**ABSTRACT DEADLINE: OCTOBER 1, 2013 | EARLY REGISTRATION DEADLINE: JANUARY 8, 2014**

# Biophysical Society 58th Annual Meeting

**FEBRUARY 15–19, 2014 | SAN FRANCISCO, CALIFORNIA**

Biophysical Society

## National Lecturer

**Carlos Bustamante**
University of California, Berkeley

*A Journey Through Cellular Processes: One Molecule at a Time*

## Symposia

*Symposia will be held Sunday through Wednesday.*

### FORCE SENSING IN MUSCLE
**Mathias Gautel**, King's College London, United Kingdom, Co-Chair
**Gabriella Piazzesi**, University of Florence, Italy, Co-Chair
**Kenneth Campbell**, University of Kentucky
**Michael Regnier**, University of Washington

### MYOSIN MOTORS IN VITRO AND IN CELLS
**Michelle Peckham**, University of Leeds, United Kingdom, Co-Chair
**Margaret Titus**, University of Minnesota, Co-Chair
**Laurent Blanchoin**, University of Grenoble, France
**Jan Faix**, Hannover Medical School, Germany

### REGULATION OF CYTOSKELETAL MOTORS
**Marileen Dogterom**, AMOLF, The Netherlands, Co-Chair
**Kazuhiro Oiwa**, National Institute of Information and Communications Technology, Japan, Co-Chair
**Yale Goldman**, University of Pennsylvania
**Stanley Burgess**, University of Leeds, United Kingdom

### MEMBRANE TRANSPORT IN FATTY ACID SYNTHESIS AND OBESITY
**Da-Neng Wang**, New York University School of Medicine, Co-Chair
**Ana Pajor**, University of California, San Diego, Co-Chair
**Stephen Helfand**, Brown University
**Gerald Shulman**, Yale University

### MOLECULAR BASIS OF VOLTAGE DEPENDENCE
**Eduardo Perozo**, University of Chicago, Co-Chair
**Sudha Chakrapani**, Case Western Reserve University, Co-Chair
**Nieng Yan**, Tsinghua University, China
**Yasushi Okamura**, Osaka University, Japan
**Baron Chanda**, University of Wisconsin–Madison

### MECHANOSENSING IN EUKARYOTES
**Jeffrey Holt**, Harvard University & Boston Children's Hospital, Co-Chair
**Valeria Vasquez**, Stanford University, Co-Chair
**Elizabeth Haswell**, Washington University in St. Louis
**Miriam Goodman**, Stanford University
**Ardem Patapoutian**, Scripps Research Institute

### MOLECULAR BASIS FOR REGULATION OF $CA^{2+}$ CHANNELS
**Stephen Long**, Memorial Sloan-Kettering Cancer Center, Co-Chair
**Amy Lee**, University of Iowa, Co-Chair
**Annette Dolphin**, University College London, United Kingdom
**Heping Peace Cheng**, Peking University, China
**Jörg Striessnig**, University of Innsbruck, Austria

### STRUCTURES OF MEMBRANE FUSION
**Anne Ulrich**, Karlsruhe Institute of Technology, Germany, Co-Chair
**David Weliky**, Michigan State University, Co-Chair
**Peter Kasson**, University of Virginia
**Lukas Tamm**, University of Virginia

### BIOPHYSICS OF GENETIC SWITCHES
**Laura Finzi**, Emory University, Co-Chair
**Ido Golding**, Baylor College of Medicine, Co-Chair
**Lucille Shapiro**, Stanford University
**Keith Shearwin**, University of Adelaide, Australia

### RNA ASSEMBLIES AND DNA ORIGAMI
**Christina Smolke**, Stanford University, Co-Chair
**Andrew Turberfield**, University of Oxford, United Kingdom, Co-Chair
**Luc Jaeger**, University of California, Santa Barbara
**Tim Liedl**, Ludwig Maximilian University of Munich, Germany

### STRUCTURAL DYNAMICS OF MOLECULAR MACHINES
**Julio Fernandez**, Columbia University, Co-Chair
**Yasmine Meroz**, Weizmann Institute of Science, Israel, Co-Chair
**Johan Elf**, Uppsala University, Sweden
**Robert Sauer**, MIT

### APPLICATIONS OF QUANTUM MECHANICS TO BIOPHYSICAL PROBLEMS
**Qiang Cui**, University of Wisconsin–Madison, Co-Chair
**Sharon Hammes-Schiffer**, University of Illinois at Urbana-Champaign, Co-Chair
**Kenneth Merz**, University of Florida
**Ursula Rothlisberger**, Swiss Federal Institute of Technology, Switzerland

### CELEBRATING 100 YEARS OF CRYSTALLOGRAPHY: X-RAYS ARE PHOTONS TOO
**Jane Richardson**, Duke University, Co-Chair
**Gregory Petsko**, Brandeis University, Co-Chair
**John Spence**, Arizona State University
**William Weis**, Stanford University
**Thomas Terwilliger**, Los Alamos National Laboratory
**Jamie Cate**, Lawrence Berkeley National Laboratory

### BIOPHYSICS OF CELL DIVISION AND SPATIAL RELATIONSHIPS
**Susan Biggins**, Fred Hutchinson Cancer Research Center, Co-Chair
**Wallace Marshall**, University of California, San Francisco, Co-Chair
**Daniel Fletcher**, University of California, Berkeley
**Matthieu Piel**, Curie Institute, France

### FORCE GENERATION IN CELL AND TISSUE NETWORKS
**Michael Sheetz**, Columbia University, Co-Chair
**Clare Waterman**, NHLBI, Co-Chair
**Alexander Bershadsky**, Weizmann Institute of Science, Israel
**Frank Jülicher**, Max Planck Institute for the Physics of Complex Systems, Germany

### CELLULAR STRESS, PROTEIN FOLDING, AND DISEASE
**Conner Sandefur**, University of North Carolina at Chapel Hill, Co-Chair
**Judy Kim**, University of California, San Diego, Co-Chair
**Nikolay Dokholyan**, University of North Carolina at Chapel Hill
**Richard Morimoto**, Northwestern University
**Santiago Schnell**, University of Michigan

### BIOPHYSICS OF PERSONALIZED MEDICINE
**Donald Engelman**, Yale University, Co-Chair
**Kathleen Giacomini**, University of California, San Francisco, Co-Chair
**Charles Cantor**, Boston University
**Atul Butte**, Stanford University

### STOCHASTICITY IN CELLULAR PROCESSES
**Nathalie Questembert-Balaban**, Hebrew University of Jerusalem, Israel, Co-Chair
**Rachel Kuske**, University of British Columbia, Canada, Co-Chair
**Stanislas Leibler**, Rockefeller University
**Elizabeth Read**, University of California, Irvine

### LIQUID PROTEIN ASSEMBLIES IN SPATIAL ORGANIZATION AND ULTRASENSITIVE SIGNALING IN CELLS
**Julie D. Forman-Kay**, Hospital for Sick Children, Canada, Co-Chair
**Tanja Mittag**, St. Jude Children's Research Hospital, Co-Chair
**Edward A. Lemke**, European Molecular Biology Laboratory, Germany
**Michael K. Rosen**, University of Texas Southwestern Medical Center
**Régis Pomès**, Hospital for Sick Children, Canada

### MOLECULAR SELF-ASSEMBLY: FROM IN VITRO TO CELLULAR SYSTEMS
**Roy Bar-Ziv**, Weizmann Institute of Science, Israel, Co-Chair
**Suzanne Gaudet**, Harvard University, Co-Chair
**David Savage**, University of California, Berkeley
**Todd Yeates**, University of California, Los Angeles

### BIOPHYSICS IN INDUSTRY: PUTTING EVOLUTION IN PRACTICE
**Kenneth Dill**, Stony Brook University, Co-Chair
**Timothy Gardner**, Amyris, Inc., Co-Chair
**Christopher Voigt**, MIT
**Peter Licari**, Solazyme, Inc.

## Workshops

*Workshops will be held on Sunday and Tuesday evenings.*

### POLARIZABLE FORCE FIELDS FROM BIOMOLECULAR SIMULATIONS
**Benoit Roux**, University of Chicago, Co-Chair
**Alexander Mackerell**, University of Maryland, Co-Chair
**Vijay Pande**, Stanford University
**Teresa Head-Gordon**, University of California, Berkeley

### SINGLE MOLECULE DYNAMICS USING FRET/LRET
**Achillefs Kapanidis**, University of Oxford, United Kingdom, Co-Chair
**William Eaton**, NIDDK, NIH, Co-Chair
**Thorsten Hugel**, Technical University of Munich, Germany
**Irina Gopich**, NIDDK, NIH

### KNOCKING DOWN OR TURNING OFF: DOWN-REGULATION OF PROTEIN EXPRESSION BY MICRORNAS
**Suzanne Scarlata**, Stony Brook University, Chair
**Leemor Joshua-Tor**, Cold Spring Harbor Laboratory
**Ofer Biham**, Hebrew University of Jerusalem, Israel
Additional speaker to be announced

### APPLICATIONS OF SUPPORTED BILAYERS
**Marjorie Longo**, University of California, Davis, Co-Chair
**Khalid Salaita**, Emory University, Co-Chair
**Christy Landes**, Rice University
**Raghu Parthasarathy**, University of Oregon

### DYNAMIC DISTANCE MAPPING BY EPR
**Hassane Mchaourab**, Vanderbilt University, Co-Chair
**Gail Fanucci**, University of Florida, Co-Chair
**Gary Lorigan**, Miami University, Ohio
**Peter Fajer**, Florida State University

*The programs for the Awards, New & Notable, and Future of Biophysics symposia will be announced at a later date.*

## Subgroups

*Subgroups will hold symposia on Saturday.*

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

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