BPS Bulletin

THE NEWSLETTER OF THE BIOPHYSICAL SOCIETY

Biophysical Society

Biophysics Week Turns 10 in 2025 – Let's Celebrate!

Mark your calendars for the milestone 10th Annual Biophysics Week, taking place March 24–28, 2025. This special anniversary is a global celebration of the remarkable contributions of biophysicists and the transformative impact of biophysics on science and society. Be part of this exciting week as we honor a decade of raising awareness about the essential role biophysics plays in addressing some of the world's greatest challenges.

Join us by participating in Affiliate Events hosted by members across the globe—both virtually and in person—and explore an exciting lineup of activities sponsored by the Society designed to bring the biophysics community together!

This year, the Biophysical Society has curated a week of extraordinary opportunities, including:

- BPS Membership Specials
- BPS Subgroup Webinars, Symposia, and Articles
- On-Demand Feature—"Biophysics 101: Wearable Technology"
- Exclusive Events and Discussions
- JUST-B Spring Seminar
- Career Booster Micro-Video Series
- New Classical Lay Summaries
- New Lesson Plans
- 2025 10th Anniversary Biophysics Week T-Shirt
- And more!

For the most updated schedule and information, please check the Biophysics Week website at **biophysics.org/BiophysicsWeek**.

Thank you to our 2025 Biophysics Week Partners

Biophysical Society Société de biophysique of Canada · The Biophysical Society of Japan · British Biophysical Society · DGfB Deutsche Gesellschaft für Biophysik e.V. · EBSA Biophysics in Europe · IUPAB Connecting the World of Biophysics · Biofiziku Klubas Lietuvos · SIBPA Società Italiana di Biofisica Pura e Applicata · SOBLA · SPBf Sociedade Portuguesa de Biofísica · SBE Spanish Biophysical Society

These Biophysics Week Partners have committed to supporting and promoting the public awareness of the importance of biophysics in science.

Inside

Stay Connected with BPS


Lynmarie K. Thompson

Challenges and Opportunities in 2025

As I write this column for the March issue of the *BPS Bulletin*, the Annual Meeting in Los Angeles is a few weeks away. I am, as always, looking forward to learning great science and to making and renewing connections with the BPS community at the meeting. This time, I am also amazed and honored to have the opportunity to serve as your BPS president for the coming year. As I ponder the challenges and opportunities ahead, I realize that one of the strengths of the Biophysical Society that I value most is the way that BPS embraces and celebrates many forms of diversity.

BPS differs from many other scientific societies in being intentionally international and interdisciplinary. Although the first meeting in 1957 was called the "First National Biophysics Conference," the organizers chose the name "Biophysical Society," and two years later established its official publication, *Biophysical Journal*. BPS currently has 29% international members and actively promotes international representation on its Council, on editorial boards, and in the selection of speakers and awardees. For example, the 2025 Annual Meeting Symposia and Workshops feature approximately 61% of speakers from the United States and 39% international speakers. The interdisciplinary nature of BPS crosses boundaries between biology, chemistry, physics, and more, which makes us nimble enough to welcome emerging subfields and techniques to our membership and our meetings. Such diversity in science is important for addressing hard problems, and by collaborating across disciplines and international borders we increase innovation.

BPS feels like a natural scientific home for many of us who tackle challenging systems like membrane proteins and complexes that benefit from combining multiple approaches to address the key mechanistic questions. BPS has also always prominently featured scientists employing computational approaches. This is a major strength that positions all of us to individually or collaboratively take full advantage of opportunities to integrate emerging computational advances into our science. The diversity of our scientific approaches not only improves our ability to tackle hard problems, it also makes our conferences and interactions with the BPS community wonderfully stimulating. The size of our annual meetings (recently averaging ~4,700 attendees) is fabulous for fostering a diverse, interactive community that actively seeks to learn about new areas and avoids the silos that emerge at larger meetings. In addition, BPS's Thematic Meetings provide an excellent complement to the Annual Meeting, as these small, member-initiated conferences have been held, since their inception in 2010, outside the United States in 20 different countries.

BPS has a longstanding commitment to promote inclusion of diverse groups. Since joining BPS as a graduate student in the 1980s, I have felt very fortunate that my natural scientific home also increasingly felt like a community that welcomed women scientists. The numbers support this feeling: BPS Council reached ~50% women in 2012, and the most recent four Annual Meetings have averaged ~51% women speakers. Even with these numbers, the Society appropriately recognized the need to address the pervasive issue of sexual harassment, which was the focus of the President's Symposium in 2020. A Council-appointed Task Force updated the BPS Code of Conduct that same year and also developed our Ethics Guidelines and an Awards and Fellows Revocation Policy in 2021.

BPS efforts to raise the participation and visibility of scientists from historically underrepresented groups include our Black in Biophysics Symposium, which was the President's Symposium in 2023 and 2024 until Council voted to make it a regular annual symposium for 2025 and beyond. SympSelect and Workshop Select talks, introduced at the 2024 Annual Meeting, provide the opportunity to identify and feature additional scientists beyond those already known to the Program Committee and Council. Finally, we have been seeking to increase participation by industry scientists and have worked to ensure members from industry serve on Council and BPS committees and are featured in sessions at the Annual Meeting and in various webinars throughout the year. This longstanding and ongoing commitment to diversity enables BPS to recruit and promote the best possible talent and a wide range of perspectives to do excellent science.

The diversity of BPS also positions us to address the critical societal challenges of our time. Having our meeting in Los Angeles reminds us of the many challenges of climate change, which brings with it ever more frequent and more intense natural disasters, including wildfires, hurricanes, and floods. At the meeting we will again all marvel at the rapid pace of science, which has profound life-saving consequences, such as the COVID vaccines that saved countless lives. And yet we are faced with a growing distrust of science and of expertise, more generally. The BPS Annual Meeting will also feature some of our many intentional and successful efforts to promote inclusion of the best talent from all groups, such as the Black in Biophysics Symposium discussed above and the JUST-B poster session. But in our larger society there is significant pushback against this work.

How does our diversity help us address such challenges? Serving on our newest BPS committee, the Committee on Sustainability, I have seen the tremendous benefit of having international members, with perspectives that include a wide range of policies on climate change. We organized the 2025 President's Symposium "Biophysics for a Sustainable Future" with the dual goals of inspiring biophysicists to pursue research in sustainability and to incorporate sustainable practices into their research. Funding mechanisms for such research will be discussed in this Symposium and in the "Sustainability in Scientific Research" session co-hosted by the Public Affairs Committee and the Committee on Sustainability.

As a diverse community of individuals who pursue rigorous science with a wide range of approaches, BPS members recognize that clear communication is vital to interdisciplinary work. Our diverse perspectives and communication skills should enable us to add our voices to the critical task of communicating the value of science to the broader public, and thus help to address the current distrust in science.

Finally, with our longstanding commitment to fostering a diverse community, BPS as a whole and BPS members individually know first-hand the benefits of such an interactive and welcoming community. We should take every opportunity to demonstrate and communicate those benefits to those who devalue these efforts.

I am proud to be a member of our vibrant, diverse, and talented BPS community, and honored to have the opportunity to lead BPS in the coming year. I value both the continuity of our great programs and the opportunity to implement new ideas to improve BPS. As president, I will work to promote the success of our members and the value of our science, and I welcome your feedback and input regarding BPS activities (thompson@chem.umass.edu). My hope is that together we will continue the good work of BPS in support of our members so that we can all contribute even more effectively to advance science and address societal challenges.

—*Lynmarie K. Thompson*, President

Nominate yourself or a colleague for a 2026 Society Award

The Biophysical Society is now accepting nominations for its 2026 awards through May 1, 2025. Society members are encouraged to submit nominations of worthy candidates, including self-nominations, so that those selected represent the diversity that is inherent in biophysics.

If you know deserving members—or you'd like to nominate yourself—this is the opportunity to recognize those contributions. Remember, awardees can only be selected from among those nominated!

Learn more by visiting our website: biophysics.org/awards-funding/society-awards.

Application Deadline: May 1, 2025

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Peying Fong

Peying Fong

Area of Research
Molecular mechanics of chloride transporters

Institution
Kansas State University College of Veterinary Medicine

At-a-Glance

Peying Fong, professor in the Department of Anatomy and Physiology at Kansas State University College of Veterinary Medicine, was born in Hong Kong before moving to upstate New York, where she was given the freedom to explore the world around her. Now she applies that curiosity to her research, which is focused on understanding the molecular mechanics of chloride transporters.

Peying Fong's journey into the world of biophysics is rooted in both her early life and a deep curiosity about the natural world. Growing up in the Rondout Valley, nestled between the Shawangunk Ridge and the eastern Catskill Mountains of New York state, Fong was always encouraged to explore the outdoors. Despite her family's modest means, her parents provided her with the freedom to roam the land surrounding their small two-bedroom house. "I consider my interest in the natural world to be a natural extension of having grown up in the Rondout Valley," she reflects. The land around her became her playground, sparking an early interest in the physical world, from the progression of blooming flowers to the laws of physics she discovered while sledding down hills.

Fong's parents, first-generation immigrants from Chusan Island, China, had limited formal education, yet instilled in her a strong work ethic and the belief that she could pursue whatever path she wanted, as long as she did her best. "My parents didn't know what science education entailed, but they supported me with a fundamental freedom: they encouraged me to do my best, to engage with whatever opportunities arose," she recalls. This was a freedom that allowed Fong to explore her scientific curiosity without any restrictions, shaping her academic trajectory in the years to come.

In high school, she quickly realized her passion for science. As a student at Yale University, Fong initially considered a broad range of subjects, even contemplating a career in art. However, it was during her time in graduate school that she was first exposed to biophysics as a distinct field. "In retrospect, I think I was drawn to the details, and I interpreted this to mean that a future in science was possible," she notes. Her exposure to biophysics at this stage deepened her understanding of physiology through a new lens, eventually leading her to major in biology and pursue a PhD in physiology at the University of California, San Francisco. There, she focused on chloride transport pathways in primary airway epithelial cultures under the mentorship of *Jonathan Widdicombe*. "It became clear to me that this was the kind of research I wanted to do for the rest of my life," Fong recalls.

After completing her PhD, Fong's postdoctoral journey took her to the University of California, Berkeley, where she worked in *Richard Steinhardt*'s lab on muscle calcium homeostasis. But it was a fellowship in Hamburg, Germany, that would shape her future. Funded by the Human Frontiers in Science Program, she joined *Thomas Jentsch*'s lab at the Center for Molecular Neurobiology. There, she delved into voltage-gated CLC channels, a discovery that would become central to her research career. "We now understand CLC channels not just as ion channels, but also as transporters. The molecular insights we gained have informed research on diseases like cystic fibrosis and polycystic kidney disease," she explains.

Throughout her career, Fong has returned repeatedly to CLC channels, seeing them as a key area of inquiry. Her initial exposure to CLC transporters, which occurred over many years in her studies of epithelial anion transport, eventually led her back to the field during the COVID-19 lockdown. "Lockdown gave me the time to catch up on recent developments in CLC transporters, and I found myself back in the field that had always fascinated me," she remembers. This reconnection spurred a collaboration with *Michael Pusch*, a fellow biophysicist, and solidified her commitment to studying these transporters.

Today, Fong is a professor in the Department of Anatomy and Physiology at Kansas State University College of Veterinary Medicine. Her research continues to focus on the regulation of chloride transporters, specifically the CLC family of proteins, by pH and chloride. "My research revolves around understanding how these transporters function at a molecular level, and the impact that their regulation can have on cellular processes," she says.

Fong's faculty role is divided between teaching, administration, and research. As a teacher in the pre-clinical veterinary curriculum, she finds that "the most rewarding aspect of my work is enabling students to understand and respect the relevance of basic science to their professional applications."

Despite the joy she finds in research and teaching, Fong's career has not been without challenges. She recalls a difficult period in which she had to face bullying from a supervisor. "It wasn't easy, but with some courage and the support of a friend who was a university ombudsman, I managed to navigate the situation with integrity," she shares. Though the experience was challenging, she reflects with pride on how she was able to handle it with dignity intact.

Looking to the future, Fong is optimistic about the evolving landscape of biophysics, especially the role of AI in advancing the field. "AI will have a massive impact on biophysics, particularly in areas like data analysis and predictive modeling," she predicts. As both a researcher and educator, she hopes to bridge biophysics not only with health sciences but also with the humanities. "Understanding how science connects with society and human experience is something I hope to foster in future generations," she explains.

For young people considering a career in biophysics, Fong has simple but vital advice: "Read broadly, engage with others, and stay open to opportunities." Her own career has been shaped by this philosophy—remaining open to new ideas and engaging with others in the scientific community. Through her long-standing membership in the Biophysical Society, she has formed lasting friendships and collaborations, which have enriched both her professional life and her personal growth. "The Biophysical Society has been a hub for cutting-edge expertise and a place where I've made many enduring friendships," she says.

While she has had a successful career in biophysics, Fong shares that if she weren't in science, she might have pursued a career in the arts. "If I weren't a biophysicist, I might have pursued teaching ballet. Ballet is a form of expression, much like science—a way of exploring and understanding the world," she muses. She still enjoys practicing ballet and yoga in her free time.

White House Executive Order Announces Withdrawal from WHO

On Monday, January 20, newly sworn-in President *Donald Trump* issued an executive order announcing his intent to withdraw the United States from the World Health Organization (WHO). The executive order also directs the Secretary of State to "cease negotiations" on the WHO Pandemic Agreement, an international treaty to better prepare the world for future pandemics.

The departure of the United States from the WHO will also effectively sever ties to federal agencies such as the Centers for Disease Control and Prevention and the Food and Drug Administration, which currently provide guidance to WHO on a range of topics and receive crucial information in return. An exit would take effect in January 2026 at the earliest.

NIH SMRB Convenes to Assess Efficiency

On January 10, the National Institutes of Health (NIH) Scientific Management Review Board (SMRB) convened to discuss strategies and data needed to assess potential areas for organizational reform. Building upon the deliberations from their November 2024 meeting, current SMRB members agreed that the framework presented in the 2010 SMRB report, "Deliberating Organizational Change and Effectiveness," was still appropriate for examining areas for process or structural improvements. Members also discussed potential topics for initial consideration through this evaluative framework, including a suggestion to begin with processes centralized within the Office of the Director. The NIH SMRB will continue to meet bimonthly, alternating between in-person and virtual sessions, with a goal of deliberating recommendations to Congress by November 2025.

Early-Career Researchers Finalize New Contract with NIH

NIH Fellows United, a union of early-career researchers, celebrated a new contract going into effect in early January after more than three years of rallying and organizing. This agreement is the first to be negotiated by a union representing scientists at a federal research facility and includes provisions on work hours, paid parental leave, protections against harassment, and a boost in pay, although raises will not be implemented until 2026 at the earliest. The NIH told the bargaining team that it will need to request new appropriations from Congress. The contract also includes language that allows the NIH to "pause or reduce" the stipulated pay increases if there are "insufficient available appropriations." The deal on the three-year contract was struck with the NIH almost a year to the day after the Federal Labor Relations Authority granted it approval to form in December 2023.

By the Numbers

Since it started in 2016, Biophysics Week has reached more than 1.1 million people around the world with its annual celebration.

HMMI Special Funding Awards Round for Investigators Program

In December 2024, the Howard Hughes Medical Institute (HHMI) announced a new special round of awards for its prestigious investigators program. This special awards round would exclude researchers at the top biomedical institutions by barring researchers from institutions that already have two or more scholars funded by the program. This new initiative is an effort to broaden the geographic diversity of the flagship program. The initiative also funds early-career scholars, with a commitment to a more diverse and equitable scientific work force. Some 330 institutions are now eligible to compete for those programs as well as for the flagship program.

Around the World

Canadian Scientists Ponder What's Ahead

After the announcement that Canadian Prime Minister *Justin Trudeau* will step down from his post, the resulting impact of a return to Conservative leadership after 10 years raises numerous questions for the scientific community. Before Trudeau's leadership, an emphasis was placed on applied research over more fundamental scientific endeavors. Initially, under his tenure, researchers saw significant funding boosts and rebalanced efforts on all aspects of science; however, the increased financial boost was short lived. Trudeau's government did not sustain the 2018 funding boost, for example, and did not respond to requests to increase federal stipends for graduate students until 2024. In 2019, it folded the science minister's position into another portfolio, and many government departments have not fully implemented their scientific integrity policies. In addition, the plans to create a new capstone organization to improve coordination among the country's main research funding agencies have gone nowhere.

The plans of the presumed Conservative successor, *Pierre Poilievre*, are unclear at this point, and it will probably be incumbent upon the scientific community to come together to rally in support of maintaining a balanced emphasis on both basic and applied research. The Liberal Party will choose its new leader and prime minister on March 9. A federal election must then be held no later than October, but many political observers expect the Conservatives to press for a vote much sooner.

Human Protein Study Launched by UK Biobank

In early January, a collaboration between UK Biobank and several pharmaceutical companies began the largest study of proteins in human blood in the world. The initiative aims to measure levels of 5,400 proteins in blood samples from half a million people to better understand the development and treatment of disease.

Since 2006, UK Biobank has collected biological samples, medical images, and health data from more than 500,000 volunteers. The initial analysis will include more than 300,000 samples, some of which will be from the same donor taken years apart, and generate a first-of-its-kind database on how a person's changing protein levels influence disease later in life. The companies funding the initiative will receive exclusive access to the data for a period of nine months before the data are released widely to UK Biobank–approved research teams. It is believed that the data generated by this project could have major implications for disease detection and identification of new drug targets for illnesses.

Know the Editor

Yu-Li Wang
Carnegie Mellon University

Editor, Cell Biophysics
Biophysical Journal

Yu-Li Wang

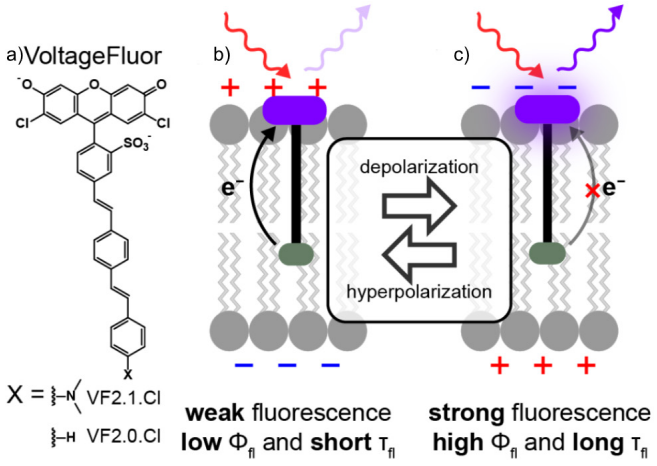
What has been your most exciting discovery as a biophysicist?

It was 1984, when much of today's technology for cell biophysics has yet to be developed. I have just started my own lab and figured out how to maintain long-term cell culture on a microscope. I have also acquired a sizable laser to produce microbeams for marking cells microinjected with fluorescently tagged proteins (it was before the introduction of GFP technology). One day I was playing with the new setup when, totally unexpectedly, I found that bleached micro-spots placed near a cell's front "walked away" from the edge of the cell. I soon realized that this must reflect a continuous flux of proteins away from the leading edge and that this flux may represent part of the mechanism for cell migration. To make a long story short, over the following decade, the observation was confirmed by using multiple techniques, and the "treadmilling" hypothesis for cell migration was widely accepted by the field and described in textbooks. I have since dedicated much of my career to the field of mechanobiology, but to this day, I still remember vividly the excitement of seeing the protein flux for the first time.

Who would you like to sit next to at a dinner party?

I have always valued the ability to use the "left" and "right" brain in a balanced manner. However, my career has limited myself and most friends to be users of the left brain. I would enjoy sitting next to right-brain users, such as musicians, artists, and fiction writers, and listening to their perspectives and aspirations.

Editor's Pick



Biophysical Reports

Toward measurements of absolute membrane potential in *Bacillus subtilis* using fluorescence lifetime
Debjit Roy, Xavier Michalet, Evan W. Miller, Kiran Bharadwaj, and Shimon Weiss

"The semipermeable membrane maintains varying ion concentrations across the bilayer, adapting to the cell's needs, creating an electric potential difference that is termed membrane potential (MP). MP drives essential bacterial activities. Quantifying MP could aid in developing diagnostic tools, combating antibiotic resistance. Traditional electrode-based methods are unsuitable for small bacteria. The authors used fluorescence measurements to quantify MP changes. The VoltageFluor (VF) shows MP-dependent fluorescence lifetime change inside the membrane. Their phasor–flourescence lifetime imaging microscopy analysis method visualizes, records, and quantifies MP changes in a high-throughput manner. They chemically modulated MP by changing the [K^+] gradient, recorded VF lifetime changes, obtained a nonlinear calibration between VF's fluorescence lifetime and MP, and estimated MP. This ability provides new insights into bacterial electrophysiology and bioelectricity research."

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BPS Welcomes Four New Student Chapters

The Biophysical Society Student Chapter program is open to students with an interest in biophysics and leadership. The program aims to build active student chapters around the globe, increase student membership and participation within the Society, and promote biophysics as a discipline across college campuses through activities organized by the chapters.

If you are interested in forming your own chapter as either a mentor or student, then you may apply for BPS Student Chapter recognition during one of the two annual calls for applications. Each chapter must be sponsored by a BPS member. The Spring Call for Student Chapters will be open from March 1 through May 1, 2025. For more information about organizing a new student chapter, please visit: www.biophysics.org/organizing-a-student-chapter.

BPS now has 69 Student Chapters worldwide, including 4 newly formed ones denoted with an asterisk below. See if there's a local chapter near you!

- Alexandria University (Egypt)
- AL-MS (University of Alabama/Mississippi State University) Student Chapter of the Biophysical Society (USA)
- Amherst College Student Chapter of the Biophysical Society (USA)
- Arizona Student Chapter (USA)
- Auburn University (USA)
- Bahçeşehir University (Turkey)
- Biophysical Society Cameroon Chapter (Cameroon)
- Biophysical Society Kenya Chapter (Kenya)
- Biophysical Society San Diego (USA)
- Biophysics Genoa Student Chapter (Italy)
- Biophysics Pashchim Student Chapter (India)
- Cedarville University (USA)
- Clemson University (USA)
- Columbia University (USA)
- Cornell University (USA)
- CWU Biophysics Club at Central Washington University (USA)
- Egerton University (Kenya)
- Emory University (USA)
- Florida State University (USA)
- Gāṅgeya Student Chapter at the Indian Institute of Science Education and Research (IISER) Kolkata (India)
- Georgia Tech (USA)
- Indian Institute of Technology Guwahati (India)
- Irvine Student Chapter at the University of California, Irvine (USA)
- Istanbul Student Chapter (Turkey)
- Johns Hopkins University (USA)
- Kent State University (USA)
- Llano Estacado Young Biophysicists at Texas Tech
- University Health Sciences Center (USA)
- Masinde Muliro University (Kenya)
- Michigan State University (USA)
- Milano Student Chapter (Italy)
- Mustafa Kemal University (Turkey)
- Northeastern University (USA)*
- NY Capital District (USA)
- Oregon State University Student Chapter at Oregon State University (USA)
- Puerto Rico Biophysical Society Student Chapter (USA)
- Sanyo-Onoda City University Student Chapter at Sanyo-Onoda City University (Japan)
- SJU (St. John's University) Student Chapter of BPS (USA)
- Structural Biology and Biophysics Club at Purdue University (USA)
- Student Chapter of NIT-W (India)*
- The City University of New York (CUNY) Student Chapter (USA)
- The Medical School of the Autonomous National
- University of Mexico (Mexico)
- The University of New Mexico (USA)
- UB (University of Buffalo) Biophysics Club (USA)
- UChicago Student Chapter (USA)
- Uganda Student Chapter (Uganda)
- UMASS Lowell Biophysics Student Chapter (USA)
- University of Buea (Cameroon)*
- University of California, Davis (USA)
- University of California, Los Angeles (USA)
- University of California, Riverside (USA)
- University of Chile (Chile)
- University of Cincinnati (USA)
- University of Denver Biophysics Student Chapter of the Biophysical Society (USA)
- University of Illinois Chicago (USA)
- University of Lethbridge & University of Montana (Canada & USA)
- University of London (United Kingdom)
- University of Maryland, Baltimore Student Chapter (USA)
- University of Maryland - College Park (USA)
- University of Michigan (USA)
- University of Pennsylvania (USA)
- University of St Andrews (United Kingdom)
- University of Texas, Arlington (USA)
- University of Texas, Austin (USA)
- University of Toronto Student Chapter of the Biophysical Society (Canada)
- University of Valparaiso (Chile)*
- University of Wisconsin–Madison (USA)
- Wayne State University (USA)
- Wesleyan University (USA)
- Yale University (USA)

For more information or to learn how to start or join a chapter, please visit www.biophysics.org/student-chapters.

Subgroups

Intrinsically Disordered Proteins

Announcing the 2025 Biophysics Week Trainee Symposium on Intrinsically Disordered Proteins! The Biophysical Society's Intrinsically Disordered Proteins (IDP) Subgroup and IDPSeminars (https://idpseminars.com//) are excited to announce a Trainee Symposium focused on the latest research in IDPs. Join us on Thursday, March 27 at 12:00 noon USA Central Time for this special event held during the regular IDPSeminars slot. This Zoom webinar will showcase cutting-edge work from the next generation of researchers in the IDP field. Two graduate students and two postdoctoral fellows, selected from submitted abstracts, will give presentations. Each trainee will deliver a 20-minute talk, followed by 5 minutes of audience questions, offering an opportunity for in-depth discussion and feedback. We encourage trainees studying IDPs to submit abstracts (a link will follow in an email communication from the IDP Subgroup and IDPSeminars). IDP Subgroup leadership will evaluate the abstracts and select the speakers, and presenters will gain invaluable experience sharing their work with an international audience. Don't miss this exciting opportunity to engage with innovative IDP research and to support emerging scientists in our field. Mark your calendar and join us for an inspiring and interactive session! Stay tuned for abstract submission details and webinar registration We look forward to seeing you there!

—*Samrat Mukhopadhyay*, Chair

Membrane Fusion, Fission & Traffic/ Single-Molecule Forces, Manipulation & Visualization

The Membrane Fusion, Fission & Traffic Subgroup and the Single-Molecule Forces, Manipulation & Visualization Subgroup of the Biophysical Society will co-host an online symposium during Biophysics Week 2025, March 24–28. *Jinqing Huang* and *Yongli Zhang* are developing the program. Priority will be given to members of the two Subgroups to speak at the symposium. If you are interested in presenting your research, please let us know and consider joining one or both Subgroups. We look forward to seeing you at the symposium!

—*Jinqing Huang*, Co-Chair-Elect for Single-Molecule Forces, Manipulation & Visualization
—*Yongli Zhang*, Chair-Elect for Membrane Fusion, Fission & Traffic

Membrane Structure & Function

The Membrane Structure & Function Subgroup of the Biophysical Society will be hosting a webinar titled "Membrane Biophysics Today: Milestones and Future Directions." This event will take place on Tuesday, March 25, from 11:00 AM to 12:00 noon USA Eastern Time, as part of Biophysics Week. This one-hour webinar will feature four 10-minute talks by leading experts in the field, offering a unique view into the world of membrane biophysics. The presentations will explore recent breakthroughs, foundational concepts, and future directions in membrane biophysics. It will be designed to engage a broad audience, including undergraduates interested in biophysics, graduate students, and college instructors. The event will be recorded so that the presentations can be shown by instructors to students at their convenience. Meeting details will be provided soon on the Biophysical Society website. We look forward to seeing you there!

—*Adam W. Smith*, Chair

Cheers! for Volunteers

Rajan Lamichhane

Rajan Lamichhane

Membership Committee

Is this your first volunteer position for BPS? If not, what other positions have you held?

I began participating in the "One-on-One with a Mentor" program for the last few years, where I have mentored several students and Early Career member mentees at the Annual Meetings. Yes, in terms of position, this is my first volunteer position for BPS.

Why do you volunteer?

I volunteer because I am passionate about contributing to the biophysics community by fostering scientific collaboration, professional development, and knowledge sharing. Supporting early-career scientists is especially important to me, as I believe mentorship and guidance play a significant role in empowering the next generation of scientists. By serving on a BPS committee, I can actively participate in BPS initiatives promoting diversity, inclusion, and accessibility. Additionally, volunteering allows me to engage with colleagues, exchange ideas, and stay connected with emerging developments in the field. Beyond BPS, I actively engage in discussions about biophysics with undergraduate and high school students, both at the University of Tennessee, Knoxville and through visits to local high schools where I present my research activities, hoping to instigate interest in the field. I believe my volunteering activities also reflect and promote the "Volunteer Spirit" mission adopted by the University of Tennessee.

What has been a highlight from your volunteer experience?

Initially, I was a little hesitant, thinking that volunteering would take a significant amount of my time, and I was also unaware of the expectations and responsibilities. However, after engaging for over a year and serving on the Membership Committee in my second year, I can confidently say that I have truly enjoyed these opportunities and experiences. The workload has been manageable, I don't feel that it takes time away from my regular activities, and now I feel a strong sense of responsibility for my contributions to the committee. I enjoyed our discussions on expanding membership to diverse communities and advancing the mission of the committee. I like participating in the "First-Time Attendee" networking event at the Annual Meeting, which provides space for face-to-face interaction with new members. Additionally, the onsite sessions at the Annual Meetings are always informative and provide opportunities to connect and exchange ideas and explore ways to serve the community better.

Do you have advice for others who might be thinking about volunteering?

If anyone is thinking about volunteering, I strongly recommend that they find ways to get involved or at least make a plan for future involvement. It is not only about serving the community but also about gaining valuable experiences and connections in return. The sense of engagement with shared values and collective efforts within the committee is rewarding and fulfilling, and the experiences we gain are highly respected

When not volunteering for BPS, what do you work on?

After starting my position at the University of Tennessee, Knoxville, we were hit by the devastating COVID-19 pandemic, which posed direct and significant challenges to setting up my lab and forming a research group. Research activities slowed down, and teaching responsibilities became even more demanding. Despite these challenges, I have remained actively involved in my lab to make sure that my research group stays strong and productive. I am passionate about analyzing single-molecule data and refining experimental workflows to make processes simple, more robust, and highly reproducible. Outside of work, I enjoy watching games on TV, especially during the weekend, and participating in my kids' activities. When I have time, I also like to go for a run and cook Nepali dishes for my family.

How to Train Your Advisor (to Train Yourself)

Training as a graduate or postdoctoral researcher can be the most intense, stressful, and productive years of your professional life. Having a healthy and productive relationship with your advisor is extremely important, but you cannot expect it to be perfect right away. Established academics can often be extremely busy and set in their ways, which leaves it to the advisee to manage upwards. The emphasis of this piece is on self-awareness, intentionality/agency, and a bit of life wisdom, or so it is hoped.

First, know yourself and your advisor. Hopefully, you have done your homework and asked key questions in interviews about them. Make sure to learn what management styles they prefer and their experience managing others. This may not seem useful at first, but understanding their perspective will be invaluable throughout your professional relationship. An important question that principal investigators get asked often in interviews is: "What management styles have you experienced, and which one do you prefer, on a scale from micromanager to often absent manager/advisor?" Both parts of that question are important, understanding that many graduate students have had little experience working with an advisor or supervisor. Once you work together, your advisor would ideally quickly recognize your personality, strengths, and weaknesses and adapt as well, but you cannot rely on this if you aim to get the most out of your experience. Your advisor cannot know you better than you know yourself. Learning their personality and professional habits will allow you to make much more useful suggestions, and is the difference between improving a workplace dynamic and hoping for a good outcome from saying, "Please stop micromanaging me!"

Second, remember that "what doesn't kill you [often] makes you stronger" and, conversely, "being comfortable doesn't get you far." For many years, I selected coworkers for my lab who seemed pleasant, generally cooperative, and who I would get along with, and yet my most productive interactions had significant scientific disagreements, divided project goals, or even fundamental personality incompatibilities. Somehow the friction created more and superior work, and sometimes that friction may come from your advisor. Back in my training days, upon joining a lab, I received the advice that a particular person thinks like a computer, and unless I learned to do the same, I'd be screaming or crying in the shower. Indeed, I did that on several occasions for a number of years until I learned to separate my and my boss's personalities from the tasks at hand. Your goal is to produce high-quality, cutting-edge science. In that way, you and your advisor's goals should align. Focus on the work at hand, and if it gets to be too much, then address it with your advisor and discuss how a healthier environment would increase performance. Our field can become quite stressful and tempers may flare, but always remember to attack the problem and not the person.

Third, be proactive regarding your intentionality and the "advisor-advisee compact." Be clear about your goals, or clarify them with the help of others (peers, thesis committee members, or your postdoc mentors), and then proceed with conviction. Your advisor has considerable insight, authority, and means to open doors for you to learn additional technical or academic skills or to meet people, but these are often not realized until you "manage up." The concept, initially from industry, is becoming popular in academia as well. Extensive training plans, from hard technical to soft academic and personal skills, are now part of most graduate and postdoc fellowship applications, providing an opportunity for advisors and advisees to align goals. Moreover, many institutions now ask advisers and mentees to sign agreements delineating their roles, modes of interaction, and expectations. This, at least in principle, papers over personality quirks by making clear professional and rational boundaries. At the end of the day though, talk is cheap, and consistent action and effort from both parties is required to ensure that they are maintained.

I outline the concept of a mentor-mentee "compact" in my lab guidelines: "You [advisee] will work smart and hard to drive projects, produce outstanding research results, paper drafts, and presentations, and I [as your advisor] will try everything in my power to guide you, improve those 'academic products,' and help your career via promoting you in my networks and via recommendations." I believe that finding a way to incorporate the spirit of this statement can make any mentor-mentee relationship healthier and more productive. It may seem simple, but ensuring that your goals and the goals and reputation of the lab are aligned in the mind of your mentor will make your mentee experience the best that it can be.

—*Molly Cule*

Upcoming Networking Events

The next call for Networking Event applications will be opening on March 15. Check out the website for criteria to start planning your application: www.biophysics.org/meetings-events/networking-events/criteria-and-submission-information.

Upcoming events include:

Bridging the Theoretical and Experimental Biophysicists in Bangladesh
Barishal, Bangladesh
March 15, 2025

Virtual Networking Event: BSC/BPS Trivia Night
March 26, 2025

Launching of Biophysical Society Student Chapter at the University of Buea
Buea, Cameroon
April 2025 (date to be determined)

Virtual Networking Event: Mini-Symposium on Computational Biophysics: From Machine Learning to Coarse-Grained Simulations
April 14, 2025

The Interdisciplinary Biophysics Networking Mini-Symposium 2025
Columbus, OH, USA
May 2025 (date to be determined)

Recent Advances in Theoretical and Computational Biophysics in Cameroon
Yaoundé, Cameroon
August 20, 2025

The Third Molecular Biophysics Symposium
Blacksburg, VA, USA
September 2025 (date to be determined)

Southern California Users of Magnets
Irvine, CA, USA
September 6, 2025

Boosting Biophysical Analysis with Machine Learning Models
Kolkata, India
October 10, 2025

Virtual Networking Event: Biophysical Mechanisms Underlying Blast-Induced Diseases: From Molecular to Clinical Outcomes
December 3, 2025

DNA Double-Strand Break Repair Mechanisms Meeting in Paris 2025
Paris, France
Date to be determined

Not all details and dates for events have been determined at the time of publication. Check www.biophysics.org/upcoming-networking-events for updates!

Biophysical Journal Call for Papers

Special Issue: Mechanics and Thermodynamics of the Living Cell, Dedicated to Erich Sackmann

Editors: ***Andreas Bausch, Rudolf Merkel, Joachim Rädler, and Alexandra Zidovska***

Biophysical Journal extends an invitation for contributions to a special issue dedicated to Erich Sackmann, who was a trailblazer in the field of cell biophysics. Sackmann, Professor Emeritus of Excellence in the Department of Physics at the Technical University Munich in Germany, passed away in May 2024 at the age of 89.

Erich Sackmann was a pioneer of biological physics, inspiring generations of students and researchers worldwide. His research focused on the mechanics and thermodynamics of the living cell, ranging from the physics of cell membranes, cell adhesion, and the cytoskeleton to the physics of biological polymers and their molecular assemblies. He is renowned for developing numerous model systems, such as polymer-supported lipid bilayers or synthetic vesicles functionalized with ligands and cytoskeletal elements, which enabled studies of cell adhesion, cell recognition, and cell migration. He established a series of measurement techniques, such as magnetic tweezers microrheology and quantitative interference contrast microscopy, which are used widely by the field. Moreover, the precision of his novel experimental techniques contributed to the entry of modern polymer physics into biology.

To celebrate the remarkable and creative scientific life of our late colleague and mentor, Erich Sackmann, we invite submission of original research articles, reviews, and perspectives aligned with his areas of interest in cell biophysics. We encourage contributions ranging from biophysical studies in vivo and in vitro to experimental, theoretical, and computational studies. With this special issue, we seek to pay tribute to Erich Sackmann and his remarkable scientific contributions, which left a permanent imprint on the landscape of the field of biophysics.

Deadline for submission: May 31, 2025

- Instructions for authors can be found at: https://www.cell.com/biophysj/authors.
- Please include a cover letter stating that you would like to contribute to the Erich Sackmann special issue and please describe why the work fits into the special issue.
- Normal publishing charges will apply.
- Questions can be addressed to the BJ Editorial Office at BJ@biophysics.org or to (240) 290-5600.

Biophysical Society

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To submit, visit https://www.editorialmanager.com/biophysical-journal/

Members in the News


Lewis Kay

Lewis Kay, University of Toronto and Society member since 1998, received the 2025 Alexander Hollaender Award in Biophysics from the National Academy of Sciences (NAS).


Peter Wolynes

Peter Wolynes, Rice University and Society member since 1994, was awarded the 2025 NAS Award in Chemical Sciences.


Jhullian Alston

Jhullian Alston, Boston Children's Hospital and Society member since 2019, was named a 2024 Howard Hughes Medical Institute (HHMI) Hanna Gray Fellow, mentored by *Taekjip Ha*.


Whitney Stevens-Sostre

Whitney Stevens-Sostre, University of Wisconsin–Madison and Society member since 2018, was named a 2024 HHMI Hanna Gray Fellow.
(Photo credit: Ilana Bar-av/AP Images for HHMI)

Wellcome Mental Health Award: Advancing target validation for novel mental health drug discovery

This award aims to support research activities to validate novel targets that have a clear therapeutic concept, a strong biological rationale, and relevance to early intervention in anxiety, depression, and/or psychosis.

Who can apply: Those who work in disciplines relevant to drug discovery and mental health science and who are from an eligible organization based anywhere in the world other than mainland China.

Deadline: April 15, 2025

Website: https://wellcome.org/grant-funding/schemes/target-validation-mental-health

2026 Bower Award and Prize for Achievement in Science

The Franklin Institute seeks nominations of individuals who have made significant contributions to the field of human gene therapy. Nominations should recognize fundamental contributions to the development of strategies for engineering genetic alterations to cells for the treatment of human disease.

Who can apply: This is an international competition; nominations of individuals from any individual or organization will be accepted, including self-nominations. Nominations of candidates traditionally underrepresented in science and engineering are particularly encouraged.

Deadlines: Letter of intent: April 30, 2025; full nomination: May 30, 2025

Website: https://fi.edu/en/awards/nominations/bower-award-prize-achievement-science

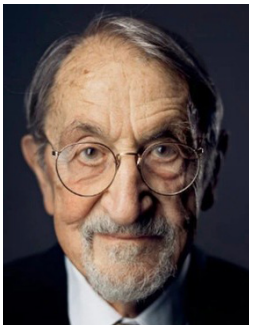
Student Spotlight


Alexis Cooper

Alexis Cooper
University of California, Merced

What advice do you have for someone thinking about studying biophysics?

My best advice is to try to build strong foundations in chemistry, physics, and biology, because I truly believe that biophysics thrives at the intersection of all of these subjects. Always stay curious about new developments in the field, even those outside your direct area of research. Take advantage of opportunities to attend workshops, conferences, or seminars that you think may be beneficial, and don't hesitate to seek mentors or collaborate with others.


Martin Karplus

Martin Karplus

A Towering Figure in Chemistry and Molecular Biophysics

Martin Karplus (1930–2024), Nobel Laureate for Chemistry in 2013, passed away on December 29, 2024 at age 94.

While in high school in 1947, Martin realized that a solid background in chemistry, physics, and mathematics was imperative to approach biology at a fundamental level (i.e., to understand life). He followed through on this concept, spending decades in small-molecule theoretical chemistry before pioneering computational molecular biophysics.

Martin was born in Vienna in 1930 into an intellectually successful Jewish family—the research of his grandfather *Johann Paul*, for example, led to the discovery of the hypothalamus. After fleeing the Nazis in 1938, he arrived as a refugee in the United States, living initially in relative poverty, but obtaining a BA from Harvard. After a meeting at Princeton with *J. Robert Oppenheimer*, who described CalTech to him as a "shining light in a sea of darkness," Martin chose CalTech for PhD study and there ended up studying with *Linus Pauling*. Karplus was inspired by Pauling's intuitive approach to chemistry, which, even if for the wrong reasons, always seemed to get the right answer.

In the late 1950s and early 1960s, Martin used quantum chemistry to study various aspects of molecules and their interactions. Notable among these were his methods for relating nuclear and electron spin magnetic resonance parameters to the electronic structure of molecules, including the derivation of the Karplus Equation, which links NMR J-coupling constants to molecular conformation.

In 1969, three years after having moved back to Harvard, Martin took a sabbatical to the Weizmann Institute, and this was influential in his subsequent biological work. There, *Shneior Lifson* had been working with *Arieh Warshel* and others on developing rapidly calculable empirical (molecular mechanics) potential energy functions, which could calculate potential energies as a function of the relative positions of atoms and therefore be used for determining structure and dynamics. Molecular mechanics functions were used in much subsequent work in computational molecular biophysics. Among these, in 1974, was the first molecular dynamics (MD) simulation of a protein, a 9-ps in vacuo simulation of bovine pancreatic trypsin inhibitor (BPTI) performed by Martin's co-workers, *Andy McCammon* and *Bruce Gelin*. This paper contributed greatly to the realization that biological macromolecules are not rigid, static structures, but that they fluctuate and change conformation.

Much resistance to MD was met, however. From one side, purist analytical theoreticians would occasionally snipe at the need to use "inelegant" numerical methods (one wonders what such philosophers would now think of AI!). In contrast, Martin had always appreciated the usefulness of computer power. "People learn" was his typical response. A much greater challenge was a common notion in empirical biology that if theory agrees with experiment, it is not interesting, because the result is already known, whereas if one is making a prediction, then it is of minor interest because there is no evidence that the prediction is correct. Decades later, MD has mostly overcome this blinkered view and has become a staple of biological and chemical science, with hundreds of thousands of applications.

Post-BPTI, the Karplus group at Harvard became a magnet for aspiring computational biophysicists, such as myself, from all over the world. As his group grew, his group's CHARMM MD program became widely used, and his own research interests expanded further—from understanding internal motions in proteins through to allostery in hemoglobin and protein folding and quantum mechanics/molecular mechanics (QM/MM) studies, to name but a few. With increasing computer power, the sizes of the systems his group could study increased, and in later years he embarked on understanding complex molecular machines such as GroEL and F1 ATPase.

France was always an attraction to Martin, and he was very close to moving there in 1974. However, an impediment was that French university professors were civil servants, and only French citizens could be civil servants. His colleague *Jacques Dubois*, a chemistry professor at Paris VII who was also Director of Research for the French Defence Research Agency, who therefore had with connections with the Pompidou government, took up this problem and managed eventually to obtain a governmental decree exempting university professors from the citizenship requirement. In the end, Martin did not stay, but he was thanked afterwards by others benefitting from the decree. He maintained a chalet high in the mountains near Annecy (I tried to sell him a car there in 1985 but smashed it up after slipping on ice on the way up; unsurprisingly, he did not take the bait). In later years he worked part of the time in Strasbourg. Among his French-influenced pastimes was cooking, a lifelong passion. Martin was also a distinguished photographer, and his early color (1950s/1960s) photography of people and places around the world was exhibited in many forums, including the Bibliotheque Nationale de France in Paris in 2013.

The scientific world will remember Martin Karplus as a towering figure of achievement and influence with his more than 800 publications impacting widely and deeply. His Nobel, awarded prima facie for QM/MM, is better seen as a recognition of his sustained lifetime's work. Hundreds of group members will also remember him for attracting like-minded young souls to his Harvard stable, for patient, deep discussions, and for always going the extra mile, a trait manifested in sometimes seemingly endless revisions of manuscripts—this was Martin the perfectionist, working tirelessly, striving to do the very best job he could. For me personally, another small memory comes to mind. An equation for a correlation function that I had written in a manuscript had an erroneous minus sign in an exponent. He simply circled it with a question mark. I asked him if he had derived the correct answer. He replied, "No. It just seemed wrong." A touch of Pauling-style intuition, perhaps?

—*Jeremy Smith*

Anith Niedziela-Majka

Anita Niedziela-Majka

It is with great sadness that we announce that BPS Council member *Anita Niedziela-Majka* (1969–2024) died on December 3, 2024, at the age of 55. Anita was diagnosed with invasive breast cancer shortly after being elected to BPS Council in 2023. She was a member of the Macromolecular Machines & Assemblies Subgroup.

Anita was born on October 5, 1969, in Bierawa, near Kędzierzyn-Koźle, in southwest Poland. She attended high school there, where her interest and fascination with science started. Her father was an engineer, and her mother was an administrative assistant. Anita's interests in quantitative sciences (initially astronomy) led her to pursue an MSc in biotechnology and PhD in biochemistry and organic chemistry at Wrocław Technical University (Poland), where she did some groundbreaking work on nuclear receptors. Anita met *Jurek Majka* in college, and they married in 1993. Anita was a stimulating colleague and teacher there, remembered for her rigorous science and teaching skills. Those who knew her recall a warm and generous friend and describe her as "one of the most inspirational, dedicated, and genuinely wonderful people we have had the privilege of knowing. We can think of no one who better exemplifies the values of academic excellence and scientific impact." Anita obtained her PhD in 1999 after defending her thesis titled "Recombinant DNA Binding Domains of Ecdysteriod Receptor—Purification and Characterization of DNA Binding Properties."

In 1999, Anita and Jurek moved to the United States, where she brought all of her outstanding qualities to pursue her first post-doctoral position in the Department of Biochemistry and Molecular Biology at Saint Louis University (SLU), working in the laboratory of *Tomasz Heyduk*. At SLU, she worked on mechanisms of transcription initiation in bacteria. She developed some unique fluorescence approaches that produced novel insights into the energetics of this process and conformational changes involved in its regulation. She is remembered by her former SLU colleagues as always full of positive energy and enthusiasm for the next experimental challenge.

In 2002, Anita undertook a second postdoctoral position in the Department of Biochemistry and Molecular Biophysics at Washington University in St. Louis School of Medicine, working in the lab of *Tim Lohman*. There, Anita carried out mechanistic studies on the superfamily 1A helicases and translocases UvrD, Rep, and PcrA by using a wide range of biophysical and biochemical approaches (fluorescence stopped-flow, quenched-flow, and analytical ultracentrifugation) to sort out the functional roles of their different assembly states. Anita excelled in so many areas, from protein expression and purification to thermodynamics and transient-state kinetics. Anita was a delightful person to have in the lab, both as a scientist and as a person, and she was always willing to tackle any problem, no matter how tough. She always made the laboratory a fun place to be and was always willing to assist her lab mates at a moment's notice, always with a smile.

In 2007, Anita moved to Gilead Sciences, Inc. as a senior biology research scientist, and continued there until her death. At Gilead she used her biophysical expertise to contribute to many areas of research, including assay development and studies of macromolecular interactions and self-assembly processes. Anita was part of multidisciplinary teams developing small-molecule drugs against HIV and HCV therapy targets, as well as anti-inflammatory and anti-cancer therapeutic approaches. Her collaborative spirit, problem-solving instincts, and interests in teaching and mentoring served her well in these endeavors. Outside the lab, Anita and Jurek enjoyed hiking, cooking, and birdwatching all over the country.

Anita left us too soon. She was a wonderful scientist, colleague, and friend. We miss her greatly.

—*Tim Lohman* and *Tomasz Heyduk*

Ariel Luis Manuel Escobar


Ariel L. Escobar

Ariel L. Escobar (1962–2024), dear colleague, mentor, and friend, left us this past December 20, 2024, at the early age of 62. Ariel was an avid scientist with a special talent for solving intricate technical problems when understanding calcium dynamics in muscle. Originally from Argentina, Ariel was born in the southern coastal town of Comodoro-Rivadavia on March 25, 1962. Ariel was the only child of *José Escobar* and *Nélida Roggero*. After serving in the army around the time of the Falklands (Malvinas) war, Ariel went to study electronic engineering at Universidad Tecnológica Nacional in Buenos Aires. He then worked with *Osvaldo Uchitel* on potassium currents in skeletal muscle and started the journey that made him the beloved scientist that many of us had the privilege to know and call a friend.

Ariel crossed the estuary of Rio de la Plata to begin his doctoral studies under the direction of *Gustavo Brum* and *Gonzalo Pizarro*, at the School of Medicine of Universidad de la Republica in Montevideo, Uruguay, where he began developing a passion for biophysical problems, including the excitation-contraction problem in muscles, which constituted a hot topic in the field at that time. As a student, Ariel went to work as a research associate in the United States with *Enrico Stefani* (Baylor, 1991) and *Julio Vergara* (University of California, Los Angeles [UCLA], 1991–1993). This work earned him a PhD in 1993 with Vergara as advisor.

Ariel moved to UCLA as a postdoc, where he developed in confocal spot technique in the laboratory of Vergara. Using this technique, Ariel was able to pinpoint the functional site of $Ca2^+$ releasing in an intact fiber with diffraction limited resolution. This work was published in *Nature* in 1994, constituting his first major publication in his career and the central piece of his PhD, awarded by the Program for the Development of the Basic Sciences, in Uruguay.

After his time at UCLA, in 1995 Ariel moved to Venezuela, the birthplace of his beloved wife Tania. Ariel joined the faculty of the Instituto Venezolano de Investigaciones Científicas (IVIC), where he collaborated with highly regarded scientists such as *Carlo Caputo* and *Reinaldo DiPolo*. At IVIC, Ariel further developed the idea of local $Ca2^+$ measurements in muscle, focusing now on the heart. His achievements in IVIC include the combination of experimental and computational tools to understand the implication of the subcellular arrangement of the $Ca2^+$ release machinery in the kinetics of $Ca2^+$ signaling. Furthermore, he also developed the pulsed local-field fluorescence microscopy (PLFFM) technique that became one of the workhorses of his lab for the rest of his career.

In 2000, Ariel moved his laboratory to Texas Tech University Health Sciences Center, Lubbock, where he further developed the PLFFM technique to study $Ca2^+$ dynamics in the intact heart, exploring the role of intracellular $Ca2^+$ storage, the role of $Ca2^+$ extrusion systems, and under pathological conditions such as ischemia and ischemia-reperfusion.

In the last leg of his journey, Ariel joined the school of Engineering at the University of California, Merced in 2009, where he continued his work on $Ca2^+$ signaling, then exploring the relationship between electrical excitation and $Ca2^+$ release. During that time, Ariel focused on, among other questions, the complicated problem of alternant T-waves, an arrhythmogenic phenomenon. Utilizing a challenging experimental system that included loose patch clamp of intact hearts in combination with flash photolysis at the pipette tip, Ariel and colleagues provided some of the first concrete evidence linking currents mediated by the sodium-calcium exchanger and alternant T-waves.

Ariel was an outstanding scientist, with privileged—even enviable—prowess for mechanistic understanding of physiological processes and incredible ability for technical development. Yet, beyond that, Ariel was a very caring and generous person who loved cultivating his friendships. He thoroughly enjoyed entertaining his friends by cooking them meals from around the world. It is common to see that anyone who shared more than one day with Ariel has great memories to share.

Ariel was a passionate scientist who saw research not as a job but as a way of life. He loved his country of Argentina and dreamed of advancing science throughout parts of Latin America where resources continue to be limited. He also helped younger researchers establish their own laboratories and collaborated with many scientist friends from around the world. Ariel leaves behind his wife Tania and so many friends that consider themselves part of his family. We, those who had the fortune of interacting with Ariel and called him a friend, already miss him terribly. Chao, Ariel.

—*Carlos Villalba-Galea*

Biophysical Society

Upcoming 2025 Meetings

THEMATIC MEETING

Beyond Simple Models: The Consequences of Membrane Complexity in Living Systems

Copenhagen, Denmark | July 7–10, 2025

BPS CONFERENCE

Proton Reactions: From Basic Science to Biomedical Applications

Estes Park, Colorado, USA | August 3–7, 2025

BPS CONFERENCE

Membrane Fusion and Budding

Estes Park, Colorado, USA | October 5–9, 2025

THEMATIC MEETING

Spatial Organization of Biological Functions

Bangalore, India | October 20–25, 2025

THEMATIC MEETING

Understanding Peripheral Membrane Protein Interactions: Structure, Dynamics, Function and Therapy

Thessaloniki, Greece | November 9–13, 2025

For more information visit **www.biophysics.org**

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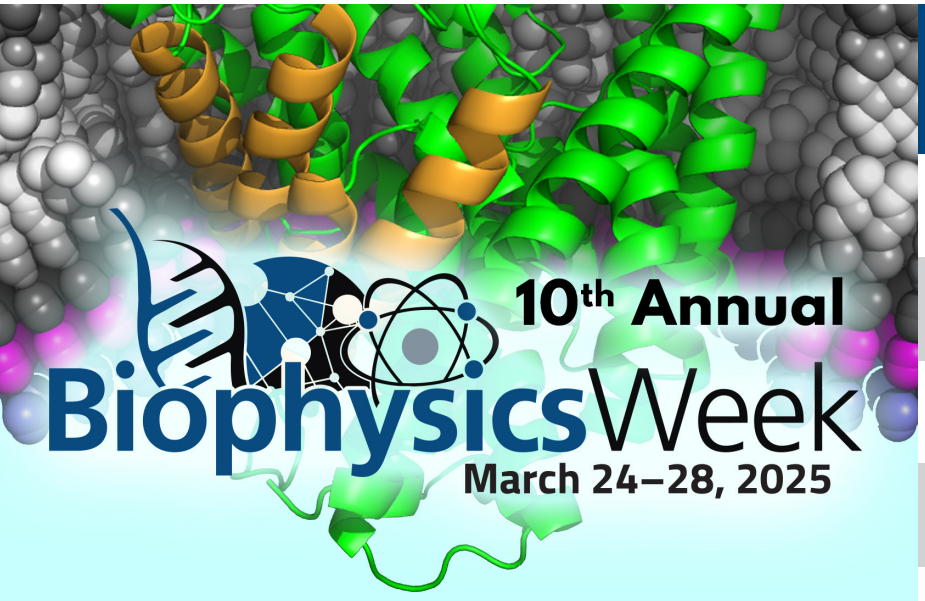
BPS Bulletin
THE NEWSLETTER OF THE BIOPHYSICAL SOCIETY

March 2025



Celebrate the 10th Annual Biophysics Week

This annual event highlights the diverse and impactful field of biophysics, fostering awareness and engagement across communities. You are invited to participate in events hosted by Affiliate Event organizers, as well as BPS Sponsored and Subgroup Events, throughout the week.

You can still participate in this milestone event by hosting an Affiliate Event, open to all students, researchers, and science enthusiasts. Register your event to receive marketing support and be included in promotional efforts.

Learn more at www.biophysics.org/BiophysicsWeek.

BPS Important Dates

Copenhagen Thematic Meeting Early Abstract Deadline
March 17, 2025

10th Annual Biophysics Week
March 24–28, 2025

***Biophysical Journal* Applications of Coarse-Grained and Multiscale Modeling Special Issue Submission Deadline**
March 31, 2025

Copenhagen Thematic Meeting Early Registration Deadline
April 4, 2025

Estes Park BPS Conference Abstract Deadline
April 14, 2025

Call for Networking Events Deadline
April 30, 2025

BPS Awards and Fellows Nomination Deadline
May 1, 2025

Please visit www.biophysics.org for a complete list of upcoming BPS Important Dates.