

## COE-INES Business Trip Report

2006 ANS Winter Meeting参加報告

出張期間：2006年11月12日～11月18日

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出張先：Albuquerque Convention Center, Albuquerque (NM), 米国

### Report on 2006 ANS Winter Meeting

The annual winter meeting of the American Nuclear Society was held at Albuquerque from November 12 to November 16. A student workshop was held on November 11<sup>th</sup> and in the morning of November 12<sup>th</sup>, but I was not able to attend due to my flight schedule. There were 9 technical tracks and two embedded meetings regarding (TOFE 2006 and NPIC&HMIT 2006) nuclear fusion engineering and nuclear instrumentation.

About five hundred famous scientists and experts in nuclear field, experienced engineers, government officials, managers in nuclear companies, and graduate students attended and presented their papers in this conference. The Meeting offered to the American nuclear community to gather, discuss Nuclear Technical issues and share ideas about the future of Nuclear Energy.

Being part of the discussions at such a high level represents a very good opportunity, since, as a researcher and engineer in nuclear field, it is very important to see fresh ideas and developing direction.

The opening ceremony was held in the evening of November 12<sup>th</sup>, but the plenary opening session took place the following morning. The main focus of this session was the theme of the conference: “Ensuring the Future in Times of Change: Nonproliferation and Security”. Following the Plenary session I visited the ANS Nuclear Technology Expo, where all sort of companies and research institutes related to the nuclear field offered kind expositions and materials. It was overall very interesting, and gave me the possibility to appreciate the vitality and the principal direction of development of the nuclear industry. I was also happy to see a strong presence of the Japanese nuclear industry: Hitachi, Toshiba and Mitsubishi were all present.



Fig.1 The venue

The technical tracks which included almost all the research topics in nuclear reactor field started the same day and continued till November 16<sup>th</sup>. I mainly focused my attention on “Track 7: Nuclear Science and Engineering”, since it included many of my research interests. But I did visit other Tracks when papers connected to my interests were presented. I found the TOFE meeting very interesting for

example, a considerable number of papers on inertial fusion (my previous research topic in master degree) have been presented.

Of the many presentations I listened to, I would just like to mention the session “Thermal-Hydraulic Limits for Generation IV Reactors–Panel” (Chairman for Prof. Hochreiter) where leading professors and researchers from INL, ANL and Berkeley gave a very good panoramic of the current status of the Generation IV program status. The discussion was passionate, and I am very glad I had the opportunity to join.

During the conference, I made use of the dining time to talk with some famous scientists about technical issues and more generally about nuclear engineering and the future of nuclear energy. I tried to listen to as many presentations as possible, asking questions after the presentation to get a better view of the current research in nuclear engineering

My paper belonged to the technical session dedicated to “Computational Thermal Hydraulics,” and I presented it on November 16th.

The title was “Direct Numerical Simulation of Turbulent Flows in an Eccentric Annulus Channel,” I discussed with one professor (Prof. Hassan) and one researcher on my paper. The professor asked me details about the numerical implementation of the code. In particular, he wanted to know about the solver of the pressure Poisson equation. The researcher asked me about the initial condition used, the transition from initial condition to steady state and about the comparisons with experiment. After my presentation I joined the session and actively participated in the discussion.

Above all, I got great gain for improving my technical background and widened my vision of nuclear energy. I had the occasion to meet some of the best researchers in the field of the nuclear engineering. So I really appreciate the opportunity I was given by COE-INES.