



HFSP AWARDS 2017

CROSS-DISCIPLINARY FELLOWSHIPS

as approved by the Board of Trustees (March 17, 2017)

The HFSP fellowship program funds innovative, ground-breaking projects that have the potential to advance knowledge in the applicants' field of study or open a new approach to a research problem. High risk research is supported.

Cross-disciplinary fellowships are intended for postdoctoral fellows with a degree outside the life sciences (e.g. physical sciences, chemistry, mathematics, engineering or computer sciences) who wish to receive training in biology. Fellows receive 3 years of support to obtain training in an outstanding laboratory of their choice in another country. Applicants for this fellowship are expected to move into a new research field through a significant change in discipline.

These types of fellowships bring about very innovative projects such as the top ranked study by Michael Luescher whose background is in chemistry. He tries to find out why and how microbial peptide radicals and enzymes are involved in human pathologies. Another highly ranked project by trained theoretical physicist Arnold Mathijssen studies abiotic self-replication and directed evolution based on magnetic beads on string. Coming yet from another very different angle, material scientist Georgios Spyropoulos intends to develop neural interface devices based on the availability of organic polymers in different brain regions.

BRACHA Dan ISRAEL	From	Department of Materials and Interfaces Weizmann Institute Rehovot ISRAEL	<i>Elucidating nucleolar self-organization by seeding nuclei with segregated nucleolar sublayers</i>
	To	Department of Chemical and Biological Engineering Princeton University USA	Supervisor: BRANGWYNNE Clifford
DOERRE Nadine AUSTRIA	From	Faculty of Physics University of Vienna AUSTRIA	<i>Interferometric imaging of retinal physiology</i>
	To	Hansen Experimental Physics Laboratory Stanford University USA	Supervisor: PALANKER Daniel
GHABACHE Elisabeth FRANCE	From	Institut Jean le Rond d'Alembert Université Pierre et Marie Curie Paris FRANCE	<i>Quantitative analysis of cell polarity with microfluidics and traction force microscopy</i>
	To	Physics Department UC San Diego La Jolla USA	Supervisor: RAPPEL Wouter-Jan
KAREDLA Venkata Satya Narain INDIA	From	III. Institute of Physics - Biophysics Georg-August-University Goettingen GERMANY	<i>Voltage sensing in neurons using nanorods</i>
	To	Department of Chemistry and Biochemistry UC Los Angeles USA	Supervisor: WEISS Shimon
KOLVIN Itamar ISRAEL	From	Racah Institute of Physics Hebrew University Jerusalem ISRAEL	<i>A multiscale approach towards studying contractility in cytoskeleton networks</i>
	To	Martin A. Fisher School of Physics Brandeis University Waltham USA	Supervisor: DOGIC Zvonimir

LUESCHER Michael Umberto SWITZERLAND	From	Department of Chemistry and Applied Biosciences ETH Zurich SWITZERLAND	<i>Glycyl radical enzymes in human microbiota and their characterisation</i>
	To	Department of Chemistry and Chemical Biology Harvard University Cambridge USA	Supervisor: BALSUS Emily
MATHIJSEN Arnold THE NETHERLANDS	From	Rudolf Peierls Centre for Theoretical Physics University of Oxford UK	<i>Abiotic self-replication and directed evolution in colloidal strings</i>
	To	Department of Bioengineering Stanford University USA	Supervisor: PRAKASH Manu
PAPPAS Charalampos GREECE	From	Advanced Science Research Centre City University of New York USA	<i>Dissipative self-replication</i>
	To	Centre for Systems Chemistry University of Groningen THE NETHERLANDS	Supervisor: OTTO Sijbren
RANJBARI Elias IRAN	From	Department of Chemistry University of Mazandaran Babolsar IRAN	<i>Nanoelectrochemistry and NanoSIMS to study the effects of cognitive drugs on synaptic vesicles</i>
	To	Department of Chemistry and Molecular Biology University of Gothenburg SWEDEN	Supervisor: EWING Andrew
SIMONCELLI Sabrina ARGENTINA/ITALY	From	Department of Physics and Center for NanoScience LMU Munich GERMANY	<i>Multicolor super-resolution fluorescence imaging of protein interactions during T-cell activation</i>
	To	Department of Physics King's College London UK	Supervisor: OWEN Dylan

SPYROPOULOS
Georgios
GREECE

From Institute of Materials for Electronics and
Energy Technology
Friedrich-Alexander University
Erlangen-Nuremberg
GERMANY

***Revealing millisecond-scale
neural dynamics with
non-invasive organic electronics***

To Department of Translational
Neuroelectronics
Columbia University
New York
USA

Supervisor:
KHODAGHOLY Dion