

September, 2020

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Important information related to IUPAB

Juan Carmelo Gómez-Fernández

IUPAB Secretary General

IUPAB Congress to be held in Foz do Iguazú (Brasil) is one of the scientific meetings that has been postponed due to the pandemic. As it is commented by the organizers, in this IUPAB News issue, it will be held on October 2021.

As a consequence of this postponement the call for **IUPAB Bursaries** has been cancelled and it will be necessary that interested people will apply again for 2021 in due course.

We may also announce that the two **IUPAB Focused Meetings** due for 2021, to be held in India and in Canada, have been postponed to 2022.

In the same way the **IUPAB 2023 Congress** due to be held in Kyoto in June 2023 is postponed to similar dates but of 2024.

Note that **bids to hold IUPAB Congress in 2027** should be submitted before 1st of May 2021.

Another consequence of the postponement of the Congress is that the **General Assembly cannot be held until 2021**. According to Article V of the Statutes and Rules of Procedure: "The work of the Union shall be directed by the General Assembly of delegates, which shall normally meet once every three years". I think that we are not in a normal situation. To prevent future similar problems the Executive Committee will propose a change of the Statutes and Rules of Procedures to permit **virtual General Assemblies** and online votes to elect IUPAB representatives.

Please remember the **new modalities of**

[sponsorship policy](#) of IUPAB.

Among these new modalities are:

- Sponsorship of a prize for communications made by students or young biophysicists.

Societies of countries linked to IUPAB as Adhering Bodies may apply for this prize to be awarded to presentations made by young biophysicists during meetings of these societies. The prize could also be given during meetings of associations of young biophysicists. See in this link the details to be taken into account: [Sponsorship policy](#).

- Sponsorship of Plenary Lectures in major biophysics meetings and conferences.

IUPAB will sponsor plenary lectures in major meetings or congresses of biophysics like those of EBSA (Europe), ABA (Asia-Pacific), Biophysical Society and LAFeBS (Latin American countries). See [Sponsorship policy](#).

Applications should be sent to the



Secretary General, Juan Carmelo Gómez-Fernández

Participation of IUPAB in a Meeting organized by IAPS (International Association of Physics Students)

IUPAB was invited by IAPS (International Association of Physics Students, <https://www.iaps.info/>), to participate in a Webinar addressing the subject of Biophysics.

This was held the 26th August 2020 ([video](#)), and was attended by 88 students (up to 19th September), as well as on-line. Esther Zamora and

address to the Physics Students finished with detailed information about how to look for a masters or PhD in Biophysics, and related sources of information.

Manuel Prieto (Universidade de Lisboa, Lisbon, Portugal) then addressed IAPS about the role and aims of IUPAB, since the type and number of adhering bodies, up to the three Regional Associations which are members of IUPAB. The connection of IUPAB to the International Science Council (ISC) was also emphasized, as well as the IUPAB Task Forces, next Congresses and

application of specific methodologies such as NMR, diffraction and cryo-EM. Also, a visit to the electromagnetic spectrum was carried out, describing the different time-scales and length scales that are available for the study of biological processes, and examples about the biophysics of light capture in biology, quantum biology and research centered on the present COVID pandemic were also documented.

Finally Manuel Prieto showed specific examples and methodologies within biophysics, trying to bridge the

knowledge already acquired by the Physics students. Dipolar interactions and its explicit dependence on distance was mentioned in the framework of electronic energy migration (FRET), describing how to derive exact solutions for the study of ion channels, and the relevance of methods where the systems are better mimics of the complex biology situation, and also methodologies carried out under the microscope, which are used to obtain dynamic information in amyloid fiber



Eduardo Graça were the IAPS hosts, and on behalf of IUPAB two biophysicists participated.

Anthony Watts (University of Oxford, UK), introduced the field of Biophysics, as a bridging science, making a detailed description of the field of Biophysics. This included describing imaging methodologies from the microscopic up to the molecular and organ level, computer modelling, and how this information enables information about structure and dynamics. The present relevance of biophysics in medical sciences and bionanotechnologies was also stressed, as well as the recent environmental applications. This

Focused Meetings and IUPAB Prizes. This was concluded with a proposal of collaboration between IUPAB and IAPS, both with IUPAB becoming a partner society of IAPS, as well as promoting a webinar series by physics students within IAPS focused on biophysics, with an IUPAB prize for the best presentation.

After these two presentations about “What is biophysics?”, and “What is IUPAB”, Tony Watts made a detailed description of Structural Biology, one of the main research areas within Biophysics. This encompasses research from nucleic acids to studies on membranes, and is centered on the

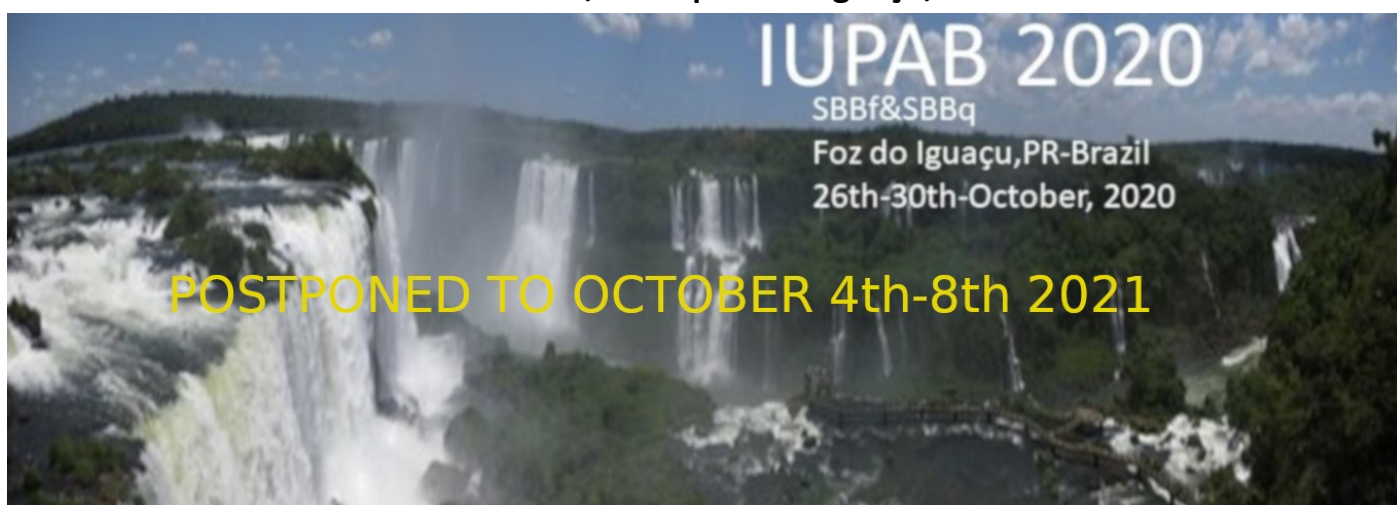
studies: FCS (Fluorescence Correlation Microscopy) as a single molecule method, and FRAP (Fluorescence Recovery After Photobleaching).

The webinar was finished with a dialogue with the host, about how the two participants were attracted to this area, and also strategies for the Physics students to become involved with biophysics.

This was a very interesting experience for the participants, IUPAB thanks IAPS for this kind invitation, and intends to approach sister organizations of IAPS for similar events.

20th International Congress of IUPAB a joint event with the 45th Annual Meeting of SBBf and 49th Annual Meeting of SBBq

October 4 - 8, 2021 | Foz do Iguaçu, Brazil



Communication from the Chairs

Rosangela Itri and Mauricio S. Baptista

The 20th International Congress of IUPAB and 45th Annual Meeting of the Brazilian Biophysical Society and the 49th Annual Meeting of the Brazilian Society for Biochemistry and Molecular Biology, was programmed to be held in Foz do iguaçu, October 26th-30th, 2020. However, due to the pandemia of covid-19 has been postponed to October 4th-8th, 2021. Here is the letter of the organizers explaining the situation.

We are all dealing with difficult times due to the coronavirus (COVID-19) pandemic. The situation has worsened significantly in Europe and USA, as well as elsewhere. Some of you may be in the rush to find new solutions to the pandemic and we wish all the success in

your efforts. Although our event is still many months away, we cannot fight against reality and try to urge people to register or to buy international tickets at this time. Although the program was almost complete and very exciting, we took the hard decision to postpone IUPAB 2020 for 1 year. We thank you for your patience and continued persistence, while we announce that IUPAB 2020 will be held in Foz do Iguaçu from **4th to 8th of October 2021**.

We understand that this might come as a big disappointment to our chairs, speakers, exhibitors and participants looking forward to some wonderful days in Foz do Iguaçu. However, we do hope to be able to confirm your

participation for the next year. We will be sending notifications to each registered participant soon with this information and more details concerning key dates, abstract and reservations.

Through these tough times, we do hope you can continue your teaching and research activities in different ways, to continue with the advances in Biophysics and Biochemistry, and all duties with your family.

We also wish all the luck for all those working in fields relevant to addressing the pandemic.

We look forward to welcoming you to Foz do Iguaçu in happier times in 2021!

Please, visit our [web site](#) for more information

International Science Council

The global voice of science

Letter from the President - 21 August 2020

Dear ISC Members, Dear Colleagues,

It has been just over two years since the launch of the International Science Council (ISC). As we gathered in the amphitheatre at the Maison des Océans in Paris in July, 2018, and celebrated a new dawn of strengthened global science partnerships and collaboration between scientific domains, the possibility of a pandemic that would plunge the world into crisis was furthest from our minds.

But as we have seen over the last six months, the pandemic has brought with it renewed calls to create, build and strengthen collaboration that could see a vaccine created in record time, as well as calls from all sectors to “build back better” in our bid to find solutions to our global problems.

The Council’s Headquarters (HQ) in France locked down in mid-March, and most staff continue to work remotely, with a small number working on site while observing social distancing regulations. Our regional offices in Malaysia and South Africa have also been combining remote and office working as we grow accustomed to this “new normal”.

The Secretariat is having to function under extraordinary circumstances, as I am sure all of us are. While the ISC’s [Action Plan 2019 – 2021](#) continues to form the basis of our project work, the Council has had many requests for new collaborations in the last few months, as

the scientific and policy-making community responds to the crises brought on by the pandemic. The ISC Secretariat, Governing Board (GB) and [Standing Committees](#) have had to pivot and adapt quickly to ensure that projects in the Action Plan are reviewed and either maintained with new timelines for delivery, or put on hold due to new projects and collaborations being requested as a result of the SARS-CoV-2 virus.

To respond to these new project requests, the GB set up a sub-committee that has met regularly and has acted as a sounding board for new ideas and requests. At the same time, the GB along with its four Standing Committees has regularly reviewed progress on all of the Council’s activities.

Members can review key milestones and next steps from the Action Plan projects by visiting <https://council.science/actionplan>.

The following new projects and collaborations are highlights of the initiatives launched as part of the Council’s response to the pandemic. These include some existing projects that have addressed health, economic and social challenges whose seriousness has been amplified by the pandemic:

- [The ISC COVID-19 Global Science Portal brings together our members’ responses and initiatives to the crisis, and the global science community’s](#)

[debates around the issues](#)

- [IIASA-ISC Consultative Science Platform: Pathways to a post-COVID World](#)
- [Combating systemic racism and other forms of discrimination](#)
- [Global Science TV, in collaboration with the Australian Academy of Science](#)

The GB’s first communiqué for 2020 provides important information on key issues, such as a review of the [ISC Statutes](#), relations with the InterAcademy Partnership (IAP), and updates from the four Standing Committees. Members should note that the sixth meeting of the GB, which was to be held in person in Paris on 25 – 26 March 2020, was held virtually, along with subsequent meetings, viz.:

1. 29 April 2020
2. 29 May 2020
3. 8 July 2020

The pandemic has forced the Governing Board to develop new approaches to its mode of working: how the GB meets and conducts its business, executing decision-making processes via email, and holding more regular and shorter virtual meetings, with the July meeting being dedicated to Standing Committee updates.

I pass on my hopes and wishes for strength and courage to colleagues who have been affected by the pandemic, and extend my sincere condolences to all who have lost loved ones. We continue to be inspired by the scientific community’s response to this profound crisis – a model of science in action for the public good.

With warm regards,

Daya Reddy,
ISC President

International Science Council

Governing Board Communiqué, August 2020

The main outcomes of the Governing Board's discussions during the virtual meetings in April, May and July 2020 are shared in this communiqué. We invite ISC members and partners to note these and to send any questions or suggestions prompted by the communiqué to our Membership Liaison Officer Anne Thieme: anne.thieme@council.science.

A. The ISC Governance System

1. Review of Statutes and Rules of Procedures

The Governing Board (GB) agreed at its October 2019 meeting to establish a Working Group to review the [ISC Statutes and Rules of Procedure](#), and to make recommendations to the GB on appropriate changes to these documents. An outreach survey was sent to ISC members at the beginning of the year to gather feedback on the current Statutes and Rules and Procedures.

The Working Group comprises:

- Daya Reddy (ISC President)
- Peter Gluckman (ISC President-elect)
- Alik Ismail-Zadeh (ISC Secretary)
- Saths Cooper (GB Member)
- Heide Hackmann (ISC CEO)
- Charles Erkelens (ISC Operations Director)

The Working Group will keep members informed of the process, the outcomes of which will be sent to members for approval.

2. Ad hoc Dues Committee

The Ad Hoc Dues Committee continues to work on a new ISC dues structure (for discussion and approval by the General Assembly in 2021). The committee is chaired by ISC Treasurer Renée van Kessel-Hagesteijn, who also chairs the Council's Committee on Finance and Fundraising.

The Ad hoc Dues Committee comprises:

- Kathie Bailey (US National Academy of Sciences)
- Enrique Forero (Colombian Academy of Sciences)
- Daniel Buquet (International Political Science Association)
- Teresa Lago (International Astronomical Union)

Members will be advised of the proposed dues structure prior to the General Assembly.

3. Small Island Developing States (SIDS) Liaison Committee

Following a call for nominations from members, the GB appointed eight distinguished scientists to the [Small Island Development States \(SIDS\) Liaison Committee](#), to be chaired by President-elect, Peter Gluckman.

The SIDS Liaison Committee comprises:

- Dania Bacardi (Cuba)
- Xavier Estico (Seychelles)
- Terrence Forrester (Jamaica)
- Teatulohi Matainaho (Papua New Guinea)
- Sau'i'a Louise Mataia Milo (Samoa)
- Michelle Mycoo (Trinidad and Tobago)
- Vidushi Neergheen (Mauritius)
- Morgan Wairu (Fiji)

The breakdown of nominations and the selected candidates (n = number) includes:

	Nominations		Selected	
	n	%	n	%
Female	3	15	4	50
Male	17	85	4	50
Total	20	100	8	100

4. Standing Committees

The Council's Standing Committees held virtual meetings during the first half of the year. The GB has had an opportunity to discuss progress across committees, noting a number of issues, including:

- The challenge for committee members to become familiar with the ISC and its extensive portfolio of activities
- The challenges involved in meeting remotely
- Welcome signs of committee members engaging in specific projects – writing groups, review etc.
- The need for greater coordination and collaboration between committees

5. Patrons

The GB has agreed on further discussion to identify new [patrons](#). This will be in the agenda for the next GB meeting. Ismail Serageldin, Mary Robinson and our newest ISC Patron, internet pioneer [Vint Cerf](#), have all participated in ISC Global Science TV as part of the Action Plan's [Public Value of Science project](#).

B. ISC Action Plan

1. Current Plan 2019 – 2021

HQ has reported to the GB on all ongoing activities. Members can find detailed updates on the projects [here](#).

Members will notice the Action Plan has a “new look” to show updates and progress on current projects.

2. Development of the 2022 – 2024 Action Plan

The GB discussed a tentative process and timeframe for developing a new Action Plan. It was agreed that members and the wider ISC community should be consulted in the development of the next Action Plan.

It was agreed that the new Action Plan should leave room for emerging issues and be at such a level of detail that the 2021 incoming GB can decide on prioritization and modes of implementation of the plan, particularly in the unpredictable context of living with COVID-19. A new Action Plan will be presented for approval by the General Assembly in October 2021. The development of the new Action Plan will build on a persuasive overview of concrete results during the current period, and will take account of a number of core activities that do not feature explicitly in the Action Plan for the period 2019 – 2021.

C. Member Engagement

Members should note the ISC’s new and improved membership engagement and outreach work, with regular updates and requests for contributions and participation. Members are encouraged to visit the [new membership section](#) and to browse regularly the [ISC Membership Noticeboard](#) to submit contributions to upcoming calls for

nominations and action and to obtain details of upcoming meetings, webinars and other issues of concern to ISC members.

D. InterAcademy Partnership (IAP) relation

Members of the leadership of the ISC and the InterAcademy Partnership (IAP) have been engaged in discussions aimed at clarifying the roles of each organization, the areas of collaboration and of overlap in activities, and on the form of relationship that would maximize their value to society, to the global scientific effort, and to their members. The intention is for the two organizations to sign a memorandum of understanding. There has been good progress and it is hoped that the MOU will be finalized shortly.

E. ISC Awards Programme

A working group, chaired by Alik Ismail-Zadeh, ISC Secretary, put forward a proposal to the GB to establish an ISC Awards Programme. The programme will recognize individuals, groups, and initiatives launched by ISC members, affiliated bodies and partners that serve to advance science as a global public good.

The working group includes:

- Alik Ismail-Zadeh (ISC Secretary)
- Elisa Reis (ISC Vice-President)
- Jinghai Li (ISC Vice-President)
- Anna Davies (GB Member)
- Pearl Dykstra (GB Member)
- Heide Hackmann (CEO)

There are five categories of ISC Award:

1. Science for Sustainability Award for outstanding scientific contribution to

the achievement of the Sustainable Development Goals using an interdisciplinary approach;

2. Science-for-Policy Award for outstanding contribution to, stimulation of, support for or communication of the findings of international scientific research and scholarship relevant to international policy challenges;
3. Policy-for-Science Award for outstanding contribution to developments in the science system that enable science to contribute more effectively to major debates in the international domain;
4. Scientific Freedom and Responsibility Award for outstanding contribution to defending and promoting the free and responsible practice of science;
5. Early Career Scientist Award for exceptional contribution to science and international scientific collaboration by early career researchers.

The ISC President will appoint an Awards Selection Committee for each edition of the awards, with the approval of the GB, and the Awards will be conferred every three years, at an ISC General Assembly.

ISC members will receive full information on the Awards criteria and nominations procedures in the final quarter of 2020.

F. Sustainability Principles

The GB approved the ISC’s Organizational Sustainability Principles, which are available online [here](#)

Implementation of the principles and related review of the ISC travel policy will be discussed by the GB during the second half of 2020, also in light of longer-term impacts of COVID-19. Members are encouraged to develop

their own organizational sustainability principles and share them as part of the recently created membership knowledge-sharing platform on the [Membership Notice Board](#)

G. Next Meeting of the GB

The in-person GB meeting scheduled for

Cape Town on 1 – 2 Oct 2020 has been cancelled. The next virtual meetings for the GB will be on 9 September and 5 – 6 November 2020 where key agenda items will include the ISC General Assembly and Global Knowledge Dialogue, currently scheduled to be held in Muscat, Oman, from 9 – 14 October 2021 ([website](#)).

committee assembled from the Biophysical Reviews' Editorial Board, with this assembly taking place after the submission deadline. Results will be announced in December, with the winner's single author Review to be published in the following year.

Submissions can be made via email in the form described above to any of the following.

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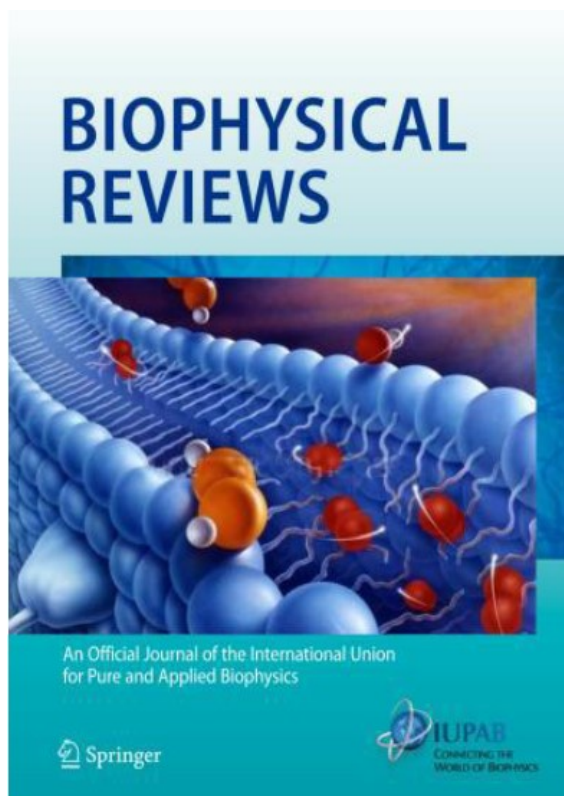
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Michèle Auger Award for Young Scientists' Independent Research (2020)

In late 2018, long time Editorial Board Member of the Biophysical Reviews journal, Professor Michèle Auger, sadly succumbed to illness. As a mark of our respect for Michèle, the Biophysical Reviews' Board, together with the support of Springer-Nature Corporation, would like to announce a perpetual memorial award in honor of her life and service. The, 'Michèle Auger Award for Young Scientists' Independent Research', will be granted each year to a single candidate performing biophysical research who, at the time of application, is under 40 years of age. The award will consist of a plaque and a free personal subscription to the journal along with an invitation to submit a single author Review article to Biophysical Reviews. The winner's published Review will carry a short foreword about the life of Professor Michèle Auger, along with her work associated with teaching and training the next generation of biophysical

scientists. Nominations can be made in the form of a candidate's one page curriculum vitae, along with five original manuscripts, to be submitted by email to either the Chief Editor, or any one of the Biophysical Reviews' Executive Editors, prior to 2020, October 31st. Judging will be carried out by a special



Open Science for a Global Transformation: CODATA-coordinated submission to the UNESCO Open Science Consultation



UNESCO is preparing a [Recommendation on Open Science](#) to be adopted by Member States in 2021. To contribute to this process, UNESCO launched a [global consultation](#) gathering inputs from all regions and all interested stakeholders, through online consultations, regional and thematic meetings and numerous debates on implications, benefits and challenges of Open Science across the globe. Input via an online consultation was requested by 15 June and [CODATA](#) was invited by the UNESCO Open Science team to present a detailed submission. Following exchanges on the [CODATA International Discussion list](#) CODATA agreed to coordinate a joint response from a number of data and information organisations. That document-[Open Science for a Global Transformation](#)-was submitted to UNESCO on 15 June and, following minor editorial adjustments, is now published [here](#).

Open Science is best characterised as the necessary transformation of scientific practice to adapt to the changes, challenges and opportunities of the 21st century digital era to advance knowledge and to improve our world. This requires changes in scientific culture, methodologies, institutions and infrastructures. These changes are already present in many research domains and institutions, where their transformative effects can be witnessed, but they are unevenly distributed. One of the purposes of Open Science viewed as a call for transformation, is to ensure that 'no-one is left behind'.

[Open Science for a Global Transformation](#) was prepared by an expert group, coordinated by [CODATA](#) and including representatives from the [ISC World Data System \(WDS\)](#), [GO FAIR](#) and the [International Council for Scientific and Technical Information \(ICSTI\)](#). These global data and information organisations have responsibilities for policy advice and promoting



Open Science for a Global Transformation: *CODATA-coordinated submission to the UNESCO Open Science Consultation*



collaborations in relation to data and information; they are advocates of Open Science and are convinced of its necessity and benefits. The organisations believe—fundamentally—that it is important to win hearts and minds, to significantly transform science policy and practice, in order to facilitate the application of the technologies and methodologies associated with Open Science to improve our world and address global challenges. Open Science requires policy interventions and investments to ensure equitable participation and access to its benefits and to mitigate some negative consequences. The perspective brought by these organisations lays particular emphasis on maximising appropriate access to (re-)usable data.

The Expert Group comprised:

- Paul Arthur Berkman, Founding Director, Science Diplomacy Center, Professor of Practice in Science Diplomacy, Fletcher School of Law and Diplomacy, Tufts University; Associated Fellow, United Nations Institute for Training and Research (UNITAR); Member of the CODATA Data Policy Committee.
- Jan Brase, head of the Research and Development at the State and University Library, Göttingen; President of ICSTI.
- Richard Hartshorn, Professor, School of Physical and Chemical Sciences, University of Canterbury; Secretary General of the International Union of Pure and Applied Chemistry; member of the CODATA Executive Committee.
- Simon Hodson, Executive Director, CODATA.
- Wim Hugo, Director of Strategy, ISC World Data System.
- Sabina Leonelli, Turing Fellow and Professor in Philosophy and History of Science, University of Exeter.
- Barend Mons, Professor in Biosemantics, Leiden University Medical Center; President of CODATA; Director GO FAIR International Support and Coordination Office.
- Hana Pergl, Operations Manager, CODATA.
- Hans Pfeiffenberger, Consultant, scientific data infrastructures and policies, Member of the CODATA Data Policy Committee, founder and member of the advisory board of Earth Systems Science Data.

The expert group is now preparing an essay for the Data Science Journal, to present the 'Open Science for a Global Transformation' to the wider community and to call for further discussion and input. The group is also preparing a related summary of current lessons learnt and implications for Open Science from the COVID-19 pandemic.

CODATA Executive Director, Appointed to UNESCO Open Science Advisory Committee

Finally, [Simon Hodson, CODATA Executive Director](#) has been appointed as one of six international experts to the [UNESCO Open Science Advisory Committee](#) which will guide the consultative process leading to the Recommendation. The first virtual meeting of the Advisory Committee is 16-17 July.



The Biophysicist: A New Journal Focusing on Research and Experiences in Biophysics Education

The Biophysicist, launched earlier in 2020, is the Biophysical Society's open access journal of biophysics

education. The journal's goal is to highlight and nurture

education, and its scholarship and development, for a worldwide audience. It aims to make fundamental concepts and techniques in biophysics (and related disciplines), as well as evidence-based pedagogical practice, accessible to individuals at all levels: undergraduate, graduate and post-graduate students/trainees, active researchers, and scholars of biophysics teaching and learning.

The journal publishes both academic articles and shorter and more informal reports. Examples of all these types of papers that reflect the interdisciplinary

The **Biophysicist**

Boards, led by Editor-in-Chief Samuel Safran of the Weizmann Institute of Science in Israel.



Describing biophysical education, Dr. Safran says, "The needs of the

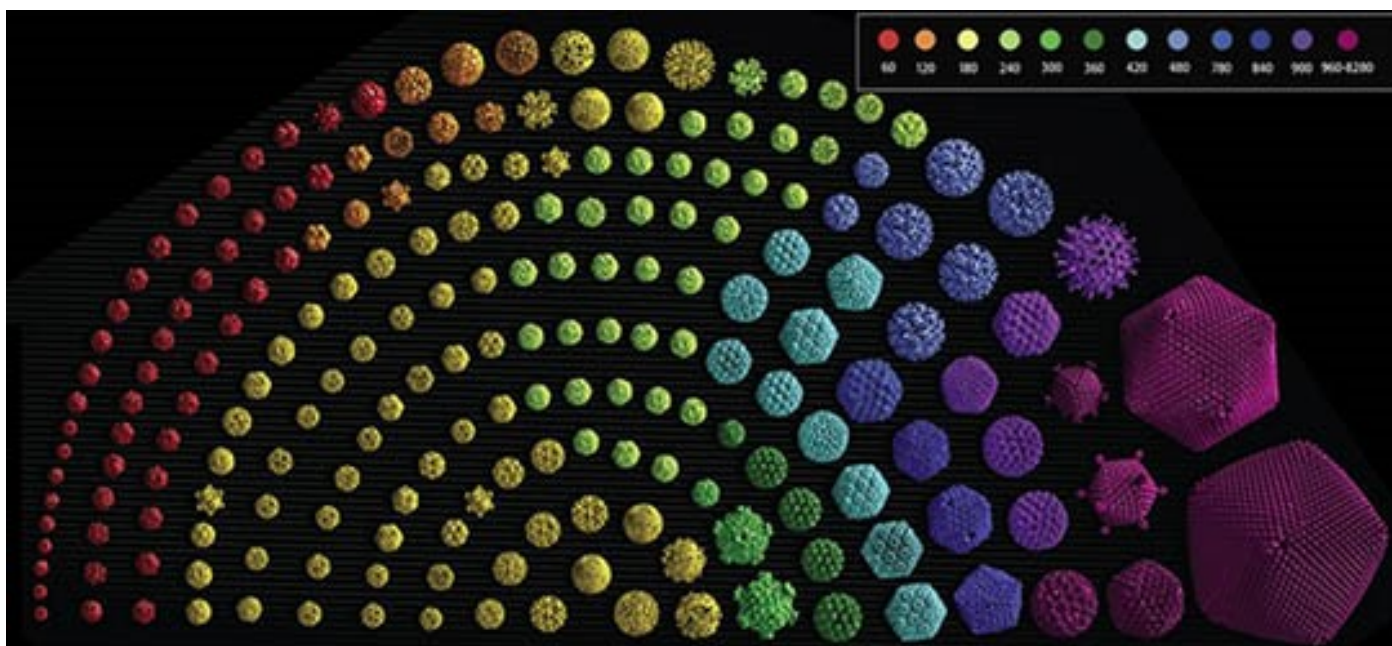
nature of biophysics education and the activities of biophysicists in a variety of scientific fields can be found in our [current issue](#).

Student Forum submissions are welcomed from students and postdoctoral trainees to provide their unique perspectives on biophysics and the current state of training, and there are no publication fees for these articles. A recent example on biophysics learning isolation can be found [here](#)).

The Biophysicist is guided by respected and diverse Editorial and Advisory

biophysics community are unique since it includes students, educators, and researchers who often come to the field from different disciplinary backgrounds; what unifies them is the application of their expertise, conceptualization, and methods to problems in the life sciences."

As an open access journal, *The Biophysicist* makes all articles available online as soon as they are published. For more information, to access all published content, or to submit your article for consideration, please visit www.thebiophysicist.org.



The Biophysicist: A New Journal Focusing on Research and Experiences in Biophysics Education

The **Biophysicist**

News from *The Biophysicist*

Volume 1, Issue 2 Published!

Read about biophysics in isolation, virus particle mechanics, machine learning, and more.

[This issue](#) of 12 articles includes research articles, reports, student contributions, and a book review. *The Biophysicist* is the open access BPS journal launched this year to highlight biophysics education and its scholarship and development.

As people never stop learning, the journal delivers evidence-based pedagogical practice in a way that is accessible to individuals at all levels: K-12 and public outreach, undergraduate, graduate and post-graduate students/trainees, active researchers, and scholars of biophysics teaching and learning.

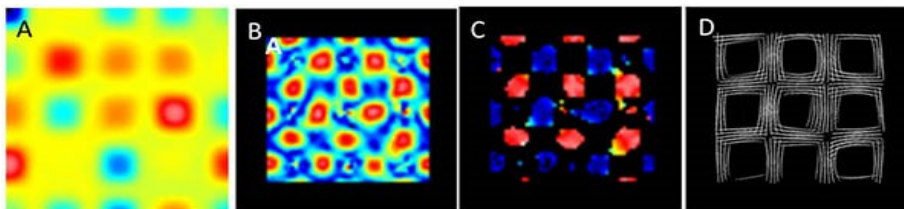


Time is running out! Submit your manuscript to *The Biophysicist* and take advantage of reduced rates.

To assist authors during this difficult time, the journal is currently discounting [article processing fees](#) by 50 percent — but this offer expires soon. Be sure to submit your work to *The Biophysicist* on or before **August 31** to receive this special discount.

Student Forum

The Biophysicist welcomes contributions from postdoctoral students and trainees on issues important to them and their unique perspective on the current state of biophysics and related disciplines.



welcomes students and trainees on issues to provide their on biophysics and scientific training.

Some appropriate topics include lessons from TA experiences, suggestions for alternative approaches to the teaching of biophysics and related disciplines, suggestions for new mentoring and career development topics, and scientific activities of BPS Student Chapters. *There are no publication fees for Student Forum articles!* For an example of the excellent insight available in the Student Forum, "[Biophysics in Isolation: Pushing Beyond the Niche](#)" by Timothy Welsh is a recommended read.

Meet the Editors

The Biophysicist is proud to be guided by a prestigious group of Editors and Advisors, led by Samuel Safran of the Weizmann Institute of Science in Israel. He reminds us that "the needs of the biophysics community are unique since it includes students, educators, and researchers who often come to the field from different disciplinary backgrounds; what unifies them is the application of their expertise, conceptualization, and methods to problems in the life sciences." Find more information about the members of the Editorial and Advisory Boards [here](#).

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Entropy Special Issue

Thermodynamics of Life: Cells, Organisms and Evolution



The question of the nature and origins of life has always occupied the minds of both philosophers and scientists. The development of materialism in Western society about 500 years ago prompted specific and directed studies by biologists, and subsequently by physicists, mathematicians, and philosophers, on this, perhaps the most important and intriguing of questions.

In this Special Issue, we concentrate on the attempts by physicists to understand the animate in terms of the known principles of thermodynamics. Many have suggested, and continue to suggest, that the ever-increasing complexity and thermodynamic “order” creation, in apparent violation of the Second Law, may place life outside the bounds of physics as we know it.

It is the purpose of the present Special Issue to oppose this view and to present the many and varied approaches that physics uses to come to terms with this fundamental question. The Special Issue will cover aspects of this problem at the various levels of biological organization: cellular, whole organisms, and evolution itself.

The overriding question of the bio-genesis and evolution of biological structure, i.e., thermodynamic “order”, in the living state will be addressed by such varied approaches as equilibrium thermodynamics, non-equilibrium thermodynamics, the maximum power principle of Lotka and Darwinian natural selection, thermodynamics of multiple gene networks considering network dimensions, entropy production leading to the genesis of information systems, and experiments involving a comparison of energy and entropy differences between a mixture of complex biomolecules and living matter. The specific problem of how thermodynamics relates to primary electron transport in plant photosystems will also be addressed. Furthermore, the generally accepted notion that it is the Gibbs-free energy which drives (bio)chemical reactions and produces (bio)chemical work shall be questioned, and the possible role of environmental heat will be considered.

Prof. Robert C. Jennings

Dr. Giuseppe Zucchelli

Guest Editors

XXV International School of Pure and Applied Biophysics

Italian Society for Pure and Applied Biophysics (SIBPA)

January 17 - 22, 2021 | Venice, Italy

Event partially funded by IUPAB



XXV INTERNATIONAL SCHOOL OF PURE AND APPLIED BIOPHYSICS on




Venice (I), Palazzo Franchetti,
17-22 January, 2021


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

In case of Covid-19 restrictions, the school will be postponed to June 2021 (notification by 5 november 2020).

Coorganized by:

The quantitative analysis of the huge amount of data produced by traditional and 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 recent machine learning approaches. Technical details of the quantitative analysis will be discussed in extended lectures, hands-on sessions and free informal discussion with the lecturers. The participation to the school is limited to 35 students.

Società Italiana di Biofisica Pura e Applicata 

Università di Milano-Bicocca
Milano 

Institute Pasteur, Paris 

CNR, ISASI Napoli 

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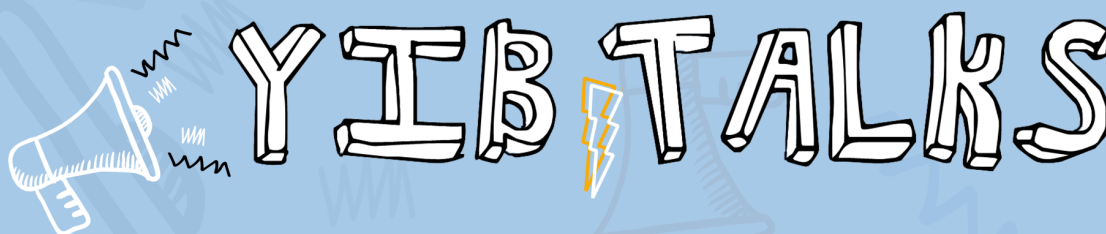
 IUPAB.

Additional info at: www.sibpa.it/index.php/scuola-internazionale-di-biofisica-sibpa-ivsla.

Please notice that the registration fee is due only after confirmation of the acceptance and in any case after the 5th November 2020. Further details will be emailed to the applicants in due time.

Young Investigators in Biophysics Talks-2020

This association of Young biophysicists (originated in Argentina) is promoting an interesting initiative that is supported by IUPAB. In addition IUPAB funds a prize to the best presentation. This is an example of what can be done under the new funding policy of IUPAB to support presentations made by Young biophysicists in national or international Meetings (see page 1 of this issue).



Share with the world **results** from your research

- Calling to masters, doctorate, postdoctorate or undergraduate students working on a biophysical research project!
- Send your 5-minute video to secretaria.yib@gmail.com by October 16th.
- The videos will be shared in our YouTube channel (@YoungBiophysics) from October 26th.

Prize to the best presentation: **250 EUR** by IUPAB!

REGISTER NOW! FREE activity with **CERTIFICATE!**

Sponsored by:



Argentinian
Biophysical
Society

Course: Introduction to FAIR Data Stewardship

Course description

Research projects create a lot of data. Although these data should remain available, in practice data often gets lost. To address this problem the GO-FAIR Foundation advocates the FAIR principles.

Research data should be Findable, Accessible, Interoperable and Reusable in an automated way. FAIR Data Stewards work with researchers to help them make their research data FAIR. In this course you will get an introduction to the knowledge and skills required to work as a data steward.

This course is a pilot, and is co-developed as part of partnership between the Hogeschool Leiden and the GO-FAIR Foundation.

Learning objectives

In this course you will learn

1. The FAIR data principles; what are they, where they come from, and how to apply them
2. What is necessary to FAIRify research datasets;
3. How to write a data management/stewardship plan for a research project;
4. The tasks and responsibilities of a FAIR Data Steward.

Course program

The lessons are interactive with both theory and assignments. In between you will get homework assignments that will take you about four hours a week.

Lesson	Date and time (CET)	Course content
1	2020-10-14, 13:00 – 16:00	Introduction to the FAIR principles
2	2020-10-28, 13:00 – 16:00	FAIRifying existing datasets 1: Making data FA(I)R for humans
3	2020-11-04, 13:00 – 16:00	Designing semantic data models and use of ontologies
4	2020-11-11, 13:00 – 16:00	FAIRifying existing datasets 2: Making data FAIR for machines
5	2020-11-18, 13:00 – 16:00	Writing a data management plan
6	2020-11-25, 13:00 – 16:00	The tasks and responsibilities of a FAIR data steward

This course is online, and will be hosted in the Microsoft Teams environment of the Hogeschool Leiden.

Certification

To can earn a certificate, you will have to make and submit the homework assignments. These assignments will be graded.

Cost

The costs for this course are 150 euro per participant (the costs are low, because it is a pilot).

Contact

For registration and more information you can contact cbd@hsleiden.nl.

13th European Biophysics Conference

European Biophysical Societies' Association (EBSA)

July 24 - 28, 2021 | Vienna, Austria



Public Lecture

Ada Yonath

Nobel prize 2009
Weizmann Institute of Science
Israel

Plenary Lectures

Thomas Südhof

Nobel prize 2013
Stanford University, USA

Francesco Bezanilla

University of Chicago, USA

Maria Rodnina

MPI Göttingen, Germany

Raimond Dutzler

University of Zurich, Switzerland

Gerhard Hummer

Max Planck Institute, Germany

Karolin Luger

University of Colorado, USA

Carol Robinson (tbc)

University of Oxford, UK

Symposia

Protons on interface
Channels and Ca²⁺ signaling
Medical biophysics / Imaging
Membrane transporter & channels
Virus biophysics
Advanced optical microscopy
Mechanobiophysics
Light as a tool in biophysics
Biomimetic nanopores
Protein translocation, assembly and folding
Bioenergetics
Quantification of molecular forces
Membrane signal transduction
Cytoskeleton / Motor proteins
Membrane architecture and asymmetry
Membrane active peptides
Biomolecular simulations
Synthetic cell
Liquid-liquid phase separation and intrinsically disordered proteins
DNA architecture and gene regulation
Lipid-Protein interactions
Biosensors
Instruct-ERIC

Deadlines

1 Dec 2020	Start of registration and abstract submission
31 Mar 2021	End of abstract submission
30 Apr 2021	End of Early bird registration

[Conference Website Link](https://www.ebsa2021.org/)

2020 International Symposium on COVID-19

National Committee of CODATA-Academia Sinica

October 5 - 6, 2020 | Taipei



In-person
&
Online

International Symposium on COVID-19

October 5-6, 2020

Organized by National Committee of CODATA-Academia Sinica
Committee on Data of International Science Council

October 5th, 2020

Session 1: Overview

- Barend Mons, CODATA
- James C. Liao, Academia Sinica
- Chien-Jen Chen, Academia Sinica
- Charles Alessi, HIMSS
- Angela Haczkú, UC Davis
- Jann-Tay Wang, National Taiwan University

Session 2: SARS-CoV-2

- Shin-Ru Shih, Chang Gung University
- Stephen Burley, RCSB Protein Data Bank
- Hui-Ling Yen, University of Hong Kong
- Ching-Yung Lin, Graphen & Columbia University

Session 3: Therapy

- C. Jason Wang, Stanford University
- Sean R. Stowell, Harvard Medical School
- Huey-Kang Sytwu, National Health Research Institutes
- Han-Chung Wu, Academia Sinica
- Hsueh-Fen Juan, National Taiwan University

Registration is required.



Official website



Conference website



Registration form

Conference website <https://reurl.cc/Y6WZGD>

October 6th, 2020

Session 4: Impact on Society

- Simon Hodson, CODATA
- Patrick Yang, Codexis
- John Burrows, University Bremen
- James Schwab, University at Albany, SUNY
- Cheng-Hsuan Lu, University at Albany, SUNY
- Charles C.-K. Chou, Academia Sinica
- Ben-Jei Tsuang, National Chung-Hsing University
- Simon Liu, U.S. Department of Agriculture



Venue:
International Conference Hall, 3F, Humanities and Social Science Building,
Academia Sinica, 128, Academia Road, Sec. 2, Nankang, Taipei, Taiwan

International FAIR Convergence Symposium

CODATA and GO FAIR

November 30 - December 4, 2020 | Virtual



Reflecting on good practices and challenges involved in putting on successful online events, the organisers have decided to change the format and the dates for the Symposium.

The International FAIR Convergence Symposium will now take place as a fully virtual event from 30 November to 4 December. Please save the dates!

In order to facilitate the new approach, and in response to a number of enquiries, we have also extended the deadline for submissions of session proposals to 30 September and of posters and lightning talks to 31 October. [Read more](#)

We have reflected on numerous online events and lessons learned and decided that trying to maintain a combined physical and virtual format posed too many technical challenges. To ensure an engaging and dynamic event, with clear outcomes, the organisers now envision the Symposium as a series of online sessions, dispersed over one week to accommodate a range of timezones as best as possible.

The symposium will feature plenary sessions, discussion sessions and collaborative workshop sessions. Each day will include sessions at Asia-friendly times, Africa and Europe-friendly times and Americas-friendly times. Recognising the challenges of virtual events, the programme will ensure that there are substantial gaps between the sessions. We propose to schedule sessions in parallel as necessary in each of these slots and we will seek to accommodate excellent proposals in preferred slots to the greatest extent possible.

As the Symposium theme is Convergence and discussion on FAIR implementation, we wish to explore the interaction provided by a virtual format to the greatest extent possible. Proposers are encouraged to ensure that their session is dynamic, interactive and output-oriented. Workshop-style sessions are strongly encouraged. The default duration of sessions will be 120 minutes to allow for such formats. Session organisers will be encouraged to post video presentations in advance of the session, whenever possible, to support and maximise the time for discussion and collaboration.

[Register here](#)

[Call for Sessions and Posters, Deadline 31 October](#)

We hope that the new dates will work for those already registered for the event. If not, please kindly contact us at conference@codata.org

IUPAB News Number 75, September, 2020

Executive Committee of IUPAB

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The Executive Committee and the Council are depicted at the end of the General Assembly in Edinburgh, 18th July, 2017



IUPAB News Number 75, September, 2020

**Activities of the
INTERNATIONAL UNION for
PURE and APPLIED
BIOPHYSICS**

**From the Secretary-General:
Professor Dr. Juan C. Gomez-
Fernandez**

Courier address:

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Facultad de Veterinaria,
Universidad de Murcia,
Edificio 17, 30100.Murcia,
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Telephone: +34-868884766.

Email: jcgomez@um.es

**IUPAB is registered in France
according Loi du 1er Juillet**

1901-Art. 5, n°

**ordre 03/000309, n° dossier
00158190**

The International Union for Pure and Applied Biophysics (IUPAB) was formed in Stockholm in 1961 as the International Organisation for Pure and Applied Biophysics. It was established as the International Union in 1966, when it became a member of the ICSU (International Council for Science) family. Affiliated to it are the national adhering bodies of 61 countries. Its function is to support research and teaching in biophysics. Its principal regular activity is the triennial International Congresses and General Assemblies.



Important Announcement Sponsorship Policy of IUPAB

As from now on there will be a change in the sponsorship policy with respect to that posted in:

<http://iupab.org/about/sponsorship/>

So that point 8, will read:

Applications for financial support of Conferences, Schools and other

should be returned to the Secretary General at least before June 30th of the year prior to the event if it is scheduled for the first semester of the following year or before the 31st of December if it will take place during the second semester.

If organizers of meetings are seeking only the approval of IUPAB, including the use of the IUPAB logo, but not requesting financial support, applications may be submitted to the Secretary General at any time and will be considered by the Executive Committee by correspondence.

Note from the Editor:

IUPAB News will be happy to reproduce articles previously published by bulletins or other publications of any of our Adhering Bodies. We will be also happy to consider articles written by biophysicists on scientific or other subjects of broad interest for the biophysical community. You may contact the Secretary General with respect to this matter.

IUPAB is not responsible for the opinions expressed in the articles here included, nor necessarily share these opinions.

The Editor of IUPAB News is the IUPAB Secretary General Juan Carmelo Gómez-Fernández. This publication is produced and published at the University of Murcia, Departamento de Bioquímica y Biología Molecular A, Campus de Espinardo, Murcia, Spain.

Assistant Editor: Alessio Ausili

It can be found online at: <http://iupab.org/category/newsletters/>

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