



GUIREC DE TOURNEMIRE

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WORK HISTORY

PhD Candidate – Brownian motion in complex environments

EMetBrown Group, Laboratoire Ondes et Matière d'Aquitaine (LOMA)

Oct. 2024 – Present

Bordeaux, France

- ERC-funded PhD program on diffusion in complex media.
- Supervisors: Yacine Amarouchene, Thomas Salez.
- Mie holography and TIRF Microscopy to probe of out-of-equilibrium processes: first-passage statistics, diffusion in porous media, and active Taylor–Aris dispersion.
- Teaching activities: mathematical methods and statistical physics at the undergraduate level.

PUBLICATIONS

Enhanced dispersion of active microswimmers in confined flows,

2025 PNAS

M. Lagoin, J. Lacherez, G. de Tournemire, A. Badr, Y. Amarouchene,
A. Allard and T. Salez

DOI 10.1073/pnas.2519691122

Non-Gaussianity-induced enhanced target-finding dynamics of confined colloids,

2026 Arxiv

G. de Tournemire N. Fares, Y. Amarouchene and T. Salez

arXiv:2511.11117

TALKS AND SCHOOLS

Brownian motion, Friends and Foes

June 2025

Poster - "First-passage statistics of a confined brownian particle"

Lausanne, Switzerland

FLUID 2024 – Fluid mechanics and wetting

November 2024

School – at the KTH

Stockholm, Sweden

SKILLS

Languages: French (native), English (C1)

Programming: Python/MatLab, Git code handling

Software: Linux, Windows, macOS, MS Office

REFERENCES

Thomas Salez (PhD supervisor): thomas.salez@u-bordeaux.fr

Yacine Amarouchene (PhD supervisor): yacine.amarouchene@u-bordeaux.fr

Antoine Allard (McF, Collaborator): antoine.allard@u-bordeaux.fr

David Dean (Professor, Collaborator): david.dean@u-bordeaux.fr