

Preface:

The first International Workshop on “Nuclear Theory in the Supercomputing Era (NTSE-2012)” was held at Pacific National University in Khabarovsk, Russia, June 18–22, 2012. The primary motivation for the meeting was the rapid growth of supercomputers and the impact they, along with theoretical and algorithmic developments, are having on nuclear theory. Manuscripts of the invited talks and contributed papers presented at the meeting constitute these proceedings.

It is a great pleasure for me, and I believe I speak on behalf of my fellow attendees, to thank our gracious Russian sponsors and hosts, the Pacific National University and its President, Professor Sergey Nikolaevich Ivanchenko. The consensus view among all participants is that the sponsorship and hosting of the meeting was indeed first class in all respects. We offer a special thanks to Prof. Alexander Mazur for his thorough planning and guidance in all aspects of the meeting.

It is important to note that the workshop was organized according to the Pacific National University Strategic Development Program for 2012–2016 and this Program provided financial support for which we are grateful.

The sponsors and hosts assembled for this meeting many of the world’s top experts in this forefront area of physics with strong links to applied mathematics and computational science. During the meeting we learned the latest developments and explored research opportunities for the coming decade in areas of basic science important to the security of fissionable materials, to advanced nuclear reactor designs, to fusion energy research as well as to astrophysical phenomena such as supernovae and neutron stars.

It is a great pleasure for me to mention that last year Pacific National University and Iowa State University signed an agreement launching an ambitious framework for growing collaborations, exchanging students and faculty, and jointly sponsoring research programs. During this meeting we discussed enhancing this framework with further program development.

All participants anticipated and were rewarded with an exciting meeting and productive discussions about recent developments in our field. We also discussed the potential for further developing our international collaborations with the region of East Asia represented by Pacific National University. It was especially valuable to have participants from other countries in the region. Finally, we also learned a great deal about the far-reaching vision for Pacific National University and its ambitious plans for the future.

I sensed that while this was the first time for the international attendees to visit Pacific National University, we all left with the anticipation to return again for another very productive scientific meeting in the future.

James P. Vary,
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Vice Chair of the NTSE-2012 Organizing Committee.
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