

News

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Six of the world's largest supercomputing centres meet in Barcelona

The JLESC meeting was extremely successful and gave a great opportunity to a lot of BSC researchers to interact with top senior researchers from leading institutions

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BSC in six H2020 Centres of Excellence on HPC Applications

Funding for eight centres is currently under negotiation. BSC leads one of the proposed centres and participates in five more

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ESADE and BSC strengthen ties between science and business

The agreement will foster collaboration between ESADE and BSC with the aim of exploring ways to bring scientific research projects to the market

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Innovative embedded architecture for HPC made in Europe

After three years of intensive research effort, the team installed a two-rack prototype which is now available to the Mont-Blanc consortium partners

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Big Data and climate change

BSC performs research into hardware and software for Big Data. Weather and climate studies are a clear case of large amount of data that are required to make a detailed prediction

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Spotlight on...

BSC celebrates its 10th Anniversary



Over 500 people, including BSC staff and various representatives from science, politics and industry, attended the 10th anniversary event organised April 1st. The event showed the centre's intention to continue working at the service of science and society.

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Directors' View



I would like to take this opportunity to highlight two important milestones for the BSC which have been reached in the past few months.

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Events and Training



Jul 10 Energy Efficient Computing Systems
10 July 2015, Barcelona

Jul 12 ISC High Performance
12 July 2015, Frankfurt

Jul 17 Towards Energy-Efficient Computing: Adaptive Management Strategies from Software to Systems
17 July 2015, Barcelona

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Inside BSC



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Directors' View



I would like to take this opportunity to highlight two important milestones for the BSC which have been reached in the past few months. One is the second meeting of the BSC Scientific Advisory Board (SAB) at the end of March. Ten^[1] world-leading scientists and science strategists came together for two days to listen to the BSC's scientific output over the past three years and its plans for the future. In their report, they noted that "The BSC provides Spain with a means of securing and sustaining leadership in science and technology through HPC-based science, thus continuing to maintain and extend the nation's visibility and impact throughout Europe and the world". They highlighted the centre's role in education and in helping to shape the future of supercomputing, and they advised the centre to increase the focus on co-design as well. They also warned BSC's patrons that sustained investment in the centre, its people and its infrastructure will be needed in order to maintain this leading position.

We plan to take heed of the comments made by the SAB in order to further improve and ensure that this success continues in the future.

The second milestone concerns the results of the EC's call on Centres of Excellence (CoEs) for HPC Applications. The CoEs are one of the three pillars of the EU HPC ecosystem; the others being PRACE (providing the infrastructure) and the European Technology Platform for HPC (providing European hardware and system software technology). As you know, we are a Hosting Member of PRACE and Founding Partner of the ETP. Eight CoEs have been awarded, and these user-centric initiatives will focus on ensuring that HPC applications to address scientific, industrial and societal challenges will take full advantage of developments in hardware and system software. BSC participates in six of these eight centres and it leads one of them, called PoP, on Productivity and Performance Optimisation. BSC is a partner in five other centres covering Materials (2 centres); Biomolecular Research; Weather and Climate, and Energy.

BSC's significant success in the CoE call reflects similarly good results in H2020 as a whole. I would like to congratulate everyone on these excellent results.

Francesc Subirada, BSC Associate Director

[1] Prof Dr Achim Bachem, Former Chairman of the Board of Directors at Forschungszentrum Jülich, Germany; Dr Catherine Rivière, Présidente Directrice Générale to the Grand Equipement National de Calcul Intensif, France; Dr Paul Messina, Director of Science, Argonne Leadership Computing Facility, US; Dr Satoshi Matsuoka, Professor of the High Performance Computing Systems Group, Tokyo Institute of Technology; Dr Horst D. Simon, Associate Laboratory Director for Computing Sciences, Lawrence Berkeley National Laboratory; Prof Dr Guy Brasseur, Senior Scientist, Max Planck Institute for Meteorology; Prof Janet Thornton, Director, European Bioinformatics Institute Hinxton; Dr Thomas Zacharia, Executive Vice President of Research and Development, Qatar Foundation; Prof Manuel Peitsch, Chairman of Board of Directors, Swiss Institute of Bioinformatics; and Prof Leonard Barrie, Bolin Centre for Climate Research at Stockholm University.

Calendar of Events and Training

Jul 10 Energy Efficient Computing Systems
10 July 2015, Barcelona

Jul 12 ISC High Performance
12 July 2015, Frankfurt

Jul 17 Towards Energy-Efficient Computing: Adaptive Management Strategies from Software to Systems
17 July 2015, Barcelona

Aug 10 1st High Performance Graph Mining workshop
10 August 2015, Sydney

Sept 22 9th RES Users' Conference & 4th HPC Advisory Council Spain Conference
22 September 2015, Barcelona

Oct 18 SEG 2015
18 October 2015, New Orleans

Nov 15 SC15
15 November 2015, Texas

Nov 16 2nd Workshop on Best Practices in HPC Training, SC15
16 November 2015, Texas

News

Six of the world's largest supercomputing centres meet in Barcelona

Top researchers from six of the largest supercomputing centres in the world, together in the Joint Laboratory for Extreme-Scale Computing (JLESC), met in Barcelona to discuss the software challenges for future supercomputers. The workshop took place from June 29th to July 1st.

Jesús Labarta, Director of Computer Sciences Department: "The JLESC meeting at Barcelona was extremely successful and gave a great opportunity to a lot of BSC researchers to interact with top senior researchers from the leading institutions involved in JLESC. Presentations provided a holistic view of the activities at the different institutions in topics of interest for the JLESC. We also had very productive technical discussions on ongoing collaborations and to plan new ones. It was the kind of "melting pot" that is necessary to build strong interactions and links that will lead to very fruitful cooperations"



The Joint Laboratory for Extreme Scale Computing includes researchers from the [French Institut National de Recherche en Informatique et en Automatique](#) (France), the [University of Illinois at Urbana-Champaign's National Center for Supercomputing Applications](#) (US), [Argonne National Laboratory](#) (US), [Barcelona Supercomputing Center](#) (Spain), [Julich Supercomputing Center](#) (Germany) and [Riken/AICS](#) (Japan).

BSC in six H2020 Centres of Excellence on HPC Applications

As supercomputers become ever larger and more powerful, HPC application codes need to be developed, optimized and scaled accordingly in order to take full advantage of the hardware. This was the idea behind the EC H2020 call for Centres of Excellence (CoEs) on HPC Applications. Funding for eight centres is currently under negotiation. BSC leads one of the proposed centres and participates in five more. This is a fantastic result and is a testament to the work that the centre has been doing over the past ten years in bringing together computer and computational science under one roof.

If negotiation is successful, Jesús Labarta and Judit Giménez will lead the centre on Performance Optimization and Productivity (POP) which will diagnose problems with codes and point to improvements to be made. The other centres under negotiation in which BSC participates are on Energy, Biomolecular Research, Weather and Climate, Materials Discovery and Materials Design.

With these results, BSC reinforces its strategic positioning in the EU HPC Ecosystem. The centre already has a prominent role in PRACE as well as the ETP4HPC.

Further information [here](#)



News

ESADE and BSC strengthen ties between science and business

ESADE and BSC have agreed on lines of collaboration that will facilitate scientific progress by bringing science and business closer together. The agreement opens up the possibility of the two institutions jointly organising educational programmes, sharing information in order to undertake European projects, advising one another, and launching other cooperation initiatives.

Francesc Subirada, Associate Director of BSC, commented: “Like other cutting-edge research centres in Spain, BSC produces top-tier knowledge and technology that can be transformed into economic and social value. We are confident that collaboration with ESADE will enable us to accelerate this transfer process and establish direct contact between our scientists and business experts”

Further information [here](#) (in Spanish)



Innovative embedded architecture for HPC made in Europe

Early in February, BSC successfully deployed the **Mont-Blanc** prototype. After three years of intensive research effort, the team installed a two-rack prototype which is now available to the Mont-Blanc consortium partners. This has been a formidable challenge as this is the first time that a large HPC system based on mobile embedded technology has been deployed and made fully operational to a scientific community composed of scientists of six of the most important research centres in Europe.

Installed in the Torre Girona chapel, the Mont-Blanc prototype is made up of a total of two racks containing 8 standard BullX chassis, 72 compute blades fitting 1080 compute cards, for a total of 2160 CPUs and 1080 GPUs.

Further information [here](#) | Watch video [here](#)



Big Data and climate change

Barcelona Supercomputing Center performs research into hardware and software for Big Data. We carry out research projects that require large quantities of data. Weather and climate studies are a clear case of large amount of data that are required to make a detailed prediction.

Every time a model reproduces the global changes in a single decade it generates between 135 TB (terabytes) and 5 PB (petabytes) of data.

Further information about Big Data and climate change in the following video. We hope you enjoy it!

Watch video in [English](#) and in [Catalan](#)



Photo News



Take a look at the new institutional BSC video
[\[Video\]](#)



2nd Conference on Cooperation between Catalonia
and CONACYT
[\[info in Spanish\]](#)



BSC at Sónar+D with “We know what you did last
Sónar”
[\[info\]](#)



2nd International BSC Doctoral Symposium 2015
[\[info\]](#)

Spotlight on...

BSC celebrates its 10th Anniversary

Over 500 people, including BSC staff and various representatives from science, politics and industry, attended the 10th anniversary event organised April 1st. The event showed the centre's intention to continue working at the service of science and society.

Various representatives from science, politics and industry congratulated BSC on its 10th anniversary. This [video](#) includes 26 testimonials (listed in speaking order):

Andreu Mas-Colell, Carmen Vela, Antoni Brufau, Pedro Morenés, Bernard Bigot, John Hennessey, Yang Yuanqing, Lino Barañao, Rajeeb Hazra, Valentí Fuster, Jen-Hsun Huang, Michele Parrinello, Erich Clementi, Juan Ignacio Cirac, Orlando Ayala, Álvaro Giménez, John R. White, Antoni Massanell, Irene Qualters, Masahiko Yamada, Philippe Vannier, Joan Massagué, Carlos Moedas, Artur Mas and Mariano Rajoy.

Further information [here](#) (in Spanish)



Congratulations



Summary of the event



Continue reading →

Spotlight on...



You can find all the pictures of the event in the BSCCNS folder on the share system:

`\\share.bsc.es\bccns\Communications\Photos\2015\10anniversary`



Inside BSC

BSC Newcomers

We would like to welcome staff who have joined the centre over the last few months and we take this opportunity to inform you that we are distributing the Welcome Manual to all newcomers. The electronic version of the Welcome Manual is available for download on the intranet:

<https://intranet.bsc.es/en/node/2212>



**FCO. JAVIER
CONEJERO**
Senior Researcher
Computer Science Dpt.



GUILLEM FRANCES
Junior Developer
CASE Dpt.



MARC SIQUIER
Junior Developer
Computer Science Dpt.



CRISTIAN MORALES
User Support
Operations Dpt.



DAVID MODESTO
Postdoctoral Researcher
CASE Dpt.



CLAUDIO MARQUEZ
Junior Developer
CASE Dpt.



OSCAR TRULLOLS
Junior Developer
CASE Dpt.



ALBERTO HUELAMO
Junior Developer
Computer Sciences Dpt.



MILICA MRDAKOVIC
Junior Developer
Computer Sciences Dpt.



IGNACIO SOTERAS
Postdoctoral Researcher
Life Sciences Dpt.



MARIA TOTH
Research Project Manager
Management Dpt.



JAVIER GARCIA
Postdoctoral Researcher
Earth Sciences Dpt.



ISABEL MARTINEZ
Research Project Manager
Management Dpt.



DAVID FUSTE
Junior Developer
CASE Dpt.



BLANCA CREUS
HR Support Officer
Management Dpt.

FELLOWSHIPS



SANDRA CORELLA
Undergraduate Student
Computer Sciences Dpt.



JUAN FCO. MARTINEZ
Undergraduate Student
Computer Sciences Dpt.



DAVID ZARAGOZA
PhD Student
Computer Sciences Dpt.



ARTEM CHERKASHIM
Undergraduate Student
Computer Sciences Dpt.



ISAAC SANCHEZ
Master Student
Computer Sciences Dpt.



BENJAMIN SCHMITT
Master Student
CASE Dpt.



JAUME BOSCH
Undergraduate Student
Computer Sciences Dpt.



NICOLA CADENELLI
PhD Student
Computer Sciences Dpt.



POL ALVAREZ
Undergraduate Student
Computer Sciences Dpt.



MIQUEL VIDAL
Undergraduate Student
Computer Sciences Dpt.

HR Excellence in Research

The European Commission grants BSC the distinction for commitment to excellence in its **HR Strategy for Research**. This recognition confirms the commitment of the centre to the principles of the **European Charter for Researchers** and the **Code of Conduct** for the Recruitment of Researchers. With HR Strategy for Researchers BSC wants to keep sustaining the best framework and environment for research excellence, maintaining and improving by adopting international best practices and high-quality standards.

Further information [here](#)

Let's stay connected with BSC Folks!

The **BSC Folks project**, launched in 2015 to coincide with the centre's 10th anniversary, aims to act as a meeting point for researchers and other staff who have worked at BSC.

Since BSC was founded in 2005, many people have contributed to the centre's growth through their skills and experience. BSC Folks is intended to act as a platform through which they can keep in touch.



Visit BSC Folks website! <http://folks.bsc.es/>

Did you know...

where CASE department is located?

Since June, CASE department is located on the 3rd floor of Nexus II. If you have any doubt about their work place or telephone number you can check it on the Intranet:

<https://intranet.bsc.es/>



XEVI ROCA
Marie Curie Postdoctoral Researcher
CASE Dpt.

Marie Curie Fellowships programme are European research grants available to researchers regardless of their nationality and field of research. This programme promotes excellence and innovation in Europe. The last Marie Curie Fellowship who joined BSC is Xevi Roca as an experienced researcher.