Rodrigo G. Schaefer

POSTDOKTOR IN MATHEMATICS

Ångströmlaboratoriet, Lägerhyddsvägen 1, Uppsala, Sweden

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Research interests

Arnold Diffusion

CURRENT RESEARCH

- Arnold diffusion in an *a priori unstable* Hamiltonian system.

Celestial Mechanics

- N-body problem on surfaces

Education

Ph.D in Applied Mathematics   *Barcelona, Spain*

UNIVERSITAT POLITÈCNICA DE CATALUNYA   *Sep. 2014 - Jul. 2018*

- Title: Global Instability in Hamiltonian Systems
- Advisor: Amadeu Delshams
- Qualification: Excellent *cum laude* (The highest qualification possible in Spain)
- Got a CNPq Scholarship (Brazil).

M.S. in Mathematics   *Rio de Janeiro, Brazil*

UNIVERSIDADE FEDERAL DO RIO DE JANEIRO   *Mar. 2012 - May 2014*

- Master's thesis: A dinâmica de N corpos sobre superfícies : um exemplo para 2 corpos
- Advisor: Stefanella Boatto
- Got a FAPERJ - Scholarship which is given to the two best students in Master program - Dept. of Math

B.S. in Mathematics   *Rio de Janeiro, Brazil*

UFRJ (UNIVERSIDADE FEDERAL DO RIO DE JANEIRO)   *Mar. 2008 - Jan 2012*

Publications

Arnold diffusion for a complete family of perturbations with two independent harmonics   *2018*

DELSHAMS, A. AND SCHAEFER, R.G.

- Discrete and Continuous Dynamical Systems - A

Arnold diffusion for a complete family of perturbations   *2017*

DELSHAMS, A. AND SCHAEFER, R.G.

- Regular and Chaotic Dynamics

N-body dynamics on closed surfaces: the axioms of mechanics   *2016*

BOATTO, S., DRITSCHEL, D.G. AND SCHAEFER, R.G.

- Proceedings of the Royal Society of London A: Mathematical, Physical and Engineering Science

Work experience

Postdoktor   *Uppsala, Sweden*

UPPSALA UNIVERSITET   *Aug. 2019- current*

Solutions Assistant   *Barcelona, Spain*

EVERIS - AN NTT DATA COMPANY   *Mar. 2019- Jul. 2019*

ETL - Extraction, Transformation and Load of data in a database

Temporary lecturer   *Rio de Janeiro, Brazil*
Universidade Federal do Rio de Janeiro   *Mar. 2014 - Aug. 2014*
- Differential and Integral Calculus
- Linear Algebra

Teaching assistant   *Rio de Janeiro, Brazil*
Universidade Federal do Rio de Janeiro   *2009 - 2011*
- Linear Algebra

Presentation

Invited talks

Congeso Bienal de la Real Sociedad Matemática Española   *Santander, Spain*
Arnold diffusion for a Hamiltonian with $3 + 1/2$ degrees of freedom   *2019*

Geometry, Dynamics, Integrable Systems   *Moscow, Russia*
Scattering maps and Global Instability in Hamiltonian Systems   *2018*

IV Congreso de Jóvenes Investigadores-Real Sociedad Matemática Española   *Valencia, Spain*
Global Instability in Hamiltonian Systems   *2017*

JuniorGesta   *Barcelona, Spain*
Global instability in Hamiltonian Systems   *2016*

Other presentations

DDAYS 2018   *Murcia, Spain*
Global instability in Hamiltonian Systems   *2018*

Hamsys2018   *Bellaterra, Spain*
Global instability for 'complete' families of perturbations with two or three independent   *2018*
harmonics

Satellite Dynamics and Space Missions: Theory and Applications of Celestial Mechanics   *San Martino al Cimino, Italy*
Arnold Diffusion for several examples using Scattering maps (poster)   *2017*

Llavefest: A Broad Pperpective on Finite and Infinite Dimensional Dynamicsl Systems   *Barcelona, Spain*
Arnold Diffusion for several examples using Scattering maps (poster)   *2017*

14th Winter School of the Spanish Dance Network   *Vigo, Spain*
Arnold Diffusion for several examples using Scattering map (poster)   *2017*

Barcelona UB-UPC DSG Seminar *Barcelona, Spain*

GLOBAL INSTABILITY IN HAMILTONIAN SYSTEMS AND SEVERAL SCATTERING MAPS *2016*

13th Winter School of the Spanish Dance Network *Seville, Spain*

ARNOLD DFFUSION USING SEVERAL COMBINATIONS OF SCATTERING MAPS (POSTER) *2016*

14th Workshop on interactions between Dynamical Systems and PDE's. *Barcelona, Spain*

ARNOLD DFFUSION USING SEVERAL COMBINATIONS OF SCATTERING MAPS (POSTER) *2016*

II BGSMath Junior Meeting *Barcelona, Spain*

GLOBAL INSTABILITY IN HAMILTONIAN SYSTEMS *2016*

CNMAC - Congresso Nacional de Matemática Aplicada e Computacional *Águas de Lindóia, Brazil*

PROPAGAÇÃO DE UM IMPULSO ELÉTRICO EM UM AXÔNIO NERVOSO (POSTER) *2012*

Research Group and Networks

Laboratory of Geometry and Dynamical Systems *Barcelona*

MEMBER *2017 - Present*

- Group of researchers in Dynamical Systems and Symplectic geometry of Universitat Politècnica de Catalunya

UPC Dynamical Systems Group *Barcelona*

MEMBER *2014 - Present*

- Group of researchers in Dynamical Systems of Universitat Politècnica de Catalunya

DANCE *Spain*

MEMBER *2016-Present*

- Network of spanish reseachers in Dynamical Systems

Participation in funded projects

Sistemes dinàmics de la UPC - 2017SGR1049 *Barcelona*

MEMBER *2017 - 2019*

- Funded by Catalan Science Department / Leading researcher: Tere Martinez-Seara

Dinámica Asociada a Conexiones entre Objetos Invariantes con Aplicaciones a Neurociencia y Astrodinámica *Barcelona*

MEMBER *2016 - 2018*

- Funded by Ministerio de Economía y Competitividad (Spain) / Leading researcher: Tere Martinez-Seara

Sistemes dinàmics de la UPC - 2014SGR504 *Barcelona*

MEMBER *2015-2016*

- Funded by Catalan Science Department / Leading researcher: Tere Martinez-Seara

Dinámica Asociada a Conexiones entre Objetos Invariantes, Aplicaciones a Astrodinámica, Neurociencia y Otros Campos *Barcelona*

MEMBER *2014 - 2015*

- Funded by Ministerio de Economía y Competitividad (Spain) / Leading researcher: Amadeu Delshams

Other Courses

SQL y PL/SQL *Barcelona*
EVERIS *2019*

Introduction to Data Science in Python *Coursera*
UNIVERSITY OF MICHIGAN *2019*

R Programming *Coursera*
JOHNS HOPKINS UNIVERSITY *2016*

Getting and Cleaning Data *Coursera*
JOHNS HOPKINS UNIVERSITY *2016*

Introduction to Python *Barcelona*
CENTRE DE RECERCA MATEMÀTICA *2015*

Languages

Portuguese	Native Fluent
English	Intermediate
Spanish	Advanced
Catalan	Intermediate

Programming Languages

Python	Intermediate
LaTeX	Intermediate
R	Basic
SQL	Basic

References

Amadeu Delshams
UNIVERSITAT POLITÈCNICA DE CATALUNYA *amadeu.delshams@upc.edu*

Stefanella Boatto
UNIVERSIDADE FEDERAL DO RIO DE JANEIRO *boattostefanella@gmail.com*

Marcel Guardia
UNIVERSITAT POLITÈCNICA DE CATALUNYA *marcel.guardia@upc.edu*

Eva Miranda
UNIVERSITAT POLITÈCNICA DE CATALUNYA *eva.miranda@upc.edu*

Congresses and conferences attended

3a Jornada Sistemes Dinàmics a Catalunya *Barcelona, Spain*
SOCIETAT CATALANA DE MATEMÀTIQUES *2018*

DDays 2018 *Murcia, Spain*
UNIVERSIDAD DE MURCIA *2018*

Hamsys2018
Bellaterra, Spain
Centre de Recerca Matemàtica
2018

16th Workshop on interactions between Dynamical Systems and PDE's
Bellaterra, Spain
Centre de Recerca Matemàtica
2018

Perspectives in Hamiltonian Systems
Venice, Italy
Università degli Studi di Padova
2018

Geometry, Dynamics, Integrable systems
Moscow, Russia
Moscow Institute of Physics and Technology
2018

15th Winter School : Recents Trends in Nonlinear Sciences
Logroño, Spain
Dance-net
2018

CSF Hamiltonian Systems
Ascona, Switzerland
ETH Institute for Theoretical Studies
2017

IV Congreso de Jóvenes Investigadores-Real Sociedad Matemática Española
Valencia, Spain
Real Sociedad Matemática Española
2017

Satellite Dynamics and Space Missions: Theory and Applications of Celestial Mechanics
San Martin al Cimino, Italy
Società Italiana di Mecanica Celeste e Astrodinamica
2017

Finite Dimensional Integrable Systems in Geometry and Mathematical Physics
Bellaterra, Spain
Centre de Recerca Matemàtica
2017

15th Workshop on interactions between Dynamical Systems and PDE's
Bellaterra, Spain
Centre de Recerca Matemàtica
2017

Llavefest: A Broad Perspective on Finite and Infinite Dimensional DynamicalSystems
Barcelona, Spain
Centre de Recerca Matemàtica
2017

Winter School in Conservative Dynamics
Engelberg, Switzerland
ETH Institute for Theoretical Studies
2017

13th Winter School : Recents Trends in Nonlinear Sciences
Vigo, Spain
Dance-net
2017

DDays
Salou, Spain
Dance-net
2016

14th Workshop on interactions between Dynamical Systems and PDE's

UNIVERSITAT POLITÈCNICA DE CATALUNYA

Barcelona, Spain

2016

II BGSMAth Junior Meeting

BGSMATH

Barcelona, Spain

2016

GestaJunior

UNIVERSITAT POLITÈCNICA DE CATALUNYA

Barcelona, Spain

2016

13th Winter School : Recents Trends in Nonlinear Sciences

DANCE-NET

Seville, Spain

2016

Global Dynamics in Hamiltonian Systems

UNIVERSITAT POLITÈCNICA DE CATALUNYA

Vall de Núria, Spain

2015

13th Workshop on interactions between Dynamical Systems and PDE's

UNIVERSITAT POLITÈCNICA DE CATALUNYA

Barcelona, Spain

2015

12th Winter School : Recents Trends in Nonlinear Sciences

UNIVERSIDAD DE VALLADOLID AND DANCE-NET

Valladolid, Spain

2015

Shilnikov Workshop.

LOBACHEVSKY STATE UNIVERSITY OF NIZHNI NOVGOROD

Nizhny Novgorod, Russia

2014

Hamiltonian Dynamics, Non-Autonomous System and Patterns in PDE's.

LOBACHEVSKY STATE UNIVERSITY OF NIZHNI NOVGOROD

Nizhny Novgorod, Russia

2014

7th DDAYS

DANCE-NET

Badajoz, Spain

2014

Barcelona Mathematical Days

SOCIETAT CATALANA DE MATEMÀTIQUES

Barcelona, Spain

2014

CNMAC- Congresso Nacional de Matemática Aplicada e Computacional

SBMAC

Águas de Lindóia, Brasil

2012