



5th Heterogeneous Hardware & Software Alliance Workshop
Future Generation of Heterogeneous Computing
Co-Located with HiPEAC 2021 Conference
<https://www.hipeac.net/2021/budapest/>
20 January 2021, Budapest, Hungary

CALL FOR CONTRIBUTIONS

As the impact of heterogeneous computing is rapidly increasing, innovative architectures, algorithms, and specialised programming environments and tools are needed to efficiently use mixed and diversified parallel architectures. One of the major challenges to exploit their benefits, in data centric and emerging domains, is the complexity in designing and maintaining a software stack that can deliver such benefits. Developers need to fully understand the characteristics of different hardware configurations and software systems, as well as consider additional factors such as performance, security mixed-criticality and power consumption resulting from the heterogeneous system.

The alliance annual workshop is intended to foster academics, industries and EU funded projects venue to discuss ideas, share results and innovate in all theoretical and practical aspects of heterogeneous computing such as Heterogeneous architectures, parallel and distributed systems; programming models; middleware and runtime systems; modelling and optimisation; Applications on heterogeneous systems, including case studies. The workshop will feature an invited keynote, presentations and a panel discussion. The best presentations will be invited to submit an article to the Journal on Low Power Electronics and Applications – Special Issue on Power Constrained Computing Systems for Next Generation IoT, HPC/HPT Architectures.

Topics

Topics of interest include (but not limited to): Heterogeneous parallel and distributed systems; Heterogeneous multicore systems and architectures; On-chip and off-chip network architectures; Real-Time embedded systems; Programming models and runtime systems; Algorithms for heterogeneous systems; Interoperability of heterogeneous software environments; Scheduling and resource management; Energy efficiency; Security; Cloud computing; Edge computing; High Performance Exascale Computing; Case studies: Cyber physical systems of systems, big Data, data-intensive computing, deep learning, scientific computing.

Submission

Research and industrial talks will be reviewed by the organisers of the Workshop to ensure quality, relevance, and potential benefit from attendance. Researchers interested in presenting are invited to submit an abstract (up to 300 words) describing the topic of the proposed talk. Submissions must be in PDF format containing the title of the talk, the abstract, the name and affiliation of the presenter. Abstracts must be sent to the organizers by email. Presenters of accepted talks must register for the main HiPEAC 2021 Conference.

Important Dates

Submission Deadline: 30th October 2020
Notification of Acceptance: 20th November 2020

Organisers

Clara Pezuela – Atos, Spain
Karim Djemame – University of Leeds, UK

Clara.Pezuela@atos.net
K.Djemame@leeds.ac.uk

Programme Committee

Vassilis Prevelakis - Technical University of Braunschweig, Germany
Paolo Burgio - University of Modena and Reggio Emilia, Italy
Alberto Scionti – Links Foundation, Italy
Karim Djemame – University of Leeds, UK