A BODY MADE OF GLASS

Monday, July 10th
7 pm, Room G1B30
Duane Physics Building
University of Colorado

a free public lecture

Your body is amazing. The instructions for its construction are encoded in only two cells, yet trillions of them have ended up in more or less the right place. When they don't, diseases arise. Remarkable scientific progress has led to understanding cell tissue organization. Surprisingly, these "living materials" are often glassy – on the edge between a fluid and a solid – which is key for their biological function. But what governs the fluid-to-solid transition? We roughly grasp how lowering temperature gives rise to glasses in non-biological materials. Cells, however, do not control temperature, they instead tune their stickiness and wigglyness. In this presentation, Professor Manning will present the latest insights and breakthroughs in how organisms control the fluid-to-solid transition in our bodies, from embryos to diseased tissues.

M. Lisa Manning studies the mechanical properties of biological tissues and non-biological materials using tools from theoretical physics. She received a Ph.D. in physics in 2008 from UC Santa Barbara, spent a few years as an independent scholar in Princeton University and is now an Associate Professor at Syracuse University. A rising star in her field, she has distinguished herself by her out-of-the-box thinking and her capacity to collaborate on difficult problems. She is a member of the Simons Collaboration on "Cracking the Glass Problem", and was recently named a Simons investigator in the Mathematical Modeling of Living Systems. Additional honors and awards include the 2016 IUPAP Young Investigator Prize in Statistical Physics, a Sloan Fellowship, and a Cottrell Scholar award. She is also highly regarded for her teaching.

No RSVP required. **For more information call (303) 492-3367**

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