

YAZDAN RASHIDI

Microfluidics & Soft matter | Ph.D. in Physics | Computational Imaging & Optical Microscopy Engineer | Python

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Authorised to Work in the EU: Yes (EU Blue Card) Mobility: Flexible & Relocation-Ready



PROFESSIONAL SUMMARY

Physicist with expertise in microfluidics, optical microscopy, and biomedical image analysis. Experienced in MATLAB and Python for image processing. Strong background in digital holography, experimental optics, and interdisciplinary biomedical research.

EXPERIENCE

Postdoctoral Researcher

Universität des Saarlandes (UdS)

 Dec 2023 – Present  Saarbrücken, Germany

- Developed quantitative imaging and MATLAB-based analysis pipelines for microfluidic and biophysical flow experiments.
- Performed confocal and optical microscopy imaging of complex biological fluid systems, including red blood cell dynamics in confined flows.
- Designed image reconstruction and particle tracking workflows for high-resolution microscopy datasets.
- Conducted experimental optimization, data analysis, and visualization for interdisciplinary biomedical research projects.

Research Secondment

Institute for Bioengineering of Catalonia (IBEC)

 Jun 2023 – Aug 2023  Barcelona, Spain

- Fabricated and tested microfluidic chips using soft lithography techniques.
- Integrated microscopy-based validation methods for experimental flow characterization.
- Collaborated in an international interdisciplinary research environment focused on biomedical microfluidics.

Secondment

LIPhy - Université Grenoble Alpes

 Nov 2021 – Dec 2021  Grenoble, France

- Microfluidic experimentation combined with optical observation of biological systems.

Research Internship – Computational Imaging

Smart Computational Imaging (SCI) Laboratory, NJUST

 Aug 2019 – Feb 2020  Nanjing, China

- Developed MATLAB algorithms for digital holographic microscopy, Fourier optics, and phase reconstruction.
- Solved phase unwrapping and image reconstruction challenges for high-resolution optical imaging systems.
- Designed and optimized holographic microscopy setups for computational imaging applications.
- Performed quantitative image analysis and optical system calibration.

PUBLICATIONS

Red blood cell lingering modulates hematocrit...

Yazdan Rashidi, et al. (*best scientific paper prize*)

 10.1016/j.bpj.2023.03.020

Cell-free layer development and spatial organization...

Yazdan Rashidi, et al.

 10.1039/D3SM00517H

Morphology, repulsion, and ordering of red blood cells...

S. M. R., Yazdan Rashidi, I. G., P. E. A., F. D. G., C. W.

 10.1039/d4sm00446a

Cell-free layer of red blood cells in a constricted...

S. M. R., K. G., Yazdan Rashidi, J. N. S., T. J., S. G., C. W.

 10.1103/PhysRevFluids.8.074202

TECHNICAL SKILLS

- Programming & Data Analysis: MATLAB
Python Image Processing Particle Tracking
- Experimental Techniques: Microfluidics
Soft Lithography Flow Cytometry
Optical microscopy: Confocal, fluorescence
- Software: ImageJ OriginPro AutoCAD 3D

CORE EXPERTISE

Microfluidics Computational Imaging
Biomedical Imaging Microscopy

EDUCATION

Ph.D in Physics

Universität des Saarlandes (UdS)

 Oct 2020 – Jan 2024

Thesis: Red blood cell flow in in-vivo and in-vitro network.

HONOURS AND AWARDS

Best scientific paper

The 3rd World Congress of eschm-isb-isch 2023

 Sep 2023

Marie Skłodowska-Curie Actions

Universität des Saarlandes

 Sep 2020

NMG scholarship

Nanjing University of Science and Technology (NJUST)

 Jul 2019

LANGUAGES

English
Deutsch

