

Title

2018 iCACGP/IGAC Early Career Short Course

Date

22-24 September 2018

Location

Shodoshima Island, Kagawa, Japan

IGAC Sponsored or Endorsed

IGAC Sponsored

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Host Institutions and Funding (logos only)

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Acknowledgments

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Participants (List of countries)

Argentina, Australia, Bangladesh, Brazil, Canada, China, Cote d'Ivoire, Finland, France, Germany, Hong Kong, India, Italy, Japan, Kenya, Malaysia, Mexico, Netherlands, Pakistan, Qatar, Russia, Singapore, South Africa, United Kingdom, United States, Venezuela, Vietnam

Background

At the 2014 joint iCACGP Symposium/IGAC Science Conference in Natal, Brazil a half-day course was held for all early career scientist to introduce them to the topics of the scientific sessions. Based on the input from this half-day course, IGAC decided to hold the first IGAC Early Career Short Course for three days prior to the 2016 IGAC Science Conference. Based on the success of the first IGAC Early Career Short Course, IGAC held the second 2018 iCACGP/IGAC Early Career Short Course prior to the 2018 joint iCACGP Symposium/IGAC Science Conference.

Event Summary (~500 words)

Forty early career scientists representing 27 countries recently gathered at Shodoshima Island, Kagawa, Japan for the 2018 iCACGP/IGAC Early Career Short Course (ECSC), which provided an opportunity to learn and discuss a variety of content varying from emerging scientific topics among the atmospheric chemistry community to exploring science-policy engagement. Though some of the flights were cancelled due to heavy fog, which made us worry at the beginning that some participants would not make it, we were all finally gathered at the venue by the end of the first day and the short course went successfully after this point. The main goal of the short course was to foster international networks and collaborations among the future leaders of atmospheric chemistry research. Investing in future leaders is a vital part of the IGAC mission to foster international atmospheric chemistry research towards a sustainable planet. Applications to attend the ECSC far outpaced the number of available spots. Many worthy applicants had to be turned away.

The 2018 iCACGP/IGAC ECSC was composed of four sessions: (1) Connecting modeling, observations and laboratory studies, (2) The future of atmospheric chemistry, (3) Science-Policy engagement, and (4) World Café: Open discussion on global issues. Highlights from each session are presented below.

The short course began with the session entitled, “Connecting modeling, observations, and laboratory studies”, which aimed to give participants an opportunity to think about how to make balanced connections among these three aspects of atmospheric chemistry. We heard talks by Dr. James Crawford (NASA, USA), Prof. Mei Zheng (Peking University, China), and Dr. Christian George (IRCELYON, France), about their experiences in developing and answering scientific questions that incorporate aspects of these sub-fields. Each talk was followed by a group discussion focused on our own experiences of connecting sub-fields in our work and on how we conceptualize building scientific questions that require interdisciplinary approaches. The speakers challenged us to examine about how we collaborate and develop scientific questions. The talks, and particularly the discussions, stimulated us to think about how to be more flexible and creative in our work.

The second session, “The future of atmospheric chemistry”, was held in the latter half of the first day, and focused on three state-of-the-science topics of growing importance. Discussion on the first topic, climate engineering, was led by Prof. Mark Lawrence (IASS, Germany); he introduced us to possible climate engineering options and the role of atmospheric scientists in this area. Dr. Manish Naja (ARIES, India) introduced the current status and perspectives on air quality issues over Asia, and we discussed how such issues might change in the future. Finally, Dr. Deborah Stein Zweers (KNMI, Netherlands) gave a primer on satellite-based measurements and shared the surprisingly fine-scale retrievals from the new satellite TROPOMI. This talk and discussion were an exciting way to end the first day.

The second day centered on a “Science-policy engagement” module developed by Dr. Rebecca Garland (CSIR, South Africa), Dr. Todd Sanford (Polygon Sun Research & Consulting, USA), Dr. Erika von Schneidemesser (IASS, Germany), and Dr. Megan Melamed (IGAC Executive Officer), and led by Dr. Garland and Dr. Sanford. This session began with clarification of the relationship between scientists and policy-making, followed by a panel discussion with several established scientists who are working at the science-policy interface. The discussion helped us to think about the possible options for science-policy engagement and how it relates to our own work. In the afternoon, we worked in groups on real-world science-policy scenarios to map possible approaches to engagement and problem-solving. This exercise allowed us to experience the importance, challenges, and complexities of science-policy engagement.

On the final day, we came together for a World Café style discussion to synthesize what we learned throughout the ECSC. We all enjoyed a very active discussion with many opportunities to listen to and exchange experiences with participants from many countries and regions. For detailed outcomes of this discussion, please see the Science Feature of this issue of IGACnews.

The ECSC, through the sessions and free-time, fulfilled its role as a platform for interactive discussions and networking among the participants and instructors across geographical

borders. The friendship among the ECSC participants triggered further networking among all early career scientists at the 2018 joint 14th iCACGP Quadrennial Symposium/15th IGAC Science Conference.



2nd iCACGP-IGAC Early Career Short Course Participants



"Angel road" in Shodoshima Island, Kagawa