

André Lanrezac

Bioinformatician | Scientific Developer

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lanzac.github.io

Skills

Programming: Python3, C++, C#, Bash, C, HTML, CSS

Technologies: Git, CI/CD (GitHub Actions), Docker, Unity, GDB/LLDB, CMake, MongoDB, Streamlit

Languages: French (native), English (proficient), Mandarin (beginner)

Experience

Research Assistant & Research engineer

Paris

Laboratory of Theoretical Biochemistry (LBT), CNRS

2019 – 2024

- Lead author of an advanced review on interactive molecular simulations (IMS) [1]
- Development of a software suite integrating visualisation and molecular simulation with human interaction [2, 3]

Bioinformatics Drug Design Intern

Paris

Bioinformatics and biophysics team, IMPMC · Sorbonne université

Feb 2019 – June 2019

- Developed a cyclic peptide docking method by combining Autodock with REMD simulations in GROMACS, and compared the results with the HADDOCK docking tool.
- Manual design of cyclic peptides with UCSF-Chimera.

Bioinformatics Structural Analysis Intern

Paris

Bioinformatics Research Group, ISYEB · Sorbonne université

July 2018

- Contributed to developing a program for rapid protein structure similarity searches. (Python).

Education

Université Paris Cité – Ph.D. in Bioinformatics

2023

Advisor: Dr Marc Baaden

Sorbonne Université, Paris – B.S. in Biology & M.S. in Bioinformatics

2019

Publications

- [1] André Lanrezac, Nicolas Férey, and Marc Baaden. "Wielding the power of interactive molecular simulations". *WIREs Computational Molecular Science* 12.4 (July 2022).
- [2] André Lanrezac et al. "Fast and Interactive Positioning of Proteins within Membranes". *Algorithms* 15.11 (Nov. 2022), p. 415.
- [3] André Lanrezac and Marc Baaden. "UNILIPID, a Methodology for Energetically Accurate Prediction of Protein Insertion into Implicit Membranes of Arbitrary Shape". *Membranes* 13.3 (Mar. 2023), p. 362.
- [4] André Lanrezac, Nicolas Férey, and Marc Baaden. "Interactive Molecular Dynamics". *Reference Module in Chemistry, Molecular Sciences and Chemical Engineering*. Elsevier, 2023, B978012821978200115X.