

### Officers

#### *President*

Henry A. Lester

#### *President-Elect*

Peter Moore

#### *Past-President*

Harel Weinstein

#### *Secretary*

Dorothy Beckett

#### *Treasurer*

Linda Kenney

### Council

Olaf S. Andersen

Ivet Bahar

Michael D. Cahalan

Patricia Clark

Marco Colombini

Valerie Daggett

David Dawson

Nynke Dekker

Enrique De La Cruz

Sharyn Endow

Laura Finzi

Susan P. Gilbert

Enrico Gratton

Donald W. Hilgemann

Vasanthi Jayaraman

David Millar

Steven Rosenfeld

Catherine Royer

Petra Schwille

Frances Separovic

Toshio Yanagida

### Biophysical Journal

Editor-in-Chief

Edward Egelman

### Executive Officer

Ro Kampman

### Newsletter Production

Alisha Yocum

### Profiles

Eddie Sodowsky

### Public Affairs

Ellen Weiss

The Biophysical Society Newsletter (ISSN 0006-3495) is published twelve times per year, January-December, by the Biophysical Society, 9650 Rockville Pike, Bethesda, Maryland 20814-3998. Distributed to USA members and other countries at no cost. Canadian GST No. 898477062. Postmaster: Send address changes to Biophysical Society, 9650 Rockville Pike, Bethesda, MD 20814-3998. Copyright © 2009 by the Biophysical Society. Printed in the United States of America. All rights reserved.



## Biophysicist in Profile

### Irène Revenko

“My career is somewhat unusual,” says Irène Revenko, Application Scientist for Asylum Research in Santa Barbara, California. “I work for a company that manufactures very specific types of microscopes, and my degrees did not prepare me for this type of career.”

Revenko believes that she was born for science. She remembers being “deeply intrigued and interested” by fourth-grade educational videos on biology. By the time she was in high school, she recognized that a math and science path would open doors for her future education in her native France. “Students who do well in science can pretty much apply for any school” she explains.

She chose Claude Bernard University, Lyon, to study to become a medical biologist, but decided along the way that she also wanted to do research. “Biology is great, but I also like technology.” A professor introduced her to newly emerging Atomic Force Microscopy (AFM). From that time forward, AFM was central to her study and work.

*Fabienne Rajas*, now Permanent Researcher for Inserm, recalls, “I met Irène at the beginning of her career in cell biology, when she joined our lab in Lyon in 1992. She was a hard worker, always enthusiastic, and always with a smile. She was working on collagen structure and started using the atomic force microscope. Now she is a world specialist of this sophisticated technology.”

Throughout her 16 years of study for two undergraduate degrees, an MS, an MD, and a PhD, Revenko gave little thought to working in industry. Her goals were to teach in a university, do research, and work in a hospital. During the course of her education, she did do research, worked in hospitals while doing medical internship and clinical pathology, and taught cell biology, molecular biology and genetics at a private school. Yet, when she completed her PhD thesis, “Applications of Atomic Force Microscopy in Biology,” industry offered her the opportunity that best satisfied her personal needs and professional aspirations.

Revenko has since turned down a “dream” university teaching job. She still finds that amazing, but she has no regrets. “People who work in academia sometimes consider industrial people as the ‘bad guys’ who just want to make money,” she observes. “But in the right company, you can still have a lot of freedom to use all your creativity and perform important service.”

Revenko acknowledges that working in industry requires making some sacrifices, such as the prestige of working in academia. “You no longer hold the honored title of ‘professor,’ and you lose the rewards and energy of teaching young, motivated students. But you can find other rewards. You also give up university politics, difficult students, a lot of time writing grants and worrying about funding, and not having enough time to both do research and teach well.”

In her position, Revenko still teaches a lot. She likes educating people from different scientific and cultural backgrounds and using her experience in AFM

and biology to help them utilize AFM in their own research.

*Csilla Gergely*, biophysics professor at Montpellier University, values the service Revenko provided when her lab acquired the MFP-3D AFM from Asylum Research. “Irène came to our institute to teach us how to utilize this instrument for biological applications. She went well beyond expected training duty, continuing to guide us later from California. Irène’s availability, fast response, professionalism, and expertise are exceptional.” Three years later, they are more than client and service provider; they are friends.

“Teaching forces me to stay up to date all the time in biology, in all microscopy techniques and nanotechnologies in general,” says Revenko. To keep from getting lost in the abundance of information available, she chooses Biophysical Society resources as her primary reference center. “This [BJ] is the journal I read in priority, the meeting I will go to if I have to choose.” Talks and posters at the BPS meeting provide crucial information about what researchers are doing in the field, so she can stay in a cutting-edge position to help people who call her.

Exhibiting at the Biophysical Society Annual Meeting gives her company the opportunity to educate attendees about the latest improvements in technology and techniques. Biophysicists of this scientific level are likely users of the instruments sold by the company.

Asylum Research recently announced that Revenko will be sent to France for a year to strengthen support for French-speaking users of atomic force/scanning probe microscopy (AFM/SPM). Rajas is delighted. Over the years, she and Revenko have maintained the friendship begun while they were lab colleagues and also shared a passion for scuba diving. “The last diving we did together was the day after Irène’s wedding. I’m very impatient to spend some time with her and her family!”

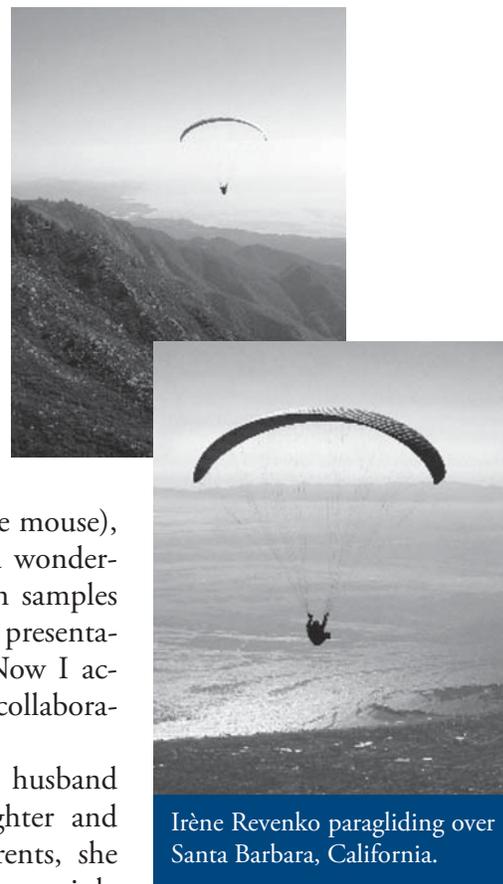
Revenko is married to *Roger Proksch*, co-founder and now President of Asylum Research. They met when both were in the same lab as postdocs at the University of California,

Santa Barbara. He was a physicist and she a biologist, so they approached problems differently. “When using AFM to observe DNA molecules,” Revenko says, “I worked to get high-resolution images of my sample, and he was totally focused on how the microscope probe was behaving while scanning the sample! That’s when I realized how scientists from different backgrounds are so complementary and how they need to learn each other’s languages to be able to communicate and have a fruitful collaboration.”

“Irène is insightful, focused, and immensely practical,” Proksch says. Once when they needed collagen samples for high-resolution microscopy research, he had paged through supply catalogs and networked with colleagues, looking for a sample. “Meanwhile, in the space of about three minutes, Irène had found a mouse that our cat, Minou, had killed, performed surgery (on the mouse), and presented me with a wonderful set of ‘native’ collagen samples we used in a number of presentations and publications. Now I acknowledge Minou as our collaborator, too.”

Revenko and her husband have a 12-year-old daughter and a 9-year-old son. As parents, she says, they try to teach them mainly two things: to be respectful of others and to think critically.

In addition to spending time with her family, Revenko relaxes by running regularly, reading biographies, and practicing extreme sports such as paragliding. Proksch says that she is as intense a competitor as she is in the lab, placing second and third in the paragliding nationals the last two times she competed. She also teaches paragliding.



Irène Revenko paragliding over Santa Barbara, California.