

## **A BRIEF REPORT ON ACCMS-5**

Hanoi, Vietnam, 7-11 September, 2009

The 5<sup>th</sup> Conference of the Asian Consortium for Computational Materials Science (ACCMS-5) was held in Hanoi, (7-11 September, 2009). The four earlier conferences were held at Bangalore (2001), Novosibirsk (2004), Beijing (2005) and Seoul (2007). The total number of registered participants was 233, with 203 accepted contributions including 3 keynotes, 51 invited papers (1 keynote and 3 invited speakers have to cancel their talks at last minute due to personal problems). The participants from nearly 30 different countries from Asia and other part of the world, such as Australia, Bangladesh, Canada, China, India, Iran, Italy, Japan, Korea, France, Germany, Poland, Russia, Singapore, Thailand, Vietnam, UK, USA... gave a unique flavor to this conference. The conference was chaired by Prof. Nguyen Manh Duc (UKAEA) and co-chaired by Prof. Y. Kawazoe (Japan) and Prof. G.P. Das (India). The ACCMS-5 has been co-organized by the Institute of Physics (IOP), Vietnam Academy of Science and Technology (VAST), Hanoi University of Technology (HUT) and Hanoi University of Science. The chairman and the secretary general of Local Organizing Committee (LOC) were Prof. Nguyen Hong Quang (IOP) and Prof. Vu Ngoc Tuoc (HUT), respectively. The conference has received strong support and sponsorship from Vietnamese Ministry of Science and Technology (MOST), personally from the Minister of MOST Prof. Hoang Van Phong and Deputy Minister, Prof. Tran Quoc Thang and the National Foundation for Science and Technology Development (NAFOSTED, MOST, Vietnam). Additionally there were also financial supports from Vietnam National University of Hanoi and Ho Chi Minh cities (Vietnam), International Center for Theoretical Physics (ICTP, Italy), Asia Pacific Center for Theoretical Physics (APCTP, Korea), Accelrys Software Inc... Two of Honorary chairs of ACCMS-5: Prof. Nguyen Van Hieu, chairman of scientific council on materials science (VAST) and Dr. Tooru Matsumiya, executive advisor, Nippon Steels Corporation, have written the welcome messages to the ACCMS-5 participants.

The three-day ACCMS-5 conference (9-11 September 2009) holds in Melia Hotel, Hanoi and it started with the welcome address by Prof. Nguyen Manh Duc, Prof. Y. Kawazoe and the Vice President of VAST Duong Ngoc Hai. Prof. Tran Quoc Thang, Deputy Minister of Science and Technology, has opened the Conference and an acknowledgement on behalf of the ACCMS-5 participants to the Deputy Minister has given by Prof. G.P. Das. A wide range of topics were covered including Advanced computational methodology: beyond DFT, Modelling of Nanotubes, nanowires and quantum dots, Modelling of Nano-biological and Polymeric Systems, Multi-scale Modeling of Materials, Modeling Materials for Future Energy, Spintronics and Magnetic Properties of Materials, Modeling of Materials under Extreme Conditions, Modeling of surfaces, interfaces and Nano devices. The quality of presentations was consistently at high level, according to all independent opinions received after the conference. For example, Prof. Peter Fulde from Max-Planck Institute and the President of APCTP wrote that he was very impressed by ACCMS-5 standard and the progress of Computational Materials Science in Asia and Pacific was outstanding... The Poster Session has been sponsored by Accelrys Inc. and five best posters were selected and awarded with

Kawazoe Prizes to young researchers: H.A. Huynh (BCCMS, University Bremen), N. H. B. Trong (Institute of Technology of HCM City, VNU of HCM), A. Sugiyama (JAIST, Japan), Minwoong J. (KIST, Korea), N.M. Cuong (Seoul National University, Korea).

Following the ACCMS-4 idea, the ACCMS-5 also holds successfully a two-day short course (7-8 September 2009) on "Advanced Computational Methods in Atomistic Modeling of Materials" at Electronic Library Building, HUT with 74 registered participants including 5 lectures and 1 tutor. The course were mainly focusing on the role of localized basic sets in atomistic simulations ("Localized orbital based DFT - Methodology and Analysis" by Prof. Steven D. Kenny, Loughborough University (UK), "Bond-order potentials: bridging the electronic-atomistic Modeling hierarchies in materials science" by Prof. R. Drautz, Ruhr University (Germany), "Tight-binding modeling with DFTB" by Dr. B. Hourahine, University of Strathclyde(UK)) and on long time scale simulation ("Understanding infrequent events and extending the time scale of molecular dynamics simulations of material systems" by Prof. A. Voter (Los Alamos National Lab, USA) and "Lattice Monte Carlo method as a powerful tool" , by Prof. K. Ohno (Yokohama National University)) . There was also a Tutorial session on "Density Functional based Tight Binding (DFTB)". At the end of ACCMS-5 short course certificate was presented to participants by the President of HUT, Prof. Nguyen Trong Giang.

The International Advisory Board of ACCMS (IAB-ACCMS) has had a meeting at traditional lunch on 10 September 2009, to discuss the progress of the ACCMS. Two possible venues for the next ACCMS meeting were suggested: Singapore and Thailand and it was unanimously decided that the ACCMS-6 in 2011 will be held in Singapore. Prof. Y.P. Feng from National University of Singapore will take responsibility for organizing ACCMS-6. The banquet with mixed shows of traditional Vietnamese and Asian folklore met warmly attention from the audience. The ACCMS-2009 Award has been presented to Prof. J. Ihm from Seoul National University (Republic of Korea) for his outstanding works on Computational Materials Science and for his great contributions to ACCMS activities. In the concluding session, Prof. G.P. Das has made a summary of the ACCMS-5 conference activities.

ACCMS-5 Local Organizing Committee.