



Physics Seminar

11th October 2019 at 10 a.m

Coffee at 09.45

**Campus Limpertsberg
Bâtiment des Sciences – room BSC 0.15**

Talk by Elizabeth K.Mann
Kent State University

(invited by: Prof. Jan Lagerwall)

The Physics of Bioemulsions

Lipid droplets are fat particles that are crucial for supplying and regulating energy within the cell and are involved in a whole host of other cellular processes. They are also bioemulsions, consisting of an oil core coated with a lipid monolayer and with proteins which bind specifically to the lipid droplet. These proteins regulate droplet structure and function. How these proteins, made within the cell, target the lipid droplets remains an open question. We study the biophysics of lipid droplets with a model system consisting of a triolein drop formed in water or buffer, covered with phospholipid monolayer, and put in contact with proteins associated with such fat particles in living creatures

About the speaker:

Dr.Elizabeth Mann received her B.S. degree in physics from Case Western Reserve University and completed her Ph.D. work in soft matter physics at the Ecole Normal Supérieure in Paris (graduating from the Université Pierre et Marie Curie.) She went on to do post-doctoral work both in France (the Institut Charles Sadron and the Université de Strasbourg, in Strasbourg) and in Switzerland (Federal Institute of Technology-Zurich), bridging laboratories of macromolecular science, odontology, and environmental science. She is Professor of Physics at Kent State University, which she joined in 1998, and holds a joint appointment in the Chemical Physics Interdisciplinary Program. Her research interests are primarily experimental, centering on lipid, liquid crystalline, and (bio)macromolecular films at interfaces: from the organization of complex molecules at a surface to pattern formation and surface hydrodynamics. She actively collaborates with professors of biology, mathematics and engineering, as well as with two start-up companies and with NASA. She was a member of the APS Committee on the Status of Women in Physics from 2015-2017.