



Environmental Forensics: Using Science to Reconstruct Contamination Events

*December 8 - 9, 2003
Howard Plaza Hotel, Taipei, Taiwan*

Conference Agenda

Day One – December 8, 2003

- 8:00-8:30 **Registration**
- 8:30-8:40 *Welcome and Workshop Overview*
Zhendi Wang, Ph.D. (Moderator), Senior Research Scientist, Environmental Canada Emergencies Science Division, Environmental Technology Centre, Ottawa, Ontario, Canada
- 8:40-8:50 *Welcome Address*
Gwo-Dong Roam, Ph.D., Director General, Office of Science and Technology Advisors, Taiwan Environmental Protection Agency, Taipei, Taiwan, R.O.C.
- 8:50-9:00 *Welcome Address*
Shuh Woei Yu, Ph.D., General Director, Center for Environmental, Safety and Health Technology Development, Industrial Technology Research Institute, Chu Tung, Hsinchu, Taiwan, R.O.C.
- 9:00-9:30 *Emerging Global Trends in Environmental Forensics*
Robert D. Morrison, Ph.D., Soil Physicist, DPRA Inc., San Marcos, California, USA
- 9:30-10:00 *Planning to Establish a Fingerprint Database for Environmental Pollutants in Taiwan*
Ms. Schau-Ping Chang, Senior Research Fellow, Environmental Analysis Laboratory, Environmental Protection Administration, Government of the Republic of China, Chung-Li City, Taoyuan County, Taiwan, R.O.C.
- 10:00-10:15 **Break**

- 10:15-11:15 ***Statistical Methods and Pitfalls in Environmental Data Analysis: Case Studies***
Yue Rong, Ph.D., Senior Environmental Scientist, California Regional Water Quality Control Board, Los Angeles, California, USA
- 11:15-12:00 ***The Potential of Molecular Biotechnology in Environmental Forensic Applications***
Yuh-Chuah Jang, Ph.D., Research Fellow, Development Center for Biotechnology, Taipei, Taiwan, R.O.C.
- 12:00-1:15 **Lunch**
- 1:15 ***Afternoon Session Overview***
Shuh Woei Yu, Ph.D. (Moderator), General Director, Center for Environmental, Safety and Health Technology Development, Industrial Technology Research Institute, Chu Tung, Hsinchu, Taiwan, R.O.C.
- 1:15-1:45 ***A Survey of Subsurface Oil Leakage from a Gas Station by Geophysical and Conventional Methods***
I-yuang Hsu, Ph.D., Researcher, Center for Environmental, Safety and Health Technology Development, Industrial Technology Research Institute, Hsinchu, Taiwan, R.O.C.
- 1:45-2:45 ***Use of Laser Ablation ICP-MS for Drug and Conventional Environmental Forensics***
John Watling, Ph.D., Professor, Curtin University of Technology, School of Applied Chemistry, Perth, Australia
- 2:45-3:00 **Break**
- 3:00-4:00 ***Use of Remote Sensing in Environmental Forensics***
Merv F. Fingas, Ph.D., Chief, Emergencies Science and Technology Division, Environmental Technology Centre, Environment Canada, Ontario, Canada
- 4:00-4:30 ***Identification of PCDD/F Sources in Ambient Air***
Lin-Chi Wang, Ph.D., Postdoctoral Fellow, Department of Environmental Engineering, National Cheng Kung University, Tainan, Taiwan, R.O.C.
- 4:30 **Adjourn**
Shuh Woei Yu, Ph.D., General Director, Center for Environmental, Safety and Health Technology Development, Industrial Technology Research Institute, Chu Tung, Hsinchu, Taiwan, R.O.C.

Day Two – December 9, 2003

- 8:30 ***Introduction and Welcome***
Robert D. Morrison, Ph.D. (Moderator), Soil Physicist, DPRA Inc., San Marcos, California, USA
- 8:30-9:00 ***Chemical Fingerprints of Diesel Using Environmental Forensic Techniques***
Jun-Chin Shen, Geochemist, Exploration & Development Research Institute, Chinese Petroleum Corporation, Miaoli, Taiwan, R.O.C.
- 9:00-10:00 ***Biomarkers in Oil Spills: Application, Limitation and Biodegradation***
Zhendi Wang, Ph.D. (Moderator), Senior Research Scientist, Environmental Canada Emergencies Science Division, Environmental Technology Centre, Ottawa, Ontario, Canada
- 10:00-10:15 **Break**
- 10:15-10:45 ***Source Identification of Unknown Wastes from Illegal Dumping Site***
Ms. Ying Lu, Senior Researcher, Environmental Analysis Technology Department, Environmental Technology Division, Center for Environmental, Safety and Health Technology Development, Industrial Technology Research Institute, Hsinchu, Taiwan, R.O.C.
- 10:45-11:15 ***Laser Ablation ICP-MS: Case Studies***
A. Mohamad Ghazi, Ph.D., Associate Professor, Department of Geology, Georgia State University, Atlanta, GA, USA
- 11:15-12:00 ***Application of Environmental Forensics Techniques in Litigation in the United States: Case Studies***
Paul Phillips, Esq., Holland & Hart, Denver, CO, USA
- 12:00-1:00 **Lunch**
- 1:00 ***Afternoon Session Overview***
James Meng-Shiun Wei, Ph.D. (Moderator), Senior Research Fellow, Office of Science and Technology Advisors, Environmental Protection Administration, Taiwan Environmental Protection Agency, Taipei, Taiwan, R.O.C.
- 1:00-2:00 ***The Role of Stable Isotopes in Environmental Forensics Studies***
R. Paul Philp, Ph.D., Professor, University of Oklahoma, Norman, OK, USA
- 2:00-2:45 ***Forensic DNA Profiling of Bacterial Communities in Soil***
Jacqui Horswell, Ph.D., Microbiologist, Environmental Science and Research Ltd., Kenepuru Science Center, Porirua, New Zealand
- 2:45-3:00 **Break**

- 3:00-3:45 ***Impact of Hydrogeologic Variables on Contaminant Plume Migration and Forensic Modeling***
Daniel B. Stephens, Ph.D., Soil Physicist, Daniel B. Stephens & Associates, Inc.,
Albuquerque, New Mexico, USA
- 3:45-4:30 ***Soil Remediation Technologies for Taiwan Rural Soil Contaminated by Heavy Metals***
Zueng-Sang Chen, Ph.D., Professor, Department of Agricultural Chemistry,
National Taiwan University, Taipei, Taiwan, R.O.C.
- 4:30 **Adjourn**
James Meng-Shiun Wei, Ph.D., Senior Research Fellow, Office of Science and
Technology Advisors, Environmental Protection Administration, Taiwan
Environmental Protection Agency, Taipei, Taiwan, R.O.C.

Hotel Information

The workshop will be held at the:

Howard Plaza Hotel
160 Jen Ai Road, Section 3
Taipei, Taiwan 106 ROC,
Tel: 886-2-2326-7527
Fax: 886-2-2708-2376

http://www.srs-worldhotels.com/taiwan/taipei/hotel_tpehow.html

The room rate for speakers is \$112.85 (US) which is for a Superior King Bed and includes tax, breakfast and service charge. The conference contact at the hotel is Ms. Amy Chen. She can be contacted at: amy8556-tp@howard-hotels.com.tw.

The course is being co-sponsored by the Taiwan EPA-Republic of China (ROC) and IRTI (Industrial Technology Research Institute of Taiwan), the largest research institute in Taiwan. ITRI is the premier research laboratory in Taiwan and consists of about 6000 scientists <http://www.itri.org.tw/eng/index.jsp>.