



## Fluid Mechanics -- Applications and Numerical Methods

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### Plan of the lectures:

The course 'Fluid Mechanics -- Applications and Numerical Methods' is designed to give an overview of modern numerical approaches to solve and analyse fluid mechanics problems. This course is prepared for PhD students in engineering.

Topics to be covered include:

- Description of fluid at different scales (i.e. microscopic, mesoscopic and macroscopic description);
- Turbulence modelling (Raynolds-Averaged Navier-Stokes and various turbulence models, Large Eddy Simulation, Direct Numerical Simulation);
- Finite Difference Method;
- Finite Element Method;
- Lattice Boltzmann Method;
- Finite-Volume Method;
- Other Methods;

| TERMINY WYKŁADÓW |                |             |                         |
|------------------|----------------|-------------|-------------------------|
| Data             | Dzień tygodnia | Godzina     | Sala                    |
| 2013-12-03       | Wtorek         | 15.15-17.00 | 139 Wydział Mechaniczny |
| 2013-12-10       | Wtorek         | 15.15-17.00 | 139 Wydział Mechaniczny |
| 2013-12-17       | Wtorek         | 15.15-17.00 | 139 Wydział Mechaniczny |
| 2014-01-07       | Wtorek         | 15.15-17.00 | 139 Wydział Mechaniczny |
| 2014-01-14       | Wtorek         | 15.15-17.00 | 139 Wydział Mechaniczny |
| 2014-01-21       | Wtorek         | 15.15-17.00 | 139 Wydział Mechaniczny |
| 2014-01-28       | Wtorek         | 15.15-18.00 | 139 Wydział Mechaniczny |