

Programming in heterogeneous environments with SYCL and OpenMP offloading

Dec 12 – 13, 2023

ONLINE

Europe/Vienna timezone



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The Speakers



Soner Steiner
VSC



Georg Zitzlsberger
IT4I

Slides and Labs

- `course_material`

Agenda DAY1

DAY 1 – THEME: PROGRAMMING WITH ONEAPI

Time	Session name / description	Presenter
09:30	Welcome	Soner/Claudia
09:40	Introduction to oneAPI and DevCloud infrastructure	<u>Soner</u>
10:00	Introduction to the VSC5 Cluster, login and job submit	<u>Soner</u>
10:15	Intro Programming CPU/GPU using SYCL	<u>Georg</u>
11:00	Coffee	
11:15	Advanced Programming CPU/GPU using SYCL	<u>Soner</u>
12:00	Lunch	
13:00	LAB1: INTRODUCTORY SYCL	Georg
14:30	Coffee	
14:45	LAB2: ADVANCED SYCL	Soner
16:00	End of Day 1	

Agenda DAY2

DAY 2 – THEME: PROGRAMMING WITH ONEAPI AND PROFILING

Time	Session name / description	Presenter
09:30	Welcome	<i>Soner/Claudia</i>
09:40	Porting CUDA code to SYCL using the Compatibility Tool	<i><u>Georg</u></i>
10:30	HANDS-ON WITH COMPATIBILITY TOOL A hands-on lab session where you can try porting a CUDA code to oneAPI with the help of the Compatibility Tool	<i><u>Georg</u></i>
11:00	Coffee	
11:15	OFFLOADING WITH C/C++ and FORTRAN Offloading using OpenMP mainly in C/C++ Offloading using OpenMP in FORTRAN Automatic offloading using DO CONCURRENT	<i><u>Soner</u></i>
12:00	Lunch	
13:00	LAB3: HANDS-ON OFFLOADING WITH OPENMP	<i>Soner</i>
14:30	Coffee	
14:45	LAB4: HANDS-ON VTUNE A hands-on lab session where you can use the Vtune and Advisor profilers to assess the performance of some example codes.	<i>Soner</i>
16:00	End of Day 2	



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