

# 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 with 3-1/2 degrees of freedom.

### 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 (FEDERAL UNIVERSITY OF 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 (FEDERAL UNIVERSITY OF RIO DE JANEIRO)

*Mar. 2008 - Jan 2012*

## Publications and Preprints

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### 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

### Arnold diffusion for a complete family of perturbations

*2017*

DELSHAMS, A. AND SCHAEFER, R.G.

- Regular and Chaotic Dynamics

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

*Vigo, Spain*

14TH WINTER SCHOOL OF THE SPANISH DANCE NETWORK

*2017*

## Global instability in Hamiltonian Systems and several Scattering maps

BARCELONA UB-UPC DSG SEMINAR

Barcelona, Spain

2016

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

13TH WINTER SCHOOL OF THE SPANISH DANCE NETWORK

Seville, Spain

2016

## Arnold diffusion 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)

CNMAC - NATIONAL CONGRESS OF APPLIED AND COMPUTATIONAL MATHEMATICS

Águas de Lindóia, Brazil

2012

## Research Group and Networks

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### UPC Dynamical System Group

MEMBER

Barcelona

2014 - Present

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

### DANCE

MEMBER

Spain

2016

- Network of spanish reseachers in Dynamical Systems

## 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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### **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 : Recents 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