



## CHINESE-AMERICAN OCEANIC AND ATMOSPHERIC ASSOCIATION SOUTHERN CALIFORNIA CHAPTER

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## COAA SCC NEWSLETTER

No. 1, Fall 2010

### A Letter from the Chair

*The Chinese-American Oceanic and Atmospheric Association Southern California Chapter (COAA SCC) was established in 2007 by a group of scientists from UCLA, UC Irvine, California State University, California Institute of Technology, and Jet Propulsion Laboratory, with Prof. Yongkang Xue as the founding Chair. During the past three years, COAA SCC has successfully organized events to enhance the interactions and communication among its members and friends, including annual summer research workshops and Chinese New-Year banquets. In 2008, COAA SCC with the COAA Board support initiated and organized a donation campaign for Sichuan earthquake relief for colleagues and their families in the Meteorological Bureau of Sichuan Province. An interactive website (<http://coaascc.wordpress.com/>) was also created to enable efficient communications among members and friends. Now, we are pleased to announce the launch of the COAA SCC Newsletter, designed to report research activities, awards and honor information from our members and friends, and to introduce new members and friends. We plan to publish the Newsletter semi-annually and would like to encourage you to submit news and short research or non-research (such as a pleasant trip to somewhere) articles to be included in our Newsletter.*

*In 2010, the Executive Committee of COAASCC organized a New-Year banquet in San Gabriel and a summer research workshop at UCLA and participated in organizing the COAA 5th International Ocean-Atmosphere Conference in Taipei. We are now working with China's Institute of Plateau Meteorology (IPM) to organize an international conference to be held in Sichuan, China in 2011. A conference call will be announced soon. The provisional working committee for COAA SCC includes Dr. Yi Chao, Dr. Yu Gu (Co-Chair), Dr. Hui Su, Prof. Yongkang Xue (Co-Chair), and myself. Should you have any suggestions and comments, please contact Dr. Yu Gu (guyu\_h@yahoo.com). The Executive Committee will elect new members in December. I would like to encourage COAA SCC members to nominate candidates. Please send your nomination to me (jyyu@uci.edu). Finally, I want to thank our Newsletter Editor, Dr. Shuhui Wang of JPL, for putting together this first issue of the Newsletter.*

Sincerely yours,

Jin-Yi Yu, Chair

COAASCC Executive Committee



## Prof. Kuo-Nan Liou Awarded COSPAR William Nordberg Medal



COSPAR (Committee on Space Research, The International Council for Science) has presented Dr. Kuo-Nan Liou, Distinguished Professor of Atmospheric Sciences and Director, Joint Institute for Regional Earth System Science and Engineering, the 2010 COSPAR William Nordberg Medal for his “outstanding contributions to the application of space science”. Prof. Liou was honored during the ceremony of the 38th COSPAR Scientific Assembly (July 2010, Bremen, Germany).

As a former Chair of the Department of Atmospheric and Oceanic Sciences at UCLA, Prof. Liou also holds a Joint appointment with the Department of Mechanical and Aerospace Engineering. His scientific work spans the areas of radiative transfer theory and application, light scattering by ice crystals and aerosols, atmospheric remote sensing, and clouds/aerosols and climate. Prof. Liou is a Member of the National Academy of Engineering and currently serves as Chair of the Special Fields and Interdisciplinary Engineering Section and a Member of the Committee on Membership. He is also a Member of the Academia Sinica (Chinese Academy of Sciences, Taiwan) and shared the 2007 Nobel Peace Prize bestowed on the Intergovernmental Panel on Climate Change (IPCC).

The COSPAR William Nordberg Medal is awarded every two years. Previous recipients include Sir John T. Houghton, former Professor of Atmospheric Physics, University of Oxford and former Director General, UK Meteorological Office; and Dr. Charles Elachi, Director, Jet Propulsion Laboratory and Professor of Electrical Engineering, California Institute of Technology.

— Reported by Dr. Yu Gu

## Prof. Yuk Yung Elected Fellow of Academia Sinica

Dr. Yuk Yung, Professor of Planetary Science of Division of Geological and Planetary Sciences, California Institute of Technology, was elected Fellow of Academia Sinica.

The election took place in Taipei on July 8. The election result was widely reported and discussed in the media. The following is extracted from interviews reported at [scholarsupdate.zhongwenlink.com/](http://scholarsupdate.zhongwenlink.com/)



翁玉林祖籍浙江温州，赴美國柏克萊加大攻讀工程物理學，後於哈佛大學取得物理學博士學位，隨即在哈佛擔任研究員和講師，1977年後至加州理工學院服務至今，主要研究興趣在行星大氣、行星演化、大氣化學、大氣輻射、天體生物學及地球的變遷。2004年獲美國太空總署頒發傑出科學成就勳章，以表揚他在太空科學的成就。

翁玉林表示，最近流行的末世預言及 2012 世界末日等災難電影都沒有科學根據。二氧化碳的增加是自工業革命以來的趨勢，200 多年來地球有發生變遷，但不會突然世界末日。地球不會在幾年中發生大變化，有重大變遷也是 100 年後。目前中國和台灣許多天災其實都是破壞水文和生態的結果。

對近年的氣候變異，翁玉林表示，主要和海洋變化有關，但天氣變化和股市一樣難估計。地球確實比之前暖化不少，根據趨勢應該會越來越暖。由於工業革命以來大氣中的二氧化碳不斷增加，尤其二氧化碳會在大氣中好幾百年，就算現在立即停止排放，也無法消除，必須尋找包括太陽能、風能等替代能源。目前科學家也致力如何把大氣中的二氧化碳融入海洋中，像是利用採完的油井存放二氧化碳等。地球目前面臨的嚴峻問題要靠「第二次工業革命」，發展乾淨能源來解決。

— Reported by Prof. Jin-Yi Yu



## Dr. Lee-Lueng Fu Awarded COSPAR International Cooperation Medal



JPL senior research scientist Dr. Lee-Lueng Fu has been named a co-recipient of the 2010 Committee on Space Research (COSPAR) International Cooperation Medal. The award recognizes Dr. Fu's leadership in satellite radar altimetry missions encompassing Topex/Poseidon, Jason 1, and Jason 2 and his successful leadership of a cohesive, collegial team of international scientists in the exploitation of ocean surface radar altimetric data.

The medal is awarded once every two years to a scientist who has made a distinguished contribution to the application of space science and whose work has contributed significantly to the promotion of international scientific cooperation. This year, Fu shares the honor with the late Yves Menard, project scientist for the Topex/Poseidon and Ocean Surface Topography Mission/Jason 2 missions for the French Space Agency.

— Reported by Dr. Shuhui Wang

## Three JPL Scientists Awarded NASA Medals



Picture taken by Shan Lee

Three of our COAA SCC members and friends at NASA's Jet Propulsion Laboratory (JPL) have been selected to accept 2010 NASA Honor Award Medals.

Dr. Hui Su (middle) was awarded the Exceptional Scientific Achievement Medal for major advances in the understanding of water vapor and cloud feedbacks on climate change through quantitative analysis of observations from multiple NASA satellites.

Dr. Jonathan Jiang (left) was awarded the Exceptional Achievement Medal for pioneering a new approach to quantifying the impact of air pollution on clouds and climate, through combining observations from multiple NASA satellites.

Dr. Lee, Tong (right) was awarded the Exceptional Achievement Medal for outstanding achievements and leadership in studying ocean climate variability through synergistic utilization of satellite observations.

These medals are prestigious NASA awards that are presented to carefully selected individuals who have distinguished themselves by making outstanding contributions to the NASA mission.

— Reported by Dr. Shuhui Wang



## What's New at Our Institutes?



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### New Graduate Students

Yuhao Zou 邹宇昊

From: Nanjing University 南京大学  
Advisor: Prof. Jin-Yi Yu

Hongying Yang 杨红英

From: Southwest University 西南大学  
Advisor: Prof. Kathleen Johnson

Xin Li 李莘

From: Nanjing University 南京大学  
Advisor: Prof. Eric Rignot

### Newly Graduated PhD

Dr. MinHui Lo received his PhD in spring 2010 and is currently a postdoctoral researcher at UCI.

— Reported by Dr. Minhui Lo



Caltech

### New Graduate Students

Zhan Su

From: University of Science & Technology of China  
Advisor: Prof. Yuk L. Yung

Xuan Zhang

From: Peking University  
Advisor: Prof. John Seinfeld



UCLA



### New Graduate Students

Xuan Ji 季璇

From: Nanjing University  
Advisor: Prof. Roberto Mechoso/Prof. David Neelin

Jing Gao 高晶

From: Nanjing University of Information Science & Technology  
Advisor: Prof. Yongkang Xue

Qianli Ma 马千里

From: University of Science & Technology of China  
Advisor: Prof. Richard Thorne

Ying Zou 邹莹

From: Beijing University  
Advisor: Prof. Larry Lyons

Mei Gao 高梅

From: Beijing University  
Advisor: Prof. Qinbin Li

Jin Kong, 孔晋

College: Beijing University  
Advisor: Prof. Kuo-Nan Liou

Xiaobi Kuang 邝小碧

College: UCSD  
Advisor: to be determined

— Reported by Junhong Liang

— Reported by Le Kuai and Xi Zhang

Currently COAA SCC has over 100 members and friends from over a dozen of institutes in Southern California such as UCLA, UC-Irvine, Caltech, JPL, California State University-LA, California Air Resource Board, USC, UC-San Diego, UC-Riverside, San Diego State University, etc. Every year we have new students and new researchers in the field of atmospheric and oceanic sciences joining us and actively contributing to our community. Let's welcome the 2010 new members and friends to our big family.

## COAA SCC Summer Workshop 2010

COAA SCC held a successful summer workshop and a celebration for Prof Kuo-Nan Liou (awarded the COSPAR William Nordberg Medal) and Prof Yuk Yung (elected as a Fellow of Academia Sinica) on September 25, 2010 at UCLA.

Prof Jin-Yi Yu (UCI), Chair of COAA SCC, opened the workshop by giving a welcome remark. Dr Yi Chao (JPL), vice Chair of COAA SCC, introduced the first keynote speaker, Prof Yung, who shared his scientific thoughts and new poems. Prof Yongkang Xue (UCLA), the ex-Chair of COAA SCC, introduced our second keynote speaker, Prof Liou, who described the mechanism and impacts of light-absorbing aerosols and snow-albedo feedback in regional climate change. The keynote speeches were followed by a cheerful celebration.



The oral section consists of six short talks. Junhong Liang (UCLA) presented his modeling work about bubbles and dissolved gases under an individual breaking wave. Dr Xiaochun Wang (JPL) introduced their real-time coastal ocean forecasting systems along US west coast. Dr Hui Su (JPL) reported her research on aerosol, clouds and water vapor transport across the tropopause. Qi Tang (UCI) demonstrated tropopause folds with tropospheric ozone column anomalies based on Aura-OMI data. Dr Xianan Jiang (UCLA) illustrated vertical cloud structures of the boreal summer using CLOUDSAT observations. Dr Yang Chen (UCI) described trends and interannual variability of fires in South America during 2001-2009.



The informal poster session is accompanied by the group lunch. There were 12 posters covering broad research topics: effects of aerosol pollution on ice cloud particle radius; biomass burning aerosol effects on clouds and precipitation; impacts of Indonesia fire on tropic upper tropospheric pollution; monitoring agricultural waste burning; relationship between shallow oceanic clouds and lower tropospheric stability, seasonal variability of CO in the upper troposphere; WRF-Chem simulation of PM2.5; weather forecast and regional climate downscaling; precipitation response to land subsurface hydrologic processes in AGCM simulations; lake water level model using LSM and lake bottom topography data; MODIS snow albedo bias and corrections on Greenland; observing odd hydrogen from space and ground-level. Over 40 scholars and students from UCI, UCLA, JPL and Caltech attended this event.



— Reported and photographed by Dr. Xianwei Wang