7th INTERNATIONAL INDUSTRIAL SUPERCOMPUTING WORKSHOP

Barcelona Supercomputing Center

September 22-23, 2016

AGENDA

Thursday, September 22: Update on industrial HPC programs worldwide

Time	Organization	Presenter/s	
09:00-09:10	Welcome	Mateo Valero	
09:10-09:30	30 second introductions	All atendees	
09:30-09:55	Hartree Center	Alison Kennedy	UK
09:55-10:20	Barcelona Supercomputing Center	Jose María Cela	Spain
10:20-10:45	National Center for Supercomputing Applications	Seid Koric, Ahmed Taha, Madhu Vellakal	USA
10:45-11:10	IBM	Elisa Martín	Spain
11:10-11:30	*Coffee break*		
11:30-11:55	Numerical Algorithms Group NAG	Andrew Jones	UK
11:55-12:20	Center for High Performance Computing South Africa	Werner Janse van Rensburg	South Africa
12:20-12:45	SURFsara	Maurice Bouwhuis	Netherlands
12:45-13:10	Hartree Center	Michael Gleaves	UK
13:10-14:10	*Lunch*		
14:10-14:35	Korea Institute of Science and Technology Information	Tae Ho Yoon	Korea
14:35-15:00	National Supercomputing Center Singapore	Jon Lau	Singapore
15:00-15:25	NACAD HPC Center Univ Federal do Rio de Janeiro	Alvaro Coutinho	Brazil
15:25-15:50	ININ and Cinvestav-Abacus	Jaime Klapp	Mexico
15:50-16:10	*Coffee break*		
16:10-16:35	Lawrence Livermore National Laboratory	Wayne Miller	USA
16:35-17:00	IT4Innovations	Branislav Jansik	Czech Republic
17:00-17:25	Edinburgh Parallel Computing Centre	Paul Graham	UK
17:25-17:50	National Computational Infrastructure	Allan Williams	Australia
17:50-18:05	Barcelona Supercomputing Center	Gina Alioto	Spain
18:05-18:15	Discussions and wrap up		
20:00-21:30	*Social dinner in Hotel Barcelo Raval*		

Friday, September 23: HPC in industry

Time	Organization	Presenter/s	
09:00-09:05	Welcome		
09:05-09:30	Idiada	Cristina Canela	Spain
09:30-09:55	Intersect360 Research	Addison Snell	USA
09:55-10:20	SICOS BW GmbH	Andreas Wierse	Germany
10:20-10:45	Constelcom	Nicolas Tonello	UK
10:45-11:15	*Coffee break*		
11:15-11:40	HPCnow!	Pere Puigdomenech	Spain
11:40-12:05	University of Balearic Islands	Joan Masso	Spain
12:05-12:30	KTH Royal Institute of Technology	Johan Jansson	Sweden
12:30-12:55	El Ranchito	Javier Mansilla	Spain
12:55-13:20	Discussions and wrap up		
13:20-14:20	*Lunch*		
14:30-15:30	*Marenostrum visit*		

VENUE

Barcelona Supercomputer Center
Address: Calle Jordi Girona 29, 08034 - Barcelona (Spain)
http://www.bsc.es/about-bsc/contact-us/how-to-find-us
Workshop room: Building C6, room E-106 (just 100 meter away from BSC)

TALKS

Alison Kennedy, Director of Hartree Centre at STFC, UK

Talk: "Partnership for Advanced Computing in Europe (PRACE)"

Alison Kennedy joined the Hartree Centre as Director in March 2016. The Hartree Centre provides collaborative research, innovation and development services that accelerate the application of HPC, data science, analytics and cognitive techniques, working with both businesses and research partners to gain competitive advantage. Prior to joining Hartree, she worked in a variety of managerial and technical HPC roles at EPCC for more than 23 years. Alison is also Chair of the Board of Directors of the Partnership for Research Computing in Europe (PRACE) and sits on the Executive Board of EUDAT, the Collaborative Research Data Infrastructure.

José María Cela, Department Director at Barcelona Supercomputing Center, Spain

Talk: "HPC for Energy Industry"

José M. Cela is PhD. in Telecommunication Engineering from Universitat Politècnica de Catalunya (UPC) and Professor of Computer Architecture at same university since 1996. He is director of the Department of Computer Applications in Science and Engineering at the Barcelona Supercomputing Center (BSC) since 2007. He has directed more than 25 R&D projects, has published over 40 articles and has participated in almost a 100 international conferences. His research is related to numerical simulation in engineering and high performance computing (HPC). In recent years, his research has focused on the energy sector. He directs the joint research center Repsol-BSC. In addition, he is responsible for the macro-research project with Iberdrola renewables and several other projects in the field of fusion energy.

Seid Koric, Technical Program Manager at National Center for Supercomputing Applications, USA

Talk: "NCSA Industry – Overview, Computational Breakthroughs and Collaborations"

Dr. Koric has more than 17 years of experience at the National Center for Supercomputing Applications (NCSA), conducting cutting-edge applied research and providing consulting for the national academic and industrial computational communities on the center's high-performance computing (HPC) platforms. Dr. Koric is currently the technical program manager for the private sector program (PSP) at NCSA - the largest industrial HPC outreach in the world. Dr. Koric is leading research projects on the NCSA's peta-scale high performance computing system of Blue Waters that aim to demonstrate the scalability of engineering industrial applications on the peta and even potentially exa-scale computing level. He has achieved new world records in parallel scaling with both commercial and academic finite element codes in 2014 and 2015.

Elisa Martín Garijo, Chief Technology Officer at IBM Spain, Spain

Talk: "High Performance Analytics, a new evolution for HPC world"

Elisa Martin Garijo is Chief Technology Officer for IBM Spain, Portugal, Greece and Israel, a Distinguished Engineer, and a member of the Leadership team of the IBM Academy of Technology. In her CTO role, Elisa leads technology and innovation in the country with the main objective of stimulating smart solutions in Spanish companies and institutions using technology and innovation as drivers. In this role her responsibility is to transmit innovative experiences and technology to enterprises and society, and bringing value by connecting clients with IBM Research.

In recent years she has been linked to smart city projects in Madrid, Malaga, in the Metropolitan Area of Barcelona and with the University of Cantabria. She is a member of the Technology Supercomputing Center Management Board, a research initiative between IBM and the National Supercomputing Center (BSC-CNS) located in Barcelona. She also belongs to the management team of the Large Systems and Supercomputing Department created by IBM and Autonomous University of Madrid.

As specialist in large company systems, web architecture and application integration, she has been involved in the design and kick-off of multi-channel solutions, company/corporate architecture and specific growth/development systems. Previously, she headed Architecture and Technology in the line of negotiations for Business Consulting Services of IBM Spain. As Chief Architect she successfully led the Architecture, developing and integrating the Application System for the Sydney 2000 Olympic Games. She has extensive experience and leadership in the fields of technology, data management, IT infrastructure, systems administration and application development.

As a member of IBM's Academy of Technology Leadership team, Elisa participates in investigative studies on international and national levels. She holds two patents and several written collaborations / studies about technical products and processes. As an executive, she is responsible for maintaining excellence and vitality in the technical community of SPGI IMT supporting the second IBM value, "Innovation that Matters", for clients and society.

Andrew Jones, Vice-President for Strategic HPC Consulting at the Numerical Algorithms Group, UK

Talk: "Experiences of Measuring Industry HPC Performance, Cost and Value"

Abstract:
This talk will discuss why it is important to measure High Performance Computing, and how to do so. The talk covers measuring performance, both technical (e.g., benchmarks) and non-technical (e.g., utilization); measuring the cost of HPC, from the simple beginnings to the complexity of Total Cost of Ownership (TCO) and beyond; and finally, the daunting world of measuring value, including the dreaded Return on Investment (ROI) and other metrics. The talk is based on NAG HPC consulting experiences with a range of industry HPC users and others. This is not a sales talk, nor a highly technical talk. It should be readily understood by anyone involved in using or managing HPC technology.

Andrew Jones is the Vice-President for Strategic HPC Consulting at the Numerical Algorithms Group. Andrew has a degree in Physics from the University of Manchester. He worked for several years in the UK defence sector. This included research developing and applying computational methods, advisory

roles, aerospace aspects, and significant use of HPC systems. In 2002, he joined the supercomputing centre at the University of Manchester, eventually becoming Head of HPC. During his time at Manchester, Andrew helped to lead the UK's CSAR national academic supercomputing service, the national grid computing service, and various university HPC facilities, including two datacentre transitions. In 2008, Andrew joined NAG to lead the growth of the HPC Consulting and Services business at NAG. NAG's HPC Consulting and Services business provides impartial experienced based advice to HPC users in industry, government and academia, including strategy, technology planning, procurement, service delivery and more. NAG's HPC business also provides HPC software engineering services - porting, parallelizing, scaling and optimizing customer application codes to deliver improved science and business capabilities on HPC platforms. The HPC business is orthogonal to NAG's well-known math library and compiler business but each benefits from the strengths and experiences of the other. Andrew is also the lead consultant for many HPC projects with NAG's consulting and services customers. Andrew has written numerous articles for various HPC publications and other media, and is active on twitter as @hpcnotes.

Werner Janse van Rensburg, Research Manager at Centre for High Performance Computing, South Africa

Talk: "Centre for High Performance Computing (CHPC) Industry Program: A South African Perspective"

Abstract:
The Centre for High Performance Computing (CHPC) is South Africa's national supercomputing facility, which is funded by the South African Governmental Department of Science and Technology (DST) and administered by the Council for Industrial and Scientific Research (CSIR). The CHPC provides High Performance Computing (HPC) infrastructure for the South African research community (both academic and private sector) to enable new forms of scientific and industrial development. The presentation will provide an overview of initiatives and activities pursued in promoting commercial HPC use of CHPC infrastructure. Both the challenges and successes associated with this will be discussed, with identification of aspects that may be unique to South Africa. (www.chpc.ac.za)

Dr Janse van Rensburg obtained his PhD in Chemistry at the University of the Free State, South Africa in 2001 followed by an MSc in Computational Chemistry from Cardiff University, Wales, in 2002. He worked as a computational chemist at the petrochemical company, SASOL, for more than 13 years where he was responsible for the successful management of the SASOL industrial computational chemistry research strategy, resource acquisition (hardware and software), national and international university research collaboration, leading the SASOL computational chemistry group and acted as industry HPC representative. In 2014 he took up the position of Research Manager at the Centre for High Performance Computing (CHPC), Cape Town, South Africa, responsible for HPC research application support to users, executing the research support strategy of the CHPC, supervising the in-house research application scientists and engineers and fulfilling the human capital development (HCD) initiatives of the CHPC.

Maurice Bouwhuis, Head Community Support and Service Management at SURFsara, Netherlands

Talk: "Industrial engagement in the Netherlands"

Maurice Bouwhuis (1969) obtained a PhD in physics from the University of Utrecht while working at the National Institute for subatomic physics Nikhef in the area of experimental nuclear physics. He has worked as a post-doc in the US and at a high-energy physics laboratory in Hamburg, Germany, where he was part of the management of the HERMES experiment. During this time his interest shifted from pure experimental physics to large-scale data processing and computation.

Maurice Bouwhuis joined SARA in 2004, first as a senior consultant and from 2006 as leader of the 'eScience & Cloud Services' group. This group aims to support scientists with the deployment of advanced ICT, and is up to date with all major scientific disciplines. He currently is the Relations and Service Manager for SURFsara. Maurice has held leadership positions in National projects like BiGGrid and the BioAssist program of the Netherlands Bioinformatics Centre, as well as in international projects like EGI, EUDAT and Fortissimo.

Michael Gleaves, Deputy Director of the Hartree Centre, UK

Talk: "Smarter innovation at scale"

Michael Gleaves is Deputy Director of the Hartree Centre, which was created to deliver competitive advantage to the UK by accelerating the adoption of Data Centric Systems, Big Data and Cognitive technologies.

The Hartree Centre was opened on 1st February 2013 and part of the Science and Technology Facilities Council (STFC). We work in collaboration with industrial and commercial clients to investigate how we can build and use apply compute and data intensive software to help companies make products and services faster and cheaper. Michael is passionate about using building and using digital tools to accelerate innovation.

Prior the working at the Hartree Centre, Michael was project lead for data and metadata capture systems for STFC large facilities and held positions in area of research, development and sales at Unilever and Dionex.

Tae Ho Yoon, Senior Researcher at Korea Institute of Science and Technology Information, Korea

Talk: "Recent Progress in Engineering Modeling and Simulation for Industry R&D of KISTI Supercomputing"

On 1994, Tae Ho Yoon entered Korea Aerospace University in Gyeonggi province located adjacent to Seoul, the capital city of South Korea, and received the bachelor degree in the aerospace engineering on 1998 and the master degree in the aerospace structural engineering on 2000.

Tae Ho Yoon had worked at a research center in Korea Aerospace University for 2 years and in Seoul National University for about 3 years through the pass of the substitution examination of the military which all men of South Korean nationality is necessary to enter for about two years.

Tae Ho Yoon received Ph.D. in the mechanical and aerospace engineering from Seoul National University in South Korea on 2011.

Tae Ho Yoon had worked at the CAE team in Samsung Electronics and Samsung Display company (2011~2013), and was a section reader in the mechanical part and the project reader of the title of the innovation of mechanical design.

Since 2013, Tae Ho Yoon is a senior researcher at Supercomputing Simulation and Modeling Center in Korea Institute of Science and Technology Information (KISTI). The role of Tae Ho Yoon in this Center is the CAE consulting related in structural problems mainly and the parallel computing code development partly for Industry R&D.

Tae Ho Yoon is the member of the society for computational design, the engineering and the Korean society of mechanical engineers, and the Korean society for composite materials domestically, and is also Code_Aster Pronet member and NAFEMS member internationally.

The main interesting research topic of Tae Ho Yoon is the composite structures, the parallel computing for CAE of full scaled large structures, CAD-CAE integration, and the application of the open source codes such as Code_Aster for FEM and OpenFoam for CFD.

Jon Lau, Deputy Director at National Supercomputing Centre Singapore, Singapore

Talk: "National Supercomputing Centre Singapore (NSCC) - democratising HPC vs being strategically focused"

Jon Lau is a Deputy Director at the National Supercomputing Centre Singapore (NSCC), which was established to make petascale supercomputing available to academic, research and industry users in Singapore; and to develop the HPC ecosystem. Jon started his career focusing on Data Mining and Artificial Intelligence at the applied R&D arm of the National Computer Board of Singapore. He went on spearhead Grid Computing adoption in Singapore from 2003 to 2010 including establishing a grid testbed. He also managed grant schemes to encourage companies to leverage on grid services. In 2010, at the Infocomm Development Authority of Singapore, he helped to strategize and establish the first Government Cloud in the region. He was helping with the management of G-Cloud before joining NSCC in 2015 to lead the Business Development efforts.

Alvaro Coutinho, Director of the High Performance Computing Center at Federal University of Rio de Janeiro, Brazil

Talk: "High Performance Computing for Energy: International Industrial Collaboration"

Alvaro L.G.A. Coutinho is the Director of the High Performance Computing Center and a Professor at the Department of Civil Engineering in The Alberto Luiz Coimbra Institute for Graduate Studies and Research in Engineering (COPPE), The Federal University of Rio de Janeiro, Brazil; Coordination and participation in over 80 industry projects. Recipient of the IBM Faculty Partnership Award, 2001; Recipient of the Giulio Massarani Academic Award, COPPE, 2007; Organizer of National and International conferences, training

workshops and short courses; Recipient of IACM Fellow Award, 2012. Recipient of the 2015 Assespro InRio Persons of the Year Award; Editorial Advisory Board, International Journal for Numerical Methods in Fluids; Editorial Board, International Journal for Numerical Methods in Engineering; Associate Editor, Revista Internacional de Métodos Numéricos para Cálculo y Diseño en Ingeniería. Dissertations Directed, 28 Ph.D. and 28 M.Sc., 106 Journal papers, 300 Conference papers. Recent projects: ''Research on Simulation of Geological Processes on High Performance Computers'', Network on Basin Mod- eling, Brazilian Petroleum Agency and PETROBRAS, 2011–2013; ''Hoscar-High Performance Computing and Scientific data management driven by highly demanding applications, CNPq, INRIA; ''Finite Element Simulator for Complex Free-Surface Problems: Extensions and New Engineering Challenges'', PETROBRAS 2011–2013, ''High Performance Computing Infrastructure for the GRADE-BR Node at COPPE/UFRJ'', Thematic Network on Scientific Computing and Visualization, Brazilian Petroleum Agency and PETROBRAS, 2008–2012; "High Performance Computing for Energy", RNP-EU, 2016-2017.

Jaime Klapp, Head of the CFD group at Instituto Nacional de Investigaciones Nucleares and Co-founder of the Cinvestav-Abacus Centre for Applied Mathematics and High Performance Computer, Mexico

Talk: "The Cinvestav-Abacus Centre for Applied Mathematics and High Performance Computer: basic science and engineering applications"

Jaime Klapp studied Physics in the National University of México (UNAM), a M. Sc. in Applied Mathematics and Theoretical Physics in Cambridge University, England and a Ph. D. in Theoretical Astrophysics in Oxford University, England. Then he did postdocs in Los Alamos National Laboratory, New Mexico, USA and the University of Florida, USA. He has done several long term visits in several countries, USA, England, Italy, Germany, Australia, Spain and Venezuela, and given lectures in many countries. He has published 12 review papers, over 150 papers and edited 13 books, most with Springer-Verlag. He is the Head of the Computational Fluid Dynamics group of the Instituto Nacional de Investigaciones Nucleares (ININ), and is the co-founder of the Cinvestav-Abacus Centre for Applied Mathematics and High Performance Computer where he is the head of several research projects. He has also received several prizes including the Science prize for the State of México. His research has focused in Astrophysical Fluid Dynamics and Computational Fluid Dynamics in general with applications in basic science and engineering.

Wayne O. Miller, Deputy Director at High Performance Computing Innovation Center, Lawrence Livermore National Laboratory, USA

Talk: "Bridging the Gap for HPC Adoption: The challenges and lessons of HPC tech transfer to the private sector"

Abstract:
While we strive to make HPC capability available to the private sector, there remains a stubborn gap between what the major HPC centers can offer and what the private sector is willing to adopt. There will always be a lag between research-grade HPC capability and widespread practical application of HPC, but this gap should be narrowed by creating a strong partnership ecosystem and importantly by clearly

demonstrating the lasting return on investment that the private sector can realize by adopting HPC more broadly and fully. This talk will discuss some lessons learned by the LLNL HPCIC and offer some suggestions for discussion for improving the landscape.

Dr. Miller is the Deputy Director of the LLNL High Performance Computing Innovation Center (HPCIC) at Lawrence Livermore National Laboratory. He provides organizational leadership to the HPCIC and its initiatives and engagements, with a focus on external engagements and the interface within LLNL. He supports implementation of the vision for both the HPCIC and the Livermore Valley Open Campus (LVOC), including strategic planning, relationship management, staffing and initiative development and execution.

His academic and professional foci have been on numerical methods for engineering analysis, primarily for fluid dynamics, structural dynamics and heat transfer. His early career at NASA Ames involved developing and applying numerical methods for the solution of helicopter aerodynamics. This was followed by time at Kenetech Windpower designing and analyzing new classes of wind turbines before joining LLNL. Wayne was awarded the Secretary of Energy Achievement Award in 2011 for his part in the DOE multi-lab response to the Gulf oil spill.

Wayne earned his B.S. in Mechanical Engineering from the University of Idaho, and his M.S. and Ph.D. in Mechanical Engineering from Duke University.

Branislav Jansik, Supercomputing Services Director at IT4Innovations National Supercomputing Center, Czech Republic

Talk: "IT4Innovations national supercomputing center: Industrial collaboration overview"

Branislav Jansik has obtained his PhD in computational chemistry at Royal Institute of Technology, Sweden in 2004. He took postdoctoral position at IPCF, Consiglio Niazionale delle Ricerche, Italy, to carry on development and applications of high performance computational methods for molecular optical properties. Since 2006 he worked on development of highly parallel optimization methods in the domain of electronic structure theory at Aarhus University, Denmark. In 2012 he joined IT4Innovations, the Czech national supercomputing center as a head of supercomputing services. He published over 30 papers and co-authored the DALTON electronic structure theory code.

Paul Graham, Software Architect at Edinburgh Parallel Computing Centre, UK

Talk: "SHAPE and Fortissimo: two pan-European SME engagement programmes"

Paul Graham is a Software Architect at EPCC, the UK national High Performance Computing Centre at the University of Edinburgh, and is the coordinator of the PRACE SHAPE initiative. Paul graduated in 1995 with a BSc (Hons) in Computational Physics from Edinburgh University, and then went to work at the ICI Wilton Research & Technology Centre in Middlesbrough as a member of their Computer Modelling Team. Paul subsequently joined EPCC in 1998, and in the years since has worked on a broad range of projects, principally with industrial and commercial partners.

Allan Williams, Associate Director at National Computational Infrastructure, Australia

Allan Williams is Associate Director (Services and Technology) at the National Computational Infrastructure (NCI). NCI is Australia's national research computing facility, providing world-class services to Australian researchers, industry and government. NCI is home to the Southern Hemisphere's fastest supercomputer and filesystems, Australia's highest performance research cloud, and one of the nation's largest data catalogues—all supported by an expert team. NCI is supported by the Australian Government's National Collaborative Research Infrastructure Strategy, with operational funding provided through a formal Collaboration incorporating the Bureau of Meteorology, CSIRO, ANU and Geoscience Australia.

Gina Alioto, Senior Strategic Project Manager at Barcelona Supercomputing Center, Spain

Talk: "POP Center of Excellence: Performance, Optimization and Productivity"

Gina Alioto has more than fifteen years of experience as a Project Manager. She spent more than seven of those years in the Silicon Valley managing cross-functional and technical teams in technology and embedded systems development projects across multiple borders. She has led teams to release innovative consumer electronics / computer products for Sony VAIO, D&M Holdings (Denon, Marantz) and ReplayTV. She has successfully served as Project Manager on behalf of the Coordinator for 4 FP7 projects (VELOX, PROARTIS, ENCORE, ParaDIME) and currently runs the RETHINK big Project and the POP Center of Excellence. She holds a Bachelor's degree from Stanford University.

Cristina Canela, R&D manager at IDIADA, Spain

Talk: "HPC at IDIADA"

Cristina Canela studied Industrial Engineering at UPC and has an MBA from EADA. She has developed her career in the automotive industry, working for companies such as SEAT or APPLUS IDIADA. She has worked for 6 years in simulation projects to develop structures of commercial vehicles. She currently combines this technical role with being the Quality responsible and the R&D manager of the Design Engineering department at IDIADA.

Addison Snell, CEO at Intersect360 Research, USA

Talk: "Trends in HPC for Industry"

Abstract:
Addison Snell of Intersect360 Research will present on developing trends in how industrial organizations access HPC resources, the skills gap in the HPC workforce, and challenges in developing scalable application software. HPC in the Cloud is growing, but from a small base, as organizations also cope with expanding diversity in processing elements.

Data for the presentation comes from a special study for the HPC Advisory Committee of the U.S. Council on Competitiveness, amplified by the library of data and reports from Intersect360 Research, including the annual Site Census and Budget Map surveys, spanning both High Performance Technical Computing (HPTC) and High Performance Business Computing (HPBC).

Addison Snell is the CEO of Intersect360 Research and a veteran of the High Performance Computing industry. He launched the company in 2007 as Tabor Research, a division of Tabor Communications, and served as that company's VP/GM until he and his partner, Christopher Willard, Ph.D., acquired Tabor Research in 2009. During his tenure, Addison has established Intersect360 Research as a premier source of market information, analysis, and consulting. He was named one of 2010's "People to Watch" by HPCwire.

Addison was previously an HPC industry analyst for IDC, where he was well-known among industry stakeholders. Prior to IDC, he gained recognition as a marketing leader and spokesperson for SGI's supercomputing products and strategy. Addison holds a master's degree from the Kellogg School of Management at Northwestern University and a bachelor's degree from the University of Pennsylvania.

Andreas Wierse, Managing Director at SICOS BW GmbH, Germany

Talk: "Update on SICOS BW's Activities"

Since July 2011 Dr. Andreas Wierse is the managing director of Sicos BW GmbH located in Stuttgart. He has considerably know how in the field of simulation and high performance computing (HPC) systems as well as long time experience in the consulting of large enterprises and SMEs. Since January 2014 he is in addition managing director at HWW (Höchstleistungsrechner für Wissenschaft und Wirtschaft) GmbH, a public private partnership in the field of HPC.

From 2004 until 2011 Wierse was founder, shareholder and managing director of the Stuttgart Visenso GmbH, specialized on visualization and virtual reality (VR)-software and turn-key solutions (soft- and hardware). Between 1997 and 2004 he worked in the same positions at VirCinity ITConsulting GmbH, including the development of the visualization and VR software COVISE.

Wierse finished his studies in mathematics at Bonn University in 199. For several years he worked as scientific assistant at the institute for applied mathematics and in the visualization department at the Computing Center of the University of Stuttgart. In 2001 he achieved his PhD in Engineering.

Nicolas Tonello, Director at Constelcom Ltd, UK

Talk: "HPC for SMEs: Why? How?"

Dr. Nicolas Tonello is founder and Director of Renuda UK in London to provide consulting and software development CFD services in Europe. In 2013 he founded Constelcom Ltd, to realise a larger, global vision for all simulation applications and activities requirements, different software delivery models, remote collaboration, and High Performance Computing (HPC). As Director of Constelcom Ltd, he leads the development and delivery of ConstellationTM, a user-centric, web enabled, highly scalable platform with exceptional access and user experience to open up supercomputing and collaboration to all engineering, science and data processing communities. Our vision is to provide an all-encompassing,

application agnostic environment for members to carry out all virtual engineering tasks, collaboratively and with seamless access to simulation software and HPC resources. Dr Tonello holds a PhD in Aerospace Engineering from The University of Michigan, USA.

Pere Puigdomènech, Presales Manager at HPCNow!, Spain

Talk: "Facilitating HPC adoption in industry"

Pere Puigdomènech Thibaut is a Mechanical Engineer from ETSEIB (UPC), his passion for the racing automotive competitions and computer simulations has led him to work at CESCA, recently renamed CSUC, where, during 6 years, he gave support to the HPC users and implemented several FP7 and CDTI projects especially with industrial partners. His main interests are optimize HPC engineering applications and develop tools to facilitate access to HPC machines. You can find him also teaching in the Fundació CIM CAE Master or in the CFD module of the BIM IL3 Master. He is also a born entrepreneur, so he has joined HPCNow! team to implement HPC systems in the industry.

Joan Massó, Professor at University of the Balearic Islands, Spain

Talk: "Simflowny: towards a universal simulator"

Dr. Joan Massó is Professor of Theoretical Physics at the University of the Balearic Islands (UIB) since 1998. During 1993-1996 he worked at the National Center for Supercomputing Applications and from 1996 to 1999 in the Max Plank Institut für Computationphysik. He is one of the original authors of the Cactus code (www.cactuscode.org). During the decade 2000-2009, Joan founded and managed GridSystems, which was one of the leading European private companies in the development and commercialization of Grid and Cloud Computing middleware with applications in finance, health, telecommunications and other industries. He participated in European Projects and National projects with a total budget of over 200M Euros. Joan has a wide experience in many areas of High Performance Computing, Cloud Computing, Internet of Things and Big Data, and he is as an advisor to several international boards and companies. He is now participating in the development of the Institute of Advanced computing and Community Code (www.iac3.eu) at the UIB.

Johan Jansson, Assistant Professor at KTH, Sweden, and Research Line Leader at BCAM - Basque Center for Applied Mathematics, Spain

Talk: "Turbulent industrial applications with the FEniCS-HPC framework"

Johan Jansson is an Assistant Professor in Computational Science and Technology at KTH in Sweden and research line leader for CFD at BCAM - Basque Center for Applied Mathematics in Bilbao, Spain. He received his PhD in Computational Mathematical Modeling from Chalmers University of Technology, Gothenburg, Sweden in 2006. His research interests are high-performance adaptive finite element methods and software frameworks for automated solution of partial differential equations, turbulent flow and fluid-structure interaction with applications in aerodynamics and biomechanics in industrial

settings. He is a co-founder and developer of the FEniCS open source software project, with the DOLFIN and Unicorn tools for high performance distributed computing for simulation of complex multi-physics. He has won EU H2020, PRACE and industrial projects together with his close collaborators.

Javier Mansilla, Computer Graphic Supervisor at El Ranchito, Spain

Talk: "Visual Effects for Series and Films: Calculating the Impossible"

El Ranchito is a visual effects and digital postproduction company working mainly for the film and advertising industry.
We are a group of professionals with an extensive experience in the audiovisual field and we have dealt with the postproduction of more than 40 feature films and a great number of commercials. We have won a number of national and international awards, amongst them THREE Visual Effects Society (VES) Awards, 8 Goya Awards and 9 Goya Awards Nominations of the Spanish Film Academy.
At El Ranchito we follow two fundamental premises: teamwork and the specialization of each team member in a particular area of the process. This means that we are present in every phase of the project: from preproduction, over the shooting and the later selection of the most suitable staff for each postproduction. For this purpose we are privileged to have top level visual effects supervisors, 2D digital compositors working with Flame and Nuke, 3D artists, R+D team, specialized editors and digital colour graders.

Javier Mansilla has contributed his talents as a Senior Artist and Computer Graphic Supervisor for more than fifteen years. He worked in four major feature animated films and he has also overseen high-end visual effects work on Hollywood blockbusters like "Warcraft: The Beginning", "A Monster Call" and the acclaimed "Game of Thrones" TV series and has been involved with dozens of Commercials, Games Cinematics and theme park attractions.