

# Unsteady Simulations for Industrial Flows: LES, DES, hybrid LES/RANS and URANS

**11-13- November, 2019**

## Address:

[Quality Panorama Hotel](#) Eklandagatan 51-53, Room *Prefekten*

Day	Time	Lec/Wo <sup>1</sup>	Content
Day 1	09.45-10.00		Registration and coffee.
	10-12	Lec	Introduction to LES
	12-13		Lunch.
	13.15-15	Lec	Discretization schemes, numerical and SGS dissipation, SGS models
	15-19	Wo	Coffee. Resolved stresses, filtering, SGS dissipation, SGS models (Matlab, Octave). Assignment LES $Re = 1\,000$ .
Day 2	8.00-10	Lec	Dynamic model, filtering, 1-eq models.
			Coffee.
	10-12	Wo	Leonard Stresses, two-point correlations, spectra (Matlab, Octave), Assignment 2a.
	12-13		Lunch.
	13.15-15	Lec	Inlet boundary conditions, hybrid LES-RANS.
Day 3			Coffee.
	15-17	Wo	Synthetic inlet boundary conditions isotropic and anisotropic (Matlab, Octave)
	8.00-10	Lec	SAS model, resolution requirements
			Coffee
	10-12	Wo	Hybrid LES-RANS (Matlab, Octave)
			Assignment 2b, 3
	12-13		Lunch.
	13.15-15	Lec	PANS
			Coffee.
	15-17	Wo	Hybrid models, PANS (Matlab, Octave)
			Assignment 2b, 3, 4

<sup>1</sup> Lec: Lecture; Wo: workshop.