

UNIVERSITY OF CALIFORNIA, BERKELEY

SCIENCE@Cal and Energy Biosciences Institute present...

Art in Science: The intersection of image and research

Energy Biosciences Building • 2151 Berkeley Way • Berkeley
February 27 & 28, 2014 • 5:30–9:00pm

LECTURES IN THE SEMINAR ROOM

Thursday, Feb 27

6:30–7:15pm

Art of Minimal Energy

CARLO H. SÉQUIN, Professor, Electrical Engineering & Computer Science, UC Berkeley

Soap films suspended in warped wire frames form surfaces of minimal area, also minimizing the internally stored energy. Artists like Brent Collins or Charles Perry have been inspired by these shapes occurring in nature and have created geometrical sculptures comprising many nicely balanced saddle surfaces, which however, often differ significantly from true minimal surfaces. Carlo will present highlights of his 18-year collaboration with Brent Collins, and examine the balance between minimal energy and maximal beauty.

7:30–8:15pm

Neurospora crassa: Portrait of a Fabulous Fungus

N. LOUISE GLASS, Professor, Associate Chair, Plant & Microbial Biology

Professor Glass's lab investigates cell specialization, communication and nonself recognition—all crucial mechanisms in microbial organisms such as filamentous fungi. Some of their research interests focus on understanding the signaling mechanisms that mediate cell fusion and the nonself recognition mechanisms that occur before and after fusion. They have begun to study how plant cell wall degradation is orchestrated by fungi, and how fungal enzymes are secreted. A long-term goal is to significantly improve the efficiency of plant biomass degradation by fungi. Learn why *Neurospora crassa* is a model cellulolytic fungus—both fabulous and important!

Friday, Feb 28

6:30–7:15pm

The Legacy of Robert C. Stebbins: Art, Science and Conservation

MICHELLE KOO, Herpetologist, Biodiversity Informatics & GIS Scientist and Researcher, Museum of Vertebrate Zoology, UC Berkeley

Join us for an inspiring tribute to Professor Robert Stebbins (1915–2013), a biologist equally renowned as an illustrator, conservationist and advocate for the study of biology the old-fashioned way—by going outside and observing it.

7:30–8:15pm

Kite-powered Photographs of Patagonia

ANAND VARMA, Contributing photographer, *National Geographic Magazine* and UC Berkeley alum

Anand's goal is to make science and natural history accessible and exciting. He works closely with science collaborators to better understand his photographic subjects and is always on the lookout for new technologies that can lead to innovative images. Needing a cost-effective way to capture aerial images of Patagonia's wetland landscapes, Anand rigged up a kite-powered camera. Hear the stories behind his favorite aerial photographs in Patagonia and learn the joys and frustrations he encountered using this unusual technique.

DEMONSTRATIONS IN THE LOBBY

Science Illustration: The art of observation

KATIE BERTSCHE, Freelance Science Illustrator, Museum of Vertebrate Zoology, UC Berkeley

Science illustration is a practical field of art in service of science with a long and storied tradition. Katie will show how she creates works inspired by the traditional techniques and composition found in Japanese wood cut prints, French botanical prints, and the science illustrators whose work was both technically skilled and showed the hand of the artist.

Origami: The art of paper folding

BERNIE PEYTON, Wildlife Biologist, Origami Master and UC Berkeley alum

The natural world and fragile paper come together in Bernie Peyton's origami, to tell little stories about why we need to preserve our planet. Not only will he demonstrate this amazing artform—you can try your hand at paper folding as well!

Orrery: Mechanical model of the solar system

ADRIAN VAN ALLEN, Graduate Student, Department of Anthropology, UC Berkeley

WILL FRANCIS, Machine Artist, Programmer and Engineer, Machine Thinking

Named after the 4th Earl of Orrery (1674–1731), the first orrery that was a planetarium of the modern era was produced in 1704. This interpretation of an 1882 teaching orrery was built by Adrian van Allen and Will Francis, who will demonstrate its use.