The 19th Heterogeneity in Computing Workshop HCW 2010

Anne Benoit, Program Chair

HCW 2010 is sponsored by the U.S. Office of Naval Research and by the IEEE
Computer Society, through the Technical Committee on Parallel Processing TCPP

Monday, April 19, 2010

- After 18 successful editions of HCW,

HCW 2010

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- ... welcome to Atlanta for HCW 2010 ☺

... but without me 🙁 ...

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nature is stronger than us ;-)

HCW 2010: People

- General Chair:
  David A. Bader, Georgia Institute of Technology, U.S.A.

- Program Chair:
  Anne Benoit, Ecole Normale Supérieure de Lyon, France

- Vice Program Chair
  for "Robust Scheduling and Fault-Tolerant Techniques":
  Qin Zheng, Inst. of High Performance Computing, Singapore

- Steering Committee Chair:
  H. J. Siegel, Colorado State University, U.S.A.

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- 17 submissions

- Reviewed by 3 to 4 members of the technical program committee, which includes 39 distinguished researchers from 14 countries

- 10 accepted papers

- One invited speaker, Richard Linderman (US Air Force Research Laboratory)

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HCW 2010: The program

- 9.00-10.00: Keynote talk *(H.J. Siegel)*
  Architectural Considerations for a 500 TFLOPS
  Heterogeneous HPC, R. Linderman

- 10.00-10.30: Break

- 10.30-12.00: Session 1: Evaluation of Heterogeneous
  Environments *(A. Benoit)*
  - Characterizing Heterogeneous Computing Environments using
    Singular Value Decomposition, A. Al-Qawasmeh,
    T. Maciejewski, H. J. Siegel
  - Statistical Predictors of Computing Power in Heterogeneous
    Clusters, R. Chiang, T. Maciejewski, A. Rosenberg, H. J. Siegel
  - A First Step to the Evaluation of SimGrid in the Context of a
    Real Application, A. Guermouche, H. Renard

- 12.00-1.30: Lunch (on your own)

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- 1.30-3.00: Session 2: Robust Scheduling and Fault-Tolerant Techniques *(I. Banicescu)*
    - Runtime Adaptation for DAGs with Uncertainties in Heterogeneous Computing Systems, Q. Zheng
    - Unibus: Aspects of Heterogeneity and Fault Tolerance in Cloud Computing, M. Slawinska, J. Slawinski, V. Sunderam
    - Robust Resource Allocation of DAGs in a Heterogeneous Multicore System, L. Briceno, J. Smith, H. J. Siegel, T. Maciejewski, P. Maxwell, A. Al-Qawasmeh, R. Chiang, J. Li, R. Wakerfield
- 3.00-3.30: Break

HCW 2010: The program

- 3.30-5.30: Session 3: From Heterogeneous Multi-Cores to Applications (Q. Zheng)
    - Decentralized Dynamic Scheduling across Heterogeneous Multi-core Desktop Grids, J. Lee, P. Keleher, A. Sussman
    - Custom Built Heterogeneous Multi-Core Architectures: Breaking the conventions, N. Venkateswaran, K. Saravanan, N. CN, A. Vasudevan, B. Subramaniam, R. Mukundarajan
    - Improving MapReduce Performance via Data Placement in Heterogeneous Hadoop Clusters, J. Xie, S. Yin, X. Ruan, Z. Ding, J. Majors, X. Qin
    - An Empirical Study of a Scalable Byzantine Agreement Algorithm, O. Oluwasanmi, J. Saia, V. King

- 5.30: End of workshop

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- All 39 PC members and other external reviewers for providing timely and thoughtful reviews

- IPDPS organizers, and in particular the IPDPS 2010 Workshops Chair, Umit Catalyurek

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