Rodrigo G. Schaefer

POSTDOCTORAL RESEARCHER IN MATHEMATICS

Ångströmlaboratoriet, Lägerhyddsvägen 1, Uppsala, Sweden

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Research interests

Dynamical Systems

- Theoretical and numerical study of Dynamical Systems, mainly, Hamiltonian Systems.

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)

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

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 (Postdoctoral Researcher)   *Uppsala, Sweden*

UPPSALA UNIVERSITET   *Aug. 2019- current*

- Head teacher in "Several Variable Calculus for master's students"
- Head teacher in "Ordinary Differential Equations II"
- Practical sessions in "Calculus of Several Variables".

Solutions Assistant (Junior Consultant)   *Barcelona, Spain*
EVERIS - AN NTT DATA COMPANY   *Mar. 2019- Jul. 2019*

Consulting in 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*

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

Teaching assistant   *Rio de Janeiro, Brazil*
UNIVERSIDADE FEDERAL DO RIO DE JANEIRO   *2009 - 2011*

Teaching: Practical sessions in "Linear Algebra".

Presentation

INVITED TALKS

Congreso 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*

INVITED COURSES

Arnold Diffusion and applications   *online / Chile*
ORGANIZED BY UNIVERSIDAD DEL BÍO-BÍO - 4H   *2020*

OTHER PRESENTATIONS

Celestial Mechanics and Beyond   *Puebla, Mexico*
SCATTERING MAPS AND GLOBAL INSTABILITY IN HAMILTONIAN SYSTEMS   *2020*

I-CELMECH training school   *Milan, Italy*
ARNOLD DIFFUSION FOR A HAMILTONIAN WITH $3 + 1/2$ DEGREES OF FREEDOM   *2020*

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   *San Martino al Cimino, Italy*
Mechanics

ARNOLD DIFFUSION FOR SEVERAL EXAMPLES USING SCATTERING MAPS (POSTER)   *2017*

Llavefest: A Broad Perspective on Finite and Infinite Dimensional Dynamical   *Barcelona, Spain*
Systems

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 DIFFUSION USING SEVERAL COMBINATIONS OF SCATTERING MAPS (POSTER)   *2016*

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

ARNOLD DIFFUSION 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

CAPA (Computer-Aided Proof in Analysis) group   *Uppsala*

MEMBER   *2019 - current*

Laboratory of Geometry and Dynamical Systems   *Barcelona*

MEMBER   *2017 - 2019*

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

UPC Dynamical Systems Group   *Barcelona*

Member   *2014 - 2018*

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

DANCE-Net   *Spain*

Member   *2016-2018*

- Network of Spanish researchers in Dynamical Systems

Grants

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

Uppsala Universitet   *2019*

- Amount 13,862 SEK

PhD scholarship   *Barcelona*

CNPq - Brazil   *2014 - 2018*

Master's degree FAPERJ - student grade A scholarship   *Rio de Janeiro*

FAPERJ - Rio de Janeiro/Brazil   *2013 - 2014*

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

Master's degree scholarship   *Rio de Janeiro*

CNPq - Brazil   *2012 - 2013*

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

Academic services

International Journal of Bifurcation and Chaos

Referee

Thematic session in Celestial Mechanics - IV CBJME   *online/Brazil*

Co-organizer   *2020/2021*

SIAM Journal on Applied Dynamical Systems

Referee

Mathematical Reviews/MathSciNet

Reviewer

Other Courses

SQL y PL/SQL   *Barcelona*

everis   *2019*

Introduction to Data Science in Python   *online*

University of Michigan via Coursera.org   *2019*

R Programming   *online*

Johns Hopkins University via Coursera.org   *2016*

Getting and Cleaning Data   *online*

Johns Hopkins University via Coursera.org   *2016*

Introduction to Python   *Barcelona*

Centre de Recerca Matemàtica   *2015*

Languages

Portuguese	Native Fluent
English	Advanced
Spanish	Advanced
Catalan	Advanced

Programming Languages

Python	Intermediate
LaTeX	Intermediate
R	Basic
SQL	Basic
C++	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*

Eva Miranda

Professor at Universitat Politècnica de Catalunya   *eva.miranda@upc.edu*