Mixing Design Automation and Artificial Intelligence with Object-Oriented English

Time：10:00 a.m ~12:00 p.m, Dec.14 (Friday), 2018
Venue：資電館105教室 @ NTHU

Speaker :

Prof. Michael Hsiao
Electrical and Computer Engineering
Virginia Tech

About Speech :

The recent advances in artificial intelligence and machine learning have allowed us to see research problems in a new light. In the past, AI has attempted to realize what humans can do; in the future, it is positioned to help humans accomplish currently considered daunting tasks, such as designing bug-free, functionally correct hardware and software.

In this talk, we will present the concept of object-oriented English, a semi-controlled natural language that allows us to elevate the level of design abstraction to the natural-language level. Then, natural-language processing, artificial intelligence, and design automation work together to synthesize the English text to the desired target result, be it a software program, hardware system, or others. Such a platform can help reduce human error, increase productivity, and simplify the task of designing complex systems. The challenges of natural language understanding, synthesis, handling of imprecision and ambiguity will be addressed. Preliminary results show that 20 English sentences can convert to more than 1000 lines of code.

主辦單位｜國立清華大學 積體電路設計技術研發中心

聯絡人｜黃錫瑜 教授（syhuang@ee.nthu.edu.tw ）