

## Preface

Due to recent pandemic, the 2020 International Conference on Climate Change, Green Energy and Environmental Sustainability (CCGEES 2020) which was planned to be held in Haikou, China, was held virtually online during December 18-20, 2020. The decision to hold the virtual conference was made in compliance with many restrictions and regulations that were imposed by countries around the globe. Such restrictions were made to minimize the risk of people contracting or spreading the COVID-19 through physical contact. There were 50 individuals who attended this on-line conference, represented many countries including Canada, Spain, UK, Italy, Malaysia and China.

CCGEES 2020 aims to bring together by a common concern for the science of, and social responses to, climate change, green Energy and environmental sustainability and to provide a platform for scientists, engineers and scholars to sharing their latest research results and experiences.

During the conference, the conference model was divided into three sessions, including oral presentations, keynote speeches, and online Q&A discussion. In the first part, some scholars, whose submissions were selected as the excellent papers, were given about 5-10 minutes to perform their oral presentations one by one. Then in the second part, keynote speakers were each allocated 30-45 minutes to hold their speeches. In the second part, we invited four professors as our keynote speakers. Prof. Dr. Hui-Ming Wee, from Chung Yuan Christian University, Chinese Taipei. His research interests are in the field of production/inventory control, optimization, logistics, renewable energy, environment, artificial intelligence and green supply chain management. And then we had Prof. Jin Su Jeong, Universidad de Extremadura, Spain. He presented an insightful speech on *Plausibility in the green/sustainable energy and climate change: reason and confidence in a hybrid operational method and flipped STEM education integration*. Dr. Lorenzo Ardito, from Polytechnic University of Bari, Italy. He talked about *The impact of public research on the technological development of industry in the green energy field*. This research, by analysing technology attributes, examines the degree to which companies build on environmental technologies generated by public research organisations (PROs) to develop the related technological solutions. Lastly, we were glad to invite Prof. Haslenda Hashim, Sustainability Research Alliance, Universiti Teknologi Malaysia as our finale keynote speakers. She shared a speech on *Paradigm Shift of Energy Sector: Integration of Big Data Analytic (BDA) and spatial explicit optimisation model for sustainable supply of oil palm waste for bioenergy generation*. Their insightful speeches had triggered heated discussion in the third session of the conference. Every participant praised this conference for disseminating useful and insightful knowledge.

The proceedings are a compilation of the accepted papers and represent an interesting outcome of the conference. Topics include but are not limited to the following areas: Causes of Climate Change, Impacts of Climate Change, Climate change solutions, Green energy and technology and more related topics. All the papers have been through rigorous review and process to meet the requirements of International publication standard.

We would like to acknowledge all of those who supported CCGEES 2020. The help and contribution of each individual and institution was instrumental in the success of the conference. In particular, we would like to thank the organizing committee for its valuable inputs in shaping the conference program and reviewing the submitted papers.

We sincerely hope that the CCGEES 2020 turned out to be a forum for excellent discussions that enabled new ideas to come about, promoting collaborative research. We are sure that the proceedings will serve as an important research source of references and knowledge, which will lead to not only scientific and engineering findings but also new products and technologies.

Committee of CCGEES 2020

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