

Gateways to the Ocean: A symposium celebrating Arnold L. Gordon's  
contributions to Physical Oceanography  
13-14 February 2020

The global ocean circulation affects our climate in myriad ways and plays a central role in mediating the planet's response to climate change. A key aspect of this circulation is the importance of specific localized gateways (or choke points) which control the strength, structure and basin connectivity of the circulation. Examples of such gateways are the Indonesian Throughflow, the Agulhas retroflection, and outflows from the Ross and Weddell Seas to name a few. These systems often consist of multiple strong jets that vary over a range of space and time scales and so remain extremely challenging to observe, model and predict. Given the rapid development of new observing technologies, and the emergence of a new class of high-resolution global ocean models that are critical for understanding the accelerating rate of climate change, the time is ripe to assess the state of knowledge in the field of ocean gateways and define key challenges for future research.

A two-day symposium to bring together distinguished and early-career researchers from across the world, including observationalists, theoreticians and modelers to address these topics was convened at Scripps Institution of Oceanography in San Diego, 13-14 February, the week prior to the 2020 AGU Ocean Science meeting. The symposium coincided with the 80<sup>th</sup> birthday of Prof. Arnold L. Gordon, a pioneer in the field of ocean gateways. Professor Gordon's singular research career, spanning over 50 years, has transformed our understanding of ocean gateways and their role in climate. The conveners and attendees celebrated Prof. Gordon's contributions over the two-day symposium, held in John Martin House, an intimate forum on the SIO campus that fostered interaction and lively discussion among attendees.

Attendance was limited to about 50 participants per day, in keeping with the occupancy limit of the venue. In an effort to cultivate the next generation of leaders in the field of ocean gateways, invitations were extended to early career researchers and members of underrepresented groups in addition to well-established researchers in the field. A list of attendees is provided in a separate document.

The symposium presentations are archived here as pdf files, organized by session. An introduction, including the two-day agenda, is included in the Session\_01 compilation of files.

Symposium Organizing Committee:

Ryan Abernathey, Bruce Huber (Lamont-Doherty Earth Observatory/Columbia University)  
Janet Sprintall (Scripps Institution of Oceanography)  
Martin Visbeck (GEOMAR Helmholtz Centre for Ocean Research Kiel)

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