ASPERT Théo

Nationality: French Age: 27 y.o

PhD in biophysics (of

aging)

Expert in microfluidics

Contact

+33 665 648 209



theo.aspert@gmail.com



17 rue de Saint-Dié, 67100 Strasbourg, FRANCE



https://taspert.github.io



Bioengineer and PhD in biophysics passionate about the biology of aging, I have a strong expertise in developing, using, and transmitting microfluidics, timelapse microscopy, and image processing technics to study how cells age, at the single-cell level.

MAIN ACADEMIC EXPERIENCES ▼

Charvin lab - PhD Institut de Génétique et de Biologie Moléculaire et Cellulaire (INSERM, CNRS, University of Strasbourg)

[2017 - Dec 2021]

R&D and scientific projects:

- Development of a high-throughput platform for replicative aging based on microfluidics and
- Deep learning-based automated detection of cell divisions for replicative lifespan reconstruction
- Measuring the statistics of extrachromosomal rDNA Circle excisions, a major event in the replicative lifespan of budding yeast cells.
- Monitoring the dynamics of entry into quiescence during an unperturbed lifecycle at single-cell level.
- Development of a microfluidic device to couple single-cell timelapse analysis with biochemical assays.
- Multiple collaborative projects, involving the development/use of microfluidic strategies.
- 2x first author publications, 6 publications.

Technical skills developed:

Microfluidics (experimental, theorical and simulations (COMSOL)). Microfabrication (design (AutoCAD), photo- and soft-lithography, clean room management). Timelapse, confocal and epifluorescence microscopy, microscope and hardware programming (Micromanager). Classical and deep-learning image and sequence processing (CNN, LSTM, U-Net). Electronics and automation. Data science and software development (Matlab, Python).

Quantitative biology (data acquisition, processing and visualization. Deterministic and stochastic modeling).

Yeast biology (notably aging and quiescence).

Classical biology tools: FACS, PCR, DNA gels, yeast and bacteria strains generation.

Saudou lab -Grenoble Institute of Neurosciences Master's internship [2016]

Description of a new mode of vesicles transport along axons

Technical skills developed:

Timelapse with spinning disk confocal microscopy, microfluidics, image and data processing, neuronal cell culture, immunofluorescence tagging.

ALMA MATER ▼

Grenoble Institute of Technology - PHELMA

- *Bachelor's degree in Engineering Physics
- *Master's degree of bioengineering (physics and instrumentation for biomedical applications)

Grenoble-Alps University

*Master of Science in Nanobiology

Ex of courses/praticals: Theoretical and experimental microfluidics, microfabrication, hydrodynamics, numerical modelisation, multi-physics simulations (COMSOL), image processing, molecular and cellular biology, physiology, systems biology.

Ex of projects: Studying the influence of shear stress on Dictyostelium discoideum actin polymerization using a microfluidic device.

(2014-2017)

Lycée Pothier - Pre-engineering class

(2011-2014)

Intensive undergraduate preparation in mathematics, physics and engineering sciences for the national competitive entrance exams to French «Grandes Ecoles».

OTHER SKILLS ▼

Chatting with computers and machines Matlab, Python, C++, HTML/CSS, Fiji/Java 3D modeling and printing (FDM, SLA), Arduino, DIY Printed 500+ faceshields for hospitals during the Covid19 pandemic Conveying a scientific/technical message Giving talks, Powerpoint, Adobe suite, Webdesign

PERSONNAL INTERESTS ▼

Cycling (road/mountain/gravel), hiking, trekking 100+km/week

Photography/Astrophotography

Environment and society

Co-founder of twitter.com/sapiensecologie