

Intel oneAPI Workshop- Agenda

Ostrava. 24th - 26th January 2023

DAY 1 - THEME: PROGRAMMING WITH ONEAPI

Time	Session name / description	Presenter
09:00	Welcome	<i>Stephen</i>
09:10	Introduction to oneAPI and DevCloud infrastructure	<i>Stephen</i>
09:30	Intro Programming CPU/GPU using SYCL	<i>Georg</i>
10:15	Advanced Programming CPU/GPU using SYCL	<i>Soner</i>
11:00	Coffee	
11:15	Porting CUDA code to SYCL using Syclomatic	<i>Georg</i>
12:00	Lunch	
13:00	AMD/NVIDIA Plugins	<i>Gordon</i>
13:30	LAB1: INTRODUCTORY SYCL / DPC++	<i>Soner</i>
15:00	LAB2: Syclomatic	<i>Georg</i>
15:30	Coffee + Additional Lab Time/ Individual Help (optional)	
16:30	End of Day 1	

DAY 2 - THEME: PERFORMANCE LIBRARIES AND PROFILING

Time	Session name / description	Presenter
09:00	Welcome	<i>Stephen</i>
09:10	Offloading using OpenMP	<i>Stephen</i>
09:45	VTune	<i>Dmitry</i>
10:15	Performance Libraries	<i>Gennady</i>
11:00	Coffee	
11:15	Advisor	<i>Georg</i>
12:00	Lunch	
13:00	GDB Debug Demo	<i>Dmitry</i>
13:30	LAB3:OpenMP Offloading	<i>Soner (& Georg)</i>
14:30	LAB4: VTune Profiling	<i>Stephen (& Soner)</i>
15:30	Coffee + Additional Lab Time/ Individual Help (optional)	
16:30	End of Day 2	

DAY 3 - THEME: PORTING WORKSHOP (BY INVITATION ONLY)

Time	Session name / description
09:30	Welcome
09:50	Attendees introduce their code.
10:15	Porting Activities (including Coffee)
12:00	Lunch
13:00	Porting Activities (including Coffee)
15:30	final report out from groups
16:00	End of Day 3

The agenda topics and timing are subject to change.

The Speakers



Stephen Blair-Chappell is an independent software consultant and is an Intel-certified oneAPI instructor. He was formerly the Technical Director at Bayncore where he led a team of consultants providing HPC and AI training on Intel Architecture. For 18 years he was a Technical Consulting Engineer at Intel helping their strategic customers in software optimization and code modernization. He is the author of the book "Parallel Programming with Intel Parallel Studio XE".



for five years.

Georg Zitzlsberger is a research specialist for Machine and Deep Learning at IT4Innovations. He has for over three years been certified by NVIDIA as a University Ambassador of the NVIDIA Deep Learning Institute (DLI) program. This certification allows him to offer NVIDIA DLI courses to academic users of IT4Innovations' HPC services. In addition, in collaboration with Bayncore, he is a trainer for Intel HPC and AI workshops and conferences carried out across Europe. He has been contributing to these events, which are held for audiences from industry and academia,



offload basics, and ML using oneAPI.

Soner Steiner is an HPC, HPDA, and IA specialist at Vienna Scientific Cluster (VSC) and is involved in the EuroCC-Austria project (a European network for awareness creation, consultancy, and training in HPC). He has 5 years of teaching experience at the university level (University of Applied Science, Austria-Wiener Neustadt). At VSC he is involved in training and consultancy of academia and industry. Before his role at the VSC, he was involved for several years in computational material science. And he is freshly a certified Intel oneAPI instructor in DPC++ essentials, OpenMP



Gennady Fedorov is an Intel Technical Consulting Engineer in the field of Intel(R) Performance (Math Kernel Library(MKL), Performance Primitives (IPP), and Data Analytic Acceleration (DAAL)) Libraries. Gennady holds a Ph.D. in Nuclear Physics from the Russian National Research Nuclear University.



Dmitry Sivkov is an Intel Technical Consulting Engineer with more than 20 years of experience in Computer Sciences and HPC. He has a Ph.D. in Applied Math. Dmitry is enabling and supporting Intel Cluster Tools for 11+ years with a lot of projects with Data Centers, Clouds, and HPC clusters.

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Gordon Brown is the Product Owner for oneAPI for NVIDIA and AMD at Codeplay Software, leading the team developing the NVIDIA and AMD backends to DPC++ and oneAPI libraries. He has been contributing to the SYCL specification for 10 years and has also contributed to ISO C++. He originally worked on Codeplay's proprietary implementation of SYCL; ComputeCpp, before later moving to work on DPC++; working with developers across a range of domains including HPC and automotive and has provided various conference talks trainings and tutorials.