世界华人生物医学工程协会
World Association for Chinese Biomedical Engineers
Newsletter

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MESSAGE FROM THE PRESIDENT

Fong-Chin SU, PhD
National Cheng Kung University, Taiwan

Dear members of the WACBE,

It is an honor and a pleasure to serve the World Association of Chinese Biomedical Engineers (WACBE) as a president. Over the past few years, with all the predecessors' efforts, WACBE has grown up to one of the largest Chinese research groups in bioengineering.

WACBE was created in 2004 with the goal of linking the world-wide Chinese professionals and researchers in the field of biomedical engineering to facilitate the professional and career development of its members and to establish a spirit of international cooperation in biomedical engineering. With the increasing aging population, the rapid demands of affordable and high quality healthcare using cutting-edge bioengineering technology has become a critical issue. As we approach the next step, we aim to foster relationships and promote cooperation between industry and academia globally for the benefit of society.

In the coming years, WACBE will continue to leverage its growing membership and to promote recognition of the need for sustainable supports from worldwide enterprises, and furthermore, we all should make more efforts to carry the younger-generation and cultivate the talents for future. On the other hand, academy initiatives will continue to grow the visibility of the impact of WACBE and ensure that the community increases influence in the field of worldwide biomedical engineering and enhances the quality of healthcare.

Thank you for your contribution, commitment and support. I look forward to collaborating with you throughout my term as President.
Best regards,

Fong-Chin Su, PhD
President, WACBE

MESSAGE FROM THE PAST PRESIDENT

Yubo FAN, PhD
Beihang University, China

Dear Friends of the WACBE,

It was my honor to serve as the President of WACBE during 2015-2017. I was deeply moved by the commitment of many Chinese biomedical engineers to promote and advance the biomedical engineering field. I appreciate the opportunity to work with you to serve the WACBE between 2015 and 2017.

Being a life member of WACBE, I am committed in achieving the missions of the WACBE. I sincerely invite you to visit me and Beijing Advanced Innovation Center for Biomedical Engineering, School of Biological Science and Medical Engineering at the Beihang University. Together, we can do better.
Sincerely,

Yubo Fan, PhD
Past President, WACBE (2015-2017)

2018 WACBE

SAVIO L-Y. WOO DISTINGUISHED LECTURESHIP

Zong-Ming LI, PhD, Past President of WACBE (2013-2015)

In 2013, the WACBE Council established the Distinguished Lectureship under the name of our founding president, Professor **Savio L-Y. Woo**. It was determined that this lecture would be given during WACBE's biennial congress. Dr. Woo is a Distinguished University Professor Emeritus of Bioengineering and the Founder and Director of the Musculoskeletal Research Center (MSRC), a diverse multidisciplinary research and educational center in the Department of Bioengineering, Swanson School of Engineering at the University of Pittsburgh. He arrived at the University of Pittsburgh in 1990 after spending 20 years at the University of California, San Diego (UCSD) as a Professor of Surgery and Bioengineering. Dr. Woo is also a Distinguished Chair Professor in the College of Biomedical Engineering at Taipei Medical University and the Bao Yu Gang Endowed Chair Professor in the Department of Biomedical Engineering at Ningbo University. He is a member of the National Academy of Medicine (1991) (formerly the Institute of Medicine), the National Academy of Engineering (1994), and the Academia Sinica (1996), one of only four persons to have gained all three of these honors. Dr. Woo is a pioneer in bioengineering and is renowned for his 45 years of translational research in healing and repair of tissues. Together with his team, they have authored over 300 original research papers in refereed journals as well as over 150 book chapters and review articles. Their work has significantly impacted the management of ligament and tendon injuries including clinical paradigm shifts that have led to improved patient outcome. As a leader in Bioengineering and Orthopaedics he has served as Chair of ASME's Bioengineering Division, United States National Committee of Biomechanics, and the World Council for Biomechanics, as well as President for The

Orthopaedic Research Society, American Society of Biomechanics, and International Society for Fracture Repair. He has also founded the International Symposium on Ligaments and Tendons (ISL&T) and the World Association for Chinese Biomedical Engineers (WACBE). Among the many leadership positions in professional organizations, Professor Woo is most passionate about founding our organization, WACBE. He believes and envisions that we Chinese bioengineers, as a united strength, have a huge potential in contributing to biomedical science.

The inaugural lecturer, Professor **Kam W. Leong**, delivered his plenary lecture titled Bioengineering of Direct Cellular Reprogramming during the 7th WACBE Congress in Bioengineering in Singapore, July 6-8, 2015. Kam W. Leong is the Samuel Y. Sheng Professor of Biomedical Engineering at Columbia University. He received his PhD in Chemical Engineering from the University of Pennsylvania. After serving as a faculty in the Department of Biomedical Engineering at The Johns Hopkins School of Medicine for almost 20 years, he moved to Duke University in 2006 to study the interactions of cells with nanostructures for therapeutic applications. After moving to Columbia University in September 2014, he continues to work on nanoparticle-mediated nonviral gene delivery and immunotherapy. He also works on the application of nanostructured biomaterials for regenerative medicine, particularly on understanding cell-topography interactions and on the application of nonviral vectors for direct cellular reprogramming and genome editing. He has published ~330 peer-reviewed research manuscripts with >37,000 citations, an h-index of 100, and holds more than 50 issued patents. His work has been recognized by a Young Investigator Research Achievement Award of the Controlled Release Society, Distinguished Scientist Award of the International Journal of Nanomedicine, Clemson Award for Applied Research of the Society for Biomaterials, and Life Time Achievement Award of the Chinese American Society of Nanomedicine and Nanotechnology. He is the Editor-in-Chief of *Biomaterials*, a member of the USA National Academy of Inventors, and a member of the USA National Academy of Engineering.

The second Savio L-Y. Woo Distinguished Lecturer, Professor **Zhi-Pei Liang**, delivered a plenary lecture during the 8th WACBE World Congress in Bioengineering in Hong Kong during July 30 to August 2, 2017. Dr. Liang received his Ph.D. degree in Biomedical Engineering from Case Western Reserve University in 1989. He subsequently joined the University of Illinois at Urbana-Champaign (UIUC) first as a postdoctoral fellow (working with the late Nobel Laureate Paul Lauterbur) and then as a faculty member in the Department of Electrical and Computer Engineering. Dr. Liang is currently the Franklin W. Woeltge Professor of Electrical and Computer Engineering; he also co-chairs the Integrative Imaging Theme in the Beckman Institute for Advanced Science and Technology. Dr. Liang's research is in the general area of magnetic resonance imaging and spectroscopy, ranging from spin physics, signal processing, to biomedical applications. Research from his group has received a number of recognitions, including the Sylvia Sorkin Greenfield Award (Medical Physics, 1990), Whitaker Biomedical Engineering Research Award (1991), NSF CAREER Award (1995), Henry Magnuski Scholar Award (UIUC, 1999), University Scholar Award (UIUC, 2001), Isidor I. Rabi Award (International Society of Magnetic Resonance in Medicine, 2009), IEEE-EMBC Best Paper Awards (2010, 2011), IEEE-ISBI Best Paper Award (2010, 2015), Otto Schmitt Award (International Federation for Medical and Biological Engineering, 2012), Technical Achievement Award (IEEE Engineering in Medicine and Biology Society, 2014), and Andrew Yang Research Award (UIUC, 2017). Dr. Liang is a Fellow of the IEEE, the International Society for Magnetic Resonance in Medicine, and the American Institute for Medical and Biological Engineering. He was elected to the International Academy of Medical and Biological Engineering in 2012. Dr. Liang served as President of the IEEE Engineering in Medicine and Biology Society from 2011-2012 and received its Distinguished Service Award in 2015.

REPORT FROM THE SECRETARY

Yongping ZHENG, PhD, The Hong Kong Polytechnic University

It is a great honor to me having this opportunity to serve WACBE as its Secretary for the session of 2017-2019. During 2017 WACBE Congress in Hong Kong, Council members, and WACBE members as well as all participants have had a lot of discussion about how to make this wonderful WACBE platform to be more dynamic and beneficial to all members. The Secretary team has received many good ideas, and we will gradually implement some to benefit members. We plan to first establish an online location to store attractive lectures of life members so that members and others can view them anytime anywhere, we may tentatively name it as "WACBE Distinguished Lectures". We will also explore the online lecture broadcasting with a suitable platform for members to interacted with WACBE distinguished lecturers. Again, our mission is to provide the best benefits to members through WACBE platform so that to promote WACBE to be a home for Chinese biomedical engineers all over the world. I would like to thank all members so much for your supports, and also please invite more people to join WACBE family as members.

Currently we have around 72 life members, 398 regular members and 198 student members. I wish that we will have significant increase of the numbers in different categories, with all our efforts. Meanwhile, as the social media is becoming more popular, WABCE is also taking advantage of this. During 2017 WACBE Congress, we have established a Wechat group "WACBE Member", with the great efforts of all members, particularly Prof Ming Zhang (President Elected), we now have 280 members in this group (Sep 15 2017). Let's continue our efforts to invite more BME people into this group.

The WACBE Council has endorsed in Aug 2017 to invite Miss Jane Ling, a PhD student in the Hong Kong Polytechnic University, as a student representative in WACBE Council, and Jane will support the WACBE Secretary team for 2017-2019 session for promoting WACBE particularly among students and young BME researchers and organizing the activities that we are planning. Thank you so much, Jane!

REPORT FROM STUDENT REPRESENTATIVE

Jane LING, The Hong Kong Polytechnic University

It is my pleasure and honor to serve as the Student Representative for the term of 2017-2019. In the following two years, I wish to help WACBE in organizing activities and facilitating students' participation in this community of Chinese biomedical engineers. We as students are encouraged to build connections within the field and across different disciplines. It is important for students to take opportunities during the WACBE activities to form contacts which will be useful for their research and career development. Enhancing communications among students and with professional researchers outside their own institutes could also aid developments and innovations in this field.

During my service as the WACBE student representative, I would help to maintain a good communication platform between students and for students with other professional researchers, such as by maintaining communication group on social media such as WeChat and LinkedIn. We would continue to provide opportunities for students to participate more in the WACBE conference by having special session for students and young investigators to participate.

Please stay tuned to our announcements for the upcoming activities. If you have suggestions on how to make WACBE a better platform for students, please do not hesitate to email me at jane.yt.ling@connect.polyu.hk.

REPORT ON THE 8TH WACBE WORLD CONGRESS ON BIOENGINEERING

Ming ZHANG, PhD, The Hong Kong Polytechnic University

The 8th WACBE World Congress in Bioengineering took place from 30 July to 2 August 2017 in The Hong Kong Polytechnic University. The Congress was organized by The World Association for Chinese Biomedical Engineers (WACBE), hosted by Interdisciplinary Division of Biomedical Engineering.

The WACBE World Congress on Bioengineering focused on the ways that biomedical engineering approaches drive innovation technologies and provide solutions that impact clinical medical practice. This meeting offers a platform, which the researchers and trainees can collaborate on the translation of biomedical technologies from the laboratory to clinical ventures. The Congress attracted about 400 delegates from over the world, including academic researchers, industry practitioners, medical officers, business leaders and students. They were gathering in the Congress to share their experience on bioengineering and had showcased the contributions that biomedical engineers brought to health care, with applications that affect the quality of life for people.

Over 360 abstracts were received. The scientific program includes 9 plenary speeches, 210 oral presentations in five parallel sessions and 128 poster presentations. The Savio Woo Distinguished Lecture was given by Professor Zhi-Pei LIANG, Franklin W. Woeltge Professor of Department of Electrical and Computer Engineering in University of Illinois at Urbana- Champaign, Champaign, USA, with an very inspiring talk on "Ultrahigh-Resolution MRSI: A Marriage of Quantum Mechanics with Machine Learning to Advance Healthcare". Other plenary speakers include Professor Savio L-Y. WOO, Professor Guang-zhong YANG, Professor Kirk SHUNG, Professor Yubo FAN, Professor Zong-ming LI, Professor Chwee Teck LIM, Professor Ming ZHANG Professor Cheng-Kung CHENG.

WACBE 2017 Delegates Photo

Click here to download the WACBE 2017 Booklet

WACBE Council Meeting was held on 30 July 2017

Professor Zhi-Pei LIANG delivered WACBE's Savio Woo Distinguished Lecture and received the Medal presented by Professor Savio WOO and Professor Zong-Ming LI

The Congress Organizing Committee was particularly keen to encourage the participation of younger researchers. Seventeen best presentation prizes were awarded to young investigators who presented their work at the conference either oral or poster presentation. The winners are:

12 Oral presentations:
CHEN Bing, The Chinese University of Hong Kong
GUO Lin, The University of Hong Kong
LI Xiaoyin, Beihang University
JI Xinyi, Bodyplus Technology (Beijing) Co., Ltd
MO Zhongjun, National Research Center for Rehaiblitation Technical Aids
QIAN Qiuyang, The Hong Kong Polytechnic University
QIU Zhihai, The Hong Kong Polytechnic University
SHI Qian, Shanghai Jiao Tong University
WANG Yan, The Hong Kong Polytechnic University
YAO Jie, Beihang University
YUE Shuhua, Beihang University
ZOU Li, The Chinese University of Hong Kong
5 Poster presentations:
CHEN Fu-yu, Auckland Bioengineering Institute
CHEN Zhengkun, The Hong Kong Polytechnic University
LIM Su Bin, National University of Singapore
TAN Qitao, The Hong Kong Polytechnic University
ZHANG Qianzhen, Chongqing University

Seventeen best presentation prizes were awarded to young investigators in the 8th WACBE Congress

We would like to thank all OC members for their strong supports and all delegates for their participation and excellent presentations. Special thanks give to Professor Yubo Fan and all delegates from Beihang University, named as the "Most Active Participation Group" in this Congress.

Professor Yubo FAN and Professor Ming ZHANG

The organising committee would also like to acknowledge the sponsors: Croucher Foundation, KC Wong Education Foundation, and exhibitors: A&P Instrument Co. Ltd, Beijing Ruituo Tech Co Ltd, Body Plus Technology, Infinitus (China) Company Ltd, Li Ning (China) Sports Goods Co Ltd, Micro Technology Hong Kong Ltd, One Measurement Group Ltd, Shanghai Gaitech Scientific Instruments Co Ltd, Shenzhen Front Technology Service Co Ltd, Winsun (China) Limited. Thanks should go to all PolyU BME team for their efforts and time for preparing this very successful congress.

Part of organizing committee members and helpers

GLOBAL NETWORKING TALENT 3.0 PLAN

The purpose of the Global Networking Talent 3.0 Plan (GNT3.0) is to strengthen the development of Taiwan medical device market by connecting researchers and manufacturers in Taiwan to the worldwide medical device market. This program allows interested people to connect to a global network of talents and scholars from bioengineering related fields and create opportunities for our graduates to participate in the top labs in the world. With the further mid-to-long term research interactions and collaborations, we expect it can stimulate a great deal of innovation ideas, and at the end, encourage start-ups & entrepreneurship to pursue high-risk, high-reward medical device projects.

Last year, 2015, we were honored to have several world-class Chinese scholars join us, and all of them are apparently influential in the bioengineering field: distinguished university professor and director from University of Pittsburgh, Savio Woo, and another prestigious professor, Ting-Kan Hung, who is regarded as one of the most influential hydraulic engineer within 200 years in US. Also, the 2015 Muybridge Award winner, Prof. Kai-Nan An from Mayo Medical school came to participate this project. And last but not least, the Scientific Committee Chair of the North American Manufacturing Institution of the Society of Manufacturing Engineers (NAMRI/SME), Prof. Albert Shih from University of Michigan, is also enthusiastically been with us.

Prof. Savio WOO, Prof. Ting-Kan HUNG, Prof. Kai-Nan AN, and Prof. Albert SHIH

For concreting the research collaboration plan, Dr. Zong-Ming Li, currently a full Staff (equivalent to Full Professor) in the Departments of Biomedical Engineering, Orthopedic Surgery, and Physical Medicine & Rehabilitation at Cleveland Clinic, connected the both sides and visited NCKU twice accompanied by Dr. Geoffrey Vince, the Department Chair of Biomedical Engineering at Cleveland Clinic. As to the long-term graduate internship and training program, they generously opened a constant channel and opportunities.

Prof. Zong-Ming LI and Dr. Geoffrey VINCE

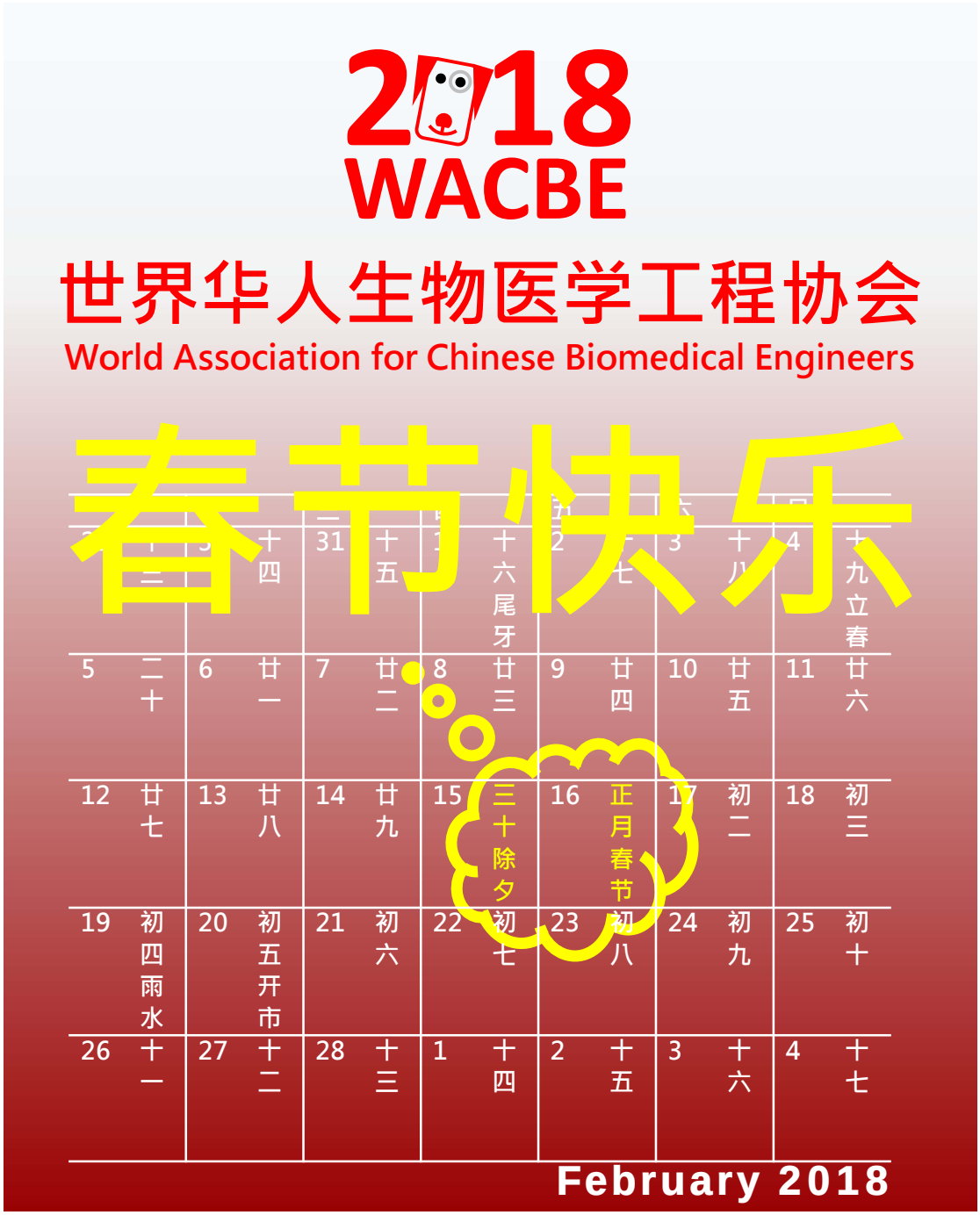
It's worth noting that those eminent professors from all over the world are all still making contribution to the development in Chinese bioengineering continually, either through experience sharing, research collaboration or project cooperation. Besides, there are another 9 remarkable professors and precursors from Bioengineering field brought up their innovation ideas and guidance during their academic visits in NCKU.

Dr. Yue-Teh Jang and Mr. Jesse Chen

In addition to the academic supports from them, Yue-Teh Jang, Ph.D., who is the General Manager and Director of Medeon Biodesign Inc. and the partner of The Vertical Group, shows strong interests and pays close attention to the startup groups and the early-stage companies. His practical guidance and comments on business strategies is undoubtedly a positive help. Jesse Chen, the Managing Director of Maton Venture Management LLC, is also very interested in the innovation medical device development; and he also travelled back and forth between Asia and North America very frequently.

LIST OF WACBE LIFE MEMBERS

1. CHAN Barbara, University of Hong Kong
2. CHAN Kai-Ming, The Chinese University of Hong Kong
3. CHANG Hsin-Kang, City University of Hong Kong
4. CHEN Zhongping, Univ. of California, Irvine
5. CHEN Jiajin, National Cheng Kung University
6. CHEN Weiyi, Taiyuan University of Technology
7. CHENG Cheng-Kung, National Yang Ming University
8. CHEUNG Tak-Man Jason, Li Ning Sports Science Research Center
9. CHIEN Shu, University of California, San Diego
10. CHING, Tak Shing, National Chi Nan University
11. CHOW Hung Kay Daniel, The Hong Kong Institute of Education
12. CHUNG Pau-Choo, Cheng-Kung University
13. DENG Linhong, Changzhou University
14. FAN Yifang, Guangzhou Institute of Physical Education
15. FAN Yubo, Beihang University
16. FONG Tik-Pui Daniel, The Chinese University of Hong Kong
17. FU Bingmei, The City College of New York
18. GOH Cho-Hong James, National University of Singapore
19. GONG He, Beihang University
20. GUO X. Edward, Columbia University
21. GUO Xia, The Hong Kong Polytechnic University
22. HSIEH Adam, University of Maryland
23. HSING I-Min, Hong Kong University of Science and Technology
24. HU Xiaoping, Georgia Tech & Emory University
25. JAN Yih-Kuen, University of Illinois at Urbana-Champaign
26. JI Julie, Indiana University-Purdue University Indianapolis
27. JU Ming-Shaung, National Cheng Kung University
28. LEE Abraham, University of California, Irvine
29. LEONG Kam W, Columbia University
30. LEUNG Kam Lun, The Hong Kong Polytechnic University
31. LI De Yu, Beihang University
32. LI Guoan, Harvard Medical School
33. LI Ke, Shandong University
34. LI Zeng Yong, Shandong University
35. LI Zong-Ming, Cleveland Clinic
36. LIANG Zhi-Pei, University of Illinois at Urbana-Champaign
37. LIM Chwee Teck, National University of Singapore
38. LIN Feng-Huei, National Taiwan University
39. LIU Yu, Shanghai University of Sports
40. LONG Mian, Institute of Mechanics, CAS
41. LU Helen H, Columbia University
42. NIU Wenxin, Tongji University
43. MAK Arthur F T, The Chinese University of Hong Kong
44. MOW Van C, Columbia University
45. QIN Ling, The Chinese University of Hong Kong
46. QIN Yi-Xian, Stony Brook University
47. SAH Robert L, University of California, San Diego
48. SHUNG K Kirk, University of Southern California
49. SU Fong-Chin, National Cheng Kung University
50. SUNG Lanping Amy, University of California, San Diego
51. TAM Wing Cheung Eric, The Hong Kong Polytechnic University
52. TOH Siew Lok, National University of Singapore
53. TONG Kai Yu Raymond, The Chinese University of Hong Kong
54. TSUI Benjamin M W, Johns Hopkins University
55. WANG Aijun, University of California, Davis
56. WANG Guixue, Chongqing University
57. WANG James HC, University of Pittsburgh
58. WANG Jaw-Lin, National Taiwan University
59. WANG Min, University of Hong Kong
60. WANG Yadong, University of Pittsburgh
61. WONG Wai Hing Kenneth, Queen Mary Hospital
62. WOO Savio L-Y, University of Pittsburgh
63. YANG King H, Wayne State University
64. YANG Mo, The Hong Kong Polytechnic University
65. YANG Guangzhong, Imperial College London
66. YEN Michael, University of Memphis
67. YU Hanry, National University of Singapore
68. YUE Guang H, Cleveland Clinic
69. ZHANG Ming, The Hong Kong Polytechnic University
70. ZHENG Yongping, The Hong Kong Polytechnic University
71. ZHAO Chunfeng, Mayo Clinic
72. ZHU Cheng, Georgia Institute of Technology



(Picture courtesy of Chi-Wen Lung, PhD)

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