Newsletter
July 2024

SIBPA
Società Italiana di Biofisica Pura e Applicata
fondata nel 1973

Premio Enrico Fermi 2024

Il premio Enrico Fermi 2024 della Società Italiana di Fisica
è stato assegnato al nostro past President,
Alberto Diaspro per i suoi studi di Microscopia Ottica in Biologia!
E' la prima volta che questo premio viene assegnato a un Biofisico.
Siamo felici di questo meritato riconoscimento ad Alberto e gli facciamo
le nostre congratulazioni!

Premio Enrico Fermi 2024

Call for positions

PostDocs within the Center of Excellence "COMMONS - Commonalities in membrane molecular interactions"

COMMONS has opened three postdoctoral positions in the COFUND AMBER project. If you know about good candidates, please forward theannouncements (deadline **September 6**, but sufficient preparation is needed).

Impact of Nanoparticle Binding on Lipid Redistribution and Membrane Deformation in Cellular Membranes

https://lu.varbi.com/en/what:job/jobID:736572/

Contact persons: Martin Malmsten & Fredrik Höök
martin.malmsten@sund.ku.dk
fredrik.hook@chalmers.se

Membrane-induced liquid-liquid phase separation
https://lu.varbi.com/en/what:job/jobID:736603/

Contact person: Emma Sparr emma.sparr@fkem1.lu.se

Condensate-mediated amyloid nucleation
https://lu.varbi.com/en/what:job/jobID:736642/

Contact person: Sara Linse sara.linse@biochemistry.lu.se

COMMONS is a Center of Excellence funded by the Swedish Research Council, with the theme "Commonalities in membrane molecular interactions" (www.physchem.lu.se/commons/). The overarching aim of COMMONS is to provide a multifaceted scientific environment focusing on unifying physicochemical processes of key importance for the function of cellular membranes and their effects on other biomolecules. The COMMONS Center brings together methodological and theoretical expertise from Lund University, Chalmers and Copenhagen University, and will serve as host for a Graduate School and a Visiting Professor program to attract experts from a broad field of biomembrane and biomolecular sciences. The COMMONS Center is led by a group of PI's (Emma Sparr, Sara Linse, Fredrik Höök, Martin Malmsten) whom together with additional scientists and guest professors within COMMONS will guide the projects and the training of the recruited postdocs towards leading academic or industrial research positions.

News from EBSA

Open PhD and Postdoc positions at the Max-Planck Institute for Multidisciplinary Sciences (MPI-NAT), Göttingen, Germany

The Department of Theoretical and Computational Biophysics, headed by Helmut Grubmüller, is looking for people interested in joining the group to contribute to current research projects:

1) addressing "Theory and Methods for Non-equilibrium Atomistic Simulations of Complex Biomolecules" and in particular projects on variational free energy methods, thermodynamics of solvation shells, Markovian thermodynamics, as well as functional mechanisms of the ribosome, fatty acid synthase, CRISPR/Cas, or intrinsically disordered proteins

Full job advert (60-23) is available here:

https://www.mpinat.mpg.de/4588467/60-23?c=645962

2) Furthermore, a PhD student position is available for the project “Microtubule nanomechanics and turnover under cell-like physical constraints”. Visit the full jab advert (21-24) for further details, please:

https://www.mpinat.mpg.de/4714565/21-24?c=645962

More research projects are presented on the department websites:

https://www.mpinat.mpg.de/grubmueller

Postdoc opportunities at Umeå University

Project number 6, which deals with investigations of glycocalyx degradation through viral diseases could greatly benefit from a biophysicist or a biophysics-oriented researcher.

More information can be found here:

https://www.umu.se/en/ucmr/ec-postdoc-programme/excellence-by-choice--postdoctoral-programme-in-life-science-call-4/. For more information about the project or the program, do not hesitate to contact me!

Application deadline is September 8.

Marta Bally

Associate Professor

Deputy director Umeå Centre for Microbial Research

Umeå University

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https://ballylab.com/

International Conference on Analytical and Nanoanalytical Methods for Biomedical and Environmental Sciences (IC-ANMBES 2024)

We're excited to remind you about the **7th Edition of the International Conference on Analytical and Nanoanalytical Methods for Biomedical and Environmental Sciences (IC-ANMBES 2024)** taking place in the beautiful city of Brașov, Romania, from September 17-20, 2024, at the Aula Magna of Transilvania University of Brașov. 🏰🌍

Great news! The deadline for abstract submission has been extended to July 21,

2024.
EBSA Travel Awards Available for Master's, PhD, and Postdoc Students!.

More details are available on the conference website (https://icanmbes.unitbv.ro/awards_bursary.html).
Important dates are:

July 21, 2024: Deadline for submission of abstracts.
July 21, 2024: Deadline for travel awards submission.
August 2, 2024: Deadline for early registration fee.
August 14, 2024: Deadline for late registration fee (to be included in Abstracts Book).

We hope you will be able to join this event and enjoy the stimulating scientific program.We are very much looking forward to seeing you in Brasov!
Kind regards,
Monica Florescu, PhD
Chairperson of IC-ANMBES Organizing Committee
Transilvania University of Brasov, Romania
icanmbes@gmail.com

Fully-Funded PhD Opportunity in Microtubule Research at SETU, Waterford

We are excited to announce a fully-funded 4-year PhD position in our research project at SETU, Ireland, focusing on the dynamics and plasticity of the microtubule lattice.

Project Overview:

This project aims to explore transient changes in the microtubule lattice using modelling techniques, including molecular dynamics, elastic network modelling, and kinetic modelling. The goal is to understand how the microtubule lattice adapts and responds to interactions with other molecules and the cellular environment.

Requirements:

Essential:

- Intellectual curiosity and analytical skills

- Understanding of mechanics or structural biology

- Experience with modelling/coding in MATLAB or Python

Desirable:

- Experience with molecular dynamics or other modelling approaches

- Basic understanding of biology

Why Waterford?

Experience the vibrant research environment at SETU, Waterford – a growing institution in an English-speaking country known for its welcoming culture, stunning coastal scenery, majestic mountains, and rich traditions in music and beer.

For more information about the position and the application procedure, please visit:

[SETU Funded Research Opportunities](https://www.setu.ie/research-innovation/researcher-support/current-funding-and-open-calls/internal-setu-funding-calls/funded-research-opportunities)

If you have any informal questions, please contact me at ondrej.kucera@setu.ie.

If you are interested in a **postdoctoral position** in a related research field, please reach out to me. We can assist in supporting your application for competitive grants like the Government of Ireland Postdoctoral Fellowship.

Best regards,

Ondrej
--Ondrej Kucera, PhD.
South East Technological University

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ondrej.kucera@setu.ie | setu.ie
Recent publications:

https://www.nature.com/articles/s41563-023-01578-1

https://www.pnas.org/doi/abs/10.1073/pnas.2209522119

https://pubs.acs.org/doi/abs/10.1021/acs.nanolett.2c0311

Postdoctoral Research Assistant position available in the field of Single-Molecule Biophysics, focusing on the dynamics of human mitochondrial DNA replication.

IMDEA Nanociencia, Madrid, Spain Duration: 2-3 years
We are looking to hire a Postdoctoral Research Assistant for an exciting project aimed to understand the dynamics of the human DNA replication in health and disease at the single-molecule level. Our lab specializes in the single-molecule biophysics of DNA replication and employs state-of-the-art single molecule techniques. We have established national and international collaborations to drive cutting-edge research (www.borjaibarralab.com).

Role Overview:
The candidate will:
- Use optical trapping and fluorescence microscopy to study DNA replication on individual DNA molecules.
- Use and develop data analysis routines to interpret experimental data.
- Acquire skills in protein purification and ensemble biochemistry.
- Contribute to building an outstanding interdisciplinary team together with the other labs involved in the project, which are experts in Biochemistry (North Florida University), CryoEM (CNIO, Madrid) and cell biology (CIB-CSIC, Madrid). Secondments will be encouraged.

Project Description:
The selected candidate will investigate the dynamics of the human mitochondrial DNA replisome at the single-molecule level. In particular, the project will be focused on elucidating the real-time kinetics, stoichiometry, and exchange

dynamics of the components of the mitochondrial replisome. We will also determine the effect of pathogenic variants of replisome factors on replisome operation. This will involve using novel biophysical instruments and collaborating with experts in molecular biology and biochemistry. Based on the relevance of mitochondrial DNA replication in health and disease and the novelty of the results, we expect a high impact of our results.

Requirements:
- A Ph.D. (or near completion) in biophysics or microscopy.
- Experience in the mentioned areas, with strong instrumentation and quantitative analysis skills.
- Motivation to develop a combined biophysics/biochemistry skillset.
- Independent, well-organized work style, with a team-oriented mindset.
- A strong publication record and excellent communication skills.

For more information and application contact borja.ibarra@imdea.org

Applications should include a motivation letter, CV, and contact information of three references. **The closing date for applications is November 1st 2024.**

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