

# Accelerating Machine Learning Applications Using CUDA Graph and OpenACC

## Authors

Leonel Toledo and Antonio J. Peña (Barcelona Supercomputing Center)

## Abstract

We'll showcase the integration of CUDA Graph with OpenACC, which allows developers to write applications that benefit from parallelism from the GPU, as well as increasing coding productivity. Since many scientific applications require high performance computing systems to make their calculations, it's important to provide a mechanism that allows developers to exploit the system's hardware to achieve the expected performance. We will also explore the most important technical details regarding the integration of CUDA Graph and OpenACC. This allows programmers to define the workflow as a set of GPU tasks, potentially executing more than one at the same time. Examples will be provided using CUDA, C++ and OpenACC, it will be expected that registrants are familiar with at least the fundamentals of these programming languages.