**D51(E) Green Building Technology (L)**

**主讲人：RICCARDO BUCCOLIERI**

**时间：5月27-31日， 6月3-5日 上午10：00am – 12:00pm**

**1个学分。**

**该课程讲述绿建技术的重要组成部分——城市微气候的基本理论与方法，并重点讲述相关模型、软件，以及实际操作。**

* The Planetary Boundary Layer
  + peculiarities and turbulence
  + governing equations
  + phenomenology
* Urban boundary layer
  + roughness change
  + energy budget
* Urban Canopy layer
  + flow, ventilation and dispersion
  + effects of city morphology and vegetation on flow dispersion and thermal environment
* Urban heat island
  + what it is and how it forms
  + mitigation strategies
  + some example studies (including in China)
* Microclimate modelling, software
  + *Classification…. To be better defines*
* Computational Fluid Dynamics
  + what it is
  + what to consider in CFD studies
  + Validation
  + Coupling with mesoscale
  + LES vs RANS
* ENVIMET
  + What it is
  + Examples of simple cases with students
* Routine air quality models
  + What they are and what can be done
  + Examples of simple cases with students using, as an example, ADMS model from CERC to show what one can do with such kind of models