



LEONARDO
THE INTERNATIONAL SOCIETY FOR THE
ARTS, SCIENCES AND TECHNOLOGY



L.A.S.E.R.-UC DAVIS

Leonardo Art Science Evening Rendezvous

Tuesday, December 1st, 2015

6:30 pm-9pm

Location: 3001 PES (Plant and Environmental Sciences)

UC Davis Campus

Map: <http://www.plantsciences.ucdavis.edu/plantsciences/visitors/map.htm>

6:30-7:00 Socializing/Networking



7:00-7:25. Dr. Robert Lang. *"From Flapping Birds to Space Telescopes: The Art and Science of Origami"*

Abstract: The last decade of this past century has been witness to a revolution in the development and application of mathematical techniques to *origami*, the centuries-old Japanese art of paper-folding. The techniques used in mathematical origami design range from the abstruse to the highly approachable. In this talk, I will describe how geometric concepts led to the solution of a broad class of origami folding problems – specifically, the problem of efficiently folding a shape with an arbitrary number and arrangement of flaps, and along the way, enabled origami designs of mind-blowing complexity and realism, some of which you'll see, too. As often happens in mathematics, theory originally developed for its own sake has led to some surprising practical applications. The algorithms and theorems of origami design have shed light on long-standing mathematical questions and have solved practical engineering problems. I will discuss examples of how origami has enabled safer airbags, Brobdingnagian space telescopes, and more.

Bio: Robert J. Lang is recognized as one of the foremost origami artists in the world as well as a pioneer in computational origami and the development of formal design algorithms for folding. With a Ph.D. in Applied Physics from Caltech, he has, during the course of work at NASA/Jet Propulsion Laboratory, Spectra Diode Laboratories, and JDS Uniphase, authored or co-authored over 100 papers and 50 patents in lasers and optoelectronics as well as authoring, co-authoring, or editing 14 books and a CD-ROM on origami. He is a full-time artist and consultant on origami and its applications to engineering problems but keeps his toes in the world of lasers, most recently as the Editor-in-Chief of the *IEEE Journal of Quantum Electronics* from 2007–2010. He received Caltech's highest honor, the Distinguished Alumni Award, in 2009 and was elected a Fellow of the American Mathematical Society in 2013.
<http://www.langorigami.com>



7:25-7:50 **Dr. Charlotte Jacobs.** *"Jonas Salk and the Conquest of Polio"*

Abstract: Charlotte D. Jacobs biography, *Jonas Salk: a Life*, chronicles the life of one of America's most beloved and decorated scientific heroes. His polio vaccine all but eradicated a crippling disease from the face of the earth, and the scientific community never forgave him. In this first full account of Salk's life, recently published by Oxford University Press, Jacobs reveals the complex man behind the controversial legend. Jacobs will discuss the challenges of portraying the life of this famous figure.

Bio: Charlotte D. Jacobs, M.D. is the Ben and A. Jess Shenson Professor of Medicine (Emerita) at Stanford University. A native of Kingsport, Tennessee, she studied medicine at Washington University in St. Louis. As a professor at Stanford University, she engaged in teaching, cancer research, and patient care. She has served as Senior Associate Dean and as Director of the Clinical Cancer Center. Her academic honors include numerous awards for excellence in patient care and teaching, as well as the Distinguished Alumni Award from Washington University. She currently cares for veterans with cancer at the Palo Alto Veterans Medical Center.

Mid-career, Jacobs began studying biography writing. Her first biography, *Henry Kaplan and the Story of Hodgkin's Disease*, published in 2010, was called one of the Best Five Books on doctors' lives by *The Wall Street Journal*. Jacobs' second biography, *Jonas Salk: a Life*, was published by Oxford University Press in of May 2015.

7:50-8:10 BREAK. Networking/Socializing. During the break anyone can have 30 seconds to share their work, announce an exhibition, show, idea etc.



8:10-8:35 **Rachel Clarke.** *Merging Spaces.* Artist talk.

Abstract: My work combines physical and virtual modes of making. As a comment on extreme consumerism in our contemporary lifestyle, the ephemeral works I create are often comprised of the waste products of that lifestyle – banal junk such as food packaging, advertising mailers, plastic bags – as well as discarded digital information. Through physical and digital processes, the discarded materials become contemplative artworks, in the form of experimental animations, augmented reality sculptures, and installations. While I'm using the technologies developed for 21st century capitalism, the way I'm using them becomes a critique of the corporate model of technology – a model designed for consumption of media, not creativity.

Bio: Rachel Clarke is an artist and educator teaching new media art at California State University, Sacramento. Her work involves video and animation, installation, augmented reality and experimental 3D, and has been shown in galleries, museums, new media art festivals and film screenings nationally and internationally. She has recently shown at ISEA Vancouver BC, Canada; Another Year in LA, Los Angeles, CA; Balance/Unbalance, ASU, Phoenix AZ; Ars Electronica, Linz, Austria; Aggregate Space, Oakland, CA; WORK Detroit, MI; and Currents International Festival of New Media in Santa Fe, NM.



8:35-9:00 **Dr. Andreas Albrecht.** *What is time?*

Abstract: Time is a central part of everyday life, yet it can still seem very mysterious. We will discuss time from a physicist's point of view in a way that takes us from everyday experiences to deep questions about the cosmos.

Bio: Prof Albrecht is a leading theoretical physicist who specializes in understanding the origins of the universe. He is known for his pioneering work on cosmic inflation, cosmic structure and the arrow of time. He is a member of the new Center for Quantum Mathematics and Physics at UC Davis (<http://qmap.ucdavis.edu>) and is currently Chair of the UC Davis Department of Physics.

Moderator/Organizer:



Anna Davidson is the moderator and organizer of UCD LASER. She is currently an M.F.A. student in Art Studio at UC Davis. Previously, she received her Ph.D. in the Department of Plant Sciences at UC Davis studying plant ecophysiology.

For more information:

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