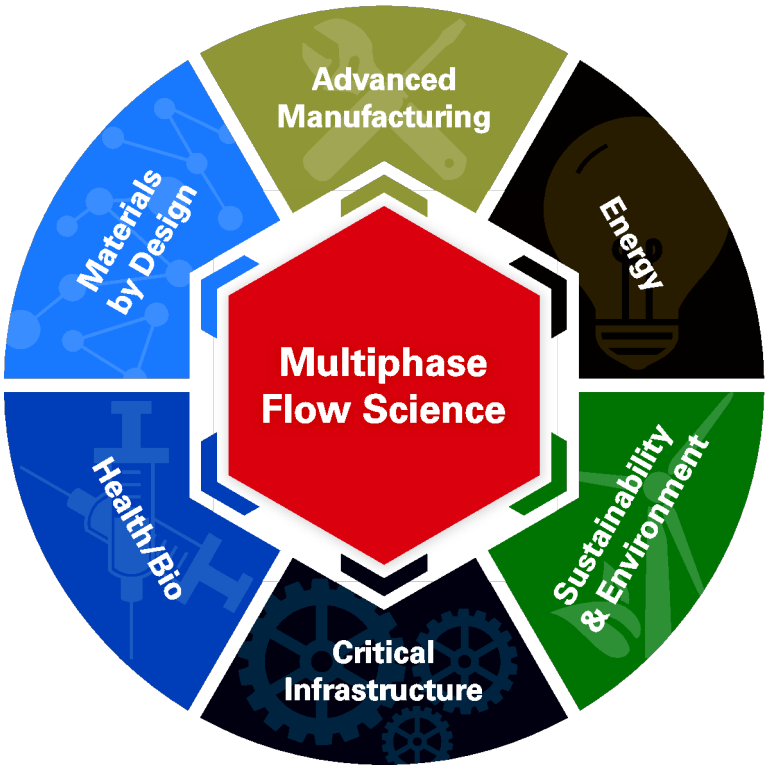
MULTIPHASE FLOW MODELING COURSE



WHEN

May 10th (8.00 AM) - May 11th (12.30 PM)

WHERE

Iowa State University Campus
1012 Black Engineering Building
Ames, Iowa, 50011

REGISTER ONLINE

Registration site: http://bit.ly/20D3oiD
A maximum of thirty participants is accepted.
The registration process closes on April 15th.

CoMFRE

Multiphase Flow Research and Education
www.mfr.iastate.edu

PROGRAM

- Governing equations, mathematical models, and computational approaches
- Meshing for multiphase CFD
- Euler-Euler models
- Applications to gas-liquid and gas-solid flows

AUDIENCE

- CFD engineers in petroleum, chemical, process engineering industry
- Knowledge of the basics of CFD recommended

REGISTRATION

- $3,000 per person, including course material, meals and refreshments
- Fee can be used towards CoMFRE membership for the year

CONTACTS

Course content:

- Alberto Passalacqua albertop@iastate.edu

Registration:

- registrations@iastate.edu

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AGENDA

MAY 10TH, 2016

- 8.00—8.45: Breakfast and registration
- 8.45—9.00: Welcome and logistics
- 9.00—9.50:
  - Introduction to multiphase flow modeling
  - Governing equations, mathematical models, and computational approaches
- 9.50—10.00: Break
- 10.00—10.50:
  - Multiphase flow capabilities in OpenFOAM®
  - Simulation workflow in OpenFOAM®
  - Introduction to meshing for multiphase CFD
- 10.50—11.00: Break
- 11.00—11.50:
  - Block-structured meshes with blockMesh
  - snappyHexMesh: an example with a stirred tank
  - Importing meshes from other tools
- 11.50—13.00: Lunch break (Room 2004 Black Eng. Bld.)
- 13.00—13.50
  - Eulerian multiphase flow solvers in OpenFOAM®
  - Drift-flux model
  - Elements on VOF solvers
- 13.50—14.00: Break
- 14.00—14.50
  - Gas-liquid flow models
  - Modeling of a bubble column

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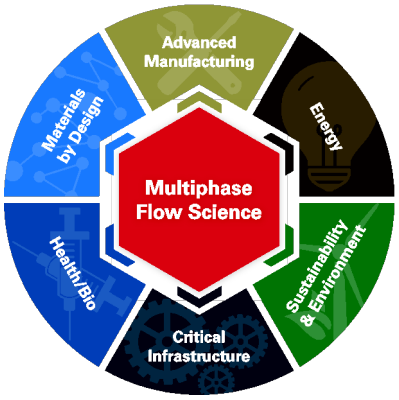

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MAY 10TH, 2016 (CONTINUED)

- 14.50—15.00: Break
- 15.00—15.50
  - Hands-on session: bubble column
- 15.50—16.00: Break
- 16.00—16.50
  - Rapid post-processing with Paraview and functionObjects
- 16.50—17.00: Closings
- 18.00—18.30: Showcase of CoMFRE research
- 18.30: Dinner

MAY 11TH, 2016

- 8.00—9.00: Breakfast
- 9.00—9.50
  - Review
  - Eulerian multiphase models for gas-particle flows in OpenFOAM®
- 9.50—10.00: Break
- 10.00—10.50
  - Hands-on session: fluidized bed
- 10.50—11.00: Break
- 11.00—11.50
  - The multi-reference frame method
  - A complete guided example simulation of a gas-liquid stirred tank reactor
- 11.50—12.00: Closing
- 12.00—13.00: Lunch (lunch boxes)
- 13.30—15.30: Optional visit to laboratories of CoMFRE faculty members. Please confirm your interest.

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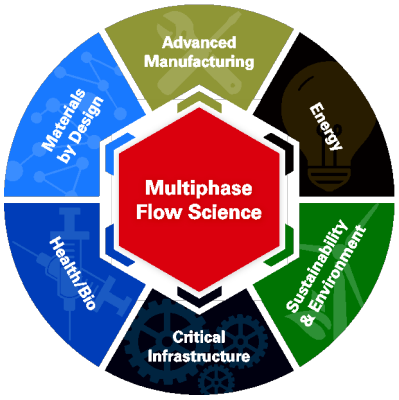

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