

# Microenvironments Modulating Biological Interactions in the Ocean

Aspen Center for Physics  
Aspen, CO  
17-21 January 2011

Over the past two decades, there has been a growing realization that small-scale interactions play a crucial role in the ecology of aquatic organisms. Unraveling these requires an interdisciplinary effort that considers the intimate coupling of physics, chemistry, and biology. This symposium will tackle key microscale themes by bringing together biologists, chemists, ecologists, physicists, engineers, and mathematicians for a highly interactive workshop.

We will explore seven key themes, each led by an invited theme leader:

- ✧ **Chemical signaling in aquatic microenvironments**  
Richard Zimmer (UCLA)
- ✧ **Propulsion and organism-generated flows**  
Martin Bees (University of Glasgow)
- ✧ **Sensing and optimal movement behavior in the plankton**  
Andre Visser (Technical University of Denmark)
- ✧ **Microscale turbulence and interactions with organisms**  
Javier Jimenez (Stanford and Universidad Politecnica, Madrid)
- ✧ **Microbiological, evolutionary, and molecular evidence for adaptation to microenvironments**  
Bess Ward (Princeton University)
- ✧ **Large-scale consequences of small-scale planktonic interactions**  
Daniel Grünbaum (University of Washington)
- ✧ **Gradients and turbulence near the seabed**  
Michael Kühl (University of Copenhagen)

## Important dates

**October 1, 2010:** Deadline for submission of abstracts (< 250 words) for contributed talks and interactive poster session (organizers reserve final decision).  
**October 31, 2010:** Deadline for registration.  
**Jan 17-21, 2011:** Meeting  
**Registration fee:** US\$350  
**Accommodation:** *Aspen Meadows* (\$200/single; \$215/double). Room-mate connection service available. See conference website.  
**Funding:** we aspire to offset registration fees and partial accommodation costs.

**Format:** Mornings (8-11am) will feature 2 educational lectures by invited speakers, followed by short contributed talks. Evenings (4-8pm) will be reserved for organized group discussions on thematic areas led by invited and contributed speakers. Organized discussions will be followed by group dinners.

[web.mit.edu/aspenoceansymp](http://web.mit.edu/aspenoceansymp)

## Organizing Committee:

Roman Stocker, MIT; Thomas Kiørboe, Tech. Univ. Denmark;  
Pete Jumars, University of Maine; George Jackson, Texas A&M;  
Mimi Koehl, UC Berkeley; Thomas Powers, Brown University.

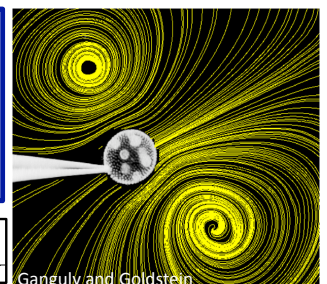
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MIT Hayashi Fund  
for Ocean Research

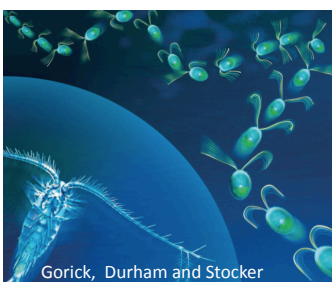
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Ganguly and Goldstein



Gorick, Durham and Stocker