

## FOREWORD

*The National Nuclear Energy Agency and Institut Teknologi Bandung are very proud to present The International Conference On Advances In Nuclear Science And Engineering (ICANSE-2007).*

*This conference is a joint cooperation between Nuclear Reactor and Physics Laboratory of Faculty of Mathematical and Natural Science ITB with the Center for Nuclear Informatics Development of National Nuclear Energy Agency, BATAN. In the past, these two institutions have been working to run such conferences related to nuclear science and engineering. Since 1991, the Center for Nuclear Informatics Development of BATAN already runs an annual seminar called The Symposium of Computation in Nuclear Science and Technology. These symposiums traditionally divided into two parts, the mathematical computation aspect, and its application in the nuclear technology. The participants of this symposium usually come from research institutions and universities. The symposiums have made discussions among researchers and introductions of this important field to the potential students. In 2005, the Nuclear Reactor and Physics Laboratory successfully held a conference called Tokyo Tech COE-INES Indonesian International Symposium. This conference focusing in an advance or innovative nuclear reactor design and analyses, gathering researchers and students especially from Tokyo Institute of Technology and Institut Teknologi Bandung.*

*The scope of conference included tracks on Innovative Nuclear Energy Systems, Nuclear Utilization systems Based On Fuel Cycle, Simultaneous Solution For Safety, Radioactive Waste And Proliferation Problem, Advanced Small Reactors Without On-Site Refueling, Innovative Transmutation Systems, Innovative Separation And Fuel Cycles/Radioactive Wastes, Nuclear Nonproliferation Issues, Innovative Energy Systems: Hydrogen Energy System, Cogeneration System & Thermal Energy Utilization Systems, Material And Process For Innovative Energy Systems, Radiation Physics, Nuclear Data, Theoretical And Computational Nuclear Physics, Nuclear Education and Energy Policy,*

*The two days conference, 13-14 November 2007 started by two keynote speakers and ended by one keynote speaker on the plenary session, after that the presentations were divided into 4 parallel sessions in all there were 106 abstracts and 70 papers accepted from 11 different countries..*

*These Proceedings contain the full-length manuscripts of the keynote, invited and contributed presentations at the ICANSE-2007 which were presented during the conference and document the illuminating discussions in the very pleasant atmosphere of Beautiful Bandung*

*We would like to thank all those who contributed to the success of this conference: the chairpersons, the invited speakers, the participants, The organizers would like to acknowledge all the members of the Technical Program Committee for their hard and competent work in time for the success of the conference. We would like also to thank all the authors who contributed with papers to this issue and the referees who helped us in the effort to improve the quality of the editorial work. Last, but not least, we would like to express our gratitude to our colleagues of the Local Organizing Committee from ITB, especially Asc Prof Dr Zaki Su'ud for the very kindly support to realize this joint conference.*

*We hope that by joint together in this ICANSE 2007 we can make a better contribution to the development of nuclear science and engineering in Indonesia and other involving countries, especially to support the Indonesian first NPP. We hope also that the students and young researchers can take an invaluable knowledge and experiences.*

**Thank You,  
Batans' Committee  
Khairina Ns**