NUS National University of Singapore

NUS Department of GEOGRAPHY Seminar Series

Semester 1, 2017-2018

Considering Variations in People's Everyday Activities with Microclimate to Shape Cities

Speaker: **Dr Manon Kohler**
Research Fellow, Department of Geography, NUS

Chair: **Dr Winston Chow**
Department of Geography, NUS

Date/Time: Friday, 22 Septemer 2017, 3.30pm – 5.00pm
Place: Earth Lab, AS2-02-03, NUS

Abstract

Since centuries urban forms have interested a variety of researcher communities - e.g. geographer, economist, sociologist, ecologist, and even biologist and philosopher. Adjectives like “optimal”, “functional”, “livable”, “equitable”, “sustainable” and “smart” have been stated. They have been associated with the urban form that contributes the most to reduce for instance the public infrastructure monetary cost, or the transport distance and time. They have depicted also the urban forms that contribute the most to enhance social interactions and equity while preserving the natural ecosystem. All these issues relate strongly (also not exclusively) to the question of the location of the different activities in an urban region and new residential developments.

Nowadays in a climate change context urban planners are facing two additional challenges. They should find ways and urban forms able to provide comfortable thermal conditions in cities while reducing the energy demands in buildings for space acclimatization. This can be achieved by designing adequate parcel designs (land cover, surface materials, building types, etc), which can, in turn, optimize the microclimate variations in a city.

Based on her previous experiences and its familiar Strasbourg-Kehl Ph.D. case study (France/Germany), the author will provide an example of how (and under which limitation) the coupling of an advanced urban development model and an urban climate modeling system can help planners to design energy efficient cities. The author will then discuss the need to consider people's everyday activities and spatial patterns conjunctly with the microclimate variations in cities to elaborate people's thermal comfort sensitivity and expectation profiles and transpose it into urban planning policies..

About the Speaker

Dr. Manon Kohler is a geographer keen on multidisciplinary and quantitative approaches with a strong interest in physic geography and urban climate. She held a BSc in Geography (mention Geoscience, Environment and Risks) and was graduated with a PhD in June 2015 from the University of Strasbourg (France) on: “capacities of urban atmospheric modeling systems to assess impacts of urban development polices on (space heating) energy demands in buildings and urban heat island”. Since now, she has been contributing to some European and French national multidisciplinary projects dealing with the concept of ecosystem services and urban green infrastructures, cities’ energy efficiency and sustainable urban developments. Granted by the Cooling Singapore project, she integrated the geography department and urban climate lab in May of this year and is now working on human outdoor thermal comfort issues in Tropics.

ADMISSION IS FREE – ALL ARE WELCOME

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