

**Decoupled, Linear and Energy Stable Schemes for Phase-Field Models of  
Multiphase Complex Fluids**

**Jie Shen**

**Department of Mathematics, Purdue University, USA**

**Email of Presenting Author: [shen@math.purdue.edu](mailto:shen@math.purdue.edu)**

I shall present some recent work on designing decoupled, linear and energy stable schemes for phase-field models of multiphase complex fluids. Particular attention will be paid to phase-field models which are valid for problems with large density ratios. I shall also provide ample numerical results which not only demonstrate the effectiveness of the numerical schemes, but also validate the flexibility and robustness of the phase-field model.