



Chinese-American Oceanic and Atmospheric Association

E-News

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About the COAA

COAA is a member-led, all-inclusive, non profit, professional association supporting its members and promoting excellence in oceanic and atmospheric sciences and related activities. Members have many opportunities to share information, news, studies and concerns related to the fields of oceanic and atmospheric sciences through board work, submitting correspondence or articles to the COAA Newsletter, leading workshops and making presentations at the Annual Meetings, making contributions to the COAA website, and networking with people in a wide variety of careers (from well-known senior professionals to young environmental enthusiasts).

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Message from the New President

Dear COAA members, Friends and Colleagues:

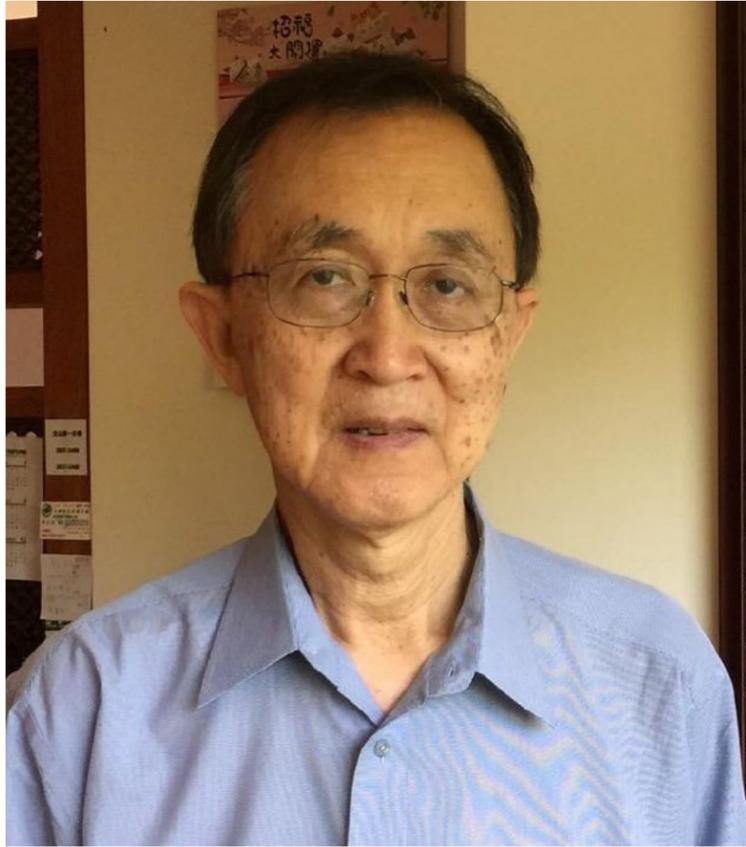
It is my great honor and privilege to serve the COAA community in 2022. In this, my first message as COAA president, I want to start by thanking Dr. Xiaowen Li and Dr. Zhibo Zhang for their excellent leadership over the past two years, and thanking our board of directors at headquarters and regional chapters for their amazing contributions. During these challenging times dealing with pandemic, COAA has successfully organized numerous virtual workshops to fulfill its missions and our members are steadily increasing. I am very excited and humbled to work with all of you together to continue the current momentum of COAA.

COAA is uniquely positioned to represent Chinese-American in the discipline and profession of oceanic and atmospheric sciences. For nearly three decades, COAA has provided a vibrant and inclusive community to connect and support our members ranging from young students to world-leading scientists. It has been the long-standing goal of COAA to promote excellence in ocean- and atmosphere-related sciences and technologies, facilitate professional interactions and collaborations, and help career advancement for our members. Each year, COAA headquarters coordinate with its regional chapters to organize various science and social events to facilitate networking and exchange of knowledge and information among COAA members and friends. We will have many exciting events and promising changes coming in 2022 that I look forward to sharing with you in the coming months.

Finally and most importantly, I would like to take this opportunity to express my great gratitude and thanks to all members and volunteers for your enthusiastic support of COAA. Your support has been vital for COAA to sustain and grow, and your participation has made COAA a fun and rewarding community. In such an era of climate change, unrelenting nationalism, and rising social inequity, it is more important than ever for us to connect, communicate, and collaborate. We are looking forward to your continuing support and involvement in upcoming COAA activities.

Wish you all the best, and stay safe!

Xiaoguang Xu
President of COAA (2022)



Dr. Chih-Pei Chang is Distinguished Professor Emeritus of the Naval Postgraduate School, Monterey, California and Distinguished Chair Professor of National Taiwan University. He received his Ph.D. from University of Washington in 1972. He was elected a Fellow of American Meteorological Society (AMS) in 1981 and received the Meisinger Award in 1983, in both cases being the first post-World War II generation Chinese American scientist honored by AMS. His other honors include Menneken Award of the Sigma Xi Society, Fellow of the Meteorological Society of Republic of China, a series of outstanding teach and research awards from the Navy, Honorary Member of the Hong Kong Meteorological Society, and Appreciation for outstanding leadership as the chair of the Monsoon Panel for a decade from the World Meteorological Organization.

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Interview of Distinguished Professor Emeritus of the Naval Postgraduate School: Dr. Chih-Pei Chang

Author: Dr. Zhuo Wang

1. I have heard several legendary stories about you being a problem student who almost flunked out of school multiple times. Could you tell us your journey as a student?

I was never a good student, I did not like school work and was always wandering around with different extracurricular interests. In high school when Taiwan was under Martial Law, I got into trouble with the military teacher and was almost kicked out of the school, until my father agreed to keep me at home away from campus, so that I could keep my eligibility to take the college entrance examination. In college my interest was in competition bridge, and I became the captain of the National Taiwan University bridge team while failed so many courses that I was put on probation twice. I wanted to stay as a professional bridge player, but my father pushed me to come to U.S. It was pure luck that I ended up first in St. Louis University in 1967, and another luck that enabled me to transfer to University of Washington even though my admission was initially rejected due to poor grades. Two years later I became a student leader in the Bao-Diao Movement, when many students from Taiwan protesting Taiwan government's giving up of the Diaoyu Islands. I and my wife tried to start a small noodle restaurant so I can devote my time to the political activities. We couldn't find a place with affordable rents, so I had to come back to finish my thesis.

Some of these histories can be find in the following article:

<https://www.ntsec.gov.tw/FileAtt.ashx?id=3107> (download pdf file “熱血坏學生的科學路“, the file name may appear as random codes)

2. What are the contributions to atmospheric sciences that you are most proud of?

In term of research, in the 1960s when I was a student, it was probably my work on the time series of satellite images of tropical waves. They were the first direct observation of westward propagating waves, and a figure from that paper was included in Holton's dynamics meteorology textbook. In the 1970s my interest was in equatorial wave theories. My paper in 1977 was the first theory of the MJO, which separated equatorial waves into two vertical modes: a shallow, vertical propagating mode that behaves like free waves and dominates the stratosphere, and a deep vertical (reduced static stability) mode due to the quasi-balance of diabatic heating and dissipation, which dominates the troposphere. In 1978-79 I participated in the Winter Monsoon Experiment, resulting in a series of papers in the 1980s on the observation and theory of cold surges, showing that they behave like gravity waves. (cont.)

2 Interview of Distinguished Professor Emeritus of the Naval Postgraduate School: Dr. Chih-Pei Chang

Starting year 2000 my interest shifted to the Maritime Continent monsoon. We showed that the mesoscale terrain interacting with large scale circulation results in many interesting variations from short to annual time scales. These include the first observation of tropical cyclone development at the equator, the asymmetric seasonal march of monsoon rainfall, and most recently, a unique seasonal prediction problem due to global models' failure over the western Indonesia – Malay Peninsula region. I termed the region WIMP, which has an interesting meaning in English language: lack of confidence.

3. What about another dimension: your leadership in coordinating and facilitating exchanges and cooperation across different communities and for international organizations?

In the second half of 20th Century Taiwan and Mainland China were enemies which prevented interactions between meteorologists across the Taiwan Strait. I had the luck to push through two watershed meetings between meteorologists from Taiwan and Mainland China during two of the region's highest tension periods: the 1989 Tiananmen incident and the 1996 Taiwan Strait missile crisis. In both times I was able to rescue the meetings that were initially derailed by seemingly insurmountable political forces. The cooperation between the two weather services flourished since then, leading to great benefits to people on both sides of the Strait as well as the East Asian region and beyond. There were also many subsequent developments that led to activities beyond the original purpose. My memoir of the dramatic development surrounding summer 1989 was published by the Meteorological Society in Taiwan and translated into English by the Hong Kong Meteorological Society:

<http://www.networkchinese.com/region/tw/07041001.html>

<https://news.ucar.edu/sites/default/files/news/2014/CPChang%20Memoir%201989%20HKMS-Final.pdf> (cont.)



Chih-Pei Chang (front row center) in a photo of the International Organizing Committee of the Sixth International Workshop on Monsoons of the World Meteorological Organization in Singapore, November 2017

3 Interview of Distinguished Professor Emeritus of the Naval Postgraduate School: Dr. Chih-Pei Chang

The 1989 conference was the first global Chinese language meteorology meeting. Professor Jing Wu of University of Delaware was the leading oceanographer at the conference. Upon returning to U.S he started to promote the idea of COAA, and I was asked to be the west coast coordinator. That was the time when most Chinese American scientists were from Taiwan, so the first few generations of COAA organizers were mostly from Taiwan.

I had the fortune to be involved in the initial planning and developments of the Modernization Program of the Central Weather Bureau in Taiwan, the Asia Pacific Economic Cooperation Climate Center in Korea, the Centre for Climate Research in Singapore, and the founding of the Hong Kong Meteorological Society. As the WMO Monsoon Panel Chair, we organized a series of international workshops, bringing hundreds of researchers and forecasters from around the world to discuss topics ranging from extreme rainfall to climate change. We published four books entitled the Global Monsoon System with the fifth in process, and helped to organize several field experiments. Recently, our report on monsoon rainfall climate change from an international workshop was highlighted by the 2022 January issue of the paper copy of BAMS and formed the basis of the IPCC report on the subject.

The following Naval Postgraduate School site has an old article about my activities prior to 2010:

https://nps.edu/stories-archive/-/asset_publisher/A2LdkKOlw8D1/content/nps-distinguished-professor-quietly-pursues-meteorological-diplomacy-

A recent short article about early 2022 activities can be found at the National Taiwan University press release:

<https://sec.ntu.edu.tw/epaper/article.asp?num=1519&sn=21260>

4. With your history of diversified interests, what are your current interests besides atmospheric sciences?

Chinese history, medical science, religious philosophy, and cosmology

“ In college I spent most my time competing in premier league bridge and seemed to be destined to become a professional bridge player. When I learned that heavy rainfall in the South China Sea can occur a couple days following cold air outbreaks from far away Siberia, I thought weather forecasting can be as fun as bridge. Instead of counting cards, I just have to count the cold air outbreaks and rainfall. And my father would be happier with me if I did not make a living playing cards. ”



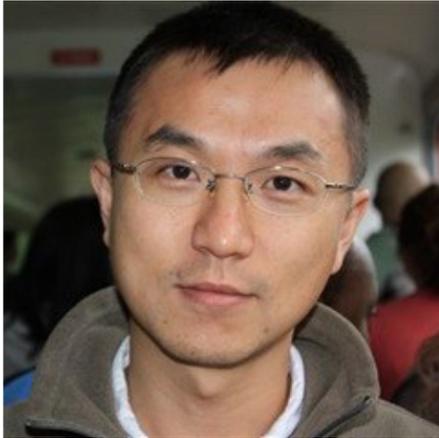
—Chih-Pei Chang, Naval Postgraduate School and National Taiwan University

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From BAMS 2022 (courtesy of American Meteorological Society)

COAA Spotlight: Dr. Lulin Xue



Bio: Dr. Lulin Xue has been the key scientist responsible for the numerical modeling aspects of several research and development projects at NCAR since 2009. His original and applied research efforts have led to the development of the WRF-WxMod(R) system including several glaciogenic and hygroscopic cloud seeding parameterizations and a novel seeding case-calling algorithm. Dr. Xue also works on the climate change impacts on the regional scale, and model physics development and evaluation using the Common Community Physics Package (CCPP) framework and the Single Column Model (SCM). Dr. Xue's areas of expertise are in aerosol-cloud-precipitation interactions, cloud microphysics and dynamics, boundary layer and mountain meteorology, weather modification, convection-permitting regional climate simulations and numerical modeling.

Q: How did you decide to study atmospheric science?

Like some of our colleagues, the choice of atmospheric science as my research area was somewhat accidental. I was enrolled in the Department of Earth and Space Sciences at the University of Science and Technology in China as my second choice of majors back in 1997. My first choice was the Department of Biology. At USTC, we still needed to take three years of fundamental courses before we chose our own interests back then. The three years of training and education allowed me to understand the

differences among geophysics, atmospheric science and space science. The atmospheric science covers a wide range of scales of physical/chemical processes, has more interesting ways of collecting observations, and can be thoroughly studied with different numerical models. The interface between the atmospheric sciences and our social lives inspired me further to pursue a research career in atmospheric science.

Q: Which accomplishments are you most proud of in your professional life, including your group achievements?

As the main developer of the WRF-WxMod(R), I am very proud of the model system that answers some of the most fundamental scientific questions related to weather modification and cloud seeding fields, provides guidance for operational cloud seeding programs, and assesses the quantitative impacts of cloud seeding on precipitation and streamflow.

Q: Who influenced you the most in your professional life and why?

My mentor and supervisor, Dr. Roy Rasmussen, shaped my career path. My internal colleague Dr. Wojciech Grabowski and external long-term collaborator Dr. Istvan Geresdi also impact my professional life strongly. My Ph.D advisor, Dr. Zaitao Pan, provided me with the most important opportunity, the NCAR ASP graduate student visiting program, in my early career.

Q: How are you interacting with Chinese-speaking scientists in Asia?

I have many collaborators in different Chinese universities and institutes. I attended some

conferences and workshops and visited them frequently before the pandemic. After the pandemic started, I kept in touch with my collaborators through emails and zoom meetings.

Q: What are your perspectives for future direction in our field??

From the fundamental research point of view, bridging knowledge gaps across scales should be one of the most important directions to pursue. To accomplish this goal, developments in instrumentations and observational facilities, novel numerical methods, approaches better combining observations and model results are needed. From the application point of view, more accurate and confident weather nowcasts, forecasts, and climate projections are needed to support novel combinations with applications from other fields.

Q: What is your major advice to young scientists in our field?

Read more books, keep your curiosity, talk to your colleagues, ask for help when needed, and enjoy your creative research activities!

1 | COAA Spotlight: Dr. Xiaodong Chen



Bio: Dr. Xiaodong Chen is currently a research scientist at the Pacific Northwest National Laboratory. His research focuses on the improved understanding of hydroclimate variability and extremes in a changing climate, and tackling the related societal resiliency and sustainability challenges based on an integrated approach (regional climate modeling, remote sensing, machine learning). Before moving to the east side of Washington in 2018, he spent seven years in Seattle and received both Ph.D. and M.S. in Civil and Environmental Engineering from the University of Washington.

Q: How did you decide to study hydrology?

There is an engineer in my family. So when it was time to choose my undergrad major, I naturally went with hydraulic engineering. Most of my undergrad courses fell into engineering fields, like those mechanics, material, and structure-themed courses, but a few courses around hydrology still successfully attracted my attention. Also, I had been attending an undergrad research training program since my sophomore year to explore surface hydrology. I found myself equally enjoying asking “why” along with “how”, and this motivated me to pursue my graduate degree in hydrology at the end of my junior year. It proved to be a great decision, as I have been since then exposed to various aspects of hydrology and relevant fields like biogeochemistry and atmospheric sciences.

Q: Which accomplishments are you most proud of your professional life, including your group achievements?

Among various projects that I have worked on, I am most excited about the engineering extreme risk assessment I conducted with my Ph.D.

supervisor Dr. Faisal Hossain. The big dams are faced with exemplified storm risks in the future, but there has been a lag in incorporating such information into the actual engineering design. Previously, people came up with different ways to estimate these risks. However, few of them are directly relevant to design/operations since they are not exactly what goes into the design codes. In this project, we proposed a “hybrid method” to use climate projections as “true data”, and plug them into the engineering protocol to reveal “how will the storms risks as used by engineers look like by the end of the century”. It was surprising to see that by the end of this century, the risks (as if seen by someone living in that era) will be 50% larger than the current design standard, and immediate measurements are needed to handle such big changes. This is also a great showcase on how better use of science-ready discoveries can really help to improve our society and achieve their deserved impacts.

2 | COAA Spotlight: Dr. Xiaodong Chen

Q: Who influenced you the most in your professional life and why?

Among all these people that have influenced my research life, I would put a special thanks note to my undergrad advisor Dr. Guangheng Ni. In our department, most of the research activities focus on structure, soil/rock, river dynamics, and engineering management, but he helped me to confirm my true interest in hydrology. I have been in his research group since I switched my primary advisor to him at the end of my freshman year, and we worked on two research training programs around the thermal effects of green roof systems and urbanization on extreme storms. The most important lesson from his mentorship is to stay open to various possibilities while staying focused on a research theme, and this helped me a lot in my graduate and current studies when I am eager to try new techniques and new ideas.

Q: How are you interacting with Chinese-speaking societies in Asia?

My interactions with those societies are mostly through academic conferences and (recently) online activities. A lot of new ideas and collaboration potential raise from casual chats during conferences like AGU and AMS meetings, and I have been enjoying such a non-stress environment of brainstorming. Besides this, seminars are also a great platform where we can formally share our research and exchange thoughts on a specific topic in great detail. This is especially helpful in establishing new networks since I could never guess who would be there as my audience.

Q: What are your perspectives for future direction in our field?

I would like to take “integration” as my understanding of the future direction. Over the past few decades, we have accumulated a significant amount of knowledge about various components of the atmosphere and cryosphere. Now would be a good time to put them into a big “box”. I often use the popular deep neural network to highlight the benefit of such integration: each component/node of the neural network is studied pretty well and can be precisely described in math. However, when they get connected to each other, some magic happens, and this can sometimes be as fascinating as we can ever imagine. Similarly, by connecting all the knowledge from different domains, it is more likely that we can obtain new insights into how everything works.

Q: What is your major advice to young scientists in our field?

I only have a short period of research experience, but the most important lesson I have learned is to stay open. The research pace now is much faster than ever, with new ideas, new techniques, and new findings popping up every day. By staying open to different possibilities, we can quickly incorporate these “new stuff” into our daily research and benefit from them in a timely manner.

COAA Spotlight: Dr. Xiquan Dong



Bio: Dr. Xiquan Dong is a full professor in the Department of Hydrology and Atmospheric Sciences at the University of Arizona. He received his Bachelor degree in electrical engineering from Tianjin University. He received his Ph.D degree in Atmospheric Sciences from the Penn State University in 1996. After he graduated from Penn State, he worked at NASA Langley as a research scientist from 1996 to 1999, a research faculty at University of Utah from 1999 to 2002. From 2002 to 2016, he worked at the University of North Dakota as an assistant professor (2002-2006), associate (2006-2011) to full professor (2011-2016).

Professor Dong joined the Department of Hydrology and Atmospheric Sciences at the University of Arizona in 2016. he teaches Physical Meteo I and II, Physical climate, and atmospheric radiative transfer and remote sensing. He conducts a broad range of research topics, including atmospheric remote sensing, aerosols, clouds, radiation and their interactions, as well as their impacts on climate changes. These research have been supported by NASA, DOE, NOAA and NSF. A total of 12 Ph.D and 24 MS students in Prof. Dong's group received their degrees with the support of these grants. Prof. Dong currently advises and supports 8 Ph.D students. He published 145 refereed papers with a total of 4846 citations and H-index 38. He also serves as editors of Advance in Atmospheric Sci, remote sensing and associate editor of JGR-atmosphere. In spare time, he enjoys playing Tennis and badminton, as well as traveling with family and friends.

Q: How did you decide to study atmospheric science?

During my time, we did not have choice. After graduated from Tianjin University with EE background in 1983, I was assigned to the Chinese Academy of Meteorological Sciences to work on developing and designing the ground-based meteorological instruments and remote sensors. I started to become love atmospheric sciences, especially remote sensing, when I became a graduate student at Penn State in 1991. After graduated in 1996, I started to work on NASA CERES project to validate their cloud property retrievals using ground-based observations. So I got involved in both ground-based and spaceborne remote sensing by then.

Q: What accomplishments are you most proud of in your professional life, including your group achievements?

The most accomplishment is to work with my graduate students. I did enjoy the process and each step with my students from the beginning of their research to their graduation. I am proud of my students, and most are working in atmospheric fields after graduation, some play an important role, and three became professor. I think the most important thing is students love atmospheric fields, not for surviving. This is the key

criteria for me to select my students.

Q: What is your major advice to young scientists in our field?

For graduate students, you should communicate with your adviser quite often. The first is to make sure your research is under right direction and meet his/her design goal. The second is let your adviser know your updated research status. These advices should be also useful for young scientists. They should communicate with their supervisors, to report and update their research. These are important for their promotion and salary raise. Atmospheric sciences has grown significantly in last three decades. Although the salary in our field is not as high as other fields, such as IT, it ranks as top 6 in all fields based on salary, security and other factors. Also the starting salary in our field is catching up. As long as you keep on working in our field, you will eventually make almost the same as other fields. Finally I would like to encourage young sciences to actively involve in community activities and services, such as organizing AMS and AGU meetings, reviewing papers etc.

1 | COAA Spotlight: Dr. Yuekui Yang



Bio: Dr. Yuekui Yang is a Research Physical Scientist at the Climate and Radiation Laboratory, Goddard Space Flight Center. He has been working at Goddard since 2007, right after he received his PhD in Atmospheric Sciences from the University of Illinois at Urbana-Champaign (UIUC). Prior to joining the NASA civil service in 2016, Yang worked as a Research Scientist and Manager at the Universities Space Research Association (USRA), where his affiliation began in May 2011. From March 2007 to May 2011, he was associated with the University of Maryland Baltimore County.

Yang's research interests include polar cloud and blowing snow, radiative transfer, polar boundary layer properties and satellite cloud property retrievals. He has been on the science teams of several NASA satellite missions, including the Ice, Cloud, and land Elevation Satellite-2 (ICESat-2), the Deep Space Climate Observatory (DSCOVR), and CloudSat/CALIPSO etc. Yang is a COAA lifetime member.

Q: How did you decide to study atmospheric science?

I started as an atmospheric science major without knowing much about it. It was during graduate study I started to develop deep interests in the subject. I was lucky to have many great professors who offered amazing classes and mentorship, such as radiative transfer and remote sensing from my PhD advisor, Prof. Larry Di Girolamo, atmospheric dynamics from Prof. Mankin Mak, weather forecast from Prof. Bob Rauber and many more.

Q: What accomplishments are you most proud of in your professional life, including your group achievements?

I am fortunate to have worked on many fun projects. One of them, for example, is to study how cloud and blowing affect the ICESat-2 surface altimetry during the designing phase of the instrument. ICESat-2 uses a 532 nm lidar to measure the surface elevation, from which we can track the

changes of the polar ice sheet and many other aspects of the planet. We know the altitude of the satellite and we know the time it takes for the laser to return; hence, at least in theory, it's straightforward to derive the surface elevation, assuming light travels in a straight line. Yet when cloud and blowing are present, particle scattering will increase the photon path length and makes the surface appear further away from the satellite. I worked on this with Dr. Alexander Marshak at Goddard through radiative transfer simulations. We found that this problem can be significantly mitigated by limiting the telescope field of view (FOV) to below 100 μ rad, which can effectively prevent multiple scattered photons to reach the sensor. In the end, the ICESat-2 telescope FOV is set to be ~ 83 μ rad and our work played a role in the decision.

Q: Who influenced you the most in your professional life and why?

I've had many great mentors along the way, such as my PhD advisor Larry Di Girolamo and my postdoc advisor Alexander Marshak. The training I received from them on radiative transfer, on remote sensing, and on scientific methods has always been the foundation of my research. I also want to mention another person, who is not exactly in my research field, but from whom I learned tremendously. He is Dr. William Corso, who sadly passed away in 2018. During the five years I was with USRA-GESTAR, Dr. Corso was the director of the program, and I was a manager under him. He provided great career support and advice not only to me, but to many people around him. Also, he was exemplary in tackling tough problems in a very easy manner, which is a quality that I always want to gain.

Q: How are you interacting with Chinese-speaking scientists?

We have a great number of world class scientists in the Chinese-speaking community and many of them are at my workplace. At Goddard, we have a very close and relatively large group that we used to have lunch together every day before the pandemic. I miss those days. It feels great to talk and discuss using one's native language. This is the same when interacting with Chinese-speaking scientists from other places. There is always a natural connection.

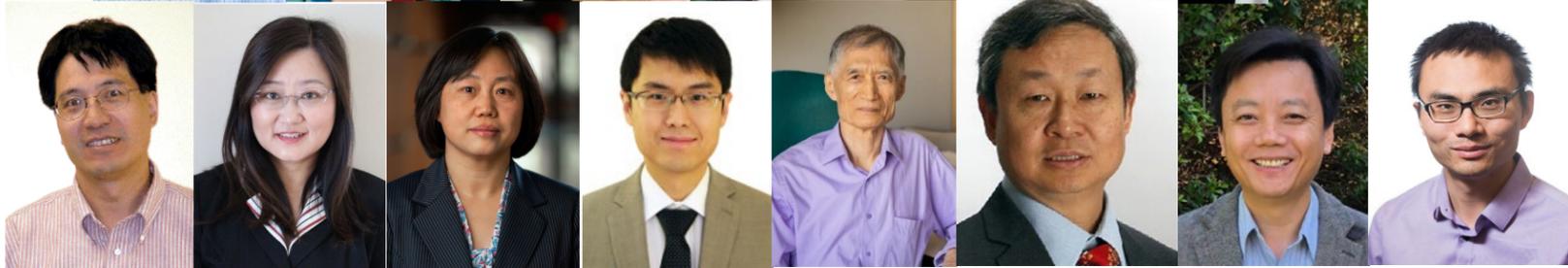
Q: What are your perspectives for future direction in our field?

We are living in a period of unprecedented climate change. I mostly work on observing this change. Others may be working on understanding the cause, or forecasting the change, or developing plans to tackle the ensued problems. All these areas will see great work in the future. Personally, I think research on relating climate change to real world problems and finding solutions will be a direction that can attract a lot of talent.

Q: What is your major advice to young scientists in our field?

From what I see, young scientists in our community are extremely well equipped to take on tough research questions and I probably am not at the position to give advice, but maybe I can share one thought: "don't sweat the small stuff". We all experience difficulties one time or the other. Someone told me once: in the long run, this doesn't matter. And I agree, in the long run what matters is the trend, not the individual ups and downs, so stay upbeat.

Congratulation to Newly Elected AGU/AMS/AAS Fellows and other Award Recipients



- **Mian Chin (NASA GSFC): 2021 AGU Fellow, 2022 AMS Fellow.**

AGU: “for pioneering work and leadership in integrating models and satellites to advance the understanding of atmospheric aerosols distributions and climate impacts”

AMS: “for her contributions in advancing understanding of global aerosol sources, sinks, and impact on our environment and weather.”

- **Bo Qiu (U. Hawaii): 2021 AGU Fellow**

“for pioneering and seminal contributions on ocean interactions across scales from km to basin-scales, including mesoscale eddies.”

- **Xubin Zeng (U. Arizona): 2021 AGU Fellow**

“for outstanding contributions to understanding, data development, and modeling of atmosphere-land-ocean interface processes”

- **Wei-Jun Cai (U. Delaware): 2021 AAAS Fellow in Atmospheric and Hydrospheric Science**

“for distinguished contributions to understanding the global carbon cycle and carbon dioxide fluxes in the ocean coastal”

- **Chuanmin Hu (U. South Florida): 2021 AAAS Fellow in Atmospheric and Hydrospheric Science**

“for distinguished contributions to the field of marine science, particularly for the discovery of the Atlantic Sargassum belt and pioneering research in remote sensing algorithms, data products, and applications.”

- **Yuan Wang (Caltech): 2021 AGU Future Horizons in Climate Science: Turco Lectureship**

“The award recognizes significant interdisciplinary scientific research, discoveries, or advancements in climate science..., identifies future areas of research that will engage both new and established scientific talent in solving the problem of global warming and related issues.”

- **Bin Zhao (Tsinghua U.): 2021 AGU Global Environmental Change Early Career Award**

“The award recognizes outstanding contributions in research, educational, or societal impacts in the area of global environmental change by honorees within 10 years of receiving their Ph.D. or highest terminal degree.”

- **L. Ruby Leung (PNNL): 2022 AMS Hydrological Sciences Medal**

“for ingenious, groundbreaking contributions which enhance the modeling of land-atmosphere interactions and the hydroclimate”

- **Xin-Zhong Liang (UMD): 2022 AMS Fellow**

“for developing and applying integrated earth system models to study climate variations and environmental impacts, building decision support systems for human-nature interactions, and projecting coupled system changes to address food-energy-water nexus and sustainability issues”.

- **Hui Su (JPL): 2022 AMS Fellow**

“for outstanding contributions to the atmospheric sciences in tropical convection and its interaction with large-scale dynamics.”

- **Guiling Wang (U. Connecticut): 2022 AMS Fellow**

“for outstanding contributions in investigating biosphere-atmosphere interactions, hydrological cycle and extremes, and climate change impact on water resources and agriculture...”

- **Qin Xu (NSSL): 2022 AMS Fellow**

“for outstanding contributions in dynamic theories and diagnostic methodologies in synoptic-scale and mesoscale meteorology, radar data quality control, and data assimilation techniques for improving analyses and predictions of severe storms.”

- **Rong Fu (UCLA): 2022 AMS Award for Outstanding Achievement in Biometeorology**

“for elucidating the critical role of tropical biosphere feedback mechanisms, exceptional mentorship of underrepresented groups in science, and extraordinary service to scientific societies and policymakers”

- **Shuyi Chen (UW): 2022 AMS Sverdrup Gold Medal**

“for fundamental contributions to understanding of tropical air-sea interactions through innovative use of observations and coupled atmosphere-wave-ocean modeling”

- **Ping Yang (TAMU): 2021 van de Hulst Light-Scattering Award; 2022 Texas Distinguished Scientist**

“The prestigious Elsevier Award, is meant to celebrate the life-time achievement of an individual scientist who has made a landmark contribution to the research field of electromagnetic scattering by particles and its applications.”

COAA at 2021 AGU annual conference

Author: Yingxi Shi



Monday, December 13th, 2021, COAA representative (secretary Yingxi Shi) and other COAA members attended the 2021 AGU Asian Americans and Pacific Islanders in Geosciences (AAPLiG) Town Hall meeting in New Orleans. COAA main chapter president-elect (Xiaoguang Xu) also attended this event online. AAPLiG is a newly founded organization that's targeting Asian and Pacific islander students and scholars in Geoscience fields. AAPLiG and COAA share similar goals of supporting AAPI within the geoscience fields and to promote scientific communication and collaboration among this group. During the meeting, COAA presented its long history and culture, and shared their past and present achievements and current activities. The two organizations also discussed challenges facing AAPI people given the current wave of asian discrimination and talked about opportunities for future collaborations. The meeting lasted much longer than was planned and those in attendance were enthusiastic about a partnership between AAPLiG and COAA. All said, the town hall was a resounding success. Other than the AAPLiG town hall, COAA also had a members' dinner party during AGU. This was a small-scale gathering due to COVID, but more than 20 COAA members and members-to-be attended the dinner party and celebrated with new AGU Fellow Prof. Xubin Zeng. Prof. Zeng gave a speech encouraging COAA members to keep up the good work and to continue doing good science. Everyone enjoyed catching up with old friends and making new friends.

COAA Spring Workshop: “Conversation with NSF Program Managers” and Fall Workshop: “Career Paths in Earth Sciences”

Author: Xiaowen Li

COAA 2021 Spring Workshop was held as a virtual event on **Saturday June 26, 2021**, from 1:00 PM to 3:00 PM EDT. NSF program managers, Dr. Chungu Lu and Dr. Jielun Sun, gave a seminar entitled “How to prepare a successful NSF proposal?”. Both Drs. Lu and Sun were program officers at NSF Physical and Dynamic Meteorology Program, and long-term COAA supporters. Dr. Lu has served as COAA president in 2016. The hour-long seminar gave a comprehensive overview of the NSF and highlighted several programs relevant to the COAA community (CAREER, GEO Education, and Post-Doctoral Fellowship programs). Drs. Lu and Sun also shared many words of wisdom before taking questions from the audience.

COAA 2021 Fall Workshop, “Career Paths in Earth Sciences”, was jointly hosted by the Headquarters and all the regional chapters. It was held again as a virtual event on **Saturday September 25, 2021**, from 2:00 PM to 4:00 PM EDT. The four speakers of the event all hold degrees in atmospheric sciences but have vastly different career paths. Dr. Bill Kuo is a senior scientist at NCAR and the Director of UCAR’s Community Programs, Developmental Testbed Center and COSMIC Program. He talked about his transition from science to management with many lessons learned. Mr. Gene Jing Chang is a financial advisor and a board member of United Chinese Americans. His presentation is “How did physics help me in my career development?” Dr. Mei Gao is a Facebook (now Meta) Data Science Manager. She detailed her journey to become a data scientist after receiving her PhD degree from UCLA. Dr. Wanying Kang is a new faculty at MIT after finishing her Postdoc work at the same institution. Her presentation title was a philosophical “Taking a leap into the unknown”. After the talk and general questions, each speaker then hosted a separate group discussion with audiences choosing to join the group of their interest for a more intimate discussion.

COAA 2022 virtual meeting: A Panel Discussion of Diversity, Equity, and Inclusiveness

Authors: Lulin Xue and Xiaodong Chen



Dr. Shuyi Chen Dr. Xubin Zeng Dr. Xin-Zhong Liang Dr. Hui Su Dr. Mian Chin

Feb 26th, 2022 – COAA hosted its 2022 annual meeting online. a panel discussion around Diversity, Equity and Inclusion (DEI) was hosted by COAA. Five panelists with diverse DEI experiences (Drs. Shuyi Chen, Mian Chin, Xin-Zhong Liang, Hui Su, and Xubin Zeng) were invited to the discussion and exchanged their opinions and suggestions with the COAA community. The discussion focused on four aspects of DEI: 1) “What do Diversity, Equity, and Inclusion (DEI) mean to you personally and to the COAA community?” led by Dr. Shuyi Chen; 2) “Why should the COAA community embrace DEI?” by Dr. Xubin Zeng; 3) “What will you do to support DEI?” by Dr. Xin-Zhong Liang; 4) “How can we break through the glass ceiling for Asian women” by Dr. Hui Su.

Take home messages:

Inspired by the discussion led by Xubin, we summarize the essential of DEI in the following analogies: Diversity is being invited to the party. We only invite people to our home that we see as worthy and similar; Equity is having an accessibility ramp to the door; Inclusion is being asked to dance or being offered

refreshments or being asked to help clean up (credits to Vema Myers and other online contents). The interactions between the panel lists and the COAA members raised our awareness of the importance of DEI and pointed the direction of our future actions. Distilled from the discussion, the following messages are highlighted:

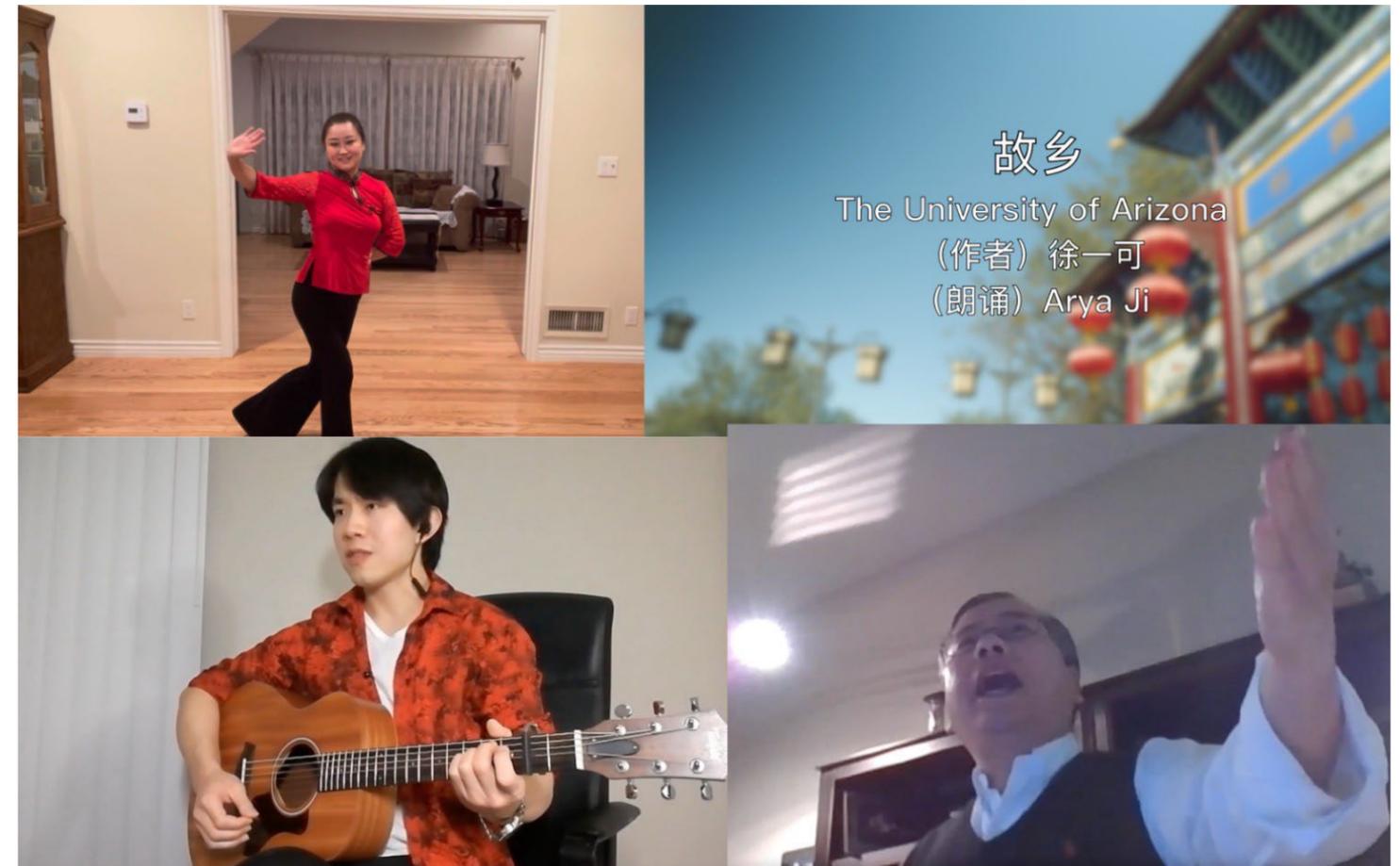
1. As Chinese-American researchers, we should be open-minded and join the broader minority communities such as the Black, Indigenous, People of Color (BIPOC) community. This can help create a stronger united voice and better environment.
2. We should collect detailed data to justify our contributions to diversity in academia yet underrepresented status in leadership/management level.
3. We should equip ourselves with training related to DEI topics such as bystander intervention, self-expression in public, and communication skills, and act accordingly.
4. Within our community, we should encourage young scientists to develop leadership skills and provide relevant training and practice.

Opportunities:

We can keep the discussion/engagement of DEI-relevant activities going both within and across the communities. This can be achieved through follow-up training/workshops/seminars around DEI theme in a sustainable manner.

COAA-SCC Chinese New Year Online Party

Author: Yuan Wang



Screenshots of highlighted performances

Feb 12, 2022, Saturday - about 70 COAA-SCC members gathered online to celebrate the Chinese New Year of the Tiger.

Dr. Yuan Wang (COAA-SCC President) briefly reported the COAA-SCC EC member changes and the COAA-SCC activities during 2021. Dr. Xiaoguang Xu (COAA President), Prof. Yongkang Xue (Chair of COAA-SCC Advisory Board) and Prof. Rong Fu gave remarks and delivered New Year greetings and best wishes to all COAA-SCC members. Dr. Jonathan Jiang recited two beautiful poems written by Prof. Yuk Yung about searching for extraterrestrial life and landing on Mars. Prof. Yung shared past memories of Prof. Kuo-Nan Liou and reminisced Prof. Liou for his tremendous guidance and advice to early-career and mid-career scientists in both academic career and personal life. Prof. Yung also talked about the concepts of "5C teaching" (critical thinking, creativity, communication, collaboration and citizenship) and the

importance of leadership.

Certificates were issued to outgoing EC members Dr. Yu Gu (UCLA) and Yue Huang (UCLA), for their dedicated service and great achievement in the past years. The regional directors from the eight COAA-SCC institutions briefly introduced members from their institutions. All attendees enjoyed the performance, games, and prize drawings throughout the party. Some highlighted performances include Dr. Hui Su's dancing "故乡情", Dr. Xiquan Dong's Peking Opera "林海雪原" I, Dr. Shirui Peng's singing with guitar "平凡之路", etc.

COAA Colorado Chapter Activity Report

Since March 2020, COAA-CC has moved its activities online. We have yet to return to hosting events in person, which we hope will be sometime soon this year. Meanwhile, here are the highlights of the past couple of years.

Authors: Wei Wang and Lulin Xue

June 2020

Forum: Closing the Cultural Gap

We held a forum titled “Closing the Cultural Gap – Challenges and Strategies for Chinese American Scientists and Engineers in Workplace” following our members’ requests. Dr. William Kuo, director of UCAR Community Programs and an immigrant from Taiwan himself, gave the keynote speech. He drew from his experiences to illustrate the inequality in workplaces against Asian colleagues due to either international or unconscious bias rooted in, among others, the cultural differences. He called for all sides to share the responsibility to address the issue including demanding your institutions take actual actions to help Asian scientists. He also pointed out that cultural differences and diversity is strength, not a problem. There is much we can do to help others to understand us and bridge the cultural gap, for example, making an effort to get to know our colleagues from different cultural backgrounds at social events. The forum was well attended by over 30 participants including the NCAR director, Everette Joseph.

May 2021

US Visas and Immigration for Scientists

At this event, Shonna Montoya, the senior immigration specialist at UCAR, and Brad Hendrick, Immigration Law Section Leader of Caplan & Earnest, spoke about types of immigration and visas, application processes and options, as well as answered questions submitted by our members.

Feb 2021 and Feb 2022

Chinese New Year Celebrations

The New Year Celebration has been a major event of COAA-CC since its inception. In 2021 and 2022, we hosted the events via Zoom. Chapter board members gave summary reports to our members, recruited new members, and encouraged membership renewal at these events. Online interactive activities included a photo contest, where members submitted and presented photos that were meaningful to them during the unusual year of 2020, prize drawings, and breakout sessions that allowed our members to introduce themselves and get to know each other beyond the generic image on a Zoom screen. The enthusiasm at the 2022 celebration was particularly palpable as many wished there had been more time to talk with their colleagues when we had to reconvene from the breakout sessions.

Feb 2021 and Feb 2022

Changes in leadership

COAA-CC weathered through two years affected by COVID distractions and restrictions under the capable hands of Ms. Yuewei Liu, Associate Scientist at RAL/NCAR. We are grateful for her dedication and strong leadership. Starting Feb 2022, Dr. Lulin Xue of NCAR has taken the helm of COAA-CC. He is joined by Dr. Shan Sun of NOAA as the vice president of COAA-CC.

COAA Family and Friends Summer Gathering

Author: Wanshu Nie



Jun 26, 2022, Sunday - COAA hosted a family and friends day event on a warm Sunday at the Cabin John Regional Park, Bethesda, MD. This is the first time in-person outdoor event after the COVID outbreak. Around 50 COAA members, families, and guests attended the event. Attendees enjoyed a great time chatting with old friends, meeting with new friends, having fun participating outdoor games, and had plenty of delicious traditional Chinese cuisine, blended with a potluck sharing plus BBQ grill. The president, Dr. Xiaoguang Xu, welcomed the attendees, and briefly updated COAA's recent

and upcoming activities. Dr. Xu thanked the organizers, especially COAA board members Dr Yingxi Shi and Dr Wanshu Nie, for their great effort in organizing such a successful event. Dr Xu also introduced the next COAA president-elect, Dr. Yuekui Yang. The event ended with a lottery co-sponsored by FreshGoGo.

Upcoming IAMES-COAA 2022 Meeting

Dear COAA members and friends,

We are very pleased to announce the COAA International Conference on Atmosphere, Ocean, and Climate Change (ICAOCC), co-organized with the IAMES 2022 Annual Conference, will be held online on 18 – 20 October 2022. Registration and abstract submission for the meeting are now open at the conference website: <https://coaaweb.org/IAMES-COAA2022>.

The conference aims to bring together global professionals to exchange ideas and experiences in the practical application of innovative sciences and technologies related to weather and climate observing and forecasting systems, climate change, environment issues, and global warming. The conference will serve as a premier platform for experts from all over the world to explore new technologies, inspire new strategies, and identify opportunities for future collaborations with their peers. It is also a means for senior scientists and engineers to provide helpful information for younger ones to stimulate the knowledge transfer from generation to generation.

The conference topics will include but not limited to:

- Radiation and climate modeling (in memory of Prof. Kuo-Nan Liou)
- Data assimilation and weather forecast (in memory of Prof. Fuqing Zhang)
- Climate change, prediction and adaptation
- Ocean process and ocean-land-atmosphere interactions
- Extreme weather and climate disasters
- Aerosol, cloud, and precipitation
- Atmospheric chemistry and environment

We kindly invite you to submit an abstract and register for the meeting at <https://coaaweb.org/IAMES-COAA2022>. We look forward to seeing you this October.

Best regards,

COAA Board of Directors



Invitation to renew your COAA membership

Dear COAA members,

As you may already know from many COAA activities, COAA is a non-profit organization comprised of more than 600 Chinese-American scholars working in the United States on Earth sciences. COAA dedicates its activities to promote science through communications and mentoring young scholars. As part of your COAA membership, **you will receive the following benefits:**

- **Networking with your peers and other professionals**
- **Receiving regular COAA newsletters and notifications of COAA events**
- **Participating COAA organized seminars, conferences, and social events**
- **Enjoying special member price for attending COAA conferences, COAA reception banquets, and other activities**

Your participation and dues make these and other valuable COAA services possible. To improve the COAA experience for its members, we invite you to renew membership for the calendar year 2022 (through 12/31/2022) as

- Regular: \$20/year
- Student: \$10/year
- Life: \$200
- Corporate: \$500/year

You can renew your membership online through the link below:

<http://www.coaaweb.org/membersonly.php> (although you may not get an automated confirmation email, your payment will go through).

You may also pay your membership dues during any COAA activities throughout the year.

If you do not plan to renew, please send us a quick email and we'll take you off the list. In either case, we would appreciate any feedback you are willing to share regarding your decisions on renewing COAA membership.

Thank you for your support for COAA and we are looking forward to seeing you at upcoming events!

Best regards,

Best regard,

COAA Board 2022



We want to hear from you

Dear COAA community,

COAA is seeking your contribution to the COAA Newsletter (<http://www.coaaweb.org/newsletters.php>) to share with the COAA community. We invite members from our COAA community to submit a short article or announcement that fits into the following categories:

- News items, conference announcements, etc
- Award recognitions, promotions, important publications, significant achievements, etc.
- Brief articles that are short, topical, and news-oriented
- COAA member 'Spotlight' (see sample issue below, and nomination self-nomination is highly encouraged)
- Advertisements from current or future corporate sponsors
- Useful member resources and opportunities

A sample issue can be found at: http://www.coaaweb.org/documents/COAA_eNews_Sep2019.pdf. Submissions are encouraged year-around for future issues.

Guidelines for contributions:

- Article submissions should be in MS Word format including a title and author(s)
- Images and photographs are highly recommended, with high resolution
- Include useful links (URLs) to additional information
- Please use our recently published issues as a sample
- Submissions should be sent to newsletter@coaaweb.org

Please note:

By submitting a contribution to the COAA Newsletter, you are agreeing that the content submitted will be publicly available. COAA reserves the right not to publish all submitted content in the Newsletter. COAA may also use submitted content in a future newsletter issue. Minor editorial changes and spelling corrections will be made. To establish the identity of contributors, your name and/or your group's name may be published with your article or contribution. By submitting images to be used with your articles, you authorize COAA to use these images in our publications.

For questions, please email COAA Newsletter editor, Dr. Youtong Zheng, at newsletter@coaaweb.org.

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- Dr. Youtong Zheng (郑又通, Princeton U.)



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