



# **International Summer School**

$$\frac{\partial f}{\partial t} + c \cdot \frac{\partial f}{\partial x} + a \cdot \frac{\partial f}{\partial c} = C(f)$$

## **Numerical Simulation: Energy Storage**

#### **Topics**:

- Numerical methods for solving ODEs and PDEs
- Practical applications of PDEs
- Finite Difference/Volume Method
- Research examples from "Physicochemical Fundamentals in Energy Storage: a Simulation Driven Approach," a module from Energy and Transport Sciences Laboratory, Mechanical Engineering, Texas A&M University

#### Participants:

Mechanical Engineering students from DHBW Mannheim, Germany and Texas A&M University (TAMU), College Station

#### Summer School Leaders:

Dr. Volker Schulz – DHBW Mannheim, Professor of Mechanical Engineering and Vice Dean of Engineering

Dr. Partha P. Mukherjee – Texas A&M University, Assistant Professor of Mechanical Engineering, and Director of the Energy and Transport Sciences Laboratory (ETSL)

### When & Where:

September 29<sup>th</sup> to October 3<sup>rd</sup>, 2014 (Mechanical Engineering Office Bldg.: MEOB 501)

Monday, September 29<sup>th</sup> Kick-Off: BBQ Social (all participants)

Monday to Friday Morning: Lectures

Afternoon: Hands-on sessions

Wednesday, October 1<sup>st</sup> Engineering Innovation Center visit and lunch (all participants)

Friday, October 3<sup>rd</sup> Concluding lunch (all participants)

For detailed course outline and application, please contact:

- Dr. Volker Schulz at volker.schulz@dhbw-mannheim.de (DHBW students)
- Dr. Partha P. Mukherjee at pmukherjee@tamu.edu (TAMU students)

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