PHYSOR-2006 Topical Meeting 参加報告
出張期間：2006 年 9 月 9 日～9 月 16 日
出張者：原子核工学専攻博士後期課程 3 年　ISMAIL
出張先：Vancouver, British Columbia, CANADA

PHYSOR stands for "**PHYsics Of Reactor**" and it holds every two years. I attended PHYSOR-2006 in September 10~14, 2006 and it was held in Hyatt Regency Hotel, Vancouver, British Columbia, CANADA. It was organized by the Canadian Nuclear Society (CNS) collaborated with the American Nuclear Society (ANS). The participants came from 25 countries and they were nuclear scientists and engineers from many kinds of nuclear institution of the countries, such as University, Research Center and Nuclear Industries.

I attended all five days of the conference. Those five days schedule consists of 1-day for Workshop (TRITON, PARCS and DRAGON, on Sunday, September 10, 2006) and 4-days for the PHYSOR Conference (Monday~Wednesday, September 11~14, 2006). I did my Oral-Presentation in 2nd day, Tuesday (September 12, 2006) at 15:00 ~ 16:20 PM. The session title is B16 "Fuel/Core Design and Analysis III", chaired by **Peter Schwanke** of Atomic Energy of Canada Limited (AECL), Chalk River, Ontario, Canada, and Co-Chaired by **Juan J. Ortiz** of Instituto Nacional de Investigaciones Nucleares, Mexico.

I was the last presenter of the total of four presenters. The following are the detail of the session:

B16 : Fuel/Core Design and Analysis III (of 3)

Session Chair : **Peter Schwanke**, AECL, Canada

Session Co-Chair : **Juan J. Ortiz** of Instituto Nacional de Investigaciones Nucleares, Mexico.

ID-157605 : Fast Calculation Program for Nuclear Fuel Lattice Design of Boiling Water Reactors
Juan J. Ortiz of Instituto Nacional de Investigaciones Nucleares, Mexico

ID-157609 : Distribution of Heating in an LVRF Bundle due to Dysprosium in the Central Elements
Kwok Tsang of Atomic Energy of Canada Limited (AECL), Canada

ID-157796 : Computational Study of Important Parameters in Deep Burn Modular Helium Reactors
Di Yun of University of Illinois at Urbana-Champaign, Urbana, IL, USA

ID-157884 : Systems of Symbiotic Large FBRs and Small CANDLE-Thorium-Reactors
Ismail of Research Laboratory for Nuclear Reactor, Tokyo Tech., Japan

There were **four** questions from audiences in my presentation. The questions are:

(1) Why do you choose fast reactor (FBR) on your system's large reactor?

(2) Why do you use criticality parameter for the FBR constraint? Why did you not prefer breeding-ratio (BR) that is more informative parameter of FBR performance?

(3) Why do you choose a CANDLE strategy for the small satellite-reactors? In my opinion, it may be better to perform a kind of burnup strategies that will provide/give better neutron economy to your small reactors than CANDLE.

(4) Did you calculate the total support period of the system, including some reprocessing time such as separation and re-fabrication time?

For each question, I gave the answers as good as I can. And I think, I did not say anything sounding unsatisfied answers to the audiences as I saw respond from them.

In the conference, during out of my session, I attended some selected sessions according to my interest. Most the attended sessions are about fast reactor, high temperature reactor, fuel cycles and safety aspects of nuclear reactor.

In the last day, Thursday (September 14, 2006), I joined to the Technical Tour. In the tour, we visited the **TRI-U**niversity **M**eson **F**acility (TRIUMF) that belongs to jointly three universities, i.e. the University of Alberta & Simon Fraser

University, the University of Victoria, and the University of British Columbia. The facility's plant is located near to the University of British Columbia, in Vancouver city. This facility basically is an elementary physics experiment facilities. Most of experiments are done for study of the above university's researchers or students, and also sometimes due to some nuclear industries demands.

In the facility, we were explained by some experts of the facility about many things of their research activities.