

Foreword

Malaysia's interest in the Antarctic started with diplomacy when Malaysia raised the issue of Antarctica as a global common for mankind in the Question of Antarctica in the United Nations in 1982. It was only in 1999 that Malaysia was able to undertake its first scientific expedition to Antarctica courtesy of New Zealand. The Malaysian International Seminar on Antarctica (MISA) is a biennial meeting that was initiated to facilitate cooperation between Malaysian scientists and their international counterparts and also to showcase the research undertaken by them.

This special issue of *Advances in Polar Science* contains seven selected papers that were presented at MISA8 and the two SCAR related workshops, Tropic Antarctic Tele-connection (TATE) and State of the Antarctic Ecosystem (AntEco), which were held at the Universiti Putra Malaysia from 18th to 20th of June 2019. It also includes an Editorial Opinion “*Arctic Environmental Change Research and Antarctic Studies Have Mutual Benefits*” that is related to the main theme of MISA8—Polar Regions in the Global Climate System.

The papers in this special issue cover the major scope of MISA8 except for the keynote addresses. The keynotes were presented by four distinguished researchers. Professor Timothy Nash presented a talk on *What Does the Paris Agreement Mean for Antarctica and the Southern Ocean* while Dr. Gwen Fenton spoke on *Surviving and Thriving in Antarctica and the Southern Ocean in a Changing World*. Professor Akiho Shibata talked about *Future and Challenges of Antarctic Governances* while Professor Azizan Abu Samah reviewed *the Malaysian Antarctic Research Program on Antarctic Weather and Climate and its Teleconnection to the Tropics*. The seminar and workshop were a success and were attended by more than 200 participants comprising postgraduate students and Malaysian polar researchers plus a number of international researchers: some physically at the meeting and others via video conferencing. A total of 43 papers were presented at this meeting covering the areas of Antarctic governance, and physical and microbiological research in the Antarctic.

The seven MISA8 articles cover the fields of atmospheric and environmental sciences, and research on Antarctic micro-organisms. One article presents observations of surface ozone variations at the Great Wall Station, Antarctica during austral summer while another evaluates tropical-Antarctic connections of an explosive cyclone in southern Brazil based on rainfall isotope ratios and synoptic analysis. Two papers consider the effects of a changing environment on polar microalgae: the toxic impacts on microalgae of oxybenzone, an ultraviolet filter introduced into Antarctica in sunscreens; and the impact of warming temperatures on the physiological and photosynthetic performance of two polar *Chlorella* sp. The three remaining contributions cover further aspects of research on Antarctic microorganisms. These are on the efficacy of the bacterium *Rhodococcus* sp. for bioremediation of fuel spills that are also contaminated with heavy metals; the structure and function of the cold shock domain (CSD)-containing protein from a psychrophilic yeast, *Glaciozyma antarctica*; and the genome of an Antarctic thermophilic bacterium, *Geobacillus* sp.

The meeting organizer would like to thank the sponsors of this meeting, particularly the Universiti Putra Malaysia, the Sultan Mizan Antarctic Research Trust, SCAR and the other local universities that cannot all be named due to limited space in this foreword.

We would also like to thank the journal *Advances in Polar Sciences* for publishing this special issue. Finally, we would like to thank the seminar participants, and the authors and reviewers, for their contributions to MISA8 and this issue.

Guest Editors

Azizan Abu Samah, Yunus Shukor, Claudio Gómez-Fuentes and Ian Allison