2nd International Workshop on Theoretical Approaches to Performance Evaluation, Modeling and Simulation.

http://tapems.unex.es/tapems2017

TAPEMS 2017
May 14th-17th, 2017, Madrid, Spain.

Performance and an aspect of it, energy efficiency, has become a key issue in both high performance and embedded computing. The objective of the **2nd TAPEMS International Workshop on Theoretical Approaches to Performance Evaluation, Modeling and Simulation** is to bring together researchers and practitioners to discussing current advances and trends in theoretical approaches to the performance evaluation, modeling and analysis of parallel applications and algorithms on multicore clusters and heterogeneous platforms, including simulation. Three main areas are considered:

1. Performance modeling and evaluation. We pursue contributions on methodologies, metrics, formalisms and tools for the performance prediction and analysis of any subsystem of current machines, such as processor, communications, memory and I/O.

2. Modeling energy efficiency of communication runtimes. Power is considered the major impediment in designing the next-generation exascale systems, particularly affected by the cost of the communications. Current communication performance models predict communication completion times. We look for links between communication performance modeling in terms of both time and consumed energy.

3. Heterogeneous computing systems. Submissions in this area are encouraged to model workload and communication in order to optimize energy and performance in heterogeneous computing.

The workshop will be organized by the **University of Extremadura**, and will be held by the **CCGrid 2017 conference**, organized by University Carlos III, Madrid – Informatics Department, Computer Architecture and Technology.

The list of topics of interest for the workshop, includes (but is not limited to):

- Performance modeling, prediction and optimization of parallel algorithms and applications.
- Performance modeling and evaluation of communications in parallel applications.
- Theoretical strategies, methodologies and application of the theoretical aspects to the improvement of the performance.

- Performance analysis of parallel architectures and applications.
- Performance modeling and simulation of parallel algorithms and applications on heterogeneous systems.
- Performance modeling, prediction and optimization of communications, algorithms and applications on heterogeneous systems.
- Theoretical and practical approaches for load balancing on heterogeneous platforms.
- Performance evaluation and modeling of big data techniques.
- Theoretical and practical approaches to reduce the energy consumption in parallel systems.
- Modeling, prediction and measurement of energy consumption on parallel platforms.
- Modeling and analysis of energy consumption in relation to performance.
- Benchmarking and simulation of energy consumption in parallel applications on parallel and heterogeneous architectures.
- Application of the models to applications in different scientific fields.

Important dates:

Paper Submission Deadline: **December 8th, 2016**.

Author Notification: **January 15th, 2017**.

Camera-Ready Paper Due: **February 15th, 2017**.

Conference Dates: **May 14th-17th, 2017**.

Publication:

All papers need to be submitted electronically through the CCGrid 2017 conference website (https://www.easychair.org/conferences/?conf=ccgrid2017) with PDF format. Note that you must select the track: "TAPEMS 2017: International Workshop in Theoretical Approaches to Performance Evaluation, Modeling and Simulation" at the beginning of the submission procedure.

Submitted papers must not substantially overlap with papers that have been published or that are simultaneously submitted to a journal or a conference with proceedings. Papers must be clearly presented in English, and may not exceed 10 letter-size (8.5 x 11) pages including all figures, tables and references using the **IEEE format for conference proceedings.**

Accepted papers that are presented at the TAPEMS 2017 will be submitted to IEEE Xplore for publication and EI indexing and published in the IEEE/ACM CCGrid 2017 conference proceedings.

Venue:
TAPEMS is part of the CCGrid 2017 conference workshops. The conference will be held in Madrid, at **Melia Los Galgos Hotel**:
Calle de Claudio Coello, 139, Madrid 28006, Spain.
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Tel: (34) 91 5626600Fax: (34) 91 5627519

Organization:

Workshop chairs:

Juan A. Rico-Gallego (University of Extremadura, Spain)

Juan C. Díaz-Martín (University of Extremadura, Spain)

José D. García (University Carlos III, Spain)

Alexey L. Lastovetsky University College Dublin, Ireland)

Program Committee (temporary):

Marco Aldinucci (University of Torino, Italy)

Pedro Alonso Jordá (Univ. Polytechnic of Valencia, Spain)

Damián Álvarez Mallón (Jülich Supercomputing Center, Germany)

Hrachya Astsatryan (National Academy of Sciences, Republic of Armenia)

María Barreda (Univ. Jaume I, Spain)

Silvina Caíno Lores (University Carlos III, Spain)

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Juan L. García-Zapata (Univ. of Extremadura, Spain)

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José Gracia (HLRS, Germany)

Khalid Hasanov (IBM, Ireland)

Atanas Hristov (Univ. of Information Science and Technology, Macedonia)

Cristoph Kessler (University of Linkopig, Sweden)

Algirdas Lancinskas (University of Vilnius, Lithuania)

Rafael Mayo Gual (University Jaume I, Spain)

Konstantina Mitropoulou (University of Cambridge, United Kingdom)

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Didem Unat (Lawrence Berkeley National Laboratory, USA)

Beat Wolf (School of Engineering of Fribourg, Switzerland)