

Newsletter

Biophysical Society

JUNE

2013

DEADLINES

Mechanobiology of Proteins and Cells

September 29–
October 3, 2013
Salisbury Cove, Maine

June 10, 2013
Abstract Submission

July 8, 2013
Early Registration

Wiki-Edit Contest

July 15, 2013
Article Submission

SAVE THE DATE

58th Annual Meeting

February 15–19, 2014
San Francisco, California

2013 Election for Society President-Elect and Councilors

The Society's annual election for President-Elect and Councilors is now open. All regular Society members whose 2013 dues were paid by May 31 are eligible to vote. Eligible members may vote electronically by accessing the secure election site at www.biophysics.org prior to August 1, 2013, using their last name and member ID to log in.



Edward Egelman



W. Jonathan Lederer

The Society's 2013 candidates for President-Elect are *Edward Egelman*, University of Virginia Medical School, and *W. Jonathan Lederer*, University of Maryland School of Medicine. The President-Elect will serve a one-year term, beginning in February 2014, followed by a year as President, beginning in February 2015, and a year as Past-President, beginning in February 2016.

Eight candidates, pictured below, are running for the four open Council positions. Those elected will serve for three years, beginning in February 2014. Full biographical sketches and candidate statements are available at www.biophysics.org.



Canan Atilgan
Sabanci University, Turkey



Olga Boudker
Weill Cornell
Medical College



Jianmin Cui
Washington University



Roberto Dominguez
University of
Pennsylvania



Kalina Hristova
Johns Hopkins University



Joseph Puglisi
Stanford University



Michael Pusch
Institute of Genetics
& Biophysics,
Genoa, Italy



Jin Zhang
Johns Hopkins
University School
of Medicine

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Public Affairs

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Biophysicist in Profile

KAREN THICKMAN

Karen Thickman's resume could go all the way back to her childhood designing experiments to answer the questions thought up by her seven-year-old self. She remembers her first experiment—working with her mother, who first taught her the scientific method, to determine why leaves of different colors had frozen at different depths of the family's pool—and many experiments thereafter. Today, Thickman is a professor at the Lane Center for Computational Biology in the School of Computer Science at Carnegie Mellon University (CMU), focusing on teaching quantitative biological techniques and experimental design.

“As scientists, it is important that we not only use data in our research, but also educate and model using data to make real-world decisions.”

— Karen Thickman

Studying science in college out of dueling desires to be either an astronaut (implanted with a love of space from her physicist father) or a medical doctor, Thickman was sidetracked by her biophysical chemistry studies at Dartmouth College. “As the courses got more advanced, I liked them more and more,” she explained. “I really liked protein structure and function studies, which became my focus in looking for graduate programs—and those programs turned out to be biophysics programs.”

Specifically, it turned out that the program was molecular biophysics at Johns Hopkins University Medical School, where Thickman earned her PhD and met colleague and friend *Ann Marie Stanley Quayle*. Though their paths have not crossed professionally since graduate school, Stanley Quayle explains that they “toiled long hours together preparing for qualifying exams and getting through our coursework at Johns Hopkins.”

After being exposed to single-molecule experiments at a Biophysical Society Annual Meeting, Thickman decided to pursue this “holy grail of molecular studies” in a postdoc program. “I remember having my mind blown by watching movies of DNA gyrase activity,” she said, “so I went to the University of Pittsburgh (Pitt) to study DNA helicases with single-molecule studies.” Her experience at Pitt challenged her with studies that were difficult in both design and execution. “Our experiments didn't yield useful results, but I learned a lot about helicases and really honed my experimental design skills.”

As her postdoc was winding down, Thickman realized that she had gotten to a point where she did not have good tools for answering the questions she was interested in asking—and she wasn't as interested in the questions she did have the tools to answer. “I started looking around for what else my skills had prepared me for, and recalled that I had really wanted to teach as a student,” Thickman said.

Her decision to pursue teaching happily coincided with an open teaching faculty position at CMU, where she works today, teaching first-year undergraduates to first-year graduate students. Thickman is currently developing and revising several courses that try to introduce students to lab-based quantitative and computational biology, including a course in the joint Pitt-CMU PhD program in computational biology, where she works with Pitt professor *Joseph Ayooob*. “We have been reworking the syllabus and structure of the course to include more experiential learning,” Ayooob explained. “We are finding that having the students play a more active role in designing the experiments—as opposed to giving them a recipe to follow—appears to have improved their interest level and grasp of the material and techniques.” The pair even incorporated Thickman’s love of cheese into their class—“for the genomics/molecular biology section, Karen had the great idea to sequence the microbiomes of different cheeses,” said Ayooob. “The students were quite abuzz and engaged in finding the answers to their questions about the cheeses.”

Starting a job in a computational biology department has not always been easy. “I used to cry when I had to use Unix [as a grad student],” Thickman admitted. “Though I was hired to teach experimental biology, it was, and still is, intimidating.” She has faced many of the challenges any young professor might—from adapting to a steep learning curve of programming and algorithm design to trying to create well-balanced assignments that provide an opportunity to practice skills without becoming unreasonably time consuming, or the opposite: busywork. “I’ve run with the idea that the best way to learn something is to teach it, so I try to teach things I don’t know much about,” Thickman said. “It is a great, and terrifying, way to learn new things.”

Her work as a teacher has developed her interest in education policy, an interest she nurtures with the help of the Biophysical Society’s Public Affairs Committee. “I’ve become very interested in workforce and diversity questions,” Thickman said. “Questions like—How many

PhDs in any given field are needed in the country? And are PhDs having trouble finding jobs just because funding is low, or is the market truly saturated?—are fascinating.” Long term, she would like to get more involved in education research and education policy, but in the meantime, she is happy to teach her friends and colleagues about the importance of getting involved. “Karen was the first person to teach me about the important role of scientists as advocates for science in the public domain, and for good policy,” said Stanley Quayle.

With Thickman’s interest in public policy, it may come as no surprise that her scientific role model is *Steven Chu*. “I admire Dr. Chu for two distinct reasons,” said Thickman, “First, for his ability to take the knowledge and tools of one field and bring them to bear on a new field, as he did in developing the field of single-molecule studies.” And second, according to Thickman, for taking a role in public life. “As scientists, it is important that we not only use data in our research, but also educate and model using data to make real-world decisions,” Thickman explained. “Even before his role as Secretary of Energy, Dr. Chu was taking an active role in society and demonstrating how data should be used in public policy decision-making.”

When she’s not in the classroom, Thickman takes a small step outside of science. Though Stanley Quayle argued that she “has never been one for the mold of traditional scientist,” Thickman’s commentary on her hobbies may beg to differ. She enjoys cooking and baking (“I love the chemistry and microbiology of food!”), quilting (“I think protein crystal structures, expression heat maps, dynamic programming matrices, cell cycle images, etc. make for great baby quilts!”), and dancing Argentine tango (this one may be where she breaks the mold). Together with her husband *Noah Smith*, Thickman tangoed her way through graduate school and her postdoc, including an afternoon of tango lessons for their wedding guests. “Karen and Noah are fantastic dancers,” Stanley Quayle said. “The rest of us [at the tango lessons] you could readily pick out on the dance floor as scientists!”



Thickman with her entry into a local quilt show.



Thickman kayaking in Austin, Texas.

Careers

Mid-Career Roundtable

At the 57th Annual Meeting, the Committee for Professional Opportunities for Women (CPOW) organized, for the second time, a career luncheon specifically targeted to mid-career biophysicists. For every scientist, even after securing a position and establishing an independent lab, promotion, tenure, funding, and productivity remain major challenges and demand much time and effort. Despite this, many successful mid-career scientists wish to contribute more, to continue to grow their careers, and to expand the sphere of their influence. Among the many skills that can help accelerate career advancement, the selected topic for this year's luncheon was visibility. A panel of outstanding scientists and science administrators accepted the invitation to lead an interactive forum that encouraged participants to: "PROMOTE your research, PROMOTE yourself."

The panelists who generously shared their experience and answered direct questions from the audience were: *Susan Amara*, Past President, Society for Neuroscience, and member, National Academy of Sciences; *Al George*, Chair, Electrical Signaling, Ion Transport and Arrhythmia Study Section & Professor, Vanderbilt University; *Shai Silberberg*, Scientific Program Director, NIH/NINDS; *Brian O'Rourke*, Circulation Research & Professor, Johns Hopkins University; and *Harel Weinstein*, Past President, Biophysical Society, and Professor and Chair of Physiology, Weill Cornell Medical College.

"I did not have one, but looking back at my career, I see that having a plan is the single most effective way to achieve career success," said Amara. In crafting a plan, start by identifying your passion and your strengths; find a niche in your field and decide to become the go-to person in that area;

and don't go it alone: enlist the support of trusted colleagues who can become your mentors. Key to achieving your goals is to have a plan and to communicate your vision.

“Key to achieving your goals is to have a plan and to communicate your vision.”

Once you've targeted your niche, start getting involved. Of the many activities that ignite your passion select the ones that will be most satisfying and the most visible. Look for opportunities to get involved locally, with your biophysics community, or take charge of something that you care about at your institution or professional society. Volunteer for a study section, join a committee, or attend a conference where you can make a difference, learn new skills, AND stand out. Leverage conferences to build your network. Attend meetings that match your research interests and talk to people—walk up and introduce yourself, ask questions, and make friends. If you are invited for a talk—GO! Building a network can take years, but it is never too late to start.

Once you've stepped forward, look back on your investments and rewards; decide to expand from there or revisit the plan. Staying on track and meeting deadlines require careful time management. Consider the advice of your department chair or mentor on how to prioritize activities.

"Keep in mind that a mentor-mentee relationship is most successful when it is based on mutual respect and is beneficial for both parties," advised Weinstein. Use all available mentoring opportunities and remember that each person has a different skill set; don't get all your advice in one place! Consider mentoring students and junior scientists, you may find the process rewarding and even valuable to your own career growth, as it helps establish you as an expert and it also expands your network.

In summary, graceful self-promotion is not only possible but also a valuable tool in your skill set for career success. However, regardless of your skill level, the surest way to build a name for yourself is to do high quality science and share your passion with enthusiasm and generosity.

The forum concluded with a networking segment and extended past the allotted time. Many participants urged the organizers to expand the period for informal interactions as a way to practice networking skills, make new connections with scientists at the same career level, and engage in small group discussions. This interactive luncheon is scheduled to occur again at the 58th Annual Meeting in San Francisco, California. Details on the 2014 event topic, as well as panelists and information on how to register, will be available on the Annual Meeting website, www.biophysics.org/2014meeting, under **Programs**, and then **Special Functions** in the fall. If you have any additional recommendations or suggestions for topics and panelists for next year, or feedback on this year's session, please send your comments to [Gabriela Popescu](mailto:Gabriela.Popescu@buffalo.edu) (popescu@buffalo.edu) or [Bernadette Chepega](mailto:Bernadette.Chepega@biophysics.org) (bchepega@biophysics.org).

Need Advice?

Seeking career advice, trying to network, or have general questions about biophysics?

Find help on the **BPS Mentor Board**. Sign up and start connecting today!

[www.biophysics.org/Professional Development/Careers](http://www.biophysics.org/ProfessionalDevelopment/Careers)



Science Fairs

For the fifth consecutive year, the Biophysical Society sponsored awards at regional and state science fairs across North America. These Biophysics Awards were given for outstanding biophysics-related projects, as determined by local Society members who volunteered as judges at the events.

In 2013, 29 students received the Biophysics Award including 12 at the state level. Additionally, 2013 was the first time BPS sponsored an award at a fair outside of the the US, in Saskatchewan, Canada.

Since its inception, the science fairs program has vastly expanded. In 2009, the Society funded awards at only four fairs in the Boston area, in conjunction with the 53rd Annual Meeting. After a successful first year, science fair awards in the San Francisco Bay-area were added in 2010. The following year, the Society broadened its scope to include regional and state fairs in the Baltimore area, including Washington DC, surrounding Maryland counties, and northern Virginia. In addition to fairs local to Annual Meeting sites, in 2011, the Society began funding awards at state and regional science fairs across the US where BPS members volunteered to serve as judges.

The science fair initiative, sponsored by the Public Affairs Committee, encourages the teaching and learning of science, technology, engineering, and math, as well as raises interest in and awareness of biophysics among high school students and teachers.

The Biophysical Society would like to thank the Society members who volunteered to judge at their local science fairs this year! If you are interested in having BPS sponsor an award at your regional or state fair in 2014 or have questions visit www.biophysics.org and click **Professional Development** and then **Education**.



BJ is now accepting MatLab FIG files to enhance articles.

Biophysical Journal Editor's Corner

BJ Goes Interactive

An exciting feature has been added to the *Biophysical Journal* (BJ) website. Now authors can upload MatLab FIG files and readers can view the interactive files via Science Direct. The FIG file format captures not only the visual information but also the underlying data, which makes it possible to view a figure at maximum accuracy at all levels of zoom and from all viewpoints, and also to download the data for validation or reuse.

Submit your manuscript and MatLab files by going to www.biophysj.org. Specific information about MatLab files can be found on the website under 'Author Instructions'.

Know the Editors

Each month we feature a *Biophysical Journal* (BJ) editor and highlight a BJ section.



David Piston
Vanderbilt University
Associate Editor of the Cell
Biophysics Section
(beginning July 1)

Q: What is your area of research?

My lab works on molecular signaling mechanisms underlying the secretion of glycemically-regulating hormones, in particular insulin and glucagon. A large part of our work focuses on the development and use of the quantitative microscopy methods needed for this research. We are also very interested in developing mathematical models that translate our molecular understanding into predictive models.

Q: As Associate Editor of the Cell Biophysics Section, can you tell us what type of papers BJ is looking for in that area?

Cell biophysics is a combination of established and evolving fields. In all cases, we are looking for papers that use biophysical approaches to obtain insights into biological mechanisms. One point I would like to stress is that the data, analysis, and interpretation should be as quantitative as possible. There is a lot of overlap with the membrane and systems biophysics sections, so I will likely be working closely with *Lukas Tamm* and *Peter Hunter* on papers at those interfaces. Of course, in some aspects of cell biophysics, new approaches such as single molecule imaging and super-resolution microscopy, are revolutionizing our quantitative cellular assays, and I think we would like to see those and similar techniques well-represented in the Journal.

Q: Why did you take on the role of Associate Editor?

I have always thought that the most important role of scientific societies is to promote and communicate research in their respective fields. For the Biophysical Society, this is through the *Biophysical Journal*. Over the years, the breadth and depth of biophysics has changed tremendously, and for the most part, I think the Journal has done a great job of reflecting those changes in our field, and giving voice to new ideas. I have been fortunate to participate with the Journal in many ways, including six years as chair of the Society's Publications Committee. I was serving in my second stint as an editorial board member of BJ when *Les Loew* [BJ Editor-in-Chief] asked me to consider this AE role. To be asked to do this is a real honor, and despite the amount of work involved, I find it to be a great way to keep up with the broader field. Finally, I have greatly enjoyed getting to know a number of authors, reviewers, and editorial colleagues that I probably never would have met except through the Journal.

Public Affairs

Bringing Biophysics to the Public—Maryland Day



University of Maryland biophysics students show off their hands-on DNA activity in front of the biomolecular dome.

On April 27, the University of Maryland (UMD) Biophysics Program, with support from the Biophysical Society, the Houston Museum of Natural Science, the National Science Foundation, and NCMI, featured the Biomolecular Discovery Dome at Maryland Day, a campus-wide open house. The Dome was one of more than 400 free events offered on the College Park, Maryland, campus, showcasing the University's research, educational, and cultural activities. There were thousands of students, professors, and members of the general public in attendance.

The Dome, which has also been featured at the 56th and 57th Annual Meetings of the Biophysical Society, demonstrated how cells and viruses come to life through 3-D films and hands-on activities. Two new films were created by University of Maryland students for the event: "Cells in Motion" by *Deborah Hemingway*, PhD student in biophysics, and "Proteins in Motion from Birth to Death" by *Mark Nakasone*, PhD student in biochemistry. Other University of Maryland biophysics students helped visitors fold their own DNA, and led a "collective motion" activity in which the participants were tracked while in motion followed by analysis of the motion to determine the extent of correlation. BPS President-Elect *Dorothy Beckett*, UMD, and

BPS member *Wolfgang Losert*, UMD, spearheaded the effort along with *Matt Doherty*, NCMI, and *Tony Butterfield*, Houston Museum of Natural Science.

Biophysical Society Weighs in on NIH Biomedical Research Workforce Proposals

In response to a request for input, the Biophysical Society's Public Affairs Committee submitted comments to the National Institutes of Health (NIH) on April 22 regarding an NIH advisory panel's plans for addressing issues in the education and training of the biomedical research workforce.

In the comments, the Committee agreed that in order to move forward in creating a sustainable biomedical workforce, attention must be paid to the training of students and postdoctoral fellows and to collecting better data on these populations, but expressed concern about the undue burden collecting such data will place on principal investigators. This applies to collecting information on current trainees, career outcomes, and individual development plans. The committee expressed support for the use of individual development plans, but not for requiring annual updates to NIH.

In regards to the review of training grant applications, the committee encouraged NIH to guide reviewers to view a broad array of career outcomes as successes of a program. Since NIH's mission is "to seek fundamental knowledge about the nature and behavior of living systems and the application of that knowledge to enhance health, lengthen life, and reduce the burdens of illness and disability," jobs related to that goal should be seen as successes. This includes jobs such as science writing, grants management, teaching positions, staff scientists, and policy advisors, among others.

To read the comments in full, visit www.biophysics.org, click on **About Us**, and then **News Releases**.

Thousands Rally for Medical Research

On April 10, over 18,000 scientists across the United States showed their support for the National Institutes of Health (NIH) as part of the Rally for Medical

Research. The physical rally took place in Washington, DC, and drew a crowd of several thousand. At that event, speakers poignantly made the connection between research and cures, drawing from their own experiences. The virtual rally took place on the internet, with supporters watching a live webcast and contacting their elected leaders about the need to fund the NIH.



Thousands of scientists gathered in Washington, DC for the Rally for Medical Research.

The rally was not only powerful for those in attendance and watching online, it also garnered media attention to the important cause. The story was featured on local newscasts in Washington DC, Boston, New York, Florida, Michigan, and Arizona. Nationally, the event was covered by CNN, USA Today, About.com, The Hill, and several medical publications. On Twitter, the Rally hashtag, #Rally-MedRes, was a top trending topic globally, reaching

the second position on that site while the rally was taking place. There were over 6,500 tweets about the rally during the time it was taking place.

President Obama also released a statement supporting the rally, saying, “To meet the challenges of the 21st century we must commit to a serious sustained effort to advance medical research.” The Biophysical Society was one of over 200 organizations that supported the rally, which was spearheaded by the American Association of Cancer Research.

President’s 2014 Budget

On Wednesday, April 10, President *Obama* released his budget proposal for Fiscal Year 2014. While not all of the federal science agencies fared well in the proposal, several did, including the National Science Foundation, the Department of Energy Office of Science, and the National Institute of Standards and Technologies. The proposal, in comparison to FY 2012 and FY 2013, is summarized in the chart below. The White House made all of its comparisons to FY 2012, since the final budget for 2013 was only approved two weeks prior to the release of the 2014 proposal. The House and Senate Appropriations Committees are in the process of learning about the budget proposal from administration officials at Congressional hearings and creating their own budget proposals. The 2014 federal fiscal year begins October 1, 2013.

President Obama’s Research and Development Budget Request for FY 2014*				
	FY 2012 (in millions)	FY 2013 with sequester cuts (in millions)	FY 2014 Proposal (in millions)	Amount (in millions)/ Percent Change from FY 2012
NIH	\$30,012	\$28,458	\$30,490	\$478/+1.6%
NSF	\$5,705	\$0	\$6,240	\$534/+9.4%
DOE Office of Science	\$4,463	\$4,239	\$4,744	\$281/+6.3%
NASA	\$11,315	\$10,566	\$11,605	\$290/+2.6%
NIST	\$557	\$588	\$1,626	\$1,069/+191.9%
Dept. of VA Affairs	\$1,160	\$1,131	\$1,172	\$12/+1.0%

Source: AAAS

*These figures represent only research and development budget authority and not total agency budget authority.

Subgroups

BIV

2014 Annual Meeting

The Biopolymers in vivo (BIV) subgroup is excited about plans for the 2014 San Francisco Annual Meeting. Program Co-Chairs *Jeff Skolnick* and *Gilad Haran* have chosen as a theme for the BIV subgroup symposium, “*Molecular Machines and How They Function Inside Cells.*” We have confirmed the two keynote talks, which will be given by *Sunney Xie*, Harvard University, and *Judith Frydman*, Stanford University. Watch this spot in a future newsletter for the full speaker line-up.

Please encourage your students to participate in the Student Research Achievement Award (SRAA) poster competition and your postdoctoral fellows to submit abstracts for next year’s Annual Meeting on topics that might be featured at the BIV symposium. We will be selecting young investigator speakers to present at the BIV symposium based on the submitted abstracts.

BIV Logo Contest

The BIV Logo Contest has launched! We are now accepting entries until December 31, 2013. The winner and two finalists will be announced at the San Francisco subgroup business meeting, and the winning logo will be plastered all over all BIV subgroup-related materials, as well as printed on the subgroup t-shirt! Only students and postdocs are eligible to enter, and there is no limit to the number of entries any individual may submit. Designs should capture the essence of the BIV subgroup: biophysics inside the cell, and be suitable for printing on a t-shirt. The winner will receive a cash prize of \$100 (must attend the meeting to receive your award!), and the winner and two runners-up will be invited to join the subgroup dinner without cost. Judging will be done by all the officers of the BIV subgroup. Submit your entries to *Lila Gierasch* at: gierasch@biochem.umass.edu

—*Lila Gierasch*, Chair

www.biophysics.org/2014meeting

Biophysical Society 58th Annual Meeting

FEBRUARY 15–19, 2014
SAN FRANCISCO, CALIFORNIA

Abstract Submission and Registration
Opens: July 1, 2013

Future of Biophysics, 12th International School of Biological Magnetic Resonance

Erice, Sicily, June 9–19, 2013

The School provides a broad overview of NMR, x-ray crystallographic, cryoEM and computational methods, merged with other approaches in biophysics. Detailed lectures are subsequently presented on key problems in biology. The speaker list is again stellar this year, and the Centro Majorana in Erice is magical. The course is a wonderful opportunity for graduate students and postdocs in your labs at both the beginning and advanced levels. The deadline for applications is fast approaching. Please encourage members of your groups to apply online ASAP, as well as access more complete information at <http://smrl.stanford.edu/erice2013>.

Organizing Committee

Joseph D. Puglisi, Stanford University
Elisabetta Viani, Stanford University
Angela Gronenborn, University of Pittsburgh

Navigating the World of Open Access Scientific Publishing

In recent years, new online only, open access scientific journals have been popping up at an alarming rate. Some of these journals are respected publications with quality peer review processes in place. Others, unfortunately, are focused on making money rather than on disseminating science. As a scientist deciding where to submit a paper and where to look for the latest science breakthroughs, understanding the world of open access publishing is more important than ever.

The Rise of Open Access and Predatory Journals

In the past decade, open access journals have gained attention and popularity with authors, readers, and funding agencies. Instead of depending on library subscriptions for revenue, open access journals charge authors or their sponsors or institutions for either submission or publication of their work. Funding agencies, such as the Burroughs Wellcome Trust and HHMI, provide funds to their grantees to publish in journals that allow for open access because they want to make the results of the work they fund available to the public as soon as possible. Authors funded by other agencies, like the NIH, can pay for open access from their grants, and some institutions pay open access fees for papers submitted by their researchers. Scientific publishing involves significant expenses, from running an editorial office to the copyediting and typesetting of manuscripts. The question is: who pays? At one extreme, there are no charges for authors, and all expenses are covered by institutional subscriptions. At the other extreme, open access, all expenses are paid by the authors. For funding agencies like the NIH, this amounts to whether the funds come out of indirect costs to research institutions which maintain the libraries, or out of direct costs to investigators in the open access model. *Biophysical Journal* is positioned in between these two extremes, with

the costs of publication shared between authors (page charges) and institutions (subscriptions).

While the open access journals do accomplish the goal of making scientific findings free for readers, their business model has lowered the bar for entry into publishing and made it easier than before to start up journals of varying quality. In the past journals depended on revenues from library subscriptions, which came only after a journal had established some history and reputation after papers were both published and cited. In fact, the journal Impact Factor was originally created as a way to choose which journals to include in a citation index and subsequently marketed as a means for libraries to determine which journals to purchase. In contrast, open access journals, which derive their revenue up front from submitting or accepted authors and their sponsors, begin receiving revenues as soon as they open their submission site. And since the money comes from submissions and publications, the journals have added incentive to solicit and publish as many papers as possible. The low barriers to starting a new journal have resulted in journals that often provide only cursory peer review, as well as some “predatory journals” entering the marketplace. These journals often have names similar to longstanding publications, which can be confusing and misleading to scientists.

The Biophysical Society and *Biophysical Journal (BJ)* editors receive submission requests from new biophysical journals (and biophysical-themed meetings, too) weekly, most of which have no real peer-review or biophysicists involved. These journals solicit highly-regarded scientists to “serve” on their editorial boards to add credibility to their publications. How many of you have received email invitations from new online only, open access journals to either submit a paper or serve on their editorial board? How many have received invitations to speak in new meetings being orga-

nized by unheard of groups or groups with names similar to organizations you know?

The problem has become so significant that, according to a recent New York Times article, it is now challenging for institutions to assess the value of publications listed on applicant curriculum vitae (<http://nyti.ms/16GyiKY>). *Nature* recently published an article on the same topic that included a checklist for conducting due diligence to requests from journals (<http://www.nature.com/news/investigating-journals-the-dark-side-of-publishing-1.12666>).

Evaluating a Journal or Meeting Prior to Submission

In this new world, scientists need to do their due diligence prior to submitting a paper to a new journal or agreeing to serve on an editorial board. Many have found that once they agree to serve on the board of a suspect journal, removal of one's name from the masthead is difficult.

When solicited, remember that your name on the masthead or your name as an author or speaker will be used to induce others to submit papers. Is this a journal or meeting that you feel comfortable promoting? How will this impact your scientific reputation? Is this how to best help your students and postdocs learn how to conduct research and become responsible members of the scientific community?

Look at the fine print. Who is behind the publication/meeting? Is it a reputable publisher? Are there scientists you know on the board? If so, reach out to them and see if they have actually done any review for that journal or been involved in any decisions. Does the journal publish everything it receives? Often, in the predatory journals, names are used to add prestige but the individuals have nothing to do with the publication. *Jeffrey Beall*, a librarian and researcher from the University of Colorado in Denver has compiled and continues to update a list of suspect journals and publishers, which is accessible at http://www.academia.edu/1151857/Bealls_List_of_Predatory_Open-Access_Publishers.

The Role of Societies

Professional scientific societies have long served as advocates for their specific fields and also for the larger good of the scientific enterprise. The Biophysical Society's mission, to disseminate and promote biophysics, has always upheld the value that the dissemination must be of good science, conducted ethically. This mission carries over into its stewardship of *BJ*. While authors have the option of paying for open access for a paper published in *BJ*, the papers undergo rigorous peer review by scientists conducting biophysical research. Papers submitted for open access publication in *BJ* undergo the exact same review and editorial scrutiny as all other papers. That is what the Society's imprimatur guarantees. And the Society, through its meetings and publications, will continue to ensure that scientific integrity is maintained in the biophysics it disseminates.

In the broader context, however, the Society's role is also to keep its members aware of the changing world of scientific research and provide information that will help them make effective decisions outside the confines of the Society's programs. As open access publication continues to grow in complexity, we will continue to keep Society members informed of its evolution and its implications.

Members in the News



Udanyan Mohanty, Boston University and Society member since 1995, was named a Fellow of the Royal Society of Chemistry.



Timothy J. Kamp, University of Wisconsin and Society member since 1988, was awarded the Cozzarelli Prize in Biomedical Sciences from the Proceedings of the National Academy of Sciences (PNAS).

Learning and Collaboration at Local Networking Events

The first five Society-sponsored networking events of 2013 took place in February, March, and April. All the events were hugely successful!

Lisbon, Portugal

The Portugal Networking Event, hosted by BPS members *Ivo Martins* and *Nuno Santos*, took place February 18–20 at the Institute of Molecular Medicine (IMM). Nearly 50 PhD and medical school students attended the event, listening to 13 speakers lecturing on four topics in the nanomedicine field. Attendees got real hands-on experience while making collaborative connections with the lecturers.



Filomena Carvalho performs some AFM scanning images of human blood cells from a blood smear in air conditions.

Columbia, Missouri

The *Missouri Symposium in Biophysics II: Membrane Proteins*, hosted by BPS members *Peter Cornish* and *Gavin King*, took place on March 10–11 at the University of Missouri. This event had 111 attendees and featured presentations by leaders in characterization of membrane protein structure and function.

Milwaukee, Wisconsin

The Milwaukee, Wisconsin, Networking Event, hosted by BPS Member *Melanie Phelan*, took place at the Milwaukee School of Engineering (MSOE) on March 23. With 45 attendees, the event featured two keynote speakers, *Dilano Saldin* and *Peter Geissinger*,

and a student speaker. Attendees were also given a tour of the MSOE labs and were able to ask questions of individuals who worked in the different labs.



Margaret Franzen explains a process of constructing a molecule model to attendees.

New York, New York

Sense to Synapse: Biophysical and Molecular Mechanisms of Perception, hosted by BPS Member *Adema Ribic*, took place on April 11 at Columbia University. Seven keynote speakers lectured on sensory systems, as well presentations selected from abstract submitters. Nearly 100 students, postdocs, and faculty members from New York, New Jersey, and Connecticut attended the event.

For more information on future networking events in your area, visit www.biophysics.org and click **Membership/Subgroups**, and then **Networking Events**.



Jennifer Beshel, CSHL, presented research on odor-induced behavior in drosophila.

Summer Savings—Post a Job Today

Do you have an opening in your lab or company? Don't miss out on these summer savings—purchase a 60-day job posting for just \$40 (a \$35 savings!) on the Society's online Job Board. All jobs must be posted by June 30 to receive the discount. By posting to the online Job Board, your job will be seen by biophysicists around the world—ensuring that you will get applications from top candidates.



To post a job go to www.biophysics.org and click on the 'Job Board' icon. From there you will be able to sign in or create an account and

select the 'Summer Savings' special upon posting your job.

Mechanobiology of Proteins and Cells

SEPTEMBER 29–OCTOBER 3, 2013

Mount Desert Island Biological Lab (MDIBL) | Salisbury Cove, Maine

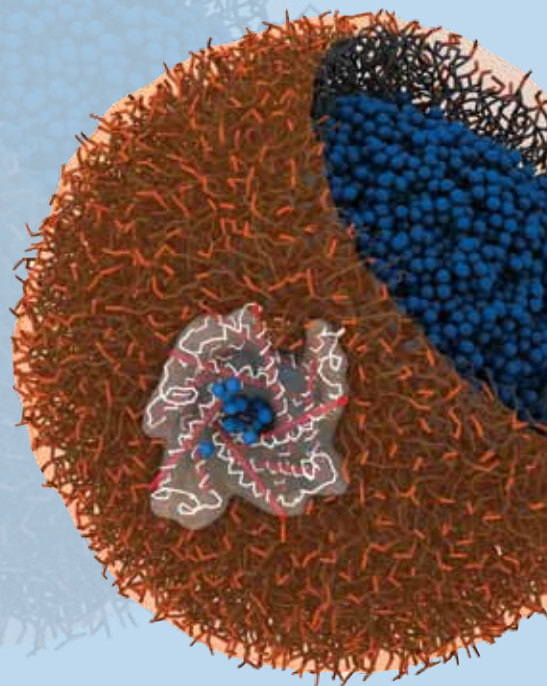
Visit www.biophysics.org/2013Maine to submit an abstract and register for the meeting

This Biophysical Society sponsored meeting will provide a forum for analysis of the mechanobiology of proteins and cellular structures by biophysicists, biochemists, structural biologists, and physiologists.

Deadlines

Abstract Submission June 10
Early Registration..... July 8

Biophysical Society



Grants and Opportunities

Academic-Industrial Partnerships for Translation of in vivo Imaging Systems for Cancer Investigations

Objective: To accelerate the translation of either preclinical or clinical in vivo imaging systems and/or methods that are designed to solve a targeted cancer problem.

Who May Apply: Institutions representing Academic Industry Partnership

Deadline: Standard NIH dates apply

Website: http://grants.nih.gov/grants/guide/pa-files/PAR-13-169.html#_Section_III_Eligibility

AAAS Mentor Awards

Objective: To recognize an individual who has mentored and guided significant numbers of students from under-represented groups to the completion of doctoral studies or who has impacted the climate of a department, college, or institution to significantly increase the diversity of students pursuing and completing doctoral studies.

Who May Apply: The award is open to all regardless of nationality or citizenship. Nominees must be living at the time of their nomination.

Deadline: July 31, 2013

Website: <http://www.aaas.org/aboutaaas/awards/mentor/>

Wiki-Edit Contest @

Expert in your area? Share that knowledge with the world!

The Biophysical Society is sponsoring a Wiki-Edit Contest with the aim of improving Wikipedia content on biophysical topics.

Choose a topic and create or edit an article by **July 15**. Six winners will receive a \$100 cash prize, membership, and registration for 2014 BPS meeting in San Francisco, a "Barnstar" award from WikiProject Biophysics, and a dinner with other BPS wikipedians at the Annual Meeting. Visit www.biophysics.org and click "Awards/Opportunities" then "Society Contests."



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biophysicalsociety.wordpress.com



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Postdoc Spotlight

MICHAEL HINCZEWSKI
University of Maryland, College Park
Thirumalai Biophysics Group

Q: What field is your PhD in? How did you specialize in biophysics?

My PhD was in statistical physics, working with *A. Nihat Berker* at the Massachusetts Institute of Technology. I concentrated on theories of phase transitions and critical phenomena. My first exposure to biophysics was during postdoctoral research with *Roland Netz* at the Technical University of Munich, and then with *Dave Thirumalai* at the University of Maryland. They have been very good guides in my move from the relatively orderly world of electrons and spins to the messiness of living matter.

Q: What is your current research project?

My work with Dave looks at various facets of protein dynamics and function. At the single-molecule level, we have been interested in what can be precisely learned from force-induced unfolding of proteins in optical traps. Collaborating with *Matthias Rief*, we have developed techniques to accurately extract energy landscapes and transition rates from measurements. We have also been applying polymer ideas to understand the design principles controlling the motility of motor proteins like Myosin V. At a larger scale, protein enzymes like kinases and phosphatases form elaborate signaling cascades, and we study how these networks can optimally transmit information.

Q: What skills and experiences have you gained/do you hope to gain from your postdoc position?

After a “traditional” physics background, doing a postdoc in biophysics is a rapid initiation into another culture. I’ve been lucky to have an advisor like Dave, who keeps me focused on the big picture: how to translate theory into something that can be concretely useful for the experimentalist in the lab. These are of course lofty goals that one approaches through a series of steps and missteps, but it has been a fun journey.

Q: Tell us about a great experience or opportunity you’ve had in the past year?

It may seem like a small thing, but the first time you plot the theory vs. experimental comparison, and the curves match the dots without too much wishful thinking, that’s a very good feeling. Modeling can be a frustrating endeavor, particularly for a system like Myosin V, where your initial drafts of a theory often seem cartoonish compared to the wonderfully detailed picture drawn by single molecule experiments over the last decade. So, when the model begins to resemble reality (despite being balanced precariously on the shoulders of many spherical cows) there is a mini-eureka moment. You feel like you have gained a glimpse into the usually inscrutable workings of nature.

Q: If you were not a biophysicist, what would you be?

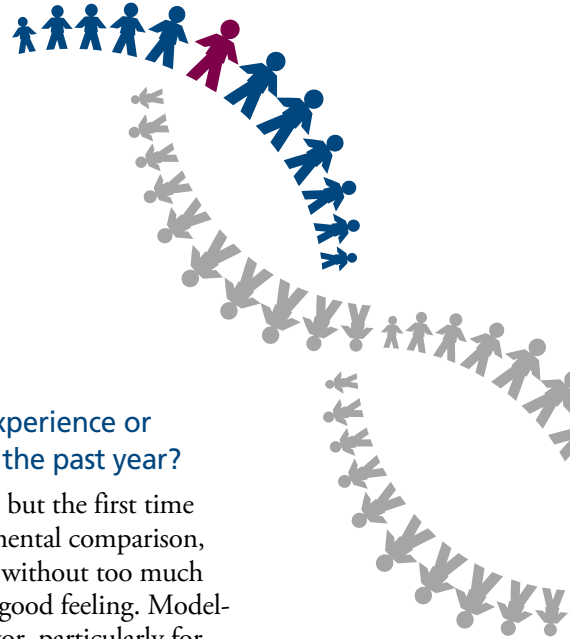
One of the unexpected side-effects of TA’ing was that I discovered I enjoyed teaching. Switching roles from student to instructor makes you far more appreciative of those few individuals from your past who could really inspire passion in their subjects. I could happily attempt to emulate them, as a high school teacher in physics or mathematics.

Dave Thirumalai, Michael’s PI says:

Mike, an extraordinary scientist, who trained in theoretical physics, has turned his attention to solving important problems in biophysics. In short order he has used his vast theoretical and computational skills by making original contributions in single molecule force spectroscopy, quantitatively describing complex pathways in the stepping of molecular motors, and more recently effect of noise on signaling networks. These contributions in diverse areas are sure to have profound effect on experimentalists. It is remarkable that he has been able to achieve these goals in a very short time.

Suggest a Student or Postdoc to Spotlight

Do you have a spotlight-worthy student or postdoc in your lab? Send his/her name to society@biophysics.org.





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UPCOMING EVENTS

BIOPHYSICAL SOCIETY NEWSLETTER JUNE 2013

August

July 30–August 1, 2013

BIT's 3rd Annual World
Congress of Microbes
Wuhan, China
[www.bitlifesciences.com/
wcm2013/](http://www.bitlifesciences.com/wcm2013/)

August 4–9, 2013

Nano-Mechanical Interfaces:
Multiphysics Theory and
Experiments
Hong Kong, China
[www.grc.org/programs.
aspx?year=2013&program
=nanomech](http://www.grc.org/programs.aspx?year=2013&program=nanomech)

September

September 20–21, 2013

The Iberian Membrane Biophysics
Colloquium: Physics Meets Biology
at the Cell Membrane
San Sebastian, Spain
[www.cicbiomagune.es/WBD/
main.php](http://www.cicbiomagune.es/WBD/main.php)

September 29–October 3, 2013

Mechanobiology of Proteins
and Cells
Salisbury Cove, Maine
[www.biophysics.org/2013maine/
Home/tabid/4368/Default.aspx](http://www.biophysics.org/2013maine/Home/tabid/4368/Default.aspx)

October

October 13–17, 2013

The Neurobiology of Synapses
and Their Dysfunction
Stresa, Italy
[www.esf.org/serving-science/
conferences/details/2013/
confdetail425/425-preliminary-
programme.html](http://www.esf.org/serving-science/conferences/details/2013/confdetail425/425-preliminary-programme.html)

October 28–30, 2013

The 51st Annual Meeting of the
Biophysical Society of Japan
Kyoto, Japan
[cls.kuicr.kyoto-u.ac.jp/bsj2013/
welcome_e.html](http://cls.kuicr.kyoto-u.ac.jp/bsj2013/welcome_e.html)

November

November 21–23, 2013

Competition in Biology—
The Race for Survival From
Molecules to Systems
Heidelberg, Germany
[www.phdsymposium.
embl.org/](http://www.phdsymposium.embl.org/)

November 24–27, 2013

The 37th Annual Conference
of the Australian Society for
Biophysics
Melbourne, Australia
www.biophysics.org.au/