Théo ANDRÉ

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"Okay, Houston. As I stand out here in the wonders of the unknown [...], I sort of realize there's a fundamental truth to our nature. Man must explore. And this is exploration at its greatest."
- David Scott

LANGUAGES

French: Native

English: C1

German: A1

QUALITIES

Teaching experience at university level

Early research experience

Interdisciplinary profile (Math-Bio-CS)

Alumni of the Heidelberg Laureate Forum Foundation (HLFF)

FIELDS OF RESEARCH

Numerical Analysis

Parameter Estimation

Mathematical Biology

ODE/PDE modeling

Stem Cells modeling

SHORT INTRODUCTION

I obtained my bachelor of theoretical mathematics and then completed an interdisciplinary Master's program at the interface between mathematics, biology and computer science at Aix-Marseille Université. Now, I work as a Ph.D. student in partial differential equations under the supervision of Prof. Dr. Anna Marciniak-Czochra at Heidelberg University. My work is focused on the modeling of neural stem cells dynamics using differential equations.

EDUCATION AND DIPLOMAS

Ph.D.: Mathematical Modeling of Pallial Neural Stem Cells Differentiation in the Adult Zebrafish Brain
Heidelberg University

📅 Since 09/2023 (ongoing)   📍 Heidelberg, Germany

CENTURI Master's Degree: Computational and Mathematical Biology (MAAP)
Faculté des Sciences, Aix-Marseille Université

📅 07/2023   📍 Marseille, France

Bachelor of Mathematics, Majors in Mathematical Modeling
Faculté des Sciences, Aix-Marseille Université

📅 06 / 2021   📍 Marseille, France

SCIENTIFIC PROJECTS

02/26, Heidelberg -- Implementation of results on Universal Pairs (Hilbert X) in the Isabelle theorem prover. (Isabelle library and Associated paper)

11/25, Heidelberg -- Paper on "Spatial scale separation and emergent patterns in coupled diffusive-nondiffusive systems". (pre-print)

09/25, Heidelberg -- Conference ENUMATH 2025.

11/24, Heidelberg -- HGS MathComp Workshop on "Automated theorem provig in LE∀N".

09/24, Marseille -- Guest Speaker at Institut de Mathématiques de Marseille (I2M). Talk on "Turing-like patterns in Reaction-Diffusion-ODE systems".

07/24, Marseille -- Summer School on "Collective Behavior and Pattern Formation" (CIRM).

07/23, Heidelberg -- Master Thesis on coupled Parabolic-ODE problems for patterns formation in Hydra. Supervised by Anna Marciniak-Czochra.

05/23, Warsaw -- Spring School on "Structured Population Models" (MIMUW), with poster Presentation.

10/22, Marseille -- Workshop on "Discrete Duality Finite Volume (DDFV) Methods and Applications" (CIRM).

09/22, Heidelberg -- Heidelberg Laureate Forum (9th edition).

09/22, Marseille -- Research School on "Domain Decomposition for Optimal Control Problems".

06/22, Marseille -- CENTURI Hackathon 2022, "Optimal Frame Sampling in live microscopy". Second Place.

05/22, Marseille -- CENTURI Summer School on "Physical Biology of the Cell". By Rob Phillips and Soichi Hirokawa.

04/22, Marseille -- Master 1 Research work on "Particle Tracking and Molecular Diffusion in Endocytic Trafficking Across the Living Fly Embryo" (CENTURI, IBDM). Supervised by Thomas Lecuit, Philippe Roudot, Claudiot Collinet.

06/21, Marseille -- CENTURI Summer School on "Single Cell RNA-seq Analysis and Clustering Method" (CIML). Supervised by Pierre Milpied

12/20, Marseille -- Bachelor Thesis on "Compartimental Models: Discrete, Continous and Asymptotic Analysis of the SIR Model". Supervised by Maxime Hauray.

12/20, Marseille -- Bachelor Thesis on "Compartimental Models: Discrete, Continous and Asymptotic Analysis of the SIR Model". Supervised by Maxime Hauray.

Since 2016 (active), Marseille -- Administration Council Member of the Association "Math Pour Tous", for the diffusion of mathematics to a non-mathematician audience.