George Datseris

Curriculum Vitae

Academic Background

01/2020 - present **Postdoc**, *Max Planck Institute for Meteorology*, Department of Atmosphere in the Earth System (dir. Bjorn Stevens), Hamburg, Germany.

04/2016 - 09/2019 **PhD in physics: Ballistic electron transport in graphene nanodevices and billiards (awarded "summa cum laude")**, *Max Planck Institute for Dynamics and Self-organization*, Department of Nonlinear Dynamics (dir. Theo Geisel), Göttingen, Germany.
PhD supervisors: Prof. Theo Geisel, Dr. Ragnar Fleischmann

10/2015 - 04/2016 **Research Assistant**, *Max Planck Institute for Dynamics and Self-Organization*, Department of Nonlinear Dynamics (dir. Theo Geisel).
6-month funded period that constituted my MSc Thesis.

2014 - 2016 **Master's Degree in the specialty of "Physics of Materials" (120 ECTS)**, *National and Kapodistrian University of Athens, Faculty of Physics*, Athens, Grade 9.28/10.0.
Thesis: Quasi-classical Magneto-transport in Graphene Antidot Super-lattices (supervised by Prof. Theo Geisel & Prof. Georgios Triberis)

2009 - 2014 **Bachelor in Physics (240 ECTS), Majored in Solid State Physics**, *National and Kapodistrian University of Athens, Faculty of Physics*, Athens, Grade 8.06/10.0.
Thesis: Auto- and Cross- Correlations in the Standard Map: Structure and Origin (supervised by Prof. Fotios Diakonos)

Fellowships & Awards

2020 **70$^{\text{th}}$ Lindau Nobel Laureate Meeting**.
Selected to participate in the (online due to COVID-19) meeting.

2018 **DSWeb 2018 Dynamical System Software Competition by SIAM**.
First place winner using the software **DynamicalSystems.jl** as a submission. For more details please see the official statement.

2018 **IMPRS Travel Grants**.
For travelling to London, U.K. and participating in the conference JuliaCon 2018 as well as travelling to Potsdam, Germany and participating in the conference deRSE19.

2016 - 2019 **International Max Planck Research School Scholarship**.
This 3-years scholarship covers a full PhD project and was awarded to me on July/2016 for my PhD project.

Publications

Publications are available on my manually curated Google Scholar page.
`https://scholar.google.com/citations?hl=en&user=5U_llXcAAAAJ`

Teaching

2020-2021 **A practical introduction to nonlinear dynamics**, *University of Hamburg*.
Full semester course for PhD and Master students where I was the only lecturer, and a tutor helped me by giving exercises. The course is based on our aforementioned book published by Springer.

2021 **Agent based modelling with Agents.jl**, *SGH Warsaw School of Economics*.
One-day guest lecture for a course on Agent based modelling taught by B. Kaminski.

2016, 2017 **Introduction to the Physics of Complex Systems**, *University of Göttingen*.
Tutoring for the course (total amount of around 48 hours) taught by R. Fleischmann, U. Parlitz, K. Alim and A. Gholami. I tutored this course twice.

04/2014 - 06/2014 **Chaos in 1D and 2D Maps**, *University of Athens*.
Total of 9 hours guest lecture for the course "Non-linear dynamical systems" taught by T. Apostolatos and P. Ioannou.

Supervision

2021 **Model Serialization and Pathfinding for Agents.jl**, *A. Sabharwal*, Google Summer of Code project, co-supervised with T. DuBois.

2021 **Albedo hemispheric symmetry as a result of static asymmetries**, *I. Baffour*, Master thesis co-supervised with H. Schmidt.

2018 **Statistical properties of musical time series**, *L. Jahn*, Bachelor thesis co-supervised with T. Geisel.

2018 **Observing and predicting complex dynamics using local modelling**, *J. Isensee*, Bachelor thesis co-supervised with U. Parlitz.

2018 **Lyapunov exponents vs. phase space restrictions in dynamical billiards**, *L. Hupe*, Bachelor thesis co-supervised with R. Fleischmann.

Workshops, Videos, Outreach

2021 **70$^{\text{th}}$ Lindau Nobel Laureate Meeting Panelist**.
Participated as one of the four panelists of the "Open Science" Panel Discussion, co-hosted with Dr. Jex and Nobel Laureates Professor Blackburn and Professor Schekman. The panel discussion was video-streamed live globally.

2020 **Julia: Zero-To-Hero**, *Göttingen / online*.
Intensive workshop about the programming language Julia and how can one start using it in scientific work. Also available on YouTube with currently ∼5,000 views.

2017 - present **Software video tutorials**, *Online*.
Multiple videos uploaded (or livestreamed) on YouTube explaining the use of software described in the *Software* section of the CV. The videos have ∼30,000 views.

Developed and Published Software

I have developed, or had significant contributions to, numerous scientific software packages for the Julia language, all of which are open source and hosted on GitHub. Notable software is DrWatson, which was created to help scientific project reproducibility and management.

- InteractiveDynamics.jl
- DynamicalBilliards.jl
- DrWatson
- MIDI.jl
- Agents.jl
- DynamicalSystems.jl
- TimeseriesPrediction.jl
- MusicManipulations.jl
- TimeseriesSurrogates.jl
- ClimateBase.jl

Invited Talks

This section lists invited talks, not contributed conference talks. I contribute on average 3-4 conference talks per year.

11/2019 **Earth's albedo symmetry and cloudiness**, *35th CERES Science Team Meeting*, invited by Norman Loeb.

11/2019 **Phase space analysis of quantum transport in graphene**, *Technical University Vienna*, invited by Stefan Rotter.

09/2019 **Music timeseries analysis: universal structure and its impact on the listening experience**, *University of Nottingham*, invited by Philip Moriarty.

08/2019 **Fresh approach to dynamical systems software**, *8th Recurrence Plot Symposium - Zhenjiang, China*, invited by Norbert Marwan.

07/2019 **Software to make your scientific life easier**, *New trends in biomedical imaging and data analysis (Conference)*, invited by Ulrich Parlitz.

05/2019 **Music timeseries analysis: universal structure and its impact on the listening experience**, *Max Planck Institute for the Physics of Complex Systems*, invited by Holger Kantz.

04/2019 **Spatiotemporal Timeseries prediction using locally reconstructed states**, *Potsdam Institute for Climate Impact Research*, invited by Norbert Marwan.

07/2018 **Fresh approach to dynamical systems software**, *TU Munich*, invited by Oliver Junge.

04/2018 **Nonlinear Resonances and phase-space volume conservation lead to robust ballistic transport in antidot superlattices**, *Uni. Regensburg*, invited by Jonathan Eroms.

Additional Qualifications

Community Service	Reviewed publications for the following journals: Journal of Open Source Software, European Physics Journal B, Chaos, and PLoS ONE Applied Mathematics.
Soft Skills	Attended courses on networking, negotiation, conflict management, grant writing, career development, and a semester-long course on project management and productivity.
Professional Drummer	Degree on mondern drumset and Jazz music theory. Graduated from Philippos Nakas school of music in association with Berklee college of music with diploma grade: "Very Good" on July 2015.
Event Organizing	Hacktoberfest at the Max Planck Institute for Dynamics and Self-Organization, Göttingen GGNB PhD School Debate club, Bi-annual retreat of the PhD school for the Physics of Biological and Complex Systems.

Languages

Mothertongue	**Greek**	
Expert	**English**	*Proficiency degree from the University of Michigan*
Intermediate	**Spanish**	*B2 National degree*