



# GASPI

## GLOBAL ADDRESS SPACE PROGRAMMING INTERFACE TUTORIAL

March 2 – 3, 2017

VŠB - Technical University of Ostrava  
IT4Innovations building, training room 207

### LECTURER

Christian Simmendinger T-Systems Solutions for Research GmbH

In this tutorial we present an asynchronous data flow programming model for Partitioned Global Address Spaces (PGAS) as an alternative to the programming model of MPI. GASPI, which stands for Global Address Space Programming Interface, is a partitioned global address space API. The GASPI API is designed as a C/C++/Fortran library and focused on three key objectives: scalability, flexibility and fault tolerance. In order to achieve its much improved scaling behaviour GASPI aims at asynchronous dataflow with remote completion, rather than bulk-synchronous message exchanges. GASPI follows a single/multiple program multiple data (SPMD/MPMD) approach and offers a small, yet powerful API.

#### Thursday March 2, 2017

09:30	10:00	Registration
10:00	11:30	Introduction to GASPI
11:30	13:00	Lunch break
13:00	14:30	Execution model
14:30	15:00	Coffee break
15:00	16:30	Segments; One-sided communication
16:30	17:00	Coffee break
17:00	18:00	Collectives/Passive communication/Fault tolerance

#### Friday March 3, 2017

09:00	10:30	Interoperability with MPI
10:30	11:00	Coffee break
11:00	12:30	Efficient parallel programming: From bulk synchronous to fully asynchronous execution
12:30	13:45	Lunch break
13:45	15:00	Overlap communication/computation
15:00	15:15	Coffee break
15:15	16:30	Data dependency driven execution



More information and registration  
<http://training.it4i.cz/en/GASPI-03-2017>