

FLOW Autumn School on Fluids & Surfaces

18-22 November 2024

Detailed Schedule

Monday 18/11		
9.00 - 9.30	Mingle & Coffee	
9.30 - 10.15	Welcome, organization, introduction of lectures	<i>Shervin Bagheri</i>
10.15-10.30	Break	
10.30-11.15	Interfaces and surface-tension driven flows	<i>TBA</i>
11.15-11.30	Break	
11.30-12.15	Interfaces and surface-tension driven flows (contd)	<i>TBA</i>
12.15-13.45	Lunch	
		<i>Pavan Kumar Kirar, Tianyang Han, Julien Cerutti</i>
13.45-14.30	Basilisk workhop (part 1)	
14.30-15.00	Break with sweets	
		<i>Pavan Kumar Kirar, Tianyang Han, Julien Cerutti</i>
15.00-15.45	Basilisk workhop (part 2)	
Tuesday 19/11		
9.00 - 9.30	Mingle & Coffee	
9.30 - 10.15	Basics on interfaces, wetting and impregnation	<i>David Quere</i>
10.15-10.30	Break	
10.30-11.15	Basics on interfaces, wetting and impregnation (contd)	<i>David Quere</i>

11.15-11.30	Break	
11.30-12.15	Liquids on textured surfaces	<i>David Quere</i>
12.15-13.45	Lunch	
13.45-14.30	Liquids on textured surfaces	<i>David Quere</i>
14.30-15.00	Break with sweets	
15.15-16.00	Procedures for surface preparation & characterisation; case studies: self-assembled slippery surfaces	<i>Chiara Neto</i>
16.00-16.15	Break	
16.15-17.00	Procedures for surface preparation & characterisation; case studies: self-assembled slippery surfaces (contd)	<i>Chiara Neto</i>
Wednesday 20/11		
9.00 - 9.30	Mingle & Coffee	
9.30 - 10.15	Dynamics of interfaces	<i>David Quere</i>
10.15-10.30	Break	
10.30-11.15	Dynamics of interfaces	<i>David Quere</i>
11.15-11.30	Break	
11.30-12.15	Atomic force microscopy imaging & force measurements; case studies: spreading & flow of liquids on surfaces	<i>Chiara Neto</i>
12.15-13.45	Lunch	
13.45-14.30	Atomic force microscopy imaging & force measurements; case studies: spreading & flow of liquids on surfaces (contd)	<i>Chiara Neto</i>
14.30-15.00	Break with sweets	
15.15-16.00	Measurements of microfluidic flow; case study: quantification of interfacial slip	<i>Chiara Neto</i>
16.00-16.15	Break	

16.15-17.00	Measurements of microfluidic flow; case study: quantification of interfacial slip (contd)	<i>Chiara Neto</i>
Thursday 21/11		
9.00 - 9.30	Mingle & Coffee	
9.30 - 10.15	Diffuse interface methods for capillarity and phase change	<i>Gustav Amberg</i>
10.15-10.30	Break	
10.30-11.15	Diffuse interface methods for capillarity and phase change (contd)	<i>Gustav Amberg</i>
11.15-11.30	Break	
11.30-12.15	The Navier-Stokes Cahn Hilliard equation, the van der Waals fluid, and more exotic examples	<i>Gustav Amberg</i>
12.15-13.45	Lunch	
13.45-14.30	The Navier-Stokes Cahn Hilliard equation, the van der Waals fluid, and more exotic examples (contd)	<i>Gustav Amberg</i>
14.30-15.00	Break with sweets	
15.15-16.00	Dynamic wetting and contact lines, boundary conditions on solid walls. Numerical implementation	<i>Gustav Amberg</i>
16.00-16.15	Break	
16.15-17.00	Dynamic wetting and contact lines, boundary conditions on solid walls. Numerical implementation (contd)	<i>Gustav Amberg</i>
Friday 21/11		
9.00 - 9.30	Mingle & Coffee	
9.30 - 10.15	Basics of numerical techniques and oct-tree codes	<i>Stephane Zaleski</i>
10.15-10.30	Break	
10.30-11.15	Basics of numerical techniques and oct-tree codes	<i>Stephane Zaleski</i>

11.15-11.30	Break	
11.30-12.15	Volume-of-Fluid and Front-Tracking models of capillarity	<i>Stephane Zaleski</i>
12.15-13.45	Lunch	
13.45-14.30	Volume-of-Fluid and Front-Tracking models of capillarity	<i>Stephane Zaleski</i>
14.30-15.00	Break with sweets	
15.15-16.00	Final conclusions and information	<i>Shervin Bagheri</i>