

# Rodrigo G. Schaefer

PH.D STUDENT IN APPLIED MATH

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## Research interests

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### Arnold Diffusion

#### CURRENT RESEARCH

- Arnold diffusion using scattering maps in an a priori unstable Hamiltonian system.

### Celestial Mechanics

- N-body problem on surfaces

## Education

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### Ph.D in Applied Mathematics

*Barcelona, Spain*

UPC (UNIVERSITAT POLITÈCNICA DE CATALUNYA)

Sep. 2014 - PRESENT

- Advisor: Amadeu Delshams
- Got a CNPq Scholarship (Brazil).

### M.S. in Mathematics

*Rio de Janeiro, Brazil*

UFRJ (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 and Preprints

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### 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

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### Fixed-term Teacher

*Rio de Janeiro, Brazil*

UFRJ (FEDERAL UNIVERSITY OF RIO DE JANEIRO)

Mar. 2014 - Agu. 2014

- Differential and Integral Calculus
- Linear Algebra

### Monitor Student

*Rio de Janeiro, Brazil*

UFRJ (FEDERAL UNIVERSITY OF RIO DE JANEIRO)

2009 - 2011

- Linear Algebra

## Presentation

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### Global Instability in Hamiltonian Systems

*Valencia, Spain*

IV CONGRESO DE JÓVENES INVESTIGADORES-REAL SOCIEDAD MATEMÁTICA ESPAÑOLA

*2017*

### Arnold Diffusion for several examples using Scattering maps (poster)

SATELLITE DYNAMICS AND SPACE MISSIONS: THEORY AND APPLICATIONS OF CELESTIAL MECHANICS

*San Martino al Cimino, Italy*

2017

### Arnold Diffusion for several examples using Scattering maps (poster)

LLAVEFEST: A BROAD PPERPECTIVE ON FINITE AND INFINITE DIMENSIONAL DYNAMICSL SYSTEMS

*Barcelona, Spain*

2017

### Arnold Diffusion for several examples using Scattering map (poster)

14TH WINTER SCHOOL OF THE SPANISH DANCE NETWORK

*Vigo, Spain*

2017

### Global instability in Hamiltonian Systems and several Scattering maps

BARCELONA UB-UPC DSG SEMINAR

*Barcelona, Spain*

2016

### Arnold dffusion using several combinations of Scattering maps (poster)

13TH WINTER SCHOOL OF THE SPANISH DANCE NETWORK

*Seville, Spain*

2016

### Arnold dffusion using several combinations of Scattering maps (poster)

14TH WORKSHOP ON INTERACTIONS BETWEEN DYNAMICAL SYSTEMS AND PDE'S.

*Barcelona, Spain*

2016

### Global instability in Hamiltonian Systems

JUNIORGESTA

*Barcelona, Spain*

2016

### Global instability in Hamiltonian Systems

II BGSMATH JUNIOR MEETING

*Barcelona, Spain*

2016

### Propagação de um impulso elétrico em um axônio nervoso (poster)

CNMAT - NATIONAL CONGRESS OF APPLIED AND COMPUTATIONAL MATHEMATICS

*Águas de Lindóia, Brazil*

2012

## Research Group and Networks

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### Laboratory of Geometry and Dynamical Systems

MEMBER

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

*Barcelona*

2017 - Present

### UPC Dynamical System Group

MEMBER

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

*Barcelona*

2014 - Present

### DANCE

MEMBER

- Network of spanish reseachers in Dynamical Systems

*Spain*

2016-Present

## Others Courses

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### Introduction to Python

CENTRE DE RECERCA MATAMÀTICA

*Barcelona*

2015

## R Programming

JOHNS HOPKINS UNIVERSITY

*Coursera*

2016

## Getting and Cleaning Data

JOHNS HOPKINS UNIVERSITY

*Coursera*

2016

## Languages

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Portuguese

Native Fluent

English

Intermediate

Spanish

Advanced

Catalan

Intermediate

## Programming Languages

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Python

Intermediate

LaTeX

Intermediate

R

Basic

## Congresses and conferences attended

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### Finite Dimensional Integrable Systems in Geometry and Mathematical Physics

UNIVERSITAT POLITÈCNICA DE CATALUNYA

*Barcelona, Spain*

2017

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

UNIVERSITAT POLITÈCNICA DE CATALUNYA

*Barcelona, Spain*

2017

### Winter School in Conservative Dynamics

ETH INSTITUTE FOR THEORETICAL STUDIES

*Engelberg, Switzerland*

2017

### DDays

DANCE-NET

*Salou, Spain*

2016

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

UNIVERSITAT POLITÈCNICA DE CATALUNYA

*Barcelona, Spain*

2015

### Global Dynamics in Hamiltonian Systems

UNIVERSITAT POLITÈCNICA DE CATALUNYA

*Vall de Núria, Spain*

2015

### Winter School : Recent Trends in Nonlinear Sciences

UNIVERSIDAD DE VALLADOLID AND DANCE-NET

*Valladolid, Spain*

2015

### Barcelona Mathematical Days.

SOCIETAT CATALANA DE MATEMÀTIQUES

*Barcelona, Spain*

2014

### DDAYS.

DANCE-NET

*Badajoz, Spain*

2014

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

LOBACHEVSKY STATE UNIVERSITY OF NIZHNI NOVGOROD

*Nizhny Novgorod, Russia*

2014

## **Shilnikov Workshop.**

LOBACHEVSKY STATE UNIVERSITY OF NIZHNI NOVGOROD

*Nizhny Novgorod, Russia*

2014