



Department of Geography --- Public Seminar Series

“Challenges and priorities in hydrology research towards the changing environment”

Speaker:

Prof. Chong-Yu Xu

(Professor of Hydrology, the Department of Geosciences, University of Oslo, Norway)

Date: 19th April, 2018 (Thursday)

Time: 11:00am – 12:30pm

Venue:

Room AAB1217, Resource Centre, Department of Geography,
Academic and Administration Building (AAB), Baptist University Road Campus
Hong Kong Baptist University

Co-organiser: the Centre for Geo-computation Studies, Hong Kong Baptist University

ALL ARE WELCOME!

Hydrological analysis and modeling in a river basin, a region or the globe are essential for water resources assessment, flood forecasting and impact study of climate and environment change. Development and application of hydrological analysis methods and models at different spatial and temporal scales have been carried out since later part of the 19th century. Since then, the development of hydrological analysis methods and models has gone through several stages, and nowadays mathematical models have taken over the most important tasks in problem solving in hydrology and water resources engineering. However, significant ongoing challenges to the hydrological analysis and modeling remain to be addressed since in a changing world, model inputs, outputs, parameters, relationship between inputs and outputs may all vary and become nonstationary, violating the basic assumption of the most existing statistical methods and models. The talk starts with a review of the history and progress of the development of hydrological science and models, the current state and the main challenges. Emphases are then paid to the following issues: the non-stationarity of hydrological processes and the rainfall-runoff relationship, the transferability of hydrological models (structure and parameters) across time periods, across spatial regions, across spatial and time scales, and coupling of hydrological models with climate models.

Dr. Chong-Yu Xu, Professor of Hydrology at the Department of Geosciences, University of Oslo, Norway. Academician of the Norwegian Academy of Science and Letters. His fields of interest and present research activities focus on Hydrological modelling at global, regional and catchment scales; Regional evapotranspiration and its role in linking climatic and hydrological system; Hydrological impact of climate and environment changes at global, regional and catchment scales, Uncertainty analysis and time series analysis. He serves as adjunct Professor at Uppsala University in Sweden and several universities/institutions in Canada and China including Nanjing University, Sun Yat-sen University, Wuhan University, Hohai University and Chinese Academy of Sciences. He served as Overseas Assessor for the Chinese Academy of Sciences. He has been awarded WMO Research Awards for Young Scientists, and Outstanding Overseas Chinese Scholars Awards, etc. He is currently the Editor for international journal of “Hydrology Research”, and Associate Editor of several journals including “Journal of Hydrology”. He is an author of more than 250 SCI Journal papers, of which more than 50 papers were published in “Journal of Hydrology”, with an h-index of 51 in the Web of Science Citation Report, and an h-index of 62 in Google Scholar. He is an Expert reviewer of IPCC WG-I AR5 report and expert reviewer of IPCC WG II AR5 report.