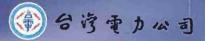
ISREO8 NTHU/ HsinChu / Taiwan

# ISRE08 NTHU

# 4th International Symposium on Radiation Education

# Organizer / Corporate Sponsors

NPO Radiation Education Forum National Tsing Hua University Chung Yuan Cristian University Kaohsiung Medical University Atomic Energy Council Institute of Nuclear Energy Research National Science Council Taiwan Power Company Chung-Hwa Nuclear Society



溫室效應

太陽光

索丸

正常的地球

溫室效應後果

温重规應的地球

# Preface

Global warming, energy crisis, and food shortage are becoming urgent in recent days. Nuclear energy appears to be part of the solution for these issues. The growing usages of radiation in power, medicine and industry have caused some public concerns. In general, various contradictory opinions exist about the radiation



applications. The objective of this symposium is to provide a forum for in-depth discussions on radiation, energy resources, and global environment. We believe the radiation education can effectively contribute to the reduction of people's excessive anxiety about radiation and the final acceptance of this modern technology. This radiation education should be conducted both in school and in society on the basis of recent scientific knowledge and rational views.

The symposium has been devoted to the application of radiation to the welfare of the society. In this 2 days conference, six major topics will be discussed: (1) non-ionizing radiation, (2) risk/benefit of low dose radiation, (3) biological effects caused by low-dose radiation and various environmental pollutants, (4) new energy resources, (5) recent status of nuclear medicine and bio-technology, (6) heavy particle therapy.

The symposium has 12 invited speakers, 50 posters, and 140 participants from four countries. On behalf of the College of Nuclear Science, I would like to express my heartily welcome to you. Wish you have an enjoyable stay at National Tsing-Hua University. As Christmas is coming, May I wish you Merry Christmas and Happy New Year.

clsR

Chin Pan Professor and Dean College of Nuclear Science National Tsing-Hua University

# Greeting Message

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Akito ARIMA、 Professor President, Radiation Education Forum

Good morning, ladies and gentlemen. It is my great honor to deliver an address, on behalf of Radiation Education Forum, on this occasion

of the 4the International Symposium on Radiation Education (ISRE08) at the National Tsing Hua University, Hsin-Chu, Taiwan. I would like to express my deepest respect and congratulation to Dr. Keh-Shih Chuang and his committee members.

It is needless to say that the present civilized world is supported essentially by the advancement of science and technology. It is a duty of scientists to pursue truth and to develop technology and to create innovative ideas for the sake of welfare of the society. At the same time, they have to act with social ethics and have to educate the general public. There seems to be a gap between the views of general public and the scientists toward the safety of radiation and radioactivity.

Now, it is time for us scientists, to come out from the ivory towers and try to think with the general public, to talk to them, and to educate people if we find them suffering from pain and damage because of their ignorance. We, scientists, should not be reserved when it is necessary for us to stand up and straighten the incorrect information.

Participants of this symposium are those who are interested in education of science and radiation. I hope that you will discuss about how to educate people in society, some of whom may just hate even to listen to a word like "radioactivity." Concerning the attitude of people against radiation and radioactivity, I would like to cite an interesting phrase by late Prof. Torahiko Terada, who lived from 1878 to 1935. He said, "It may be easy either to take it seriously dangerous or to regard it as entirely safe, but it is pretty difficult to admit its danger properly. This phrase by the famous Japanese physicist, late Prof. Terada is particularly important for radiation education, and it can be applied to all cases of "risk-related scientific matters."

Presently, correct knowledge about radiation and radioactivity is learned only by those who wish to be specialists in these fields, but I think that everybody in the society should learn about these matters properly. Today, in the advanced countries like Japan and Taiwan, materialistic civilization seems to have reached to the utmost level. This was possible just because everybody has the right knowledge about how to use the electric or electronic appliances in daily life. This is the great results of education.

We need to educate children so that they could nurture a sense of justice, in addition to learn the three R's: reading, writing, and arithmetic. Children should be taught how to think scientifically as well as to understand the phenomena. The role of education is becoming more and more important and complicated because the life of people is advanced, and getting complicated.

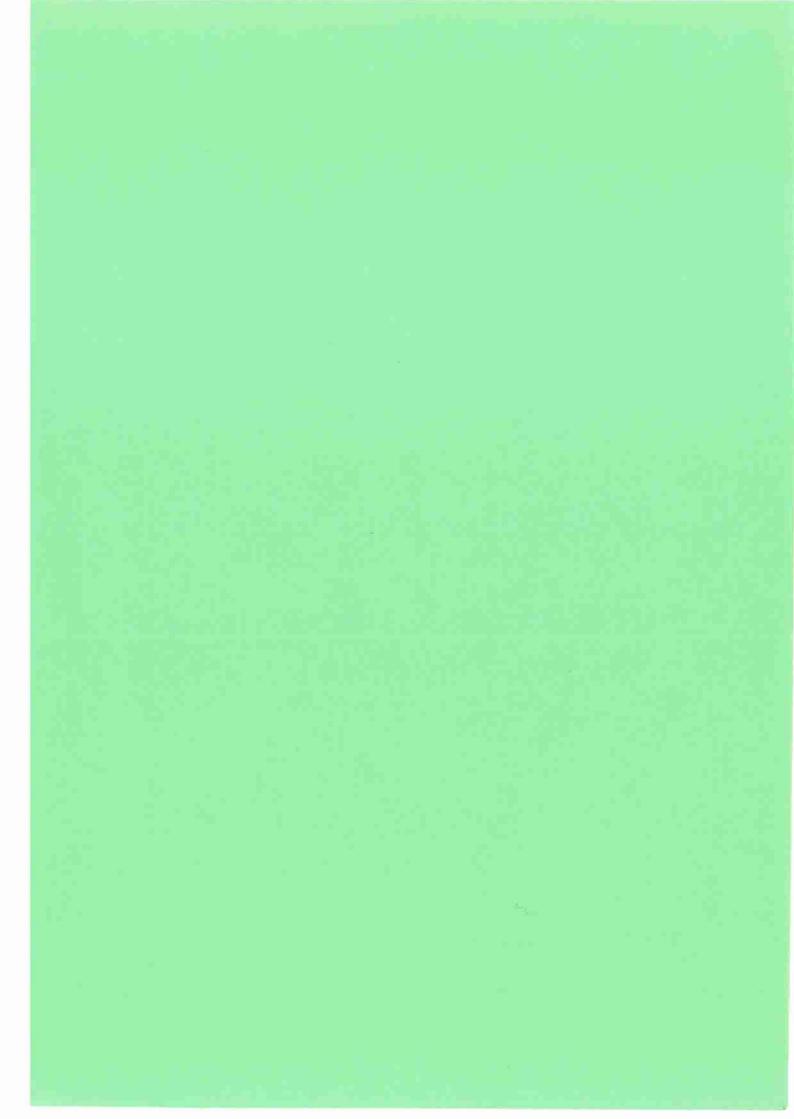
For the existence of mankind, we must try our best not to worsen the natural environment. We must try our best to stop the deterioration of our beautiful earth for the sake of our descendants. For the betterment of our human life and for the improvement of our real quality of life, let us appeal to teach wisdom with scientific knowledge for children and people. To maximize the potential ability of all the humankind, the direction of our path should be integrated with the same vector. Here again, we have to rely on the power of education.

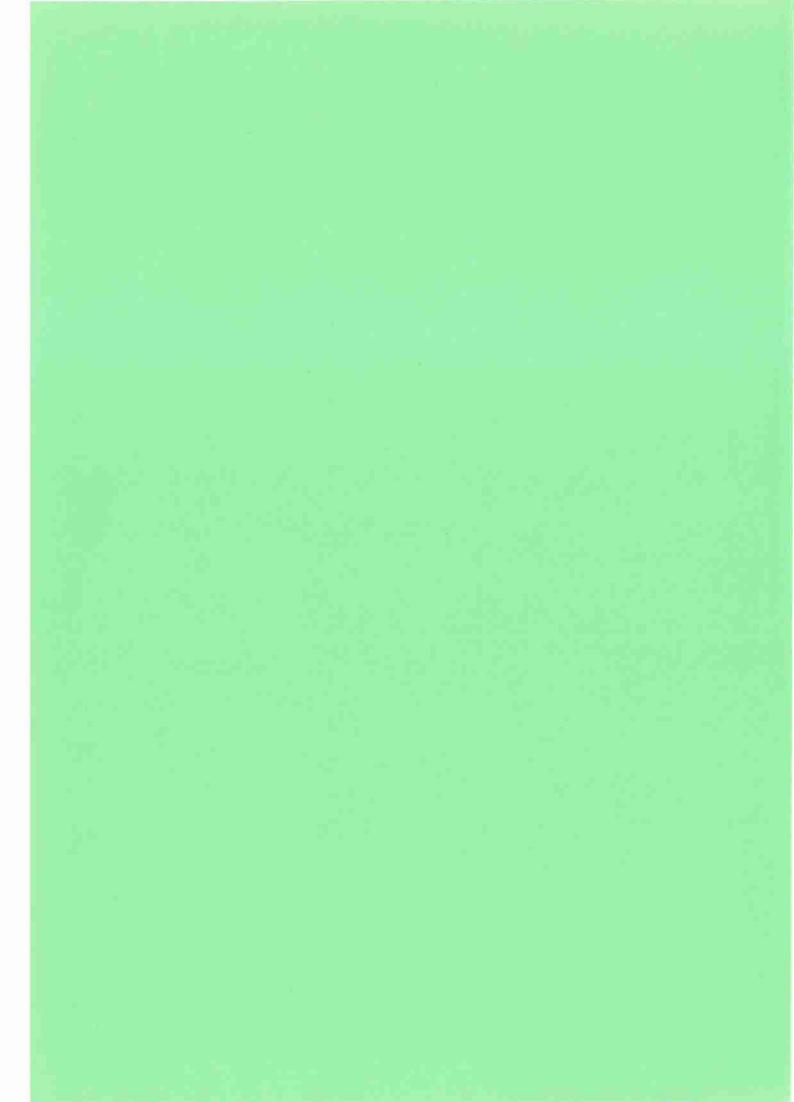
We have assembled here to build up a new educational system: an activity which needs human wisdom, sense of justice, and courage. I am expecting brilliant success of this symposium.

Thank you very much.

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# Program Assistant



#### Chairman

莊克士 Keh-Shíh Chuang

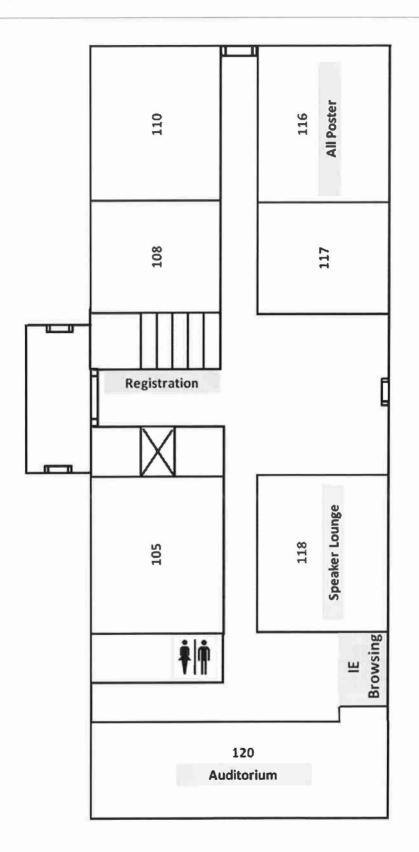
# **Program Subcommittee**

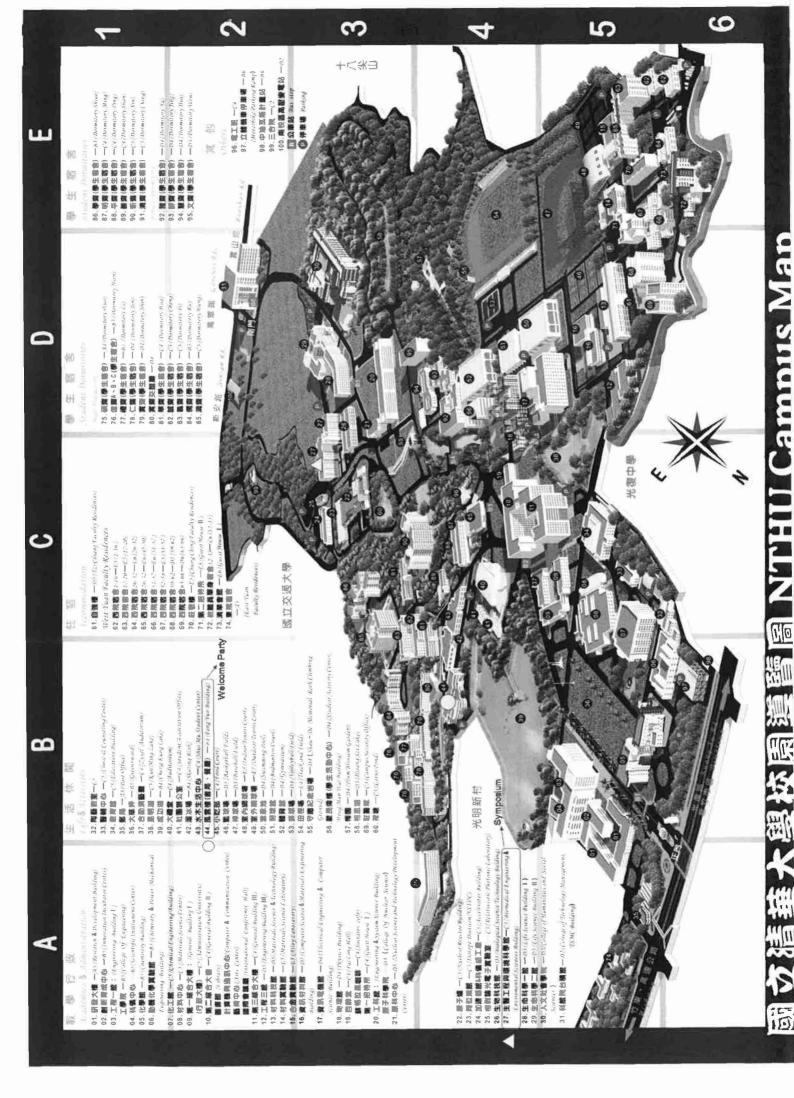
- 黄金旺 Chin-Wang Huang
- 陳佳如 Chía-Ju Chen
- 黃柏嘉 Po-Chia Hang
- 吴書瑋 Shu-Wei Wu
- 林義興 I-Hsing Lin
- 張家豪 Chia-Hao Chang
- 黃勇盛 Yung-Sheng Huang
- 楊肅同 Su-Tung Yang

# **Organizing Subcommittee**

呂世紀	Shíh-Chí Lu	郭翰	Нап Кио
楊惠鈞	Huí-Chun Yang	賴佩伶	Peí-Ling Lai

- 黄郁慈 Yu-Tzu Huang
- 林信宏 Hsin-Hung Lin
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- 吴怡君 Ví-Chun Wu
- 蔡書汎 Shu-Fan Tsaí
- 宗音//C Shu Jun 2su
- 鄭維剛 Wei-Kang Cheng





# Accreditation

輻射防護師(員) Radiation Protection Technologists

輻射操作人員及運轉人員

1學分/1小時 1 credit/ hour

# 醫事放射師 Radiation Technologist

1學分/1小時 1 credit/ hour

# 醫學物理師 Medical Physicist

2 學分/ 1 小時,共 20 學分 2 credits/ hour, total in 20 credits

# 放射腫瘤專科醫師 Radiation Oncologist

共 10 學分 10 credits in total

# 放射線專科醫師 Radiologist

共7學分 7 credits in total

# 放射核醫專科醫師 Nuclear Medicine Physician

共 12 學分

12 credits in total



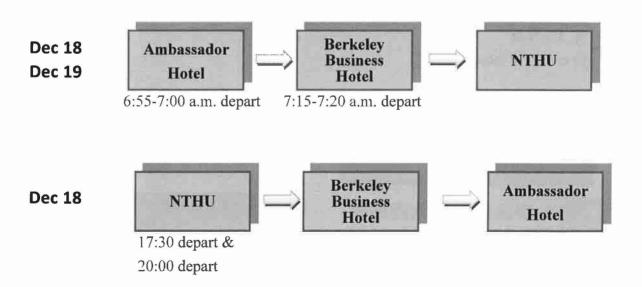
# Accommodation

- About 15 minutes walk to NTHU Berkeley Business Hotel (near NTHU) 柏克萊大飯店(光復店) Address: No.272, Sec. 2, Guangfu Rd. Telephone: (03)5728668
- Providing shuttle service to NTHU
  Ambassador Hotel
  國賓大飯店
  Address : No. 188 Sec. 2 Chung Hwa Rd.
  Telephone : (03)5151111

# Berkeley Business Hotel (near Downtown) 柏克萊大飯店(中正店)

Address : No.151, Jhongjheng Rd. Telephone : (03) 5251155

Shuttle Service



# Program Information

Thursday, 18 December					
Time	Торіс	Speaker			
07:50~08:20	Onsite Registration	Front Desk			
08:20~08:30	Welcome	Chin Pan, Dean, INS			
	Radiation Education	Tatsuo Matsuura, Ph.D.			
08:30~10:30	Radiation Education in School	Kunihiko Hasegawa, Ph.D.			
	Proton Therapy, Heavy Charged Particle Therapy	Yasuhito Sasaki, Ph.D.			
10:30~10:50	Tea Break				
10:50~12:10	Evolution of the System of Radiological Protection	Prof. Masahito Kaneko			
	Non-ionizing Radiation	Prof. Kazuaki Katoh			
12:10~13:30	Lunch				
	Current Nuclear Medicine Related Research in National Tsing Hua University	Prof. Jem-Mau Lo			
13:30~15:30	New Energy Resources	Hiroshi Kudo, Ph.D.			
	The Nuclear Energy Perspective in Taiwan	Taun-Ran Yeh , Chairman, Institute of Nuclear Energy Research			
15:30~15:50	Tea Break				
15:50~17:10	Advancement of Medical Physics Education in Taiwan	Chuan-Jong Tung, Ph.D.			
	Natural Radiation	Kimiko Horiuchi, Ph.D.			
17:15~18:30	Poster Presentation	Poster Presenters			
18:30~20:00	Welcome Party	All participants			

Friday, 19 December					
Time	Торіс	Speaker			
	Nuclear Education in National Tsing-Hua University	Chin Pan, Dean			
08:30~10:30	Nuclear Literacy and Radiation Effects in Hungary	Eszter Tóth, PhD			
	<b>Biological Effects of Radiation</b>	Kazuo Sakai, PhD			
10:30~10:50	Tea Break				
10:50~12:10	Present and Status of Radiation Education in Thailand	Prof. Pannee Pakkong			
	Training Programs for Radiation Protection Engineers, Technologists and Technicians	Tai-Chin Liu, PhD			
12:10~13:30	Lunch				
13:30~16:00  7.14 -	Site visit to the Utility for Boron Neutron Capture Therapy OR Taiwan Nuclear Power Plant				



