



National Lecturer

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University of California, Berkeley, HHMI

CRISPR Systems: Biology and Application of Gene Editing



BPS18
62ND Annual Meeting
Biophysical Society

San Francisco, California
February 17–21, 2018

SUBGROUP SATURDAY

Delve deep into a subject area with symposia organized by these dynamic focused communities.

- BIOENERGETICS
- BIOENGINEERING
- BIOLOGICAL FLUORESCENCE
- BIOPOLYMERS IN VIVO
- CRYO-EM
- EXOCYTOSIS & ENDOCYTOSIS
- INTRINSICALLY DISORDERED PROTEINS
- MECHANOBIOLOGY
- MEMBRANE BIOPHYSICS
- MEMBRANE STRUCTURE & ASSEMBLY
- MOLECULAR BIOPHYSICS
- MOTILITY & CYTOSKELETON
- NANOSCALE BIOPHYSICS
- PERMEATION & TRANSPORT

2018 Program Committee

- Anne Kenworthy**, Vanderbilt University School of Medicine, Co-Chair
Francesca Marassi, Sanford Burnham Presby Medical Discovery Institute, Co-Chair
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Samantha Harris, University of Arizona
Michael Pusch, CNR, Italy
David Piston, University of Washington, St. Louis
Catherine Royer, Rensselaer Polytechnic Institute

SYMPOSIA

Discover the latest advances in biophysics.

Fibril Assembly and Structure: Progress and Challenges

- Robert Griffin, MIT, Co-Chair
 Joan Emma Shea, University of California, Santa Barbara, Co-Chair
 Alasdair Steven, NIH
 Robert Tycko, NIH

Biophysical Mechanisms of Molecular Evolution

- Michael Harms, University of Oregon, Co-Chair
 Claus Wilke, University of Texas, Austin, Co-Chair
 Tanja Kortemme, University of California, San Diego
 Andreas Pluckthun, University of Zürich, Switzerland

Protein Dynamics, Folding, and Allostery I: How Do Proteins Fold and Misfold?

- Galia Debelouchina, Princeton University, Co-Chair
 Michele Vendruscolo, University of Cambridge, United Kingdom, Co-Chair
 Debora Marks, Harvard University
 José Onuchic, Rice University

Protein Dynamics, Folding, and Allostery II: Dynamics and Function

- Walter Chazin, Vanderbilt University, Co-Chair
 Christina Redfield, University of Oxford, United Kingdom, Co-Chair
 Judith Frydman, Stanford University
 Tatyana Polenova, University of Delaware

Protein Structure and Dynamics in the Lipid Bilayer Membrane

- Timothy Cross, Florida State University, Co-Chair
 Song-I Han, University of California, Santa Barbara, Co-Chair
 Wonpil Im, Lehigh University
 Nathaniel Traaseth, New York University

Transmembrane Signals and Signaling Mechanisms

- William Cramer, Purdue University, Co-Chair
 Lynmarie Thompson, University of Massachusetts, Amherst, Co-Chair
 Vadim Cherezov, University of Southern California
 Alexandra Newton, University of California, San Diego

Channel Mechanisms: Sensing and Gating

- Teresa Giraldez, University of La Laguna, Spain, Co-Chair
 Robert Stroud, University of California, San Francisco, Co-Chair
 Paul Slesinger, Mount Sinai School of Medicine
 Jacqueline Gulbis, Walter and Eliza Hall Institute, Australia

Membrane Bending: Mechanisms and Consequences

- Jeanne Stachowiak, University of Texas, Austin, Co-Chair
 Anne Ulrich, Karlsruhe Institute of Technology, Germany, Co-Chair
 Andrew Callan-Jones, Université de Montpellier, France
 Ralf Langen, University of Southern California

Interrogating Membrane Organization and Dynamics

- Mary Kraft, University of Illinois, Co-Chair
 Siewert-Jan Marrink, University of Groningen, The Netherlands, Co-Chair
 Atul N. Parikh, University of California, Davis
 Jennifer Lippincott-Schwartz, NIH, HHMI

Biophysics of Lipid-modified GTPases

- Sharon Campbell, University of North Carolina, Co-Chair
 Roland Winter, Technical University of Dortmund, Germany, Co-Chair
 Jacqueline Cherfils, CNRS, France
 John Hancock, University of Texas, Houston

Cardiac Contractility

- Livia Hool, University of Western Australia, Co-Chair
 Brian Sykes, University of Alberta, Canada, Co-Chair
 David Thomas, University of Minnesota
 Yael Yaniv, Technion Israel Institute of Technology

Cytoskeletal Motors

- William Hancock, Pennsylvania State University, Co-Chair
 Erika Holzbaur, University of Pennsylvania, Co-Chair
 Anne Houdusse, Institut Curie, France
 Steven M. Block, Stanford University

Modeling and Probing the Cytoskeleton

- Anders Carlsson, Washington University, St. Louis, Co-Chair
 Iva Tolić, University of Zagreb, Croatia, Co-Chair
 Marileen Dogterom, Delft University of Technology, The Netherlands
 Alexander Mogilner, New York University

DNA Supercoiling

- Laura Finzi, Emory University, Co-Chair
 Sarah Harris, University of Leeds, United Kingdom, Co-Chair
 Nick Gilbert, University of Edinburgh, United Kingdom
 David Levens, NIH

RNA Structure and Function

- Teresa Carlomagno, Leibniz University of Hanover, Germany, Co-Chair
 Karla M. Neugebauer, Yale University, Co-Chair
 Maria Costa, Institut de Biologie Intégrative de la Cellule, France
 Kiyoshi Nagai, University of Cambridge, United Kingdom

Energy Transduction

- Susan Buchanan, NIH, Co-Chair
 Krzysztof Palczewski, Case Western University, Co-Chair
 Junko Yano, Lawrence Berkeley National Laboratory
 Carola Hunte, University of Freiburg, Germany

Synaptic Vesicle Fusion and Retrieval

- Axel Brunger, Stanford University, Co-Chair
 Diasynou Fioravante, University of California, Davis, Co-Chair
 Thomas Blanpied, University of Maryland
 Ling-Gang Wu, NIH

Translational Biophysics

- Melanie Cocco, University of California, Irvine, Co-Chair
 Shankar Subramaniam, University of California, San Diego, Co-Chair
 Donald Ingber, Harvard University
 Shyni Varghese, Duke University

Biophysical Insights from Surface Engineering

- Deborah Leckband, University of Illinois at Urbana-Champaign, Co-Chair
 Kathleen Stebe, University of Pennsylvania, Co-Chair
 Junsang Doh, Pohang University of Science and Technology, South Korea
 Joseph Zasadzinski, University of Minnesota

Protein and RNA Phase Separation

- Simon Alberti, Max Planck Institute, Germany, Co-Chair
 Tanja Mittag, St. Jude Children's Research Hospital, Co-Chair
 Clifford Brangwynne, Princeton University
 Michael Rosen, University of Texas Southwestern Medical Center

WORKSHOPS

Learn from those leading the development of emerging techniques.

Probing Atomic Single Sites in Cells and Bio-Assemblies: Advances in In-Cell NMR

- Lucia Banci, University of Florence, Italy, Co-Chair
 Ichio Shimada, University of Tokyo, Japan, Co-Chair
 Marc Baldus, Utrecht University, The Netherlands
 Volker Dötsch, Goethe University Frankfurt, Germany
 Lynette Cegelski, Stanford University

Atoms to Cells: Modeling Biological Complexity

- Leslie Loew, University of Connecticut Health Center, Co-Chair
 Banu Ozkan, Arizona State University, Co-Chair
 Ron Dror, Stanford University
 Mark Sansom, University of Oxford, United Kingdom
 Ruth Nussinov, NIH

From Molecules to Mammals: Imaging, Sensing, and Light Control

- Gang Han, University of Massachusetts Medical School, Co-Chair
 Jin Hyung Lee, Stanford University, Co-Chair
 Klaus Hahn, University of North Carolina
 Jin Zhang, University of California, San Diego
 Vladislav Verkhusha, Albert Einstein College of Medicine

Biomembrane Models and Tools

- Rumiana Dimova, Max Planck Institute, Germany, Co-Chair
 J. Antoinette Killian, Utrecht University, The Netherlands, Co-Chair
 Gerald Feigenson, Cornell University
 Kalina Hristova, Johns Hopkins University
 Alex Smirnov, North Carolina State University

Abstract Topic Categories

- PROTEINS
- NUCLEIC ACIDS
- LIPID BILAYERS & MODEL MEMBRANES
- CELL PHYSIOLOGY & BIOPHYSICS
- CHANNELS
- CYTOSKELETON, MOTILITY & MOTORS
- BIOENERGETICS
- SYSTEMS BIOLOGY
- BIOPHYSICS OF NEUROSCIENCE
- NEW DEVELOPMENTS IN BIOPHYSICAL TECHNIQUES
- BIOENGINEERING & BIOMATERIALS
- BIOPHYSICS EDUCATION

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The Biophysical Society was formally founded in 1958 to lead the development and dissemination of knowledge in biophysics. It does so through its many programs, including meetings, publications, and committee outreach activities. The Society consists of over 9,000 members who work in academia, industry, and government agencies throughout the world.

In addition to Annual Meeting discounts and the right to sponsor an abstract, member benefits include:

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- Career Development Webinars
- Access to members-only directory
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- Opportunities to join and network with subgroups
- Access to travel and meeting support

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Regular	\$180
Early Career	\$75
Student	\$25

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A NOTE FROM THE PROGRAM CHAIRS

We are honored and excited to present the program for the 2018 Annual Meeting. The program highlights the prominent position of biophysics as the cornerstone of biology, physics, and chemistry, and reinforces its importance in bridging basic scientific research with translational applications. Symposia and Workshops cover a broad range of topics that represent the core strengths of the Society and also push the forefronts of biophysical theory, experiment, and technology. The sessions mix theoretical and experimental topics, in line with the interdisciplinary nature of our field. It is a wonderful time to be a biophysicist and we look forward to seeing you all in San Francisco.



Anne Kenworthy



Francesca Marassi

REGISTRATION

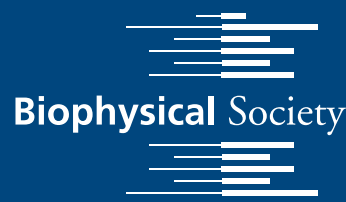
REGISTRATION TYPE	EARLY	AFTER JANUARY 15
BPS Regular Member*	\$280	\$350
Nonmember	\$510	\$610
BPS Early Career Member*	\$255	\$325
Early Career Nonmember	\$510	\$610
Student Member*	\$80	\$110
Student Nonmember	\$130	\$165
Emeritus Member	\$80	\$110
Guest (social events only)	\$65	\$65

*2018 Society membership dues must be paid.

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#BPS18     

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IMPORTANT DEADLINES

Abstracts

Abstract Submission: October 2
SRAA Poster Competition Applications: October 4
Abstract Revision and Withdrawal: October 6

Registration

Early Registration: July 1, 2017 – January 15, 2018
Regular Registration: January 16 – February 21, 2018

Housing

Student Housing Reservations: December 4, 2017
General Housing Reservations: January 19, 2018

Travel Awards Application Submissions: October 4, 2017

- Graduate Students
- Junior Investigators
- Postdoctoral Fellows
- Senior Scientists
- Undergraduate Students

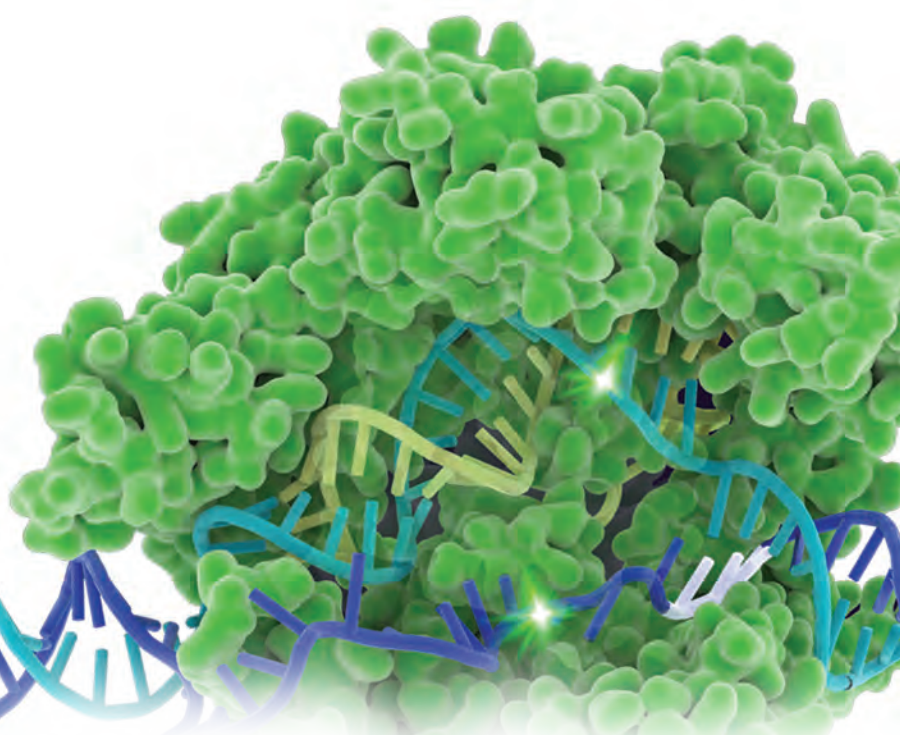
For complete details, visit www.biophysics.org or contact the Biophysical Society at 240-290-5600 or society@biophysics.org.

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