

School of Biological Sciences

Spring 2023



THE LECTURE SERIES AND ITS PURPOSE

The R. Omar and Evelyn Rilett Family Life Sciences Lecture Series was established in April 2007. It recognizes Dr. Rilett's vision and leadership, which built a Department of Biological Sciences at Illinois State University that advanced education in the natural sciences, fostered scholarly endeavors, and nurtured the development of research to the benefit of all who chose to teach and learn at this institution. The purpose is to bring outstanding life scientists and lectures to Illinois State University to benefit academic and local communities.

School of Biological Sciences

presents

R. Omar and Evelyn

Rilett Family

Life Sciences Lecture Series

Co-Sponsored by the
School of Biological Sciences,
Phi Sigma, and Provost Office
at Illinois State University

Dr. Janet Iwasa

***Assistant Professor
Biochemistry
University of Utah***

Salt Lake City, UT



March 7, 2023 6:00 P.M.

**Schroeder Hall 130
Illinois State University**

LECTURE SERIES PROGRAM

WELCOME

Dr. Rachel Bowden

Director, School of Biological Sciences

INTRODUCTION OF SPEAKER

Dr. Jan Dahl

School of Biological Sciences

PRESENTATION

Animating Molecular Machines

As a molecular animator, I use software from the entertainment industry to create visually rich animations that depict specific molecular and cellular processes. During this presentation, I will share a number of insights drawn from over a decade of experience creating molecular animations with numerous research collaborators on diverse molecular topics, and describe the workflow my group members and I have developed for creating molecular animations. I will also describe how 3D animation can be particularly beneficial for understanding and describing dynamic and complex molecular machines and share some observations on how the animation process can help researchers refine and explore their hypotheses. Finally, I will discuss the importance of broad scientific communication and describe various outreach projects lab members and I have undertaken.

Highlights of Dr. Janet Iwasa's career, thus far:

Current: Assistant Professor of Biochemistry at the University of Utah

Education: After receiving a Ph.D. from the University of California in San Francisco for her work on the actin cytoskeleton in the laboratory of Dr. Dyche Mullins in 2006, Dr. Iwasa worked as a postdoctoral fellow to create a multimedia exhibit with Nobel laureate Dr. Jack Szostak at Harvard University and the Museum of Science, Boston.

Faculty Appointments: Dr. Iwasa was appointed as a Lecturer in Molecular Visualization at Harvard Medical School in 2008 and in 2013 joined the School of Medicine at the University of Utah as a Research Assistant Professor in Biochemistry.

Awards and Honors: Dr. Iwasa is a TED Senior Fellow and has been recognized as one of the "100 Leading Global Thinkers" of 2014 by Foreign Policy magazine and one of the "100 Most Creative People" of 2012 by Fast Company magazine. Her illustrations and animations have won her many awards, including from the FASEB BioArt Scientific Image & Video Competition and AAAS International Science & Engineering Visualization Challenge.

Grant Funding: The research of Dr. Iwasa has been funded by the National Institutes of Health (NIH), National Institute of General Medical Sciences (NIGMS), National Aeronautics and Space Administration (NASA) and the National Science Foundation (NSF).

Publications: Dr. Iwasa's work has been published in many scientific journals including Science, Nature and Cell, and highlighted in many magazines, including the New York Times. In addition, she developed the Molecular Flipbook, a free and open source animation software that allows biologists to create molecular animations.

For additional information, please visit Dr. Iwasa's website at:
<https://animationlab.utah.edu/>