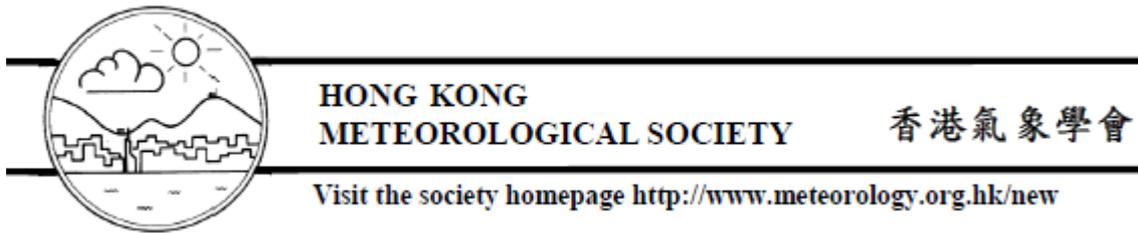


**Dr. George Liu Elected Executive Committee Member of
the Hong Kong Meteorological Society**



Dr. George Liu, currently Associate Professor at the Department of Land Surveying & Geo-Informatics (LSGI), The Hong Kong Polytechnic University (PolyU), Hong Kong and Fellow of the Hong Kong Meteorological Society, was elected Executive Committee Member at the annual general meeting (AGM) of the Hong Kong Meteorological Society held at the Hong Kong Observatory on 20 January 2020.

Dr. Liu's research Lab, the Micro-Laboratory of Atmospheric Research and Geomatics Engineering (Micro-LARGE), has been dedicated for more than one decade to atmospheric water vapor observation and modeling using multiple sensors including Global Navigation Satellite Systems (GNSS), various remote sensing satellites (MODIS, Fengyun, etc), radiosonde, and many other sensors. Water vapor, accounting for only a very small amount (0-2%) of the atmosphere, however is a crucially important constituent in the atmosphere. With a concentration over 99% in the troposphere, water vapor is the largest contributor to the Earth's greenhouse effect, accounting for about 60% of the warming effect. In addition to the warming effect, water vapor has a significant effect on many other phenomena such as the radio wave delay effect on many satellite signals such as GNSS, atmospheric chemical pollution such as ozone, formation of aerosol, climate change, and others. Water vapor is a key Essential Climate Variable (ECV) defined by the Global Climate Observing System (GCOS). Nevertheless, high-resolution high-precision observation of water vapor, in both spatial and temporal domains, has long been a challenge in the meteorological society.

As one of the three research areas at the Micro-LARGE Lab, three highly competitive research grants on the atmospheric water vapor research have been successfully secured from the Hong Kong Research Grants Council (RGC) over the past years, in addition to other research grants. The Micro-LARGE Lab has acquired advanced instruments worth more than HK \$5 million for water vapor research, including two advanced water vapor radiometers.

Dr. Liu has published extensively on water vapor observation and modeling. His Lab has developed novel algorithms to calibrate the water vapor data of remote sensing satellites using ground-based observations, leading to an accuracy improvement of 15-22%. In 2017, his Lab for the first time in PolyU won the "Zhu Kezhen" Prize from the Hong Kong Meteorological Society. In 2014, Dr. Liu was nominated by the Hong Kong Observatory for the World Meteorological Organization (WMO) "Norbert Gerbier-MUMM International Award for 2015" for his article that has developed a method to evaluate the absolute accuracy of water vapor measurements.