



# GUIREC DE TOURNEMIRE

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## WORK HISTORY

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### 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

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### 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

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### 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

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**Languages:** French (native), English (C1)

**Programming:** Python/MatLab, Git code handling

**Software:** Linux, Windows, macOS, MS Office

## REFERENCES

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**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