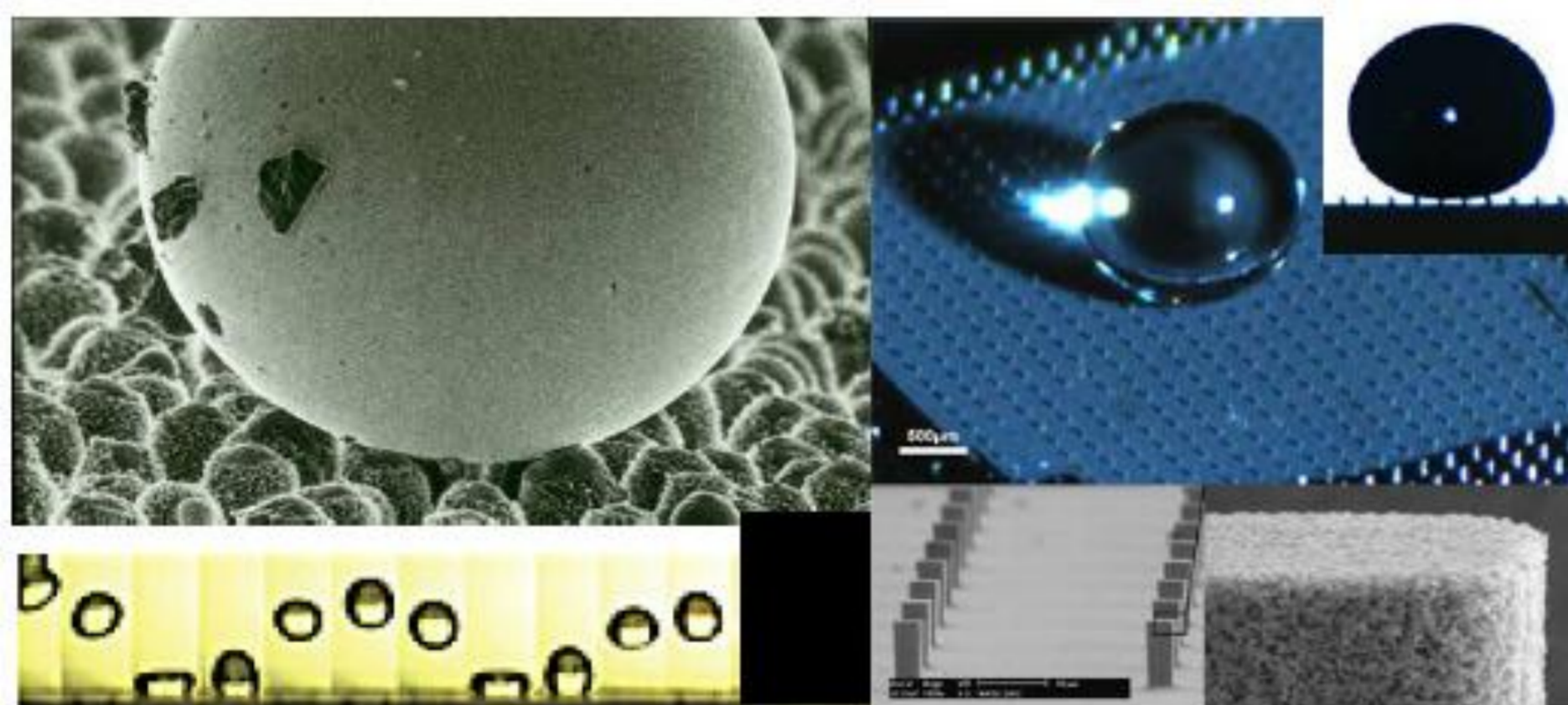
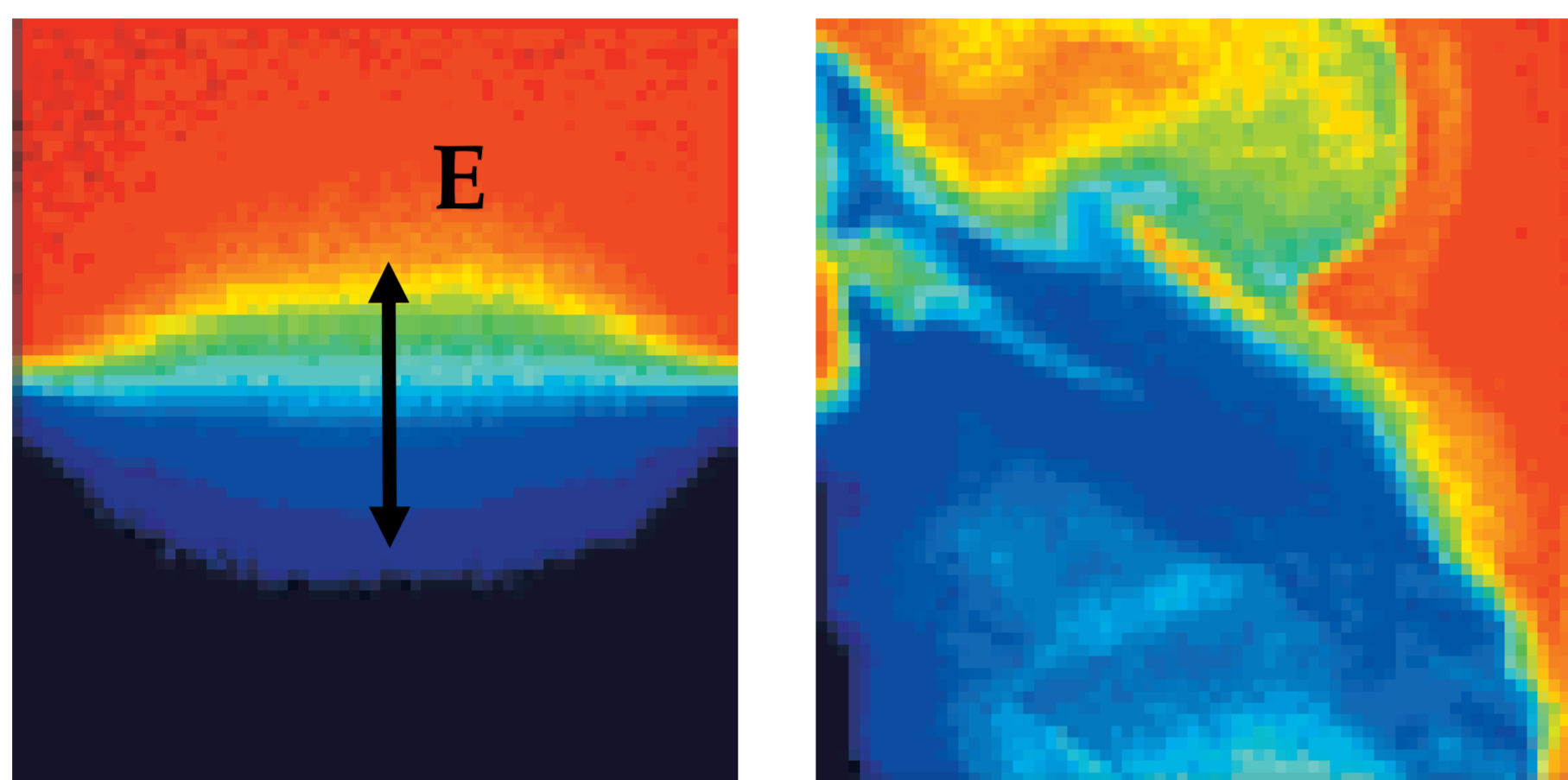


Hua-Yi Hsu**Assistant Professor of Mechanical Engineering**

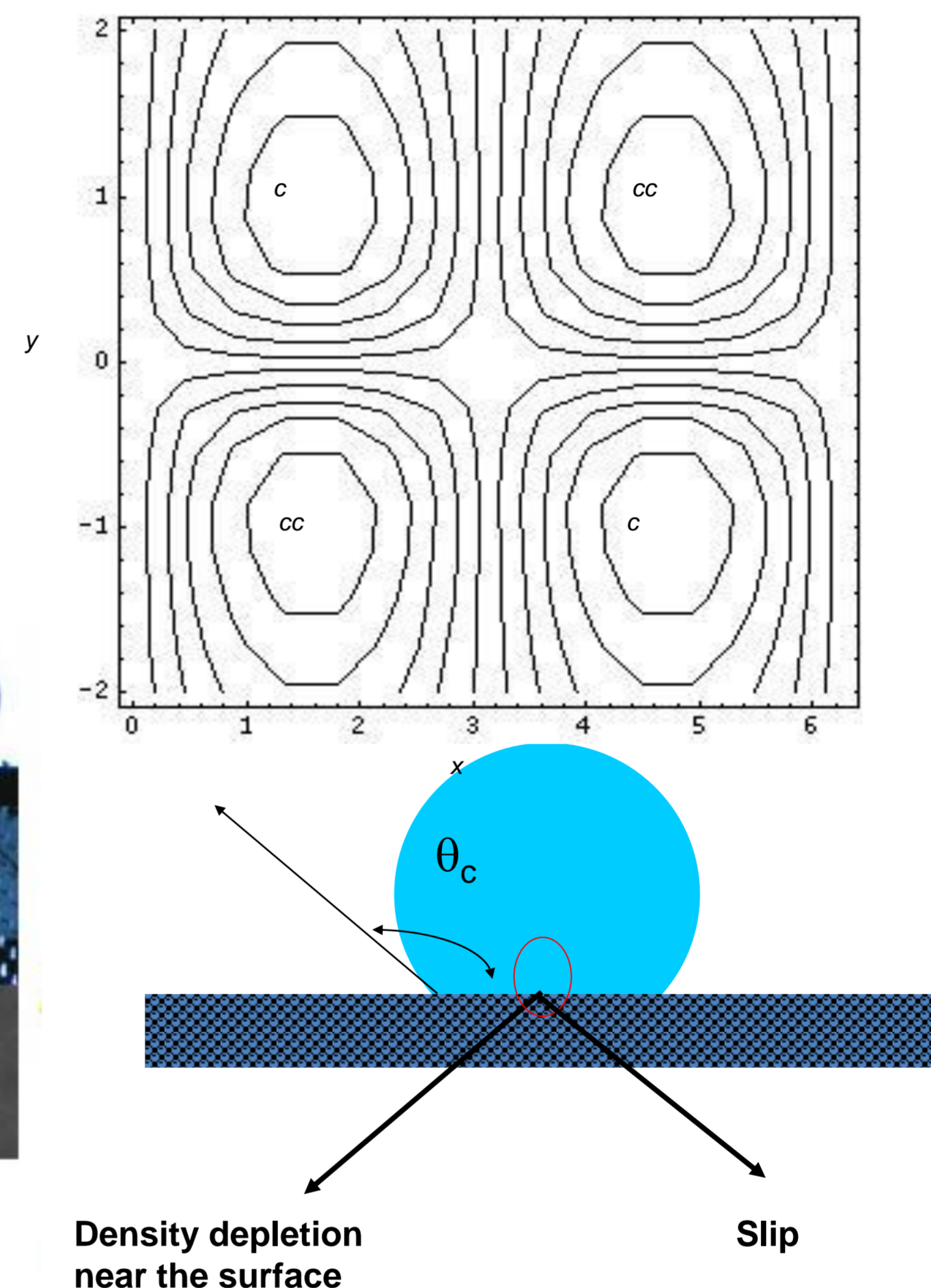
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BS Bioenvironmental System Engineering, National Taiwan University, 2002
PhD Mechanical Engineering, Northwestern University, 2008



Roughness-induced superhydrophobicity

**Research Interests:**

- **Direct numerical simulation (DNS) of fluid-particle flows:**

Application of fast algorithms to sediment transport in fluid-particle flows.

- **Self-assembly and Electrohydrodynamic (EHD) flows:**

Numerical methods for EHD flows for fluid-solid transport systems, and self-assembly.

- **Hydrophobic and hydrophilic surfaces:**

Molecular Dynamics studies of the hydrophilic and hydrophobic phenomena.

- **Biomechanics:**

Modeling and Simulation of Cell migration

- **Electro-orientation:**

The orientation of nano-particle suspended in applied electric field.

- **A continuum approach to reproduce molecular scale slip behavior:**

Using a novel fluctuating hydrodynamic (FHD) based continuum approach to address the issue of slip near hydrophobic surfaces.