



Kobe University

Global-Link Forum in Taipei



2015

December 3-4
in *Taipei*





KOBE UNIVERSITY GLOBAL-LINK FORUM IN TAIPEI December 3-4, 2015

Kobe University, with the International Student Center as a driving force, started the International Alumni Association Network project in 2001 in order to strengthen ties with our alumni living overseas. As of December 2015, there are 12 international alumni associations (Korea, Taiwan, China, Vietnam, Indonesia, Thailand, Malaysia, Singapore, Europe, Myanmar, Laos and Mongolia).

To commemorate the tenth anniversary of the International Alumni Association Network project, in January 2011 we held the first Kobe University Global-Link Forum (KUGL) in Bangkok, Thailand. The forum had two main goals: to promote the Kobe University Brand overseas, and to form stronger links with overseas academic associations and the International Alumni Association Network, which provides an invaluable repository of knowledge for the University. After the successful launch of KUGL, Kobe University held the second forum in Seoul, Korea in November 2011, and the third forum in Beijing, China in September 2012.

In July 2013, we installed the Centre for Asian Studies under the Institute of Promoting International Exchange Programs, which was established to enhance our global competitiveness and develop further as an international hub for education and research. Through the Centre, Kobe University is pursuing a strategic approach to international exchange, focusing on Asian countries currently experiencing rapid economic growth which are expected to play increasingly important global roles.

Continuing the Global-Link Forum series following the international strategy mentioned above, we held the fourth forum in Ho Chi Minh City and Hanoi, Vietnam in December 2013 and the fifth forum in Kuala Lumpur, Malaysia in December 2014. These forums were hosted by the Institute of Promoting International Exchange Programs and involved the entire university. This year we will hold the sixth Kobe University Global-Link Forum on December 3-4 in Taipei, Taiwan.

This year's forum aims to increase the presence of Kobe University overseas in cooperation with partner universities in Taiwan and under the sponsorship of the "Kobe University Alumni Association in Taiwan." We hope that through this forum ties will be formed and strengthened between the University, its alumni, and its partner universities, and the Kobe University network will continue to expand worldwide.

(Institute of Promoting International Exchange Programs, Kobe University)



Re-realizing the Relationship with Taiwan and Japan: Cooperation in Science, Technology and Innovation

Organized by: Institute of Promoting International Exchange Programs, Kobe University

Co-hosted by: National Taiwan University

Kobe University Alumni Association in Taiwan

Nominal Supporting Institutions: Taipei Office, Japan Interchange Association

Taipei Medical University

Forum - Day 1 -

Date: Thursday 3 December 2015

Venue: Liang Kuo-Shu International Conference Hall, College of Social Sciences,
National Taiwan University

10:00-11:20 Morning Session (Opening Session)

Opening Remarks

Noriyuki Inoue, Executive Vice President in Charge of International Exchange and Internal Control, Kobe University

Congratulatory Address

Guan-Chau Huang, Deputy Education Counsellor, Department of International and Cross-strait Education, Ministry of Education

Takashi Hamada, Secretary-General, Taipei Office, Japan Interchange Association

David Chang, President, Kobe University Alumni Association in Taiwan

Keynote Speech

Hiroshi Takeda, President, Kobe University

Ching-Ray Chang, Executive Vice President for Administrative Affairs, National Taiwan University

13:30-16:50 New Orientations in the Humanities and Social Sciences in East Asia

Commentator

Lin Huang, Director of Kobe University China Office/ Professor of Graduate School of Business Administration, Kobe University

13:30-14:30 Humanities *This session will be held in Chinese.

Historical Consciousness and the China Model

Yasushi Ogata, Director of Centre for Asian Studies/ Professor of Graduate School of Humanities, Kobe University

Why Speak of "East Asian Confucianisms"?

Chun-chieh Huang, National Chair Professor and Dean, Institute for Advanced Studies in Humanities and Social Sciences, National Taiwan University

[Discussion: 20mins]

14:30-14:50 Coffee Break

14:50-16:50 Social Sciences

Innovation Made by Technological Entrepreneurs in Japan –Challenge of KOBE's Interdisciplinary Education –

Hiroyuki Ozaki, Professor, Graduate School of Business Administration, Kobe University

The cooperation of industries between Taiwan and Japan

Chien-Fu Jeff Lin, Professor of Department of Economics/ Associate Dean of Institute for Advanced Studies in Humanities and Social Sciences, National Taiwan University/ President, Taiwan Institute of Economic Research (TIER)

Sustainable Strategies for Recovery from Natural Disasters

Shinya Horie, Project Associate Professor, Graduate School of Economics, Kobe University

The Development of the Biotechnology Industry in Taiwan

Julie C. L. SUN, Director, Biotechnology Industry Study Center, Taiwan Institute of Economic Research

[Discussion: 40mins]

16:50-17:00 Closing

Closing Remarks

Yasushi Ogata, Director of Centre for Asian Studies/ Professor of Graduate School of Humanities, Kobe University

Forum - Day 2 -

Date: Friday 4 December 2015

Venue: Liang Kuo-Shu International Conference Hall, College of Social Sciences,
National Taiwan University

9:20-12:30 Advanced Research of Emerging and Reemerging Diseases in Asia

Opening Remarks

Satoshi Takada, Dean and Professor, Graduate School of Health Sciences, Kobe University
International Collaborative Research on Infectious Diseases – J-GRID (MEXT), SATREPS (JST/JICA), A*STAR (Singapore), JSPS program –

Hak Hotta, Professor and Endowed Chair, Graduate School of Health Sciences, Kobe University

Characterization of Southeast Asian type of HIV

Masanori Kameoka, Associate Professor, Graduate School of Health Sciences, Kobe University

Development of the novel oral vaccine platform utilizing bifidobacteria

Toshiro Shirakawa, Professor, Graduate School of Health Sciences, Kobe University

Telemedicine and Emergency Air Medical Services

Shin-Han Tsai, Dean of College of Public Health and Nutrition/ Professor and Chair of Department of Emergency Medicine, Shuang Ho Hospital, Taipei Medical University

Novel Immunotherapy to Cure Chronic HBV Infection by Using a Convenient Immuno-competent Mouse Model

Pei-Jer Chen, Professor of Graduate Institute of Clinical Medicine, Medical College/ Professor of Hospital Hepatitis Research Center, National Taiwan University

[Discussion: 30mins]

13:30-16:50 Advanced Membrane Technology Contributions to Resolving Energy and Environmental Issues

Keynote Speech: Development of Innovative Membranes for Water Treatment and CO₂ Separation

Hideto Matsuyama, Director of Center for Membrane and Film Technology/ Professor of Graduate School of Engineering, Kobe University

Report 1: Morphology Control of Polymeric Membranes --- Roles of Polymer Chain Entanglement

Da-Ming Wang, Professor and Chairman, Department of Chemical Engineering, National Taiwan University

Report 2: Tough Ion Gel Membranes Containing Amino Acid Ionic Liquid as a CO₂ Carrier

Eiji Kamio, Assistant Professor, Graduate School of Engineering, Kobe University

Report 3: Development of Novel Aerogel Membranes to Resolve the Carbon Abundance and Water Scarcity Issues

Kuo-Lun Tung, Professor, Department of Chemical Engineering, National Taiwan University

Report 4: Polymeric membrane microstructure characterization by positron annihilation spectroscopy

Kueir-Rarn Lee, Director of Center for Membrane Technology/ Professor of Department of Chemical Engineering, Chung Yuan University

16:50-17:00 Closing

Kobe University Alumni Networking in Taipei

Date: Friday 4 December 2015

Venue: World Trade Center Club

[Registration Open: 17:30]

18:00- Panel Discussion

The Collaboration Between Taiwan and Japan in Mobile Innovation

Yeachi Chen, Project Manager, Information and Communications Research Laboratories, Industrial Technology Research Institute (ITRI), Committee of Communications Industry Development, Ministry of Economic Affairs

Comparison between northern and southern Taiwanese cuisine

Jeng Ju Chuan, Shop Manager, Ki A Peng Sian (枝仔冰城)

The frontier of Taiwanese manufacturing innovation

Ren-Jye Liu, Professor, Department of Industrial Engineering and Enterprise Information, Tunghai University

19:00- Reception



Kobe University
Director of Centre for Asian Studies
Professor of Graduate School of
Humanities

Yasushi Ogata

Historical Consciousness and the China Model

The controversy on China Model held in 2008 has provoked the new China's investigation of Chinese traditional culture.

The traditional culture were consistently regarded as negative before 2008. In 1980's, it had been strongly condemned as feudalistic despotism, and the leaders of the CCP even advocated that the modernization could not be realized except to overcome the traditional culture. However, the Chinese traditional culture supporters thought that the China Model was just an alternative of the Washington Model, and only the Chinese traditional culture would solve the problems which could not be settled by the western value. After the appearance of new leader, Xi Jinping in 2012, the stream of re-evaluation to the traditional culture has become decisive.

Although the new revolutionary cultural movement after 1949 (including the Great Cultural Revolution from 1966 to 1976) have drastically transformed the pre-modern tradition, we can not deny that the traditional mode of thinking has continued to influence the contemporary Chinese culture. Could Xi Jinping use his conception of "Chinese Dream" to reconcile the feudalistic despotism of traditional culture with their goal of modernization? Could his hostile attitude to the universal value guarantee the Chinese people's rights of discussing and selecting their ideal life? How can he avoid the Sinocentrism thought?

This presentation will discuss the predicament of the China Model from the perspectives of Chinese historical consciousness.

Academic Background: Chinese Modern History

Academic Degree: Ph.D.(1992; Literature), The University of Tokyo, Japan

Career:

Professor, Graduate School of Humanities, Kobe University

Director, Centre for Asian Studies, Institute of Promoting International Exchange Programs, Kobe University

Publications:

Discourses of the Crisis Era: Chinese Revolution 1926-1929 (Tokyo: Shinhyoron Publishing, 1995)

Asian Diasporas and Colonial Modernity: Bridge-building of History, Literature and Thought (Tokyo: Bensei Publishing, 2012)



National Taiwan University
Institute for Advanced Studies in
Humanities and Social Sciences
National Chair Professor and Dean

Chun-chieh Huang

Why Speak of “East Asian Confucianisms”?

This presentation discusses the “what”, the “why” and the “how” of the study of “East Asian Confucianisms”. It is argued that the “East Asian Confucianisms” as a new academic discipline is full of potential. The rationale for proposing East Asian Confucianisms as a field of study is twofold. On the one hand, East Asian Confucianisms embrace the Confucian traditions of China, Japan, Korea, and Taiwan. On the other hand, the varied Confucian traditions in these cultures did not form a mechanical assemblage, but rather a comprehensive, developing, and systematic whole. The particularity and commonality of Confucianisms in China, Korea and Japan can best be visualized in an East Asia and comparative perspective.

Moreover, East Asian Confucianisms display a genetic developmental interconnectedness. It is well known that Confucianism originated in Shandong, China, two thousands years ago. By the sixteenth century it had spread to Japan across the vital bridge of Korea and taken up a major place in Japan’s philosophical mainstream. In the history of cultural interaction in East Asia, a “Confucianism” as opposed to “Christendom” can readily be observed.

In retrospect, we observe that the study of Confucianism in last century in each and every East Asian country was confined by the ghetto of nation-state. In the emerging 21st-century age of globalization, we have to strive to revisit the intrinsic values of Confucianisms in East Asia.

I shall stress the necessity of revisiting East Asian Confucian legacy and conclude by indicating that the universality of East Asian Confucian values shall become more and more apparent in the civilizational dialogue in the 21st century.

Keywords: East Asian Confucianisms, Confucianism, humanity, humanism, China, Korea, Japan.

Academic Background: History

Academic Degree: Ph.D. (1980; History), University of Washington, Seattle, Washington, USA

Career:

National Chair Professor, Ministry of Education, ROC; University Chair Professor and Dean, Institute for Advanced Studies in Humanities and Social Sciences; Director, Center of East Asian Confucianisms, National Taiwan University; Research Fellow, Institute of Chinese Literature and Philosophy, Academia Sinica, Taipei, TAIWAN

Publications:

East Asian Confucianisms: Texts in Contexts (Goettingen and Taipei: V&R unipress, National Taiwan University Press, 2015); *Xu Fuguan et sa pensée dans le contexte du confucianisme de l’Asie de l’Est* (Quebec: Presses de l’Université Laval, 2015); 《轉型中的大學通識教育：理念、現況與展望》（臺北：臺大出版中心，April 2015）；《大學通識教育的理念與實踐》（臺北：臺大出版中心，Feb.2015年）；《大學通識教育探索：臺灣經驗與啟示》（臺北：臺大出版中心，Feb. 2015）；《全球化時代大學通識教育的新挑戰》（臺北：臺大出版中心，Feb. 2015）；*Taiwan in Transformation: Retrospect and Prospect* (New Brunswick / London: Transaction Publishers, June 2014); 《台灣的大學教育——理念與改革》（首爾：韓國外國語大學出版社，March 2014）；《東アジア思想交流史：中国・日本・台湾を中心として》（東京：岩波書店，Jan. 2013）



Kobe University
Graduate School of Business
Administration
Professor

Hiroyuki Ozaki

Innovation Made by Technological Entrepreneurs in Japan — Challenge of KOBE's Interdisciplinary Education —

In 2015, approximately 90 companies are expected to go public in Japanese financial market. This figure of companies is more than four times of the recent bottom in 2009. The good result has come from easy-money policy by Bank of Japan and increasing entrepreneurs who have tried hard to provide new values for their customers. Many of the entrepreneurs have created businesses utilizing innovative technologies including information technology, medical, biotech, chemical, engineering, agriculture, and energy. The newly created companies which utilize innovative technologies are called “Technology Startups” (TS).

Key successful factor for TS is having an “Technology Entrepreneur”(TE) who can find solutions for various management issues such as team building, R&D, intellectual property, product development, manufacturing, marketing, sales, and client management.

Who and what is a talented TE who can lead a startup company to a success? This is an issue which will be discussed in this session based on current information in Japanese market. New graduate school of KOBE University will come to grips with a challenging goal to educate students to become TE by an interdisciplinary educational effort of four departments, which are medical, biotech, material, IT, and entrepreneurship.

Academic Background: Strategic entrepreneurship, Biotech business management, Cleantech business management

Academic Degree: PhD in Global Business

Career:

Nomura Securities, Morgan Stanley, Goldman Sachs, SBI, Startup Business, Tokyo University of Technology

Publications:

Ozaki, Kikuchi, Takegahara (2015) “Renewable Energies and New Growth Strategy”, Energy Forum

Ozaki (2012) “Growth Strategy in a Changing Society”, Nikkei BP

Ozaki (2011) “Five Misinterpretations in Global Cleantech Business”, Nikkei Premia

Ozaki (2009) “Cleantech Business of Next Generation”, Nikkei Publishing

Ozaki (2009) “New Hurdle for Investment Banking Industry”, Nikkei Publishing

Ozaki (2007) “Biotech Business Management”, Maruzen Publishing



National Taiwan University
Professor of Department of Economics
Associate Dean of Institute for Advanced
Studies in Humanities and Social Sciences

Taiwan Institute of Economic Research (TIER)
President

Chien-Fu Jeff Lin

The cooperation of industries between Taiwan and Japan

1. The current status and tendency of development in different industries between Taiwan and Japan
2. The investment and trade between Taiwan and Japan
3. The current status and prospective of cooperation in different industries between Taiwan and Japan
4. The expectation of cooperation results in different industries between Taiwan and Japan

Academic Background: Economics

Academic Degree: Doctor of Philosophy in Economics from the University of California San Diego

Career:

Dr. Chien-Fu Jeff Lin is the President of Taiwan Institute of Economic Research (TIER). Prior to his current position, he served as a Professor of Department of Economics, National Taiwan University; an Associate Dean of Institute for Advanced Studies in Humanities and Social Sciences, National Taiwan University; the Convener of Monetary and Public Finance Department, the National Policy Foundation; and the General Convener of Taiwan Competitiveness Forum Association.

Dr. Lin earned a Master of Arts in Economics followed by a Doctor of Philosophy in Economics from the University of California San Diego. Dr. Lin has his Bachelor of Arts and Master of Arts, both in Economics, from the National Taiwan University; and was awarded the Fulbright Honor in 2006. Dr. Lin has published many papers on Economic Policy Analysis, Macroeconomic Analysis, and Econometrics. In addition, he frequently publishes articles to share his views on current economic, political and social issues in newspapers such as the Economic Daily News column.



Kobe University
Graduate School of Economics
Project Associate Professor

Shinya Horie

Sustainable Strategies for Recovery from Natural Disasters

In this presentation I explore the recovery policies after the Great East Japan Earthquake and Tsunami comprehensively. By doing so, we assess how the disaster-affected cities' possession of their accommodation promotes the effectiveness of the policies.

In the current four years, interestingly, there have been differences among the disaster areas in the magnitude of successfulness in recovery plans although some of them have experienced the same levels of devastation. The cities located in the southern area have recovered relatively faster than the one in the northern area.

One of the goals of the recovery plans is to achieve fast and sustainable recovery of the disaster area. However, if the severity or the coverage of the damage exceeds certain limits or ranges, the disaster area cannot find the undamaged areas in neighborhoods.

I focus on these matter as a source of difference in the magnitudes of recovery considering nuclear plant nearby areas, and propose the necessity for the local cities to have their potential accommodation as a part of preparing for the smooth recovery.

Academic Background:

1997-2001 Department of Economics, Kobe University

2001-2004 Graduate School of Economics, Kobe University

2004-2015 Graduate School of Economics, The Ohio State University

Academic Degree: Ph.D. (Economics)

Career:

2012-2015 Research Associate, Graduate School of Environment Studies, Tohoku University

2015-Present Project Associate Professor, Graduate School of Economics, Kobe University

Publications:

Sanei, M. S. Horie, and S. Managi (2015). "Job Opportunity and Ownership Status: Return Decision after the Great East Japan, Earthquake and Tsunami," *Singapore Economic Review*, forthcoming



Taiwan Institute of Economic
Research
Biotechnology Industry Study
Center
Director

Julie C. L. SUN

The Development of the Biotechnology Industry in Taiwan

Taiwan Institute of Economic Research (TIER) was established on September 1, 1976 by Dr. Chen-fu Koo as the first private independent research institute in Taiwan. The purposes of the Institute are to actively engage in research on domestic and foreign macroeconomics and industrial economics, to provide consultations for government and businesses, and to promote Taiwan's economic development.

Biotechnology Industry Study Center (BISC) was founded under TIER in 2003. It is aimed to study and to promote the bioeconomy, i.e., the bio-related industries, in Taiwan. BISC works closely with the governments, Council of Agriculture and Ministry of Science & Technology, and with the research institutes both in agriculture and in medicine. It carries out the projects on strategical planning and economic evaluation for governments, as well as provides market information, technology valuation, and regulation analysis for companies in the biotechnology industry in Taiwan.

Dr. Julie Sun is the founder and current director of BISC. Her presentation will cover the topics as follows.

The Current Status of the Biotechnology Industry in Taiwan

The Policy of the Biotechnology Industry in Taiwan

The Perspective of the Biotechnology Industry in Taiwan

Academic Degree: Ph.D., Judge Business School, University of Cambridge

Career:

Chief Editor, Agricultural Biotechnology Industry Quarterly

Director, Biotechnology Industry Study Center

Director, Intellectual Property Valuation Service Centre

Research Fellow, Taiwan Institute of Economic Research



Kobe University
Graduate School of Health Sciences
Professor and Endowed Chair

Hak Hotta

International Collaborative Research on Infectious Diseases — J-GRID (MEXT), SATREPS (JST/ JICA), A*STAR (Singapore), JSPS program —

Center for Infectious Diseases (CID), formerly called International Center for Medical Research (ICMR), Kobe University Graduate School of Medicine, aims to conduct international collaborative research on infectious diseases, such as viral hepatitis, dengue, HIV/AIDS, influenza and diarrheal diseases, and also other medical and international health problems. CID has been collaborating with Airlangga University to establish an overseas research center in Indonesia in a Japanese government (MEXT) project named the Japan Initiative for Global Research Network on Infectious Diseases (J-GRID) since 2007. Also, CID was appointed to conduct another collaborative research with University of Indonesia and other institutions through the Science and Technology Research Partnership for Sustainable Development (SATREPS) program supported by the Japan Science and Technology Agency (JST) and the Japan International Cooperation Agency (JICA) from 2009 to 2014. Moreover, some of our international collaborative studies were supported by grants from the counterpart countries, e.g., Biomedical Research Council of A*STAR, the Agency for Science, Technology and Research, Singapore, since 2008. My colleagues and I have been working on molecular virology and epidemiology of hepatitis C virus (HCV) as well as development of diagnostics, antivirals and vaccines against HCV. In this forum, I will explain the scheme of our international collaborative research and present some of our achievements on the study of HCV.

Academic Background and Career:

1974; graduated from Faculty of Medicine, Osaka University; obtained a Medical License
1985; Ph.D. (Kobe University)
1994; Professor and Chair, Department of Microbiology, Kobe University School of Medicine
1998; Director, International Center for Medical Research (ICMR), Kobe University School of Medicine
2003; Director, International Student Center, Kobe University
2006; Director, ICMR and Center for Infectious Diseases, Kobe University Graduate School of Medicine
2011; Vice Dean, Kobe University Graduate School of Medicine
2013; Honorary Professor, Airlangga University, Republic of Indonesia
2015; Professor Emeritus, Kobe University
Endowed Chair and Professor, Kobe University Graduate School of Health Sciences

Publications:

Mohd-Ismail NK, Hotta H, et al. J Virol 2009; Kasai D, Hotta H, et al. J Hepatol 2009; Deng L, Hotta H, et al. J Virol 2011; Matsui C, Hotta H, et al. J Virol 2012; El-Shamy, Hotta H, et al. Hepatology 2008, 2013; El-Shamy, Hotta H, World J Gastroenterol 2014; Takei S, Hotta H, et al. Vaccine 2014; Ratnoglik SL, Hotta H, et al. PLoS ONE 2014; ; Aweya JJ, Hotta H, et al. Virology 2015; Keng CT, Hotta H, et al. Gut 2015.



Kobe University
Graduate School of Health Sciences
Associate Professor

Masanori Kameoka

Characterization of Southeast Asian type of HIV

Human immunodeficiency virus (HIV) infection and acquired immune deficiency syndrome (AIDS) (HIV/AIDS) cause a serious health problem and have a big impact on the economic of several Southeast Asian countries. Thailand has the highest HIV-1 prevalence rate among Southeast Asian countries. In addition, the epidemic of HIV-1 is currently rapidly growing in Indonesia. In order to gain a better understanding of the HIV-1 situations in the countries, we have conducted collaborative studies with Thai and Indonesian researchers. We have studied the immunological characteristics of Southeast Asian strains of HIV-1 in Thailand, and found a molecular mechanism of how the Thai HIV-1 strains escape from host humoral immune responses. In addition, we have studied the genotypic characteristics of HIV-1 strains in Indonesia, and revealed HIV-1 subtypes prevalent in several regions of Indonesia. In this talk, the research outcomes of the collaborative studies will be presented.

Specialized Field:

HIV/AIDS, Dengue, Emerging and re-emerging infectious diseases, Virology, Molecular epidemiology, International Health

Academic Degree: Ph.D. (received at Hokkaido University in 1996)

Career:

Research Associate/ Associate professor at Hokkaido, Nara medial and Osaka Universities, Specially appointed professor at Osaka University

Recent Publications:

Kotaki, T. et al. HIV-1 Transmitted Drug Resistance Mutations among Antiretroviral Therapy-Naive Individuals in Surabaya, Indonesia. *AIDS Res. Ther.* 12: 5, 2015.

Khairunisa, S. Q. et al. Appearance of Drug Resistance-Associated Mutations in Human Immunodeficiency Virus Type 1 Protease and Reverse Transcriptase Derived from Drug-treated Indonesian Patients. *AIDS Res. Hum. Retroviruses* 31: 255-259, 2015.

Kotaki, T. et al. Continuous Dengue Type 1 Virus Genotype Shifts Followed by Co-circulation, Clade Shifts and Subsequent Disappearance in Surabaya, Indonesia, 2008-2013. *Infect. Genet. Evol.* 28: 48-54, 2014.

Utachee, P. et al. Impact of amino acid substitutions in the V2 and C2 regions of human immunodeficiency virus type 1 CRF01_AE envelope glycoprotein gp120 on viral neutralization susceptibility to broadly neutralizing antibodies specific for the CD4 binding site. *Retrovirology* 11:32, 2014.



Kobe University
Graduate School of Health Sciences
Professor

Toshiko Shirakawa

Development of the novel oral vaccine platform utilizing bifidobacteria

We have been developing the novel oral vaccine platform efficiently and safely to induce mucosal and systemic immunity against various infectious pathogens (e.g. Salmonella Typhi, hepatitis C virus, influenza type A virus, and others). Our proposed vaccine platform utilized bifidobacterium displaying antigen, including CD4 and CD8 epitopes of the pathogens on the cell-surface. The health-promoting benefits and safety of bifidobacterium have long been recognized. In addition, comparing to Lactobacillus, bifidobacterium has the higher adhesive ability to human epithelial cells and the better effect on activating human immune systems. Bifidobacterium can be freeze-dried and encapsulated in PH-dependent seamless capsule. Encapsulated bifidobacterium can be delivered to intestine with resistance to gastric acid, and be stored at room temperature. The advantages of this novel oral vaccine platform are efficient cellular and humoral immunities expected, less side effects (pain, pathogenicity), no necessity of needles, stored at room temperature, easy to administer to children even in poor hygiene conditions.

Academic Background: MD, Kobe University School of Medicine, 1992

Academic Degree: PhD, Kobe University Graduate School of Medicine, 1998

Career:

2015- Professor, Kobe University Graduate School of Health Sciences

2005- Associate Professor, Kobe University School of Medicine

2001- Assistant Professor, Kobe University Graduate School of Medicine

1996-1998 Research Associate, University of Virginia, Health Science Center

Publications:

1: Takei S, Omoto C, Kitagawa K, Morishita N, Katayama T, Shigemura K, Fujisawa M, Kawabata M, Hotta H, Shirakawa T. Oral administration of genetically modified Bifidobacterium displaying HCV-NS3 multi-epitope fusion protein could induce an HCV-NS3-specific systemic immune response in mice. *Vaccine*. 2014; 32(25):3066-74

2: Shirakawa T, Terao S, Hinata N, Tanaka K, Takenaka A, Hara I, Sugimura K, Matsuo M, Hamada K, Fuji K, Okegawa T, Higashihara E, Gardner TA, Kao C, Chung LW, Kamidono S, Fujisawa M, Gotoh A. Long-term outcome of phase I/II clinical trial of Ad-OC-TK/VAL gene therapy for hormone-refractory metastatic prostate cancer. *Hum Gene Ther*. 2007;18(12):1225-32.



Taipei Medical University
Dean of College of Public Health and
Nutrition
Professor and Chair of Department of
Emergency Medicine, Shuang Ho Hospital

Shin-Han Tsai

Telemedicine and Emergency Air Medical Services

Introduction:

The demands for Emergency Air Medical Services (EAMS) have increased worldwide in recent years. The geographical limitations in Taiwan main-island and unequal development of medical manpower and facilities on remote islands have resulted in a growing need of EAMS to the main island of Taiwan. A lack of the preflight screening mechanism has resulted in rapid growth of unnecessary flights. On account of cost containment, the Taiwan Department of Health established the National Aeromedical Approval Center (NAAC) for the preflight screening of patients requesting EAMS in 30 remote locations.

Methodology:

Retrospective analysis of all patient records undergoing EAMS via NAAC.

Results:

Between Oct 01, 2002 and Jul 31, 2015, there were 4658 EAMS requests (avg. 0.99/day). Among them, there were 3952 request for interhospital transports. A total of 3421 interhospital transports were approved, with overall approval rate of 86.56%.

Among all completed cases, male patients outnumbered female patients (M:F= 2:1). Mean age of patients was 49.5 years. Medical and surgical conditions comprise 72% and 28% respectively. There has been no patient safety or flight safety issue in 3421 flights and savings of government expenditure is US\$43,700,066 during the twelve years and ten months period.

Conclusion:

The physicians in the NAAC played crucial roles in this aspect. One of the major roles the physicians is being a gatekeeper for EAMS approval and transport quality. The system, including the protocols used, screening criteria, and the use of video telemedicine, is thought to have caused the reduction of EAMT applications.

Academic Degree:

Department of Medicine, National Defense Medical Center, Taiwan, ROC, Degree Received: M.D.; Division of Anatomy (Neuroanatomy) Institute of Biomorphology, National Defense Medical Center, Taiwan, ROC, Degree Received: M.Sc.; Ph.D. Program, Department of Neurosurgery and Division of Neurobiology, Department of Cell Biology, Neurobiology and Anatomy, University of Cincinnati College of Medicine, Cincinnati, Ohio, U.S.A. Degree Received: Ph.D.

Publications:

Chen YT, [Tsai SH](#), Sheu SY, Tsai LH. Ghrelin improves lipopolysaccharide-induced gastrointestinal motility disturbances: roles of nitric oxide and prostaglandin E2. *Shock*. 33(2): 205-212, 2010 (SCI)
Ma HP, Chen WL, Wu CH, Chiu WT, [Tsai SH](#). Transport of invalids by air: Aging and Patient Safety in Air Medical Transport. *British Medical Journal*. March. 20, 2013 (SCI)
Chen WL, Ma HP, Chiu WT, [Tsai SH](#). Prehospital management of head injury patients in emergency air medical transport (EAMT). *British Medical Journal*. Apr. 22, 2013 (SCI)
Chen WL, Ma HP, Wu CH, Chiu WT, [Tsai SH](#). Infection control for patients with Middle East Respiratory Syndrome Coronavirus (MERS-CoV). *British Medical Journal*. Aug. 3, 2013 (SCI)
Chen WL, Ma HP, Wu CH, Chiou HY, Yen Y, Chiu WT, [Tsai SH](#). Clinical Research of Mortality in Emergency Air Medical Transport (EAMT). *BioMed Research International*. 767402, 2014 (SCI)
Chen WL, Chiu WT, Wu MS, Hsu MH, [Tsai SH](#). Translational Research of Telecare for the Treatment of Hepatitis C. *BioMed Research International*. 195097, 2014 (SCI)
Lin LF, Liou TH, Hu CJ, Ma HP, Ou JC, Chiang YH, Chiu WT, [Tsai SH](#), Chu WC. Balance function and sensory integration after mild traumatic brain injury. *Brain Injury*. 29(1): 41-46, 2014 (SSCI)



National Taiwan University
Professor of Graduate Institute of
Clinical Medicine, Medical College
Professor of Hospital Hepatitis
Research Center

Pei-Jer Chen

Novel Immunotherapy to Cure Chronic HBV Infection by Using a Convenient Immuno-competent Mouse Model

Chronic hepatitis B involved the complicated interaction between evolving hepatitis B virus and the host immune responses. Current antiviral NUCs effectively control new cycles of viral replication, but do not upgrade the host anti-viral immune responses. However, to study the HBV-specific immune responses and to optimize immune-therapy, we need a simple immune-competent animal, especially mouse, model. The hydrodynamic injection of HBV DNA can efficiently deliver viral genome into the mouse liver to initiate viral gene expression, viral replication, and to release the complete virions and HBsAg into the circulation. Though there are no new cycles of HBV infection, this approach can stimulate the host anti-HBV immune responses. Depending upon the strains of mice, certain strains of mice clear the HBV rapidly but others cannot so the HBV become persistent.

By using this system, it is possible to understand the HBV persistence, and also tested a variety of new immunomodulators. New TLRs ligands or therapeutic antibodies (against HBsAg or immune-inhibitory molecules, PD1 or PDL1), are now studied in this system. In addition, exploratory therapies, such as reactivating exhausted NK cells, or preferential killing of HBV carrying hepatocytes by cIAPs antagonists, have been updated.

Academic Background: Professor, College of Medicine, National Taiwan University.

Academic Degree: MD., Ph.D.

Career:

From 2001 to 2006, he was a member of the editorial board of the journal *Hepatology* and reappointed since year 2010-2011. In 2000, Professor Chen was awarded the International Research Scholar in Infectious Diseases by the Howard Hughes Medical Institute for a period of five years. He has been elected into Academia Sinica in year 2006, and into TWAS member in year 2011. He has published over 600 articles in the areas of hepatitis and hepatocellular carcinoma.

Publications:

Chou HH, Chien WH, Wu LL, Cheng CH, Chung CH, Horng JH, Ni YH, Tseng HT, Wu D, Lu X, Wang HY, Chen PJ, Chen DS. Age-related immune clearance of hepatitis B virus infection requires the establishment of gut microbiota. *Proc Natl Acad Sci U S A*. 2015 Feb 17;112(7):2175-80. Epub 2015 Feb 2.

Wang SH, Yeh SH, Shiau CW, Chen KF, Lin WH, Tsai TF, Teng YC, Chen DS, Chen PJ. Sorafenib Action in Hepatitis B Virus X-Activated Oncogenic Androgen Pathway in Liver through SHP-1. *J Natl Cancer Inst* (2015) 107(10): djv190



Kobe University
Director of Center for Membrane
and Film Technology
Professor of Graduate School of
Engineering

Hideto Matsuyama

Development of Innovative Membranes for Water Treatment and CO₂ Separation

With the aim at tackling the global issues such as water shortage and CO₂ caused global warming, my research focuses on membrane utilized water treatment and CO₂ separation. The research is mainly in 5 aspects, 1) membrane for water reuse and desalination with considerably low energy consumption, 2) strong anti-fouling membrane based on new materials, 3) CO₂ separation membrane with high performance in a large variety of conditions, 4) energy production by membrane process, 5) innovative separation system by using our newly developed membrane.

In order to further advance such research, we have established the Center for Membrane and Film Technology (MAFTech Center) in 2007, which is the first and only-one university-driven membrane research center in Japan. Currently we are collaborating with more than 60 industrial companies, as well as partnering with 7 academic membrane research centers overseas.

In 2015, the integrated membrane research building (6000m²) finished its construction and started its operation. It is the most diverse research unit integrating all aspects from basic to applied research. Researches based on the many different backgrounds are intensively and synergistically carried out in this facility. Our goal is the contribution to achieve sustainable society in future via membrane and membrane process innovations.

Educational Qualifications:

B.A.Sc. (1983) Kyoto University
M.A.Sc. (1985) Kyoto University
PhD (1990) Kyoto University.

Professional Experience:

1985-94 Assistant Professor, Kyoto Institute of Technology.
1994-98 Lecturer, Okayama University.
1998 Associate Professor, Okayama University.
1998- 2004 Associate Professor, Kyoto Institute of Technology.
Professor, Kobe University
2007 Director of Center for Membrane and Film Technology



National Taiwan University
Department of Chemical
Engineering
Professor and Chairman

Da-Ming Wang

Morphology Control of Polymeric Membranes --- Roles of Polymer Chain Entanglement

Nonsolvent-induced phase separation has been used for a long time to prepare polymeric membranes. But, a clear insight into how membrane forms still remains a challenge. The presentation is focused on a point being overlooked in the literature: that phase separation may need time to occur. For example, phase separation via the mechanism of nucleation and growth may not occur if there is not enough time for the nuclei to form; a polymer solution with a composition in the crystallization region may not crystallize if not enough time is given for the crystalline nuclei to occur. Therefore, the times given and needed for the nuclei to occur play important roles in the formation of membrane pores. The time given for the nuclei to occur is the time that the casting solution stays in the meta-stable region. And the time needed for the nuclei to form is strongly related to the degree of polymer chain entanglement in the casting solution, which can be characterized by using the solution viscoelasticity. We will give examples showing that by varying solvent quality, polymer concentration, polymer molecular weight, we can change the degree of polymer chain entanglement and thus change the phase separation mechanism and the resulting membrane morphology.

Profile:

Da-Ming Wang received his B.S. in Chemical Engineering from National Taiwan University in 1983 and PhD in Chemical Engineering from the Pennsylvania State University in 1992. He joined the Department of Chemical Engineering as a faculty member in 1998. His research interests include fabrication of polymeric membranes, membrane separation techniques, and biomaterials. He serves as one of the editors of the Journal of Chemical Engineering of Japan and an editorial board member of the Taiwanese Institute of Chemical Engineers.



Kobe University
Graduate School of Engineering
Assistant Professor

Eiji Kamio

Tough Ion Gel Membranes Containing Amino Acid Ionic Liquid as a CO₂ Carrier

Increase of CO₂ in the atmosphere causes serious environmental impacts including global warming and climate change. Membranes have gained significant attraction to be utilized as a CO₂ separation medium. Recently, we developed a new class of CO₂ separation membranes containing amino acid ionic liquids (AAILs) with superior CO₂ permeation properties. To utilize the AAIL-based membrane under pressurized conditions, here, we propose a tough gel membrane containing a large amount of AAIL. The gel membrane has excellent mechanical strength based on a specific double-network (DN) gel matrix that improves the pressure resistance of the membrane and also enables fabrication of a thin membrane with high CO₂ permeance. The developed DN gel membrane containing 80 wt% of AAIL was stable up to 400 kPa of trans-membrane pressure difference. Long-term durability test of the DN ion gel membranes under pressurized condition exhibited the stable performance for more than 5 days. In addition, the thin DN gel membrane (58 μm) containing 80 wt% AAIL showed not only high CO₂ permeance but also high CO₂/N₂ selectivity. The DN gel membrane containing AAIL indicated high potential to provide feasible and desirable CO₂ separation membranes for various practical CO₂ separation applications.

Academic Degree: Ph.D., Doshisha University, September 2002

Career:

Kobe University: Assistant Professor (April 2012 to present)

Project Associate Professor (April 2010 to March 2012)

Research Scientist (April 2008 to March 2010)

Okayama University: Research Scientist (April 2006 to March 2008)

Hachinohe Institute of Technology: Research Scientist (April 2005 to March 2006)

Osaka Prefecture University: Assistant Professor (April 2004 to March 2005)

Okayama University: Research Scientist (October 2002 to March 2004)

Major Publications for CO₂ separation membranes:

S. Kasahara, E. Kamio, T. Ishigami and H. Matsuyama, Amino acid ionic liquid-based facilitated transport membranes for CO₂ separation, *Chem. Commun.*, 48 (2012) 6903-6905

S. Kasahara, E. Kamio, A. Yoshizumi and H. Matsuyama, Polymeric ion-gels containing an amino acid ionic liquid for facilitated CO₂ transport media, *Chem. Commun.*, 50 (2014) 2996-2999

F. Moghadam, E. Kamio, A. Yoshizumi and H. Matsuyama, An amino acid ionic liquid-based tough ion gel membrane for CO₂ capture, *Chem. Commun.*, 51 (2015) 13658-13661



National Taiwan University
Department of Chemical
Engineering
Professor

Kuo-Lun Tung

Development of Novel Aerogel Membranes to Resolve the Carbon Abundance and Water Scarcity Issues

In this talk, I will report the development of novel aerogel membranes and operation modes for various process applications with membrane contactors (MCs). In particular, it will focus on the development of tuned hydrophobic, hydrophilic and asymmetric wettability membranes. Membrane contactors are membrane systems that can find application in different fields of industrial interest, covering, for example, gas-liquid operations, liquid-liquid extractions and vapor-liquid distillation. In past decade, the use of membrane absorption to capture carbon (membrane absorption, MA), to prepare emulsions (membrane emulsification, ME), to recover resources from sea (membrane crystallization, MCr) to carry out distillation processes for water scarcity issue (membrane distillation, MD) has been subject of many research activities worldwide. Focus of this talk will be placed on the applications of the developed novel aerogel membranes for MA and MD processes to resolve the carbon abundance and water scarcity issues, respectively, for achieving an ultimate goal toward a sustainable planet.

Academic Background/Degree:

1991 BS Department of Chemical Engineering, National Taiwan University

1994 MS Department of Chemical Engineering, National Taiwan University

1998 PhD Department of Chemical Engineering, National Taiwan University

Career:

2009-2012 Director, R&D Center for Membrane Technology, Chung Yuan Christian University

2006-2009 Deputy Director, R&D Center for Membrane Technology, Chung Yuan Christian University

2006-2012 Professor, Department of Chemical Engineering, Chung Yuan Christian University

2002-2006 Associate Professor, Department of Chemical Engineering, Chung Yuan Christian University

1999-2002 Assistant Professor, Department of Chemical Engineering, Chung Yuan Christian University

1991-1992 Process Engineer, Ho-Tai Industrial Co.

Publications:

+120 refereed SCI journal papers; +150 conference papers; 20 patents; 18 books; 10 chapters;

16 plenary speeches; 18 keynote speeches; 30 invited speeches;

10 editor, deputy editor, associate editor and editorial board;

5 conference chairs; 32 scientific committees and organizing committees of international conferences.



Chung Yuan University
Director of Center for Membrane
Technology
Professor of Department of
Chemical Engineering

Kueir-Rarn Lee

Polymeric membrane microstructure characterization by positron annihilation spectroscopy

The concept of correlating the physical defects at the atomic and molecular level, such as vacancy or free volume with membrane performances, such as permeability and selectivity, for optimal design of membranes is very important. In general, atomic probes, SEM, and AFM are powerful tools for detecting static defects near the surface. However, the above instruments are difficult to be used to analyze the fine structure under the membrane skin-layer. One important approach is to study the free-volume properties of polymeric membrane systems, the very origins of physical structure of polymers, i.e., from the Å to 1 nm level and 10^{-6} - 10^{-15} s time scale of motion. In this presentation, we introduced a special physical technique, positron annihilation spectroscopy (PAS), it is a special nondestructive evaluation (NDE) technique for materials characterization. During the recent decades, PAS was developed as a useful tool to probe the fine structure of polymeric membrane. Especially, PAS was used to measure physical properties of defects, i.e., free volumes at the atomic and molecular levels as a function of chemical changes and molecular modifications in a polymeric membrane system.

Research Fields:

- Membrane Preparation: We currently focus on the synthesis of novel polyamide and organic/inorganic hybrid membrane. The next step is to design module for various separation processes.
- Separation Process: Our present interest lies on the preparation polymeric membrane for pervaporation and oxygen enrichment.
- Membrane Modification: The present research concentrates on the membrane modification using chemical grafting, plasma pretreatment, and organic/inorganic hybrid.
- Membrane Characterization: Investigation on free volume depth profile of polymeric composite membrane by positron annihilation spectroscopy is our present research field. Especially, the effect of membrane morphology and chemical structure on the free volume and free volume distribution.

Potential Applications of Research:

Pervaporation, Membrane Module Design, Gas Separation, Membrane structure characterization by Positron Annihilation Spectroscopy (PAS)

Publications:

Gongping Liu, Wei-Song Hung, Jie Shen, Qianqian Li, Yun-Hsuan Huang, Wanqin Jin, Kueir-Rarn Lee, and Juin-Yih Lai, "Mixed matrix membranes with molecular-interaction driven tunable free volumes for efficient bio-fuel recovery", *J. Mater. Chem. A*, 3, 4510-4521 (2015) (sci)

Jie Shen, Gongping Liu, Kang Huang, Wanqin Jin, Kueir-Rarn Lee, and Nanping Xu, "Membranes with fast and selective gas-transport channels of lamellar grapheme oxide for efficient CO₂ capture", *Angew. Chem. Int. Ed.*, 54, 578-582 (2015) (sci)

Kobe University Alumni Networking in Taipei



Ministry of Economic Affairs
Information and Communications Research
Laboratories, Industrial Technology Research
Institute (ITRI), Committee of Communications
Industry Development
Project Manager

Yeachi Chen

The Collaboration Between Taiwan and Japan in Mobile Innovation

The Committee of Communications Industry Development (CoCID) is under the Ministry of Economic Affairs, Taiwan. CoCID serves as the contact window to promote general affairs of the communications industry, such as 4G/5G, wearable/IoT, and smart city related technologies. It aims at promoting industrial cooperation, business opportunities and innovative applications and services. In this session, Yeachi Chen will introduce what Taiwanese government does for promoting the communications industry and what opportunities lie in the collaboration between Taiwan and Japan in mobile innovation.

Academic Background: Graduate School of International Cooperation Studies, Kobe University

Academic Degree: Master of Economics

Career: Project Manager of Committee of Communications Industry Development, Ministry of Economic Affairs



Ki A Peng Sian (枝仔冰城)
Shop Manager

Jeng Ju Chuan

Comparison between northern and southern Taiwanese cuisine

Although Taiwan is not a big country looking at the geographic area, Taiwanese cuisine has developed into very distinct food culture and taste between northern and southern region. This shows the wide variety and multi-facet of Taiwanese food culture, and it is one of the reason that Taiwanese cuisine has attracted many visitors to Taiwan.

The speaker intend to introduce this distinctive food culture through introduction of the famous restaurants in both the northern and southern Taiwan, their history and interesting facts.

Academic Background: Graduate School of Humanities, Kobe University

Academic Degree: Master of Art

Career: Shop Manager of “Ki A Peng Sian (枝仔冰城)”

Kobe University Alumni Networking in Taipei



Tunghai University
Department of Industrial Engineering
and Enterprise Information
Professor

Ren-Jye Liu

The frontier of Taiwanese manufacturing innovation

Over the past decade, facing severe business environment changes, especially the impact of fierce competition in China and other emerging countries, the continued challenge manufactures innovative Taiwanese companies - are gradually attracting attention. Here, I will clarify the frontier of Taiwanese manufacturing innovation.

Recent innovation theory is constantly emphasized the importance of research and development, joint development, co-production and joint marketing with external organizations through collaboration. Concrete presentation is modularization in design or production. Furthermore, it is also emphasized the inter-organizational relationship and open innovation by cooperation with suppliers, competitors, customers, and external research institutes.

Based on these two dimensions, I will present two innovative patterns through the frontier cases of Taiwanese bicycle and Panasonic notebook computers production in Taiwan. Firstly, it will co-create new products, new processes and new markets with affiliating companies overall supply chain-related organizations including of a competitor and module production companies. Secondly, it will cooperate with component, part and modular suppliers to develop new products through module design, production and to create high customer value. Such development patterns, based on Taiwanese companies' customer value creation, is considered as a co-creation model, a new concept of manufacturing innovation.

Profile:

Professor Ren-Jye Liu received his Ph.D in Business Administration from Kobe University in Japan in 1991. Liu was Chairman of his department at Tunghai University (1998-2001) and an advisory committee member for the Taiwan Economic Ministry (1993-98). In the global academic field, he has been a Visiting Professor in the Business School, Kobe University (2006), Osaka City University (2010-), and was a visiting faculty member in the Wharton School, University of Pennsylvania (2002-03). In the private sector, Liu has been the director of the Precision Machinery R&D Center and the Taiwan Machine Tool Foundation.

He is the author of eleven books in Taiwan as well as eight expertise articles in academic books in both Japanese and English. He is the winner of many academic awards, including Carolyn Dexter Award Nominee (2007, the Academy of Management), the Best paper Award (1997, Association for the Study of Industrial Management in Japan), the Excellent Book for Business Award (1997,1998, 2009, the Taiwan Economic Ministry).



Organized by: Institute of Promoting International Exchange Programs, Kobe University

Co-hosted by: National Taiwan University

Kobe University Alumni Association in Taiwan

Nominal Supporting Institutions: Taipei Office, Japan Interchange Association

Taipei Medical University

神戸大学 KOBE UNIVERSITY

1-1 Rokkodai-cho, Nada-ku, Kobe 657-8501, Japan TEL: +81-78-803-5043 FAX: +81-78-803-5049

E-mail: intl-plan@office.kobe-u.ac.jp <http://www.office.kobe-u.ac.jp/ipiep/index.html>