TALK | DR. BARBARA SCHORMAIR
DEPUTY DIRECTOR, INSTITUTE OF NEUROGENOMICS
HELMHOLTZ ZENTRUM MÜNCHEN

Dr. Barbara Schormair is a Senior Research Fellow and Deputy Director at the Institute of Neurogenomics at the Helmholtz Zentrum München, the German Research Center for Environmental Health. Dr. Schormair completed her Master of Science in biology at the Ludwig-Maximilians-University Munich and the Julius Maximilian University Würzburg in Germany. Her PhD at the Institute of Developmental Genetics and the Institute of Human Genetics at the Technical University of Munich focused on dissecting the genetic basis of restless legs syndrome (RLS) with high-throughput genotyping technologies. During research stays at the Max-Planck-Institute of Psychiatry in Munich and the Center for Sleep Sciences and Medicine at Stanford University, California, USA, she gained expertise in statistical genetics. Dr. Schormair was a lead investigator in all major large-scale genetic association studies published for RLS to date. Her main research interest is elucidating the genetic architecture of RLS and other movement disorders by applying cutting-edge genomic technologies and translating these findings into patient care.

MODERATOR | DR. THOMAS FRIESE
VICE PRESIDENT FOR DATA ARCHITECTURE AND DIGITAL TECHNOLOGY
PLATFORMS AT SIEMENS HEALTHINEERS

In this role, Dr. Friese leads efforts to introduce novel digital and data based services into the portfolio of Siemens Healthineers. His work focuses on using state-of-the-art software technology, particularly cloud computing and big data analytics, to enhance and strengthen the core competencies of Siemens Healthineers in medical imaging, diagnostics and therapy. Prior to his current role, Thomas Friese held a variety of technical and engineering leadership positions at Siemens Corporate Technology and Siemens Healthcare. Thomas Friese earned his PhD in computer science from the University of Marburg, Germany.

KEYNOTE | DR. ALAN GARA
INTEL FELLOW AND CHIEF ARCHITECT,
INTEL CORPORATION

Dr. Alan Gara is leading a team of Intel architects in system pathfinding for future HPC platforms. He is also leading the Intel team responsible for the Aurora system for the US Department of Energy. Prior to joining Intel in 2011, Dr. Gara was an IBM fellow and chief architect for 3 generations of the BlueGene platforms which was awarded the National Medal of Technology and Innovation in 2008. He has received 2 Gordon Bell prizes (1998, 2006) and a Seymour Cray Award in 2010. Dr. Gara has over 70 publications in computer science and physics and more than 130 US patents in the area of computer design and architecture. Gara previously joined Columbia University in 1992, where he became a member of the E690 experimental group at Fermilab. This was followed by work at the Large Hadron Collider at CERN in collaboration with the Columbia University theory group led by Prof. Norman Christ on the QCDSP supercomputer optimized for QCD calculations. Gara received his PhD in physics from the University of Wisconsin, Madison in 1987 for his work calculating the meson mass spectra utilizing relativistic Bethe-Salpeter approach.

TALK | PROF. DR. SATOSHI MATSUOKA
DIRECTOR, RIKEN CENTRE FOR COMPUTATIONAL SCIENCE (R-CCS) – PROFESSOR
DPT. MATHEMATICAL & COMPUTING SCIENCES, TOKYO INSTITUTE OF TECHNOLOGY

Since April 2018 Prof. Dr. Satoshi Matsuoka is the director or Riken CCS, the top-tier HPC centre that represents HPC in Japan, currently hosting the K Computer and developing the next-generation Post-K machine, along with conducting multitudes of cutting edge HPC research. He had been a Full Professor at the Global Scientific Information and Computing Centre, a Japanese national supercomputing centre hosted by the Tokyo Institute of Technology since 2000, and since 2016 a Fellow at the AI Research Centre, AIST, the largest national lab in Japan as well as becoming the head of the joint Lab RWBC-OIL (Open Innovation Lab on the Real World Big Data Computing) between the 2 institutions, in 2017. He was the leader of the TSUBAME series of supercomputers and won the 2014 IEEE-CS Sidney Fernbach Memorial Award, the highest prestige in the field of HPC.

He still has an appointment as a Professor at the Dpt of Mathematical and Computing Sciences, Tokyo Institute of Technology, to continue his research activities spanning the 3 institutions in HPC and scalable Big Data and AI.

TALK | PROF. DR. RICK STEVENS

PROFESSOR, UNIVERSITY OF CHICAGO AND ASSOCIATE LABORATORY
DIRECTOR AT ARGONNE NATIONAL LABORATORY

At Argonne, Prof. Stevens leads the Computing Environment and Life Sciences Directorate that operates one of the top supercomputers in the world (MIRA). The directorate is home to several user facilities and joint institutions, including the Argonne Leadership Computing Facility, one of two Department of Energy (DOE) Leadership Computing Facilities dedicated to open science, to accelerate the pace of discovery, address complex national challenges, and deliver future Exascale computing capabilities. Stevens co-leads the DOE national laboratory group that has been developing the national initiative for Exascale computing. He is a principal investigator for the NIH/NIAID-supported PATRIC Bioinformatics Resource Centre. Stevens is also the PI of The Exascale Deep Learning and Simulation Enabled Precision Medicine for Cancer project through the Exascale Computing Project (ECP). Stevens is a PIs for the DOI-NCI Joint Design of Advanced Computing Solutions for Cancer project, part of the Cancer Moonshot initiative. Stevens is a co-principal investigator on a multi-institutional effort to study the effects of traumatic brain injury.

KEYNOTE | DR. FREDERICK STREITZ

CHIEF COMPUTATIONAL SCIENTIST AND DIRECTOR OF THE HIGH PERFORMANCE COMPUTING INNOVATION CENTER (HPCIC), LAWRENCE LIVERMORE NATIONAL LABORATORY (LLNL)

Dr. Streitz develops strategies and leads efforts to address the nation's forefront scientific problems through development of supercomputing. As HPCIC Director, he helps guide LLNL's efforts to form strategic industrial, academic and government collaborations that support and expand HPC resources, expertise and capability at the Lab. Both an experimental and computational physicist, his multidisciplinary research teams have twice won the Gordon Bell Prize for significant achievement in supercomputing and were finalists twice more, with work encompassing the fields of material science, turbulence, biomedicine, and plasma science. Dr. Streitz is the chair for the Software Working Group at the Council on Competitiveness and serves on the steering committee for Harvard's Institute for Applied Computational Science, external review panels for Argonne and Oak Ridge National Labs, and the editorial board of the International Journal of High Performance Computing Applications. He is a Fellow of the American Physical Society. Fred joined LLNL in 1999 as a computational physicist after holding positions as a National Research Council Fellow at the Naval Research Laboratory and an Assistant Professor at Auburn University.

Dr. Streitz received a Bachelor of Science in physics from Harvey Mudd College in Claremont, California and a Master's degree and doctorate in physics from the Johns Hopkins University in Baltimore, Maryland.

MODERATOR | PROF. DR. MARTIN SCHULZ

FULL PROFESSOR AND CHAIR FOR COMPUTER ARCHITECTURE
AND PARALLEL SYSTEMS, TECHNICAL UNIVERSITY OF MUNICH (TUM)

Prof. Dr. Martin Schulz joined the Technical University of Munich (TUM) as a full professor in 2017. Prior to that, he held positions at the Center for Applied Scientific Computing (CASC) at Lawrence Livermore National Laboratory (LLNL) and Cornell University. He earned his Doctorate in Computer Science in 2001 from TUM and a Master of Science in Computer Science from UIUC. Martin Schulz has published over 200 peer-reviewed papers and currently serves as the chair of the MPI Forum, the standardization body for the Message Passing Interface. His research interests include parallel and distributed architectures and applications; performance monitoring, modeling and analysis; memory system optimization; parallel programming paradigms; tool support for parallel programming; power-aware parallel computing; and fault tolerance at the application and system level. Martin was a recipient of the IEEE/ACM Gordon Bell Award in 2006 and an R&D 100 award in 2011.

TALK | PROF. DR. PETER COVENEY

DIRECTOR OF THE CENTRE FOR COMPUTATIONAL SCIENCE AND COMPUTATIONAL LIFE AND MEDICAL SCIENCES NETWORK, UNIVERSITY COLLEGE LONDON (UCL)

Prof Dr Peter V. Coveney holds a chair in Physical Chemistry, is an Honorary Professor in Computer Science at University College London (UCL) and is Professor Adjunct at Yale University School of Medicine (USA). He is Director of the Centre for Computational Science (CCS) at UCL. Coveney is active in a broad area of interdisciplinary research including condensed matter physics and chemistry, materials science, as well as life and medical sciences in all of which high performance computing plays a major role. He leads and has led many large scale projects, including EU H2020 Centre of Excellence in Computational Biomedicine, and the EPSRC RealityGrid e-Science Pilot Project (2001-10), and the EU FP7 Virtual Physiological Human (VPH) Network of Excellence (2008-13). He has been the recipient of many US NSF and DoE as well as European supercomputing awards, which provide access to numerous petascale computers. Coveney chaired the UK Collaborative Computational Projects Steering Panel (2005-15) and has served on programme committees of many conferences, including the 2002 Nobel Symposium on Self-Organisation; he was Chair of the UK e-Science All Hands Meeting 2008. He has published more than 420 scientific papers and authored two best-selling books (The Arrow of Time and Frontiers of Complexity); he is lead author of the first textbook on Computational Biomedicine (Oxford University Press, 2014). Coveney is a founding member of the UK Government's E-Infrastructure Leadership Council and a Medical Academy Nominated Expert to the UK Prime Minister's Council for Science and Technology on Data, Algorithms and Modelling which led to the creation of the London based Turing Institute.