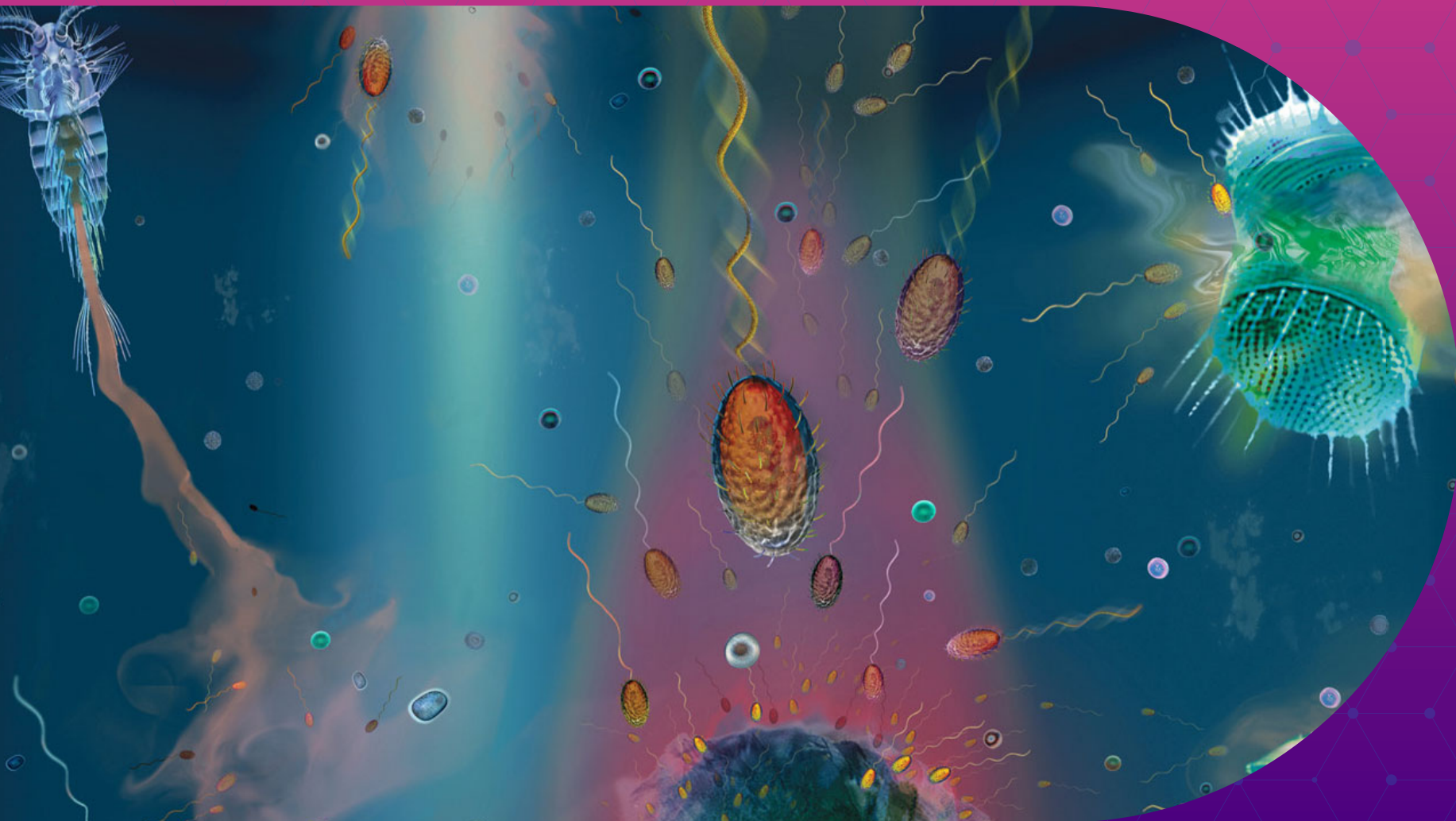


# PHYSICS COLLOQUIA 2024



Marine microbes are the drivers of a wealth of global processes, from the cycling of carbon to the production of oxygen to the health of coral reefs. Underpinning these important influences are interactions occurring at the scale of individual cells, where physical processes are heavily influenced by viscosity and diffusion and observations are made challenging by the minute scale. Yet, experimental systems such as microfluidics have enabled progress in both the laboratory and the field, and time-lapse image analysis coupled with simple mathematical models has started to provide insights into the behaviors of marine microorganisms at the microscale. I will illustrate this microscale world which provides a plethora of fascinating and important research opportunities for the biologist and the physicist alike through examples from our recent research, spanning from the first in situ measurements of chemotaxis to understanding colony formation in *Trichodesmium* to quantifying particle degradation by bacteria in the biological pump.

**Roman Stocker** | ETH, Zurich (CHE)

## THE OCEAN AT THE MICROSCALE: THE PHYSICS OF MARINE MICROBIAL PROCESSES

ore 14:30 | AULA A | VIA CELORIA 16 MILANO

APR  
12



UNIVERSITÀ DEGLI STUDI DI MILANO  
DOTTORATO DI RICERCA IN FISICA  
ASTROFISICA E FISICA APPLICATA

DIPARTIMENTO DI FISICA  
via Celoria 16 | 20133 MILANO  
Tel. +39 02 50317740  
<http://phd.fisica.unimi.it> | [phd@fisica.unimi.it](mailto:phd@fisica.unimi.it)