



**September 30 – October 4, 2024**

**SCHOOL ON  
ACTIVE MATTER**



**JULIA M. YEOMANS**  
**University of Oxford, UK**  
*From Active Nematics  
to Mechanobiology*



**RODRIGO SOTO**  
**Universidad de Chile, Chile**  
*Computational Modeling  
of Active Systems*



**APARNA BASKARAN**  
**Brandeis University, USA**  
*Theoretical Foundations of  
Active Matter: Lessons from  
Ideal Microscopic Models*



**FRANCESCO GINELLI**  
**University of Insubria, Italy**  
*Physics of Flocking*

Active matter describes systems whose constituent elements consume energy locally in order to move or to exert mechanical forces. As such, active matter systems are intrinsically out of thermodynamic equilibrium. Examples include flocks or herds of animals, collections of cells, components of the cellular cytoskeleton and even artificial microswimmers. Active matter is a rapidly growing field involving diverse scientific communities in physics, biology, computational sciences, applied mathematics, chemistry, and engineering. Numerous applications of active matter are constantly arising in biological systems, smart materials, precision medicine, and robotics.

This school is intended for graduate students and researchers interested in the physics of active matter. The lectures will cover well-tested and successful theoretical approaches as well as a discussion of experimental results. To achieve this purpose, leading experts will present lectures on fundamental aspects of active matter and a pedagogical exposition of its recent trends.

There is no registration fee and limited funds are available for travel and local expenses.

**Application deadline: July 27, 2024**

**Online application and more information:  
[www.ictp-saifr.org/sam2024](http://www.ictp-saifr.org/sam2024)**



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