


# MicrocombSys workshop "From finite element modeling to solitons (SOLIFEM)": Oct 21 - 24, 2024

	COMSOL	LUMERICAL	PIC DESIGN & PACKAGING	APPLICATIONS
	Monday 21 October 24	Tuesday 22 October 2024	Wednesday 23 October 2024	Thursday 24 October 2024
9:00 - 9:15	Welcome & Opening Remarks	Logistics and Overview (Antonella & Simone)	Logistics and Overview (Antonella & Simone)	Logistics and Overview (Antonella & Simone)
9:15 - 9:30	Simone BIANCONI Overview of the scientific program and objective	Victor TORRES-COMPANY (Coordinator, Chalmers)  Overview Marie Curie DN - MicrocombSys (Coordinator Talk)	Alberto Nardi (IBM Zurich)  Periodic Structures	Andrey VOLOSHIN  Photonic integrated lasers
9:30 - 10:15	Anat SIDDHARTH Introduction to Kerr Combs			
10:15 - 10:30	Coffee Break	Coffee Break	Coffee Break	Coffee Break
10:35 - 11:15	Sasha TUSNIN / Andrey GELASH (external speaker) Numerical simulations for nonlinear dynamics (LLE)	Shivaprasad HULYAL / Xinru JI Part 1: Bus-resonator coupling simulations	Xinru JI Overview of fabrication processes & troubleshooting	Jianqi HU Pulse pumping and supercontinuum
11:15 - 12:30	Exercise session on LLE simulations using python (Jiale SUN)	Handson lecture and exercise session on FDTD simulations (Jianqi HU)	Andrey VOLOSHIN / Anat Siddharth MFD simulations of tapers	Grigorii Likhachev / Simone BIANCONI Soliton microcombs for coherent sensing and LiDAR
12:30 - 13:30	Lunch	Lunch	Lunch	Lunch and closing remarks
13:30 - 15:30	Zheru Qiu / Junyin Zhang FEM mode analysis (COMSOL) Part 1: Dispersion Engineering Handson lecture and exercise session in COMSOL (Grigorii LIKHACHEV)	Shivaprasad HULYAL / Xinru JI FDTD simulations Part 2: Coupling ideality and Pulley coupling Handson lecture and exercise session on FDTD simulations (Jianqi HU)	Excursion to Lavaux (UNESCO world heritage site)	Lab tours and travel back  
15:30 - 16:00	Coffee Break	Coffee Break		
16:00 - 17:30	Anat Siddharth / Zihan LI / Mikhail Churaev FEM mode analysis (COMSOL) Part 2: Bending losses Handson lecture and exercise session in COMSOL	Nikolai KUZNETSOV / Jiale SUN Experimental data analysis for microresonator characterization: dispersion, loss, coupling rate Handson lecture and exercise session on data analysis (Xuan YANG, Simone BIANCONI)		
17:30 - 18:00	Troubleshooting & Wrap-up	Troubleshooting & Wrap-up		
18:00	Dinner - free time	Group dinner	Group dinner	

Arrival: Sunday October 20

Departure: Thurs Oct 24 at 15:00