

Rodrigo G. Schaefer

POSTDOCTORAL RESEARCHER IN MATHEMATICS

Ångströmlaboratoriet, Lägerhyddsvägen 1, Uppsala, Sweden

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Research interests

Arnold Diffusion

- Arnold diffusion in Hamiltonian system.

Celestial Mechanics

- N-body problem on surfaces.
- Central configurations on the N-body problem.
- Oscillatory motions on the restricted three body problem.

Education

Ph.D in Applied Mathematics

UNIVERSITAT POLITÈCNICA DE CATALUNYA

Barcelona, Spain

Sep. 2014 - Jul. 2018

- Title: Global Instability in Hamiltonian Systems
- Advisor: Amadeu Delshams
- Qualification: Excellent *cum laude* (The highest qualification possible in Spain)

M.S. in Mathematics

UNIVERSIDADE FEDERAL DO RIO DE JANEIRO

Rio de Janeiro, Brazil

Mar. 2012 - May 2014

- Master's thesis: A dinâmica de N corpos sobre superfícies : um exemplo para 2 corpos
- Advisor: Stefanella Boatto

B.S. in Mathematics

UFRJ (UNIVERSIDADE FEDERAL DO RIO DE JANEIRO)

Rio de Janeiro, Brazil

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 (Postdoctoral Researcher)

UPPSALA UNIVERSITET

- Practical sessions in "Calculus of Several Variables".
- Head teacher in "Ordinary Differential Equations II"

Uppsala, Sweden

Aug. 2019- current

Solutions Assistant (Junior Consultant)

EVERIS - AN NTT DATA COMPANY

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

Barcelona, Spain

Mar. 2019- Jul. 2019

Temporary lecturer

UNIVERSIDADE FEDERAL DO RIO DE JANEIRO

Teaching in "Differential and Integral Calculus" and "Linear Algebra".

Rio de Janeiro, Brazil

Mar. 2014 - Aug. 2014

Teaching assistant

UNIVERSIDADE FEDERAL DO RIO DE JANEIRO

Teaching: Practical sessions in "Linear Algebra".

Rio de Janeiro, Brazil

2009 - 2011

Presentation

INVITED TALKS

Congreso Bienal de la Real Sociedad Matemática Española

ARNOLD DIFFUSION FOR A HAMILTONIAN WITH $3 + 1/2$ DEGREES OF FREEDOM

Santander, Spain

2019

Geometry, Dynamics, Integrable Systems

SCATTERING MAPS AND GLOBAL INSTABILITY IN HAMILTONIAN SYSTEMS

Moscow, Russia

2018

IV Congreso de Jóvenes Investigadores-Real Sociedad Matemática Española

GLOBAL INSTABILITY IN HAMILTONIAN SYSTEMS

Valencia, Spain

2017

JuniorGesta

GLOBAL INSTABILITY IN HAMILTONIAN SYSTEMS

Barcelona, Spain

2016

OTHER PRESENTATIONS

Celestial Mechanics and Beyond

SCATTERING MAPS AND GLOBAL INSTABILITY IN HAMILTONIAN SYSTEMS

Puebla, Mexico

2020

I-CELMECH training school

ARNOLD DIFFUSION FOR A HAMILTONIAN WITH $3 + 1/2$ DEGREES OF FREEDOM

Milan, Italy

2020

DDAYS 2018

GLOBAL INSTABILITY IN HAMILTONIAN SYSTEMS

Murcia, Spain

2018

Hamsys2018

GLOBAL INSTABILITY FOR 'COMPLETE' FAMILIES OF PERTURBATIONS WITH TWO OR THREE INDEPENDENT HARMONICS

Bellaterra, Spain

2018

Satellite Dynamics and Space Missions: Theory and Applications of Celestial Mechanics

ARNOLD DIFFUSION FOR SEVERAL EXAMPLES USING SCATTERING MAPS (POSTER)

San Martino al Cimino, Italy

2017

Llavefest: A Broad Pperpective on Finite and Infinite Dimensional Dynamicsl Systems

ARNOLD DIFFUSION FOR SEVERAL EXAMPLES USING SCATTERING MAPS (POSTER)

Barcelona, Spain

2017

14th Winter School of the Spanish Dance Network

ARNOLD DIFFUSION FOR SEVERAL EXAMPLES USING SCATTERING MAP (POSTER)

Vigo, Spain

2017

Barcelona UB-UPC DSG Seminar

GLOBAL INSTABILITY IN HAMILTONIAN SYSTEMS AND SEVERAL SCATTERING MAPS

Barcelona, Spain

2016

13th Winter School of the Spanish Dance Network

ARNOLD DFFUSION USING SEVERAL COMBINATIONS OF SCATTERING MAPS (POSTER)

Seville, Spain

2016

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

ARNOLD DFFUSION USING SEVERAL COMBINATIONS OF SCATTERING MAPS (POSTER)

Barcelona, Spain

2016

II BGSMath Junior Meeting

GLOBAL INSTABILITY IN HAMILTONIAN SYSTEMS

Barcelona, Spain

2016

CNMAC - Congresso Nacional de Matemática Aplicada e Computacional

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

Águas de Lindóia, Brazil

2012

Research Group and Networks

CAPA (Computer-Aided Proof in Analysis) group

MEMBER

Uppsala

2019 - current

Laboratory of Geometry and Dynamical Systems

MEMBER

Barcelona

2017 - 2019

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

UPC Dynamical Systems Group

MEMBER

Barcelona

2014 - 2018

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

DANCE-Net

MEMBER

Spain

2016-2018

- Network of Spanish researchers in Dynamical Systems

Grants

Esseen, L and C-G, for mathematical studies fellowship

UPPSALA UNIVERSITET

Uppsala

2019

- Amount 13,862 SEK

PhD scholarship

CNPQ - BRAZIL

Barcelona

2014 - 2018

Master's degree FAPERJ - student grade A scholarship

FAPERJ - RIO DE JANEIRO/BRAZIL

Rio de Janeiro

2013 - 2014

- Scholarship which is given to the two best students in the Master program - Dept. of Mathematics.

Master's degree scholarship

CNPQ - BRAZIL

Rio de Janeiro

2012 - 2013

Participation in funded projects

Sistemas dinàmics de la UPC - 2017SGR1049

MEMBER

Barcelona

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

MEMBER

Barcelona

2016 - 2018

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

Sistemas dinàmics de la UPC - 2014SGR504

MEMBER

Barcelona

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

MEMBER

Barcelona

2014 - 2015

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

Other Courses

SQL y PL/SQL

EVERIS

Barcelona

2019

Introduction to Data Science in Python

UNIVERSITY OF MICHIGAN VIA COURSERA.ORG

online

2019

R Programming

JOHNS HOPKINS UNIVERSITY VIA COURSERA.ORG

online

2016

Getting and Cleaning Data

JOHNS HOPKINS UNIVERSITY VIA COURSERA.ORG

online

2016

Introduction to Python

CENTRE DE RECERCA MATEMÀTICA

Barcelona

2015

Languages

Portuguese	Native Fluent
English	Advanced
Spanish	Advanced
Catalan	Interm/Adv.

Programming Languages

Python	Intermediate
LaTeX	Intermediate
R	Basic
SQL	Basic

References

Amadeu Delshams

PROFESSOR AT UNIVERSITAT POLITÈCNICA DE CATALUNYA

amadeu.delshams@upc.edu

Stefanella Boatto

ASSOCIATE PROFESSOR AT UNIVERSIDADE FEDERAL DO RIO DE JANEIRO

stefanella.boatto@matematica.ufrj.br

Marcel Guardia

ASSOCIATE PROFESSOR AT UNIVERSITAT POLITÈCNICA DE CATALUNYA

marcel.guardia@upc.edu

Eva Miranda

PROFESSOR AT UNIVERSITAT POLITÈCNICA DE CATALUNYA

eva.miranda@upc.edu

Congresses and conferences attended

Celestial Mechanics and Beyond

INSTITUTO TECNOLÓGICO AUTÓNOMO DE MÉXICO

Puebla, Mexico

2020

I-CELMECH training school

UNIVERSITÀ DI MILANO

Milan, Italy

2020

Congreso Bienal de la Real Sociedad Matemática Española

REAL SOCIEDAD MATEMÁTICA ESPAÑOLA

Santander, Spain

2019

3a Jornada Sistemes Dinàmics a Catalunya

SOCIETAT CATALANA DE MATEMÀTIQUES

Barcelona, Spain

2018

DDays 2018

UNIVERSIDAD DE MURCIA

Murcia, Spain

2018

Hamsys2018

CENTRE DE RECERCA MATEMÀTICA

Bellaterra, Spain

2018

16th Workshop on interactions between Dynamical Systems and PDE's

CENTRE DE RECERCA MATEMÀTICA

Bellaterra, Spain

2018

Perspectives in Hamiltonian Systems

UNIVERSITÀ DEGLI STUDI DI PADOVA

Venice, Italy

2018

Geometry, Dynamics, Integrable systems

MOSCOW INSTITUTE OF PHYSICS AND TECHNOLOGY

Moscow, Russia

2018

15th Winter School : Recents Trends in Nonlinear Sciences

DANCE-NET

Logroño, Spain

2018

CSF Hamiltonian Systems

ETH INSTITUTE FOR THEORETICAL STUDIES

Ascona, Switzerland

2017

IV Congreso de Jóvenes Investigadores-Real Sociedad Matemática Española

REAL SOCIEDAD MATEMÁTICA ESPAÑOLA

Valencia, Spain

2017

Satellite Dynamics and Space Missions: Theory and Applications of Celestial Mechanics

SOCIETÀ ITALIANA DI MECCANICA CELESTE E ASTRODINAMICA

San Martin al Cimino, Italy

2017

Finite Dimensional Integrable Systems in Geometry and Mathematical Physics

CENTRE DE RECERCA MATEMÀTICA

Bellaterra, Spain

2017

15th Workshop on interactions between Dynamical Systems and PDE's

CENTRE DE RECERCA MATEMÀTICA

Bellaterra, Spain

2017

Llavefest: A Broad Perspective on Finite and Infinite Dimensional Dynamical Systems

CENTRE DE RECERCA MATEMÀTICA

Barcelona, Spain

2017

Winter School in Conservative Dynamics

ETH INSTITUTE FOR THEORETICAL STUDIES

Engelberg, Switzerland

2017

13th Winter School : Recents Trends in Nonlinear Sciences

DANCE-NET

Vigo, Spain

2017

DDays

DANCE-NET

Salou, Spain

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 D DAYS

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