

Spring 2016 Joint Colloquium

Materials Department & Materials Research Laboratory

Professor Christian Santangelo

Dept. of Physics

University of Massachusetts, Amherst

Friday, April 29th, 2016

11:00 am, ESB 1001



The mechanics of origami

The ancient art of origami is probably as old as paper, yet only recently has it been recognized as a framework for engineering new devices and materials. For the past several years, our group has been developing an origami approach to mechanical metamaterials, materials that exhibit designed mechanical response at long length scales by virtue of their structure at short length scales, as well as an approach to fabricating self-folding materials. In this talk, I will discuss our recent progress in designing and fabricating self-folding origami structures and mechanical metamaterials.

Bio

Professor Santangelo is a theoretical physicist with a research interest in soft materials. He received his B.A. degree in Physics from Cornell University in 1997 and his Ph.D. in Physics from UC Santa Barbara in 2004, with Fyl Pincus. He did a post-doc at the University of Pennsylvania with Randy Kamien, then joined the Physics Department at the University of Massachusetts in 2007. He is the recipient of the 2004 Glenn Brown Prize from the International Liquid Crystal Society and a CAREER award in 2008. His most recent work has been on using geometry to design shape and control the mechanical properties of thin elastic sheets.

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Hosted by Cyrus Safinya