Physics Colloquium



College of

LETTERS



"Dripping Jetting Drops and Wetting: The Magic of Microfluidics"

Friday, October 5th at 4:10pm Barnard Hall 103



Dr. David A. Weitz

Mallinckrodt Professor of Physics and of Applied Physics

Harvard University

Experimental Soft Condensed Matter Group

https://weitzlab.seas.harvard.edu/

Abstract: This talk will discuss the use of microfluidic devices to precisely control the flow and mixing of fluids to make drops and will explore a variety of uses of these drops. They can be used to create new materials that are difficult to synthesize with any other method. These materials exhibit fascinating physical properties and have great potential for practical uses. I will also show how the exquisite control afforded by microfluidic devices provides enabling technology to use droplets as microreactors to perform reactions at remarkably high rates using very small quantities of fluids. This allows them to be used to explore fundamental properties of systems biology.

Dr. Weitz received his Ph.D. in physics from Harvard University and then joined Exxon Research and Engineering Company, where he worked for nearly 18 years. He became a professor of physics at the University of Pennsylvania and moved to Harvard at the end of the last millennium as professor of physics and applied physics. He leads a group studying soft matter science with a focus on materials science, biophysics and microfluidics. Several startup companies have come from his lab to commercialize research concepts.

Hosts: Connie Chang (connie.chang@montana.edu) and James Wilking (james.wilking@montana.edu)