PRACE 2017 Winter School-Tel Aviv-Fuelling Scientific Discovery with HPC Infrastructure

Monday, February 6, 2017 - Thursday, February 9, 2017

Tel Aviv Israel

Scientific Program

Fuelling Scientific Discovery with HPC Infrastructure

Lecturers and Presenters

Mr. Mordechai (Moti) Butrashvily

Tel Aviv University

Moti is a graduate Tel Aviv University student in the fields of geophysics and applied mathematics. Aside from being a developer for over 10 years, he attended the first PRACE Summer of HPC Programme in 2013. Moti served in the elite 8200 Intelligence Unit of the Israel Defense Forces. In his spare time, Moti is a member of TAU rowing team.

Mr. Sebastian Lührs

Jülich Supercomputing Centre

Sebastian Lührs studied Technical Mathematics and received his MSc. degree from the FH Aachen in 2013. He is working at the Jülich Supercomputing Centre of Forschungszentrum Jülich since 2014 as part of the application support group in the cross-sectional team application optimisation. His main working areas are tool development, training in regard to parallel I/O, user support and code optimisation.

Dr. Jan H. Meinke

Jülich Supercomputing Centre

Jan H. Meinke is a staff scientist at the Jülich Supercomputing Centre of Forschungszentrum Jülich. He received his Ph.D. in Physics in 2002 from Michigan State University and has been working in Jülich since 2005. Jan is a member of the Simulation Laboratory Biology. His research interests include protein folding and how to make efficient use of HPC hardware for solving scientific problems. He has been teaching GPU programming since 2010.

Dr.-Ing. Bernd Mohr

Jülich Supercomputing Centre

Deputy Head, Application Support Division, Jülich Supercomputing Centre

Bernd Mohr started to design and develop tools for performance analysis of parallel programs already 1987 at the University of Erlangen in Germany. During a three year Postdoc position at the University of Oregon, he designed and implemented the original TAU performance analysis framework. Since 1996 he has been a senior scientist at Forschungszentrum Jülich. Since 2000, he is the team leader for the group "Programming Environments and Performance Optimization". Besides being responsible for user support and training in regard to performance tools at the Jülich Supercomputing Centre (JSC), he is leading the Scalasca and Score-P performance tools efforts in Jülich.

Prof. Dan Mordehai

Technion-Israel Institute of Technology

Dan Mordehai completed his B.Sc. in physics and mathematics at the Hebrew University of Jerusalem, and a PhD in Physics at Tel Aviv University on the study of defect properties in metals using molecular dynamics simulations. During the period of two post-docs in CEA/France and at the Technion he developed and employed simulation tools to perform a multiscale study of mechanical properties, both in extreme conditions and at very small scales. Since 2011 he has been an Assistant Professor at the Mechanical Engineering department at the Technion. His group is working on modelling nanomechanical properties of solids using atomistic- and mesoscale simulation techniques. For more details http://nanomechsim.technion.ac.il/

Prof. Dennis Rapaport

Bar-Ilan University

Dennis Rapaport received a Ph.D. in theoretical physics in 1972 from King's College, University of London; his earlier degrees were from the University of Melbourne. He is a Professor of Physics at Bar-Ilan University. He has held visiting appointments at Cornell University and IBM, with shorter working visits that included the University of Georgia, where he is an Adjunct Professor of Physics, Edinburgh and Florida State Universities, Oak Ridge and Daresbury Laboratories, Scripps Institute, HLRZ Julich, and CSIRO. He is a Fellow of the American Physical Society. His research interests are focused on molecular dynamics applications and methodology, with emphasis on the simulation of emergent phenomena in fluids, granular matter and viral assembly. He is the author of the textbook 'The Art of Molecular Dynamics Simulation' published by Cambridge University Press in two editions. He also explores the use of interactive visualization in physics.

Dr. Guy Tel-Zur

Nuclear Research Center of the Negev (NRCN), Ben-Gurion University

Guy Tel-Zur works as a researcher at Nuclear Research Center of the Negev’s (NRCN) Physics Department and as an external lecturer and adviser at Ben-Gurion University of the Negev . He has been teaching parallel processing for many years. His main interests are in High-Performance Computing, Scientific Computing and Cloud Computing. Guy has a Ph.D. in Physics from the Weizmann Institute of Science.

Thank you to the program advisory committee:
Dr. Joan Adler, Technion-Israel Institute of Technology
Dr. Avi Cohen, Bar-Ilan University
Dr. Boris Morose, Afeka College
Dr. Amir Natan, Tel Aviv University
Dr. Guy Tel-Zur, Nuclear Research Center of the Negev’s (NRCN) and Gurion University of the Negev
Mr. Hank Nussbacher, IUCC