*Fourth Minisymposium*

## *on* HPC APPLICATIONS IN PHYSICAL SCIENCES

*in conjunction with 13th international Conference*
*on Parallel Processing and Applied Mathematics*
*Bialystok, Poland, September 8-11, 2019 ([PPAM 2019](#))*

Modeling and numerical simulations have become important tools in physical sciences and materials design. Significant results have been achieved in simulations of static and dynamic properties of the condensed and soft matter systems using the HPC resources. The Minisymposium is devoted, but not limited, to HPC applications in physical sciences and aims at addressing the following topics:

- scalability of the simulation tools in the HPC environment;
- the overlap between the *ab initio* and phenomenological modeling;
- non-classical dynamics in the low-dimensional magnetism;
- new approaches and simulations methods;
- new tools and environments in materials science computations.

Scientific success of this Minisymposium will result not only from an overview of high-performance computing in a variety of systems, but also from recognizing the limitations of the available theoretical tools and from the identification of challenging areas where new efforts will be required to further advance the field.

### PAPER SUBMISSION, ORAL PRESENTATIONS AND PUBLICATION

Original papers, not previously published or submitted for publication elsewhere, are invited for the Minisymposium. They should be prepared according to the Springer LNCS and PPAM 2019 rules (full paper, up to 10 pages, PDF file, draft version with an abstract) and submitted via the [PPAM](#) Conference submission system before *April 21, 2019*. All papers will be refereed and accepted on the basis of their scientific merit and relevance to the workshop topics.

The authors of accepted papers can feature their contributions in the special Minisymposium oral session. Only papers presented at PPAM 2019 will be included in the proceedings published after the conference by Springer in the series Lecture Notes in Computer Science.

### IMPORTANT DATES:

| | |
|---|---|
| **Submission of Papers:** | **April 21, 2019** |
| **Notification of Acceptance:** | **May 31, 2019** |
| **Camera-Ready Papers** | **November 2, 2019** |

### MINISYMPOSIUM CHAIRS / INQUIRIES

*Grzegorz Kamieniarz* ([gjk@amu.edu.pl](mailto:gjk@amu.edu.pl))
*Wojciech Florek* ([wojciech.florek@amu.edu.pl](mailto:wojciech.florek@amu.edu.pl))

Adam Mickiewicz University in Poznań, Poland

### PROGRAM COMMITTEE

| | |
|---|---|
| *Joan Adler* | Technion – Israel Institute of Technology, Israel |
| *Stefano Carretta* | University of Parma, Italy |
| *Andrzej Drzewiński* | University of Zielona Góra, Poland |
| *Larry Engelhardt* | Francis Marion University, USA |
| *Jacek Kitowski* | AGH University of Science and Technology, Poland |
| *Jaroslaw S. Kłos* | Adam Mickiewicz University, Poland |
| *Leeor Kronik* | Weizmann Institute of Science, Israel |
| *Krzysztof Kułakowski* | AGH University of Science and Technology, Poland |
| *Grzegorz Musiał* | Adam Mickiewicz University, Poland |
| *Jürgen Schnack* | Universität Bielefeld, Germany |
| *Jens-Uwe Sommer* | Leibniz Institute of Polymer Research, Germany |
| *Federico Totti* | University of Florence, Italy |
| *Kalliopi Trohidou* | NCSR "Demokritos", Greece |
| *Jacek Wojtkiewicz* | Warsaw University, Poland |