Andreu Fernández Gallén

Personal Data

Place and Date of Birth:	February 14, 1993—Barcelona, Spain
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Education

Sept 2011 - Jan 2017	Undergraduate Degree in Physics *Fundamental Physics Specialization*, **Universitat de Barcelona**, Spain. Undergrad thesis: Erythocyte Flickering. Mark: 10/10 with honors. Advisor: Aurora Hernández-Machado
Jan 2017 - Jan 2018	Master Degree in Nanoscience and nanotechnology, **Universitat de Barcelona**, Spain. Master thesis: Phase field model of the erythocyte flickering, with and without spontaneous curvature. Mark: 10/10 with honors. Advisor: Aurora Hernández-Machado

Research

Jan 2018 - July 2022	Ph.D. in Faculty of Physics, Condensed Matter Physics Department **Universitat de Barcelona**, Spain. Thesis: Modelling the dynamics of cellular membranes. Advisor: Aurora Hernández-Machado Keywords: Simulations, programming, data analysis, data science, interfaces, fluid mechanics, biophysics, mathematics, collaborations. Defended on the 8th of July of 2022 This thesis has revolved around theoretical and numerical study of the behaviour of interfaces and cellular membranes coupled to the surrounding fluid. This has been carried away by numerical simulations programmed and analysed by myself.
Jan 2023 - Present	CNRS Post-doc in Centre interdisciplinaire de recherche en biologie (CIRB) Turlier Lab, **Collège de France** in Paris, France.

Scholarships

May 2017 - May 2018	Twelve months international student internship at Centre de Recerca Matemàtica (CRM).
Sept 2017 - Feb 2018	Six months scholarship "*Initation to research*" granted by the Institute of Nanoscience and Nanotechnology of the Universtitat de Barcelona (IN2UB).
July 2017 - June 2022	Four years scholarship "*Formacion Personal Investigador*" granted by the Spanish Government ministry of Economy related to the Research Project Ref FIS201678883-C2-1-P UB Physics.

Publications

- Gallen, Andreu F., Mario Castro, and Aurora Hernandez-Machado. "Red blood cells in low Reynolds number flow: A vorticity-based characterization of shapes in two dimensions." Soft Matter 17, no. 42 (2021): 9587-9594.
- Rueda-Contreras, Mara Denisse, Andreu F. Gallen, J. Roberto Romero-Arias, Aurora Hernandez-Machado, and Rafael A. Barrio. "On Gaussian curvature and membrane fission." Scientific Reports 11, no. 1 (2021): 1-10.

- Andreu F. Gallen, J. Roberto Romero-Arias, Rafael A. Barrio. and Aurora Hernandez-Machado "Vesicle formation induced by thermal fluctuations" ArXiv Pre-print (2022).

Presentations and seminars

Barcelona 2018	L'Astérix té Malaria. Encontres amb el tercer cicle de la Facultat de Física.
Madrid 2018	Poster session FisEs (congreso de Física Estadística).
Benasque 2019	Poster session en Micro and Nanofluidics: from technology to science.
Barcelona 2020	Consolider Seminar. Membrane modelling: Stream function and Gaussian curvature.
Barcelona 2021	Seminar "Modelling the Dynamics of the Red Blood Cell" RheoTalks.
Chicago 2022	Focus speaker session March Meeting American Physical Society.
Edinburgh 2022	Poster session en Physics of Life School.
Zaragoza 2022	Poster session en FisEs (congreso de Física Estadística).

Congresses

Madrid 2018	FisEs Madrid 2018 (congreso de Física Estadística).
Benasque 2019	Micro and Nanofluidics: from technology to science.
Chicago 2022	March Meeting 2022 American Physical Society.
Edinburgh 2022	Physics of Life Summer School.
Zaragoza 2022	FisEs Zaragoza 2022 (congreso de Física Estadística).

Research stays

March 2017	Two weeks research stay at the Universidad Complutense de Madrid (UCM) with Francisco Monroy research group at the Physical Chemistry faculty.

Languages

English:	Fluent, C1 level certified by Escola d'Idiomes Moderns (EIM)
Catalan:	Mothertongue
Spanish:	Mothertongue

Intrapersonal skills

Team-work: I have worked in parallel with multiple research groups from various cities and countries in various topics.

I have worked on my interpersonal skills and communicator skills by giving various talks and seminars and teaching almost 100 hours of classes in the university.

Programming Languages

Experienced with C, FORTRAN, Python, and Mathematica.
Some experience with Matlab and Java.
Very experienced in learning new languages.

Computer Skills

Proeficient:	Excel, Word, PowerPoint, LaTeX
Basic Knowledge:	Linux, Ubuntu, Adobe Illustrator

Other

2014-2016	Volunteer work at Hospital Clinic with AFANOC foundation (Associació de Familiars i Amics de Nens Oncològics de Catalunya).
2019-2021	Elected as the representative of the Physics PhD programme and then as the vice-president of the counsel of all the PhD programmes representatives.