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# The 108th iCeMS SEMINAR

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**Thu 26 Apr 2012**  
**13:30 - 15:00**

## **Dynamics of Heterogeneity in Fluid Membranes**

Lecturer: **Assoc. Prof. Shigeyuki Komura**  
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Tokyo Metropolitan University

Venue: iCeMS Complex 1 Main Bldg. (#71)  
2nd floor Seminar Room

I shall discuss the dynamics of heterogeneity observed in multi-component fluid membranes particularly focusing on hydrodynamic effects due to the membrane and solvent. Two situations are discussed separately; above and below the miscibility transition temperature. In the former case, we calculate the wavenumber dependence of the effective diffusion coefficient by changing the temperature and/or the thickness of the bulk fluid. For the case below the transition temperature, we study the domain growth exponent in a binary membrane using a particle-based simulation method. With the addition of bulk solvent, a change in the growth exponent from two- to three-dimensional nature is observed. Along with the measurement of correlated diffusion, we conclude that the phase separation takes place through the Brownian coagulation process in our simulation.

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**Hosted by:** iCeMS (Institute for Integrated Cell-Material Sciences), Kyoto University

