).

KAM and dispersive methods in Hamiltonian PDEs - Milano, December 1-3, 2014

Summer school "Normal forms and large time behavior for nonlinear PDE", Nantes, June, 22nd to July, 3rd 2015 (in collaboration with Benoit Grebert).

Localization and reducibility in Hamiltonian PDE and Quantum Mechanics, Milano, December 16-18, 2015.

I am organizing "Hamiltonian PDEs: KAM, Reducibility, Normal Forms and Applications", (CMO, Oaxaca) Jun 09 - Jun 14, 2019 (in collaboration with M.Correggi, B. Grebert, C. Villega-Blas), funded by BIRS-CMO.

GRANTS

2001-2018 responsible of the local grant of the group of ``Mathematical Physics of Univeristà di Milano"

PI of a national project funded by Miur (ministry for the scientific research) under the project call COFIN2005. (Local team leaders Dario Bambusi, Giancarlo Benettin, Diego Noja, Stefano Marmi).

2007-2012 Responsible for Italy of the GDRE project GREFI-MEFI for the collaboration between Italy and France (the scientific staff counts some hundreds of researchers).

2016- now: Member of the scientific commettee of LYSM (a GDRE project).

DIDACTICS

Since 1990 I have been teaching Mathematical Physics and/or Calculus in different courses, including Mathematics and Physics, both in ``Laurea Triennale" and ``Laurea Magistrale"

2016 Phd course on redubility and KAM theory for PDEs at UNIMI.

2017 Phd course on redubility and KAM theory for PDEs at SISSA.

I have been the supervisor of more than 40 thesis in Mathematics or Physics at degree level, and 7 PHD thesis in Mathematics (Paleari, Muraro, Bardelle, Haus, Maspero, Pasquali, Fusé).

RESEARCH INTERESTS

1. Normal form, Nekhoroshev and KAM theory for infinite dimensional Hamiltonian systems, in particular:

1.1 Normal form for perturbation of resonant systems; more in particular

1.1.1 Exchange of energy among different degrees of freedom in infinite dimensional lattices, Breathers and their exponential stability;

1.1.2 Exponential stability in partial differential equations;

1.2 Birkhoff normal form for nonresonant systems and almost global existence in PDEs.

1.3 KAM theory and reducibility in Hamiltonian PDEs

3. Semiclassical methods. In particular:

3.1 Semiclassical normal form and construction of the eigenvalues of Schroedinger operators close to the bottom of a well;

3.2 Dynamics of the Gross Pitaevskii equation

4. Continuous approximation of the dynamics of lattices. In particular

4.1 Use of normal form to approximate the long time dynamics of lattices

4.2 Use of spectral methods to study the continuous approximation of Toda chains

4.3 Use of variational methods to construct and approximate localised solutions in lattices, through the continuous limit.

5. Dispersive effects and nonlinear Fermi golden rule.

5.1 Asymptotic stability in NLW and other systems

5.2 Dynamics of solitons.

Milano, December 31, 2018