

Hilton Tel Aviv - 5 March 2020


Join us for this special software development workshop day! A full day about the latest innovations in software development from Intel, to help you understand how the next generation Intel architectures, development tools and technologies will impact the future of Software Development, HPC and Machine Learning!

The workshop will also focus on the future Intel® oneAPI Toolkit, which aims at simplifying development across multiple architectures - especially CPUs and compute accelerators including GPUs and FPGAs - with uncompromised performance for diverse workloads!

Please bring your own Laptop / Notebook to participate to the Hands-on Labs in the afternoon! No software installation required.



AGENDA

Timing	Session
08:15 - 09:15	Registration & Light breakfast
09:15 - 09:30	Opening Remarks about Intel's Vision for Software Developers: What is going to happen?
09:30 - 10:15	Intel® Hardware Architecture for Software Developers: What's New? This session will offer in-depth insights into the current and future Intel® hardware platforms tailored to the needs of software developers, software architects, HPC and AI experts. We will cover the latest Intel® processors and the future Intel® GPU architecture.
10:15 - 11:00	Developing code for Intel® CPUs: how to achieve maximum performance in 2020 and beyond Learn how Intel® Software Development Tools will help you to achieve optimal performance in your High Performance Computing, Artificial Intelligence, and IoT projects. Includes a look at the new Intel® Parallel Studio XE 2020 tools which are designed to take advantage of the latest generation of Intel processors.
11:00 - 11:15	Coffee Break
11:15 - 11:45	 Software Developers: what you need to know about the Intel OneAPI project Hear about the latest update on the "Intel OneAPI" project: a unified programming model to simplify application development across diverse computing architectures. One API supports direct programming and API programming, and will deliver a unified language and libraries that offer full native code performance across a range of hardware, including CPUs, GPUs, FPGAs and AI accelerators.
11:45 - 12:15	Guest Presentation This session will be presented by a guest speaker from the software industry.
12:15 - 13:00	Lunch break
13:00 - 13:45	Hands-on Lab with the Offload Advisor: How to decide which parts of the code need to be offloaded? Learn how to use the Offload Advisor, a tool that allows you to collect performance predictor data in addition to the profiling capabilities of Intel® Advisor, and determine what code can be offloaded to a GPU, accelerating the performance of your CPU-based application.
13:45 - 15:15	Hands-on Lab: Introduction to Data Parallel C++ (DPC++) Data Parallel C++ is the language of oneAPI targeting multiple architectures, including CPU and compute accelerators like GPUs and FPGAs. It provides features needed to define data parallel functions and to launch them on different processing devices. Learn DPC++ programming basics on a simple vector addition example and dive deeper into programming in DPC++, including best practices you can put to use today and the iso3DFD* demo.
15:15 - 15:30	Coffee Break
15:30 - 17:30	Hands-on Lab: Case study on Iso3DFD. From serial to DPCPP version using intel tools In this last case study, we will demonstrate how to use offload advisor to select which loops can be offloaded. We will guide the user through the dpcpp implementation using local and global nd-range, playing with device selectors, adding blocking in the kernel and showing roofline model on the GPU.
17:30	Q&A