SIBPA
Società Italiana di Biofisica Pura e Applicata
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Biophysics in Europe

NEWSLETTER 2020, #12 – December

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[by SIBPA] Pietro Greco (1955–2020)

Venerdì 18 dicembre ci ha lasciato improvvisamente Pietro Greco. Giornalista scientifico e scrittore, laureato in chimica, è stato socio fondatore della Fondazione IDIS-Città della Scienza di Napoli. Ha diretto il master in Comunicazione scientifica della Scuola Internazionale Superiore di Studi Avanzati (SISSA) di Trieste. È stato membro del consiglio scientifico dell'Istituto superiore per la protezione e la ricerca ambientale (ISPRA) e della Fondazione Symbola. È stato direttore della rivista Scienza&Società edito dal Centro Pristem dell'università Bocconi di Milano, di Bo Live, magazine dell'Università di Padova, del web journal Scienza in Rete e storico conduttore della trasmissione Radio3Scienza su Rai Radio 3.
Autore prolifico d'importanti saggi scientifici che hanno riguardato le politiche per lo sviluppo scientifico e culturale in Italia, le scienze ambientali, la fisica dei quanti, la storia della scienza (in Italia e in Europa) fino al ruolo della ricerca scientifica come impulso per lo sviluppo economico-sociale del Mezzogiorno d'Italia (per un elenco esaustivo si rimanda al link https://www.scienzainrete.it/category/Autori/Pietro-Greco).

Pietro è stato amico e sostenitore della SIBPA, sempre generoso nel proporre e offrire occasioni per una maggiore visibilità delle attività della nostra Società, attingendo al suo sterminato bagaglio di relazioni e opportunità di comunicazionee (una per tutte, la pubblicazionesu Scienza in Rete del resoconto della prima esperienza di collaborazione tra SIBPA e il Festival della Scienza di Genova, https://www.scienzainrete.it/articolo/al-festival-della-scienza-di-genova-biofisica-%C3%A8-alla-portata-di-tutti/franco-gambale-carlo). Qui ci piace ricordare il suo contributo di speaker brillante e acuto moderatore della sessione "Biofisica: storia, attualità prospettive" in occasione del Congresso Nazionale SIBPA 2014 a Palermo: grazie a lui, il primo fruttuoso tentativo di allargare a tematiche non tradizionali le classiche sessioni del congresso SIBPA. Del suo particolare contributo sul rinascimento scientifico italiano degli anni '60 resta memoria nell'articolo "A Neapolitan miracle" pubblicato su *Biophysical Chemistry* (https://doi.org/10.1016/j.bpc.2015.06.008). Pietro, inoltre, era membro in carica della commissione per l'assegnazione del Premio Marina Diana Mercurio - SIBPA. La SIBPA desidera ricordare Pietro attraverso le parole a lui dedicate da Settimo Termini, presidente dell'Associazione Marina Diana Mercurio, nell'editoriale conclusivo dell'ultimo numero di *Nuova Lettera Matematica*, rivolto al pensiero e all'opera di Adriano Olivetti.

"… La mattina del 18 dicembre è scomparso all'improvviso Pietro Greco, amico e colonna portante della Lettera (vecchia e nuova). Non potremo più contare sul suo aiuto per discutere i temi di cui parlavamo nelle righe precedenti (così come non potrà farlo la classe dirigente italiana). E non sapremo mai "come" avrebbe presentato per noi, nel prossimo numero, il rapporto tra Dante e la scienza (una promessa che ci aveva fatto un paio di giorni prima di lasciarci). Le sue idee le possiamo dedurre dai suoi innumerevoli scritti, tra cui l'opera monumentale "La scienza e l'Europa" ma Pietro aveva la capacità di stupirci arricchendole ogni volta, presentandocele da una prospettiva diversa. Questo ci mancherà per sempre. Ciao Pietro".

[by SIBPA] SIBPA-IVSLA International School of Biophysics 2021: online with new dates

SIBPA Società Italiana di Biofisica Pura e Applicata *Fondata nel 1973* — IUPAB Connecting the World of Biophysics — Istituto Veneto di Scienze Lettere ed Arti — Member Society of EBSA Biophysics in Europe

XXV INTERNATIONAL SCHOOL OF PURE AND APPLIED BIOPHYSICS on

Venice (I), Palazzo Franchetti,
18-22 January, 2021

Quantitative analysis of optical imaging for Medicine and Biophysics: foundations, applications and perspectives.

Due to Covid-19 pandemic restrictions, the school will take place on-line. No registration fee is requested. Upon registration, the applicants will receive the information to access the hosting platform.

The quantitative analysis of the huge amount of data produced by modern optical microscopy and spectroscopy techniques can dramatically improve our understanding of basic physiological phenomena and foster the application of innovative imaging approaches in medical diagnosis. The school will offer an overview of the foundations and applications of some of the most recent methods for quantitative analysis of data provided by modern optical and multimodal imaging, with a special focus on machine learning approaches. Technical details of the quantitative analysis will be discussed in lectures, and online informal discussion with the lecturers. The participation to the school is limited to 35 students.

Coorganized by:

Società Italiana di Biofisica Pura e Applicata — SIBPA

Università di Milano-Bicocca Milano — Università degli Studi di Milano Bicocca

Institute Pasteur, Paris — Institut Pasteur

CNR, ISASI Napoli — National Research Council of Italy

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Pietro Ferraro –CNR- ISASI (Italy);
Cristophe Zimmer – Institute Pasteur (F)

DIRECTOR of the school:
Prof. Giorgio Giacometti - IVSLA and Uni. Padua (Italy)

SPEAKERS:

Margaux Bouzin, Milano (I)
Silvia Caponi, Perugia (I)
Gastone Castellani, Bologna (I)
Isabella Castiglioni, Milano (I)
Maddalena Collini, Milano (I)
Alberto Diaspro, Genova (I)
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Dynamic Optics

Additional info at: www.sibpa.it/index.php/scuola-internazionale-di-biofisica-sibpa-ivsla.
Please notice that the school will take place on-line. Upon registration the applicants will receive all the information about the hosting platform (Webex).

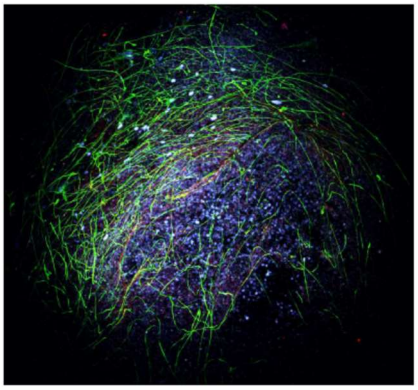
[CfPO] Post-doc position at VIMM, Padova, Italy

VENETO INSTITUTE OF MOLECULAR MEDICINE

UNIVERSITÀ DEGLI STUDI DI PADOVA

POST-DOC POSITION AVAILABLE AT VIMM (PADUA, ITALY)

Biophysical study of brain organoids derived from Parkinson's disease patients



Increasing evidence suggests that Parkinson's disease might be driven by lysosomal dysfunction with cellular waste-clearing. The project aims to functionally characterize midbrain organoids derived from patients carrying pathological variants of the gene encoding the beta-glucocerebrosidase (GBA) lysosomal enzyme, known to confer a 5- to 7-fold increased risk to develop Parkinson's disease. Brain organoids have recently emerged as a three-dimensional tissue culture platform to study neuronal and glial properties in physiological and pathological conditions. The selected candidate will study the structure and functionality of midbrain organoids (https://youtu.be/cHyhWv37g74U2) both at single cell and network level using a combination of electrophysiology (patch-clamp) and imaging equipment (wide-field, confocal, 2 photon-STED). The results will be correlated to key pathological pathways including alpha-synuclein aggregation, lysosomal and endoplasmic reticulum stress. The multidisciplinary nature of this new research project (PRIN, Research Project of National Relevance) is evident from the broad range of expertise of the PIs and Italian centres involved: VIMM, University of Milan, Policlinico of Milan, Humanitas University.

QUALIFICATIONS

We are looking for highly motivated candidates holding a master's degree with at least three years research experience, or a Ph.D related to stem cell and/or neurobiology fields. Hands on experience working with molecular biology, human pluripotent stem cells and electrophysiology are meriting. Candidates will also be evaluated based on motivation, flexibility and proved ability to work independently.

ABOUT THE VENETO INSTITUTE OF MOLECULAR MEDICINE

The selected candidate will work at the Veneto Institute of Molecular Medicine (VIMM, https://www.vimm.it/) in the laboratory of Prof. Mario Bortolozzi, where state-of-the-art biological and biophysical facilities are available. The VIMM is an internationally recognized institute with the mission of establishing a close link between basic and clinical research and promoting translational research. The institute is a dynamic and stimulating environment located in Padua, an attractive historical city close to Venice and the beautiful Dolomites mountains.

CONTACTS

Interested candidates should send an email to mario.bortolozzi@unipd.it including:
1) a cover letter describing scientific experience, interests and career goals;
2) full CV;
3) reference letter and/or names and contact information of at least two professional references.
Applications will be reviewed immediately and considered until the position is filled.

JOB DETAILS

Employer: University of Padua (Padova), Italy. Website: http://www.unipd.it/en/.
Funding: Italian Ministry of Research and University (MIUR).
Supervisor: Mario Bortolozzi, Ph.D., associate professor at the Department of Physics and Astronomy "G. Galilei", University of Padua. Principal investigator at the Venetian Institute of Molecular Medicine (VIMM), Via G. Orus 2, 35129, Padova, Italy. Website: http://www.vimm.it/scientific-board/mario-bortolozzi/.
Job type: Post-doc Research Fellowship (Italian "assegno di ricerca").
Employment type: 2-year contract available immediately.
Job hours: Full-time.

[CfPO] [EBSA] Post-doc position at University of Warwick, Coventry

I am looking to recruit a motivated postdoc at the interface of soft matter and microbiology. The successful candidate will join a team of technician and another postdoc (with microbiology background) to help understand the biophysics and microbial ecology of photgranules. These are micron to cm sized object forming in freshwater samples and covered by cyanobacteria in their outer layer. We are interested in understanding granule formation, dynamics, and interactions within.

If you are interested, get in touch to discuss more or simply apply at:
https://atsv7.wcn.co.uk/search_engine/jobs.cgi?owner=5062452&ownertype=fair&jcode=1874020&vt_template=1457&adminview=1

Orkun S Soyer, PhD, Head of OSS Lab & Professor, School of Life Sciences, Gordon and Betty Moore Investigator; Group Site | GitHub Site

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[WS/SY] [EBSA] Workshop announcement and invitation, COMPUTER SIMULATION AND THEORY OF MACROMOLECULES 2021

Due to the continuously high and rising demand for discussing recent advances in biomolecular simulation, we will organise the 'Computer Simulation and Theory of Macromolecules' workshop again. We cordially invite you and in particular your students and postdocs to participate in the meeting on April 23-24, 2021.
The current Corona pandemic situation prompted us to switch to a virtual setup: Therefore, we invite you to join the presentations via a video conferencing Webinar tool. We will also arrange a virtual poster session – more information will follow in due time. Please submit your talk or poster title and abstract at the registration website below.
We are very much looking forward to many exciting presentations and lively discussions!
We do not charge any registration fee this time, but kindly ask you to register your contribution by February 24, 2021 at the latest through the form on our registration website:
https://www.mpibpc.mpg.de/17589936/Registration-2021

Volkhard Helms, Helmut Grubmüller

PS: For further information on presentation formats and the virtual meeting setup, please refer to https://www.mpibpc.mpg.de/grubmueller/huenfeld

Max Planck Institute for Biophysical Chemistry, Theoretical and Computational Biophysics, Helmut Grubmueller; Computational Biomolecular Dynamics, Bert de Groot; Mathematical Biophysics, Aljaz Godec
Am Fassberg 11, 37077 Goettingen, Germany, Tel.: ++49 551 201 2300, Fax: ++49 551 201 2302, Email: eheinem1@gwdg.de

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[WS/SY] Workshop "Frontiers in ion channels and nanopores", Roma, Italy

erc European Research Council Established by the European Commission	February 2-5 2021 Sapienza University of Rome Dept of Mechanical & Aerospace Engineering https://sites.google.com/uniroma1.it/ficn2021/	SAPIENZA UNIVERSITÀ DI ROMA CECAM-IT-SIMUL cecam

Scientific Committee:
- Carlo Massimo Casciola
- Giovanni Ciccotti
- Ignacio Pagonabarraga Mora

Organizers:
- Alberto Giacomello
- Carlo Guardiani
- Antonio Tinti

Ion channels are fundamental biological devices that act as gates in order to ensure selective ion transport across cellular membranes; their operation constitutes the molecular mechanism through which basic biological functions, such as nerve signal transmission and muscle contraction, are carried out.

Nowadays **biological nanopores** can be inserted in lipid bilayers and reproducibly prepared allowing several applications in nanobiotechnology such as single molecule detection and manipulation. The power of these tools is exemplified by the ultra-fast DNA sequencing technique based on the alpha-hemolysine channel. Ion channels are, however, extremely sensitive to the external environment and once they are extracted from their biological setting, they tend to lose their unique properties. This has prompted massive research efforts in order to produce synthetic nanopores in solid-state materials; these artificial nanopores, however, still do not fully replicate the properties of ion channels. Indeed, a number of stimulating challenges are ahead, such as combining the exquisite selectivity of biological pores with the robustness of synthetic ones.

From a more general perspective the study of biological ion channels enshrines the possibility to identify the design principles for **biomimetic nanopores**, and as such it is of great interest not only for the biophysical, but also for the nanotech community.

This workshop brings together **leading and emerging scientists** in the field of ion channels and nanopores covering theoretical advances, state-of-the-art simulation approaches, and frontline experimental techniques. The speakers are selected among renowned experimentalists, theoreticians, simulators and technologists. The informal atmosphere is intended to promote the interaction of young researchers with leading scientists.

Free participation, subject to registration

Workshop "Frontiers in ion channels and nanopores", Roma, Italy

Invited Speakers

Hydrophobic gating

- **Gerhard Hummer** - Max Planck Institute of Biophysics
- **Mark Sansom** - University of Oxford
- **Sergei Sukharev** - University of Maryland

Computational methods/ theory

- **Peter Hänggi** - University of Augsburg
- **Benoit Roux** - University of Chicago
- **Attila Szabo** - National Institute of Health
- **Eric Vanden-Eijnden** - New York University

Ion channel Simulation

- **Ben Corry** - Australian National University
- **Lucie Delemotte** - KTH Royal Institute of Technology
- **Michael Grabe** - University of California, San Francisco
- **Werner Treptow** - University of Brasilia
- **Matteo Ceccarelli** - Università di Cagliari

Experimental gating

- **Francisco Bezanilla** - University of Chicago
- **Anna Moroni** - University of Milan "La Statale"
- **Crina Nimigean** - Cornell University
- **Eduardo Perozo** - University of Chicago
- **Murali Prakriya** - Northwestern University

Nanopore technology

- **Armagan Kocer** - University of Twente
- **Aleksandra Radenovic** - École Polytechnique Fédérale de Lausanne
- **Alessandro Siria** - Centre National de la Recherche Scientifique
- **Michael Mayer** - University of Fribourg

Drying in nanoconfinement

- **Yaroslav Grosu** - CIC energiGUNE
- **Richard Remsing** - Rutgers University
- **Roland Roth** - University of Tübingen

Free participation, subject to registration

https://sites.google.com/uniroma1.it/ficn2021/registration

[CONGR] [Ebsa] EBSA Congress 2021 (Vienna 24-28 July)

[Newsletter closed on 23/12/2020]