



# OpenACC Organization Unveils Expanded Vision to Ready HPC Community for Exascale

*Announces a series of efforts aimed at driving continued value including an updated specification, a new board member and full schedule of GPU Hackathons.*

DENVER, COLORADO, UNITED STATES, November 18, 2019 /EINPresswire.com/ -- Today, the OpenACC organization announced an expanded vision and mission to help the research and developer communities prepare for the era of exascale. Additionally, the Organization announced OpenACC 3.0, a newly elected Board member, as well as the 2020 schedule of global hackathons and bootcamps.

OpenACC is a directive-based programming model designed to provide a simple on-ramp to parallel computing on CPUs, GPUs, and other devices. The model was designed with usability, portability and performance in mind so that researchers could spend more time advancing science and less time programming.

## Focused on the Future of Accelerated Computing

With exascale computers promising to drive science and industry forward, it's clear that massive parallelism at the node level is the path forward. Scientists and engineers need highly productive programming environments to speed their time to discovery while also shoring up their skills in parallel and accelerated computing in order to fully leverage these next-generation systems.

The original charter of OpenACC.org is to develop and deliver the OpenACC specification, and to help educate and support the scientific community using OpenACC directives. To meet the changing needs of the community and prepare for exascale computing, the OpenACC organization mission is expanding, building on its philosophy of a user driven specification to create a bridge to heterogeneous programming. The Organization aims to achieve this through three areas of focus: participating in computing ecosystem development, providing hands-on training and education on state-of-the art programming models, resources and tools; and developing the OpenACC specification.

"The growth of OpenACC over the past year has been amazing, with over 200 OpenACC application ports now initiated, under way or in production," said Duncan Poole, president of OpenACC.org. "We had waiting lists for all 15 of our week-long GPU hackathons and sponsored over 20 GPU bootcamp training sessions worldwide in 2019. Feedback from these events has made it clear the OpenACC organization needs an expanded vision as we enter the Exascale era. In addition to evolving the OpenACC specification, we will operationalize our efforts on parallel computing training and education and lean in to DSLs and parallelism in standard C++ and Fortran as we strive to maximize both innovation and standardization of best practices in parallel programming."

## Introducing OpenACC 3.0

OpenACC 3.0 specification has just been approved. New user-requested features include: the addition of C18, C++17, and Fortran 2018 as supported base languages; defined support for lambdas in compute constructs; zero modifier for create and copyout data clauses; support for fat nodes with multiple devices, including cross-device synchronization in the wait directive and

wait runtime API routines; and more.

[View the full specification.](#)

Welcome Thomas Schulthess: OpenACC Board Member

OpenACC members have elected Thomas Schulthess, director of the Swiss National Supercomputing Centre (CSCS) and professor of computational physics at ETH Zurich, as the newest board member. A winner of the Gordon Bell Prize in both 2008 and 2009 with published works in 70 scientific publications, Dr. Schulthess's extensive expertise in high performance computing will help the Organization to continue to develop our strategy, offering resources and training that meet the research needs of their user community.

"Since my start as a physicist and a researcher, my passion for science led me to pursue approaches that allow new experiments to tackle new problems. We must harness technology to fuel the accelerated computing that enables researchers to push the envelope of simulation-based science," said Schulthess. "The expanded vision of the OpenACC organization created an opportunity for me to bring my experience to help continue the focus on the needs of the research community, maintaining high standards to push productive accelerated computing and training at all levels of the computational scientific journey."

2020 GPU Hackathons and Bootcamps: New Year, New Events and New Initiatives

For five years, OpenACC has spearheaded global hackathon events in collaboration with Oak Ridge National Laboratory and other leading research organizations. Participants represent distinguished scholars and preeminent institutions around the world such as Brookhaven National Laboratory, Massachusetts Institute of Technology (MIT), Helmholtz-Zentrum Dresden-Rossendorf (HZDR), ETH Zurich, University of Sheffield, Korea Institute of Science and Technology Information (KISTI), National Center for High-performance Computing (NCHC), and IIT Bombay among others.

2019 saw a record number of events with 15 GPU hackathons and over 20 of the newly introduced GPU Bootcamp short-format events across Europe, Asia, India and North America. This represents a 300% growth in the program--resulting in over 1250 people trained through hackathons, 900 people trained through bootcamps, and approximately 300 applications utilizing GPU-acceleration in part or completely--and underscores the increasing interest and need from the community for critical hands-on training.

Continuing the momentum, OpenACC organization has announced a full calendar of events for 2020, including 20 GPU hackathons and over 40 GPU bootcamps scheduled worldwide.

To support the exponential growth, the Organization is launching additional resources:

□ [www.gpuhackathons.org](http://www.gpuhackathons.org): A new, dedicated website with a streamlined design and enhanced functionality to provide easy access to essential information about the GPU hackathons and bootcamps; and

□ Mentor Nurture Program: The initiative is specifically designed to facilitate and encourage the professional development of mentors participating in the GPU hackathons and bootcamps. Details about the mentor nurture program will be forthcoming; applications are currently being accepted for mentors.

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