

# 2<sup>nd</sup> HPC Advisory Council Spain Conference

## Welcome!

**HPC Advisory Council  
Spain Conference 2013**

September 12th, 2013  
Campus Diagonal Nord  
Barcelona, Spain

**WIFI Access:  
SSID: XSF-UPC  
[www.upc.edu](http://www.upc.edu)  
Enter as Guest**

# Welcome!

## Gold Sponsors



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## Media Sponsors



- 9:00-9:30**      Gathering
- 9:30-9:40**      Opening session: HPC Advisory Council activities (Gilad Shainer, HPC Advisory Council)
- 9:40-10:00**    Opening session: The Spanish Supercomputing Network (Sergi Girona, Barcelona Supercomputing Center)
- 10:00-11:00**    Keynotes: High-Performance Interconnection Networks on the Road to Exascale HPC: Challenges and Solutions (Pedro J. Garcia and Jesus Escudero, Universidad de Castilla-La Mancha and Jose Duato, Universitat Politcnica de Valencia)
- 11:00-11:15**    Coffee break
- 11:15-12:00**    Virtual machine migration with SR-IOV over InfiniBand (Vangelis Tasoulas, Simula Research Laboratory)
- 12:00-12:30**    Sponsor presentation (Dell)
- 12:30-13:30**    Lunch
- 13:30-14:00**    Sponsor presentation (Boston)
- 14:00-14:45**    Dragonfly topology considerations for large scale HPC systems (Olaf Sem-Jacobsen, Simula Research Laboratory )
- 14:45-15:30**    rCUDA: Towards energy-efficiency in GPU computing by leveraging low-power processors and InfiniBand interconnects (Federico Silla, Technical University of Valencia)
- 15:30-16:00**    Coffee Break
- 16:00-16:30**    Supercomputers and Biomechanics (Mariano Vazquez, BSC HPC Mechanics Group Manager)
- 16:30-17:00**    Closing session: The future of MPI (Richard Graham, MPI Forum Member of the Steering Committee)
- 17:00**            Adjourn and Prize Raffle

- **The workshop goals**
  - Education, training, solutions, futures
- **One day, many subjects**
  - We encourage live discussions
  - We want to have all sessions start in time
  - There are breaks for offline discussions
- **Speakers – make sure Brian has your slides!**
- **And the raffle...**



# HPC Advisory Council Members



Dell™ PowerEdge™ R720xd/R720  
32-node cluster



HP ProLiant SL230s Gen8  
4-node cluster



HP Cluster Platform 3000SL  
16-node cluster



Dell™ PowerEdge™ C6145  
6-node cluster



Dell™ PowerEdge™ R815  
11-node cluster



Dell™ PowerEdge™ M610  
38-node cluster



Dell™ PowerEdge™ C6100  
4-node cluster

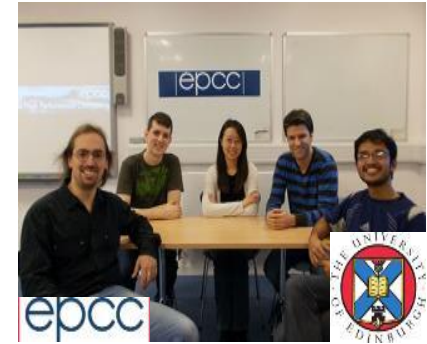


InfiniBand-based Storage (Lustre)



- **University award program**
  - Universities are encouraged to submit proposals for advanced research
  - Once / twice a year, the HPC Advisory Council will select a few proposals
- **Selected proposal will be provided with:**
  - Exclusive computation time on the HPC Advisory Council's Compute Center
  - Invitation to present in one of the HPC Advisory Council's worldwide workshops
  - Publication of the research results on the HPC Advisory Council website
- **2010 award winner is Dr. Xiangqian Hu, Duke University**
  - Topic: "Massively Parallel Quantum Mechanical Simulations for Liquid Water"
- **Spring 2011 award winner is Dr. Marco Aldinucci, University of Torino**
  - Topic: "Effective Streaming on Multi-core by Way of the FastFlow Framework"
- **Fall 2011 award winner is Jacob Nelson, University of Washington**
  - "Runtime Support for Sparse Graph Applications"
- **2012 award winner is Antonis Karalis**
  - Topic: "Music Production using HPC"
- **To submit a proposal – please check the HPC Advisory Council web site**

# ISC'13 – Student Cluster Challenge Teams





# ISC'13 Student Cluster Challenge





Submission for Participation is Open



# Contact Us

**Web:** [www.hpcadvisorycouncil.com](http://www.hpcadvisorycouncil.com)

**Email:** [info@hpcadvisorycouncil.com](mailto:info@hpcadvisorycouncil.com)

**Facebook:** <http://www.facebook.com/HPCAdvisoryCouncil>

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