

**MetStröm Short Course (June 11-14, 2012)**  
**(co-organized by the DFG Research Group 1447)**

**Stochastic Approaches to Turbulence Modeling:**  
**Basics of Linear Eddy and One Dimensional Turbulence Modeling**

**Who?:**

**Alan R. Kerstein (formerly SANDIA Livermore)**

**and**

**Heiko Schmidt (Brandenburg Technical University Cottbus)**

Practicals supervised by E. Dietze, Ch. Glawe, F. Schulz, and Z. Jozefik (BTU)

**Where?:**

**LG3a, Siemens-Halske Ring, BTU Cottbus**

**Preliminary Program:**

- Day 1 (Monday, June 11, 2012)
  - Registration starts at 11:30
  - Lectures will begin at 13:00
  - DNS, LES, RANS, and the motivation for alternatives (H. Schmidt)
  - Introduction to LEM/ODT (A. Kerstein)
  - Scale locality: An organizing principle for modeling turbulent flow advancement (A. Kerstein)
- Day 2 (Tuesday, June 12, 2012)
  - ODT: Model formulation and implementation (A. Kerstein)
  - Eulerian LEM/ODT implementation in 3D solvers (A. Kerstein)
  - LEM/ODT in Lagrangian approaches (H. Schmidt)
  - Algorithmic and physical extensions: mesh adaptivity, cylindrical geometry, spatial advancement (A. Kerstein)
- Day 3 (Wednesday, June 13, 2012)
  - Multi phase flow simulation (A. Kerstein)
  - Combustion applications (H. Schmidt)
  - Buoyant stratified flow applications (A. Kerstein)
  - Applications for clouds (H. Schmidt)
  - Practical (E. Dietze, Ch. Glawe, Z. Jozefik, F. Schulz)
- Day 4 (Thursday, 14. June 2012)
  - Practical (E. Dietze, Ch. Glawe, Z. Jozefik, F. Schulz) and individual discussions
  - General discussion, future challenges (until 12:30)