Spatiotemporal Modeling and Simulation

06 :: Particle Methods
**Topic**

Introduction to particle methods for continuous systems

**Program**

Function approximation using particles
Operator approximation using particles
Fast neighbor list algorithms
Particle interaction symmetry
Self-test questions
Learning goals

Be able to explain the duality between intensive and extensive methods

Know the particle function approximation by heart

Be aware of the approximation errors and the overlap condition

Be able to explain the need for remeshing and moment-conserving interpolation

Be able to implement cell lists and Verlet lists.