

## ***Minisymposium on HPC Applications in Physical Sciences***

The ***Minisymposium*** will be a part of the [12th International Conference on Parallel Processing and Applied Mathematics PPAM 2017](#), organized in Lublin, Poland, on September 10-13, 2017. This is the third time the ***Minisymposium*** is included in the PPAM Conference, whereas the previous events in the series were independent (International Seminar *Phase Transitions and Critical Phenomena*, Poznań, Poland, December 4-6, 1997) or organized within the PARA 2008 Workshop on State-of-the-Art in Scientific and Parallel Computing, Trondheim, Norway, on May 13-16, 2008 (*HPC Applications: Molecular Nanomagnets Simulations*).

### **MINISYMPOSIUM TOPICS**

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:

- a) scalability of the simulation tools in the HPC environment;
- b) the overlap between the *ab-initio* and phenomenological modeling;
- c) non-classical dynamics in the low-dimensional magnetism;
- d) new approaches and simulations methods;
- e) 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 AND PUBLICATION**

Abstracts and original papers are invited for the ***Minisymposium***. They should be prepared according to the Springer LNCS and PPAM 2017 rules and be submitted using the online submission system. Submissions will be refereed and accepted on the basis of their scientific merit and relevance to the workshop topics. Only papers presented at PPAM 2015 will be included in the proceedings, to be published after the conference by Springer in the LNCS series.

### **IMPORTANT DATES:**

***Submission of Abstracts and Papers:***      ***April 21, 2017***  
***Notification of Acceptance:***              ***May 31, 2017***  
***Camera-Ready Papers***                      ***November 15, 2017***

### **MINISYMPOSIUM CHAIRS**

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