

# INTRODUCTION TO COMPUTATIONAL FLUID DYNAMICS (CFD)



**UNS**  
UNIVERSITAS  
SEBELAS MARET



**INSTRUCTOR: PROF. EKO PRASETYA BUDIANA**

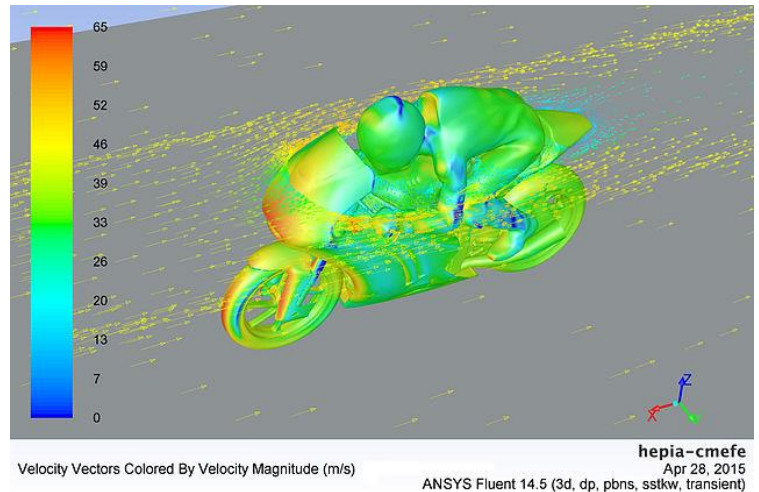
## Module 1

Finite difference method for incompressible Navier Stokes equations

1. Partial differential equations
2. Finite difference method
3. Incompressible Navier-Stokes Equation
4. Stream Function-Vorticity Formulation
5. Pressure Correction Method

## Module 2

1. Introduction
  - CFD Overview
2. Geometry Basics
  - Geometry creation
  - Importing and editing geometry
  - Geometry simplification
3. Meshing
  - Mesh Methods, Types and Computation
  - Mesh creation
  - Mesh quality checks and improvement
4. Solver settings
  - Setting solver parameters
  - Initial and boundary condition setup
  - Convergence settings and monitoring
5. Post processing and visualization
  - contour plots
  - vector plot
  - streamlines



**19 OCTOBER 2017 (THURSDAY)**

**CAD/CAE LAB, FACULTY OF MECHANICAL ENGINEERING**

**Register: <http://iceseam2017.utm.edu.my/>**

**GPS: 2.274221, 102.281677**

**Certificates of attendance will be given to participants who successfully complete the course**