



## **SPECIAL SESSION ON GPU COMPUTING** (<https://ppam.edu.pl/workshops>)

in conjunction with

**14th INTERNATIONAL CONFERENCE ON PARALLEL PROCESSING  
AND APPLIED MATHEMATICS**  
Gdansk, Poland, September 11-14, 2022  
(<https://ppam.edu.pl/>)

### **Overview:**

GPU programming now offers a full and mature ecosystem, with programming languages, numerical libraries, high level interfaces, annotation-based programming models, support in mathematical software, GPU scripting languages, and data parallel languages.

In addition, the evolution in the hardware has positioned graphics accelerators as a fundamental tool in deep learning with application in autonomous driving, smart cities, healthcare, high performance computing, virtual reality, etc.

By sharing their experiences on GPU programming, we hope that the participants of the session will gain a better understanding about which tools are good for which problem type and gain insights on the trade-offs between performance, coding comfort, and specialization. This session invites submissions that deal with practical applications that have successfully employed GPU libraries or high level programming tools. The focus may lie both on the development of the libraries or utilization of existing tools.

The session topics include, but are not limited to:

- GPU applications encoded with high level programming tools
- GPU library development and application
- Comparison of different programming abstractions on the same/similar applications
- Comparison of the same/similar programming abstractions on different Applications

- Performance and coding effort of high level tools against hand-coded approaches on the GPU
- Performance and coding effort on multi-core CPUs against GPUs utilizing programming abstractions
- Classification of different programming abstractions with respect to their best application areas
- Libraries and tools for transitioning from single-GPU to multi-GPU applications.

### **Submissions:**

The rules of PPAM conference apply. In particular:

- Papers will be refereed and accepted on the basis of their scientific merit and relevance to the conference topics.
- Regular papers are not to exceed 12 pages (LNCS style).
- Abstracts of accepted papers will be available during the conference in form of a brochure.
- Only papers presented at PPAM 2022 will be included into the proceedings, which is planned to be published after the conference by Springer in the LNCS series.

### **Session organizers:**

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### **IMPORTANT DATES:**

Submission of Papers:	<del>May 6,</del> May 20, 2022
Notification of Acceptance:	<del>June 17,</del> June 25, 2022
Camera-Ready Papers:	November 2, 2022