

Van Landeghem Céline

CONTACT

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EDUCATION

2022–Present : PhD in applied mathematics at Institut de Recherche Mathématique Avancée, Université de Strasbourg, supervised by Laetitia Giraldi, Yannick Hoarau and Christophe Prud'homme. *Micro-swimming in complex environments*.

2020–2022 : Master of Science at Université de Strasbourg, *Calcul Scientifique and Mathématiques de l'Information*. Training with dual competences in mathematics and computer science: modeling, data processing, simulation and optimization. Graded *very good*.

2017–2020 : Bachelor of Science at Université de Strasbourg, *Applied Mathematics*. Graded *very good*.

PROFESSIONAL EXPERIENCES

2022 : Six months internship at Université de Strasbourg supervised by Laetitia Giraldi and Christophe Prud'homme. *Modeling and simulation of contact in micro-swimming*.

2021 : Three months internship at start-up Tetrao, Luxembourg. *Development of algorithms for data extraction of investment funds from websites*.

TEACHING, SUPERVISION

2023–2025 : Travaux dirigés et pratiques *Techniques d'Analyses Numérique*, S5 MA.

2023–2025 : Travaux pratiques *Informatique*, S3 Mathématiques.

2023 & 2024 : Two months internship *The Boustrophedon decomposition method for offline robot complete path planning*, *Simulation of two interacting squirmers*, M1 CSMI.

2024 & 2025 : Project *Collective motion of squirmers in confined environments*, *Navigation of magnetic micro-objects through complex environments*, M1 and M2 CSMI.

TALKS

2024 : 46th National Congress on Numerical Analysis, Ile de Ré.

2023 & 2024 : IRMA PhD Student Seminar, Strasbourg.

2023 : SIAM Conference on Computational Science and Engineering, Amsterdam.

PUBLICATIONS

Van Landeghem C., Berti L., Chabannes V., Chouippe A., Giraldi L., Hoarau Y., Prud'Homme C.: *Mathematical and computational framework for moving and colliding rigid bodies in a Newtonian fluid*. Annals of Mathematical Sciences and Applications, Vol. 9, No. 1, pp. 59–89, 2024.

Van Landeghem C., Berti L., Giraldi L., Prud'Homme C.: *Towards a computational framework using finite element methods with Arbitrary Lagrangian–Eulerian approach for swimmers with contact*. To be published in SEMA SIMAI Springer Series.

LANGUAGES

Luxembourgish : native.

German : fluent.

French : fluent.

English : advanced.