ICS 2016 CCU CSIE
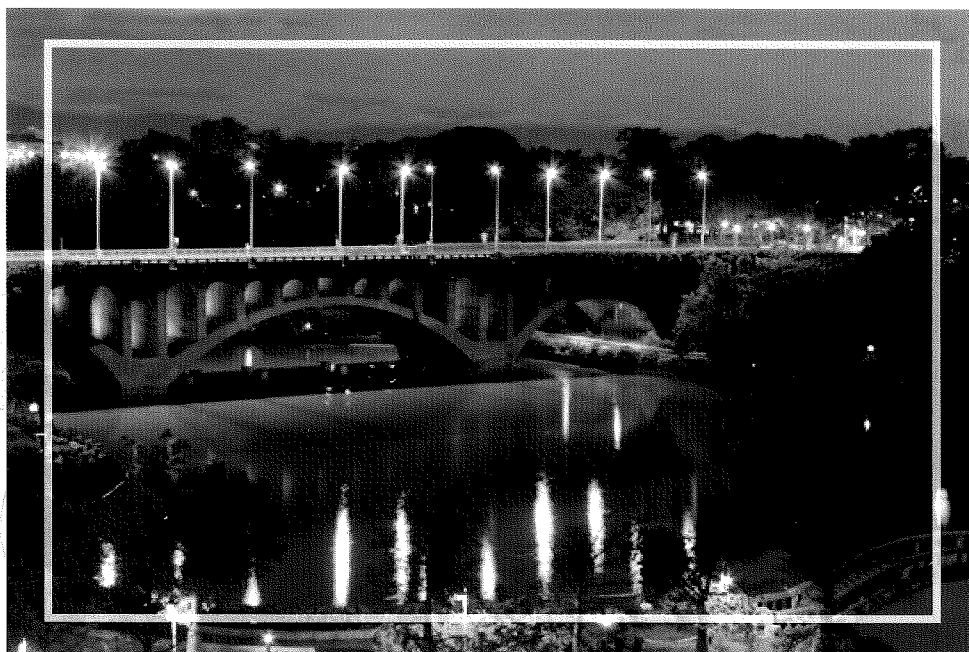
International Computer Symposium 2016

Conference Program

15-17 December 2016, Chiayi, Taiwan

暨科技部資訊學門成果發表會

Day 3 (Saturday 17 Dec. 2016)				
09:00-10:00	Keynote talk: Prof. Gary G. Yen Title: Many-Objective Evolutionary Algorithms-Visualization and Decision-Making (International Conference Hall)			
10:00-10:15	Tea Break			
10:15-12:00	Data Mining I (Seminar Room1)	Multimedia Technologies and Applications (Seminar Room2)	Software Development (Seminar Room3)	Green Systems and Applications (Seminar Room4)
12:00-13:00	Lunch			
13:00-15:00	Data Mining II (Seminar Room1)	Advanced Techniques in Image Processing (Seminar Room2)	Software Testing (Seminar Room3)	Wearable computing (Seminar Room4)

Keynote Speech
Title: Approximation Algorithms: Methodologies, Applications and Empirical Evaluation

Speaker: Teofilo F. Gonzalez, Department of Computer Science, University of California, Santa Barbara

Abstract:
We discuss the basic methodologies to design approximation algorithms. These include: Restriction (structural and algorithmic), Relaxation (structural and numerical), Rounding, Transformation, Local Search, and Metaheuristics. As an example of a hybrid technique we apply the Restriction-Relaxation technique to design a set of algorithms for the problem of finding minimum edge-length corridors. We discuss several different design choices some of which provide constant ratio approximations, while others can be shown to allow for arbitrarily bad solutions. We outline the proof techniques to establish our results. An extensive empirical evaluation of our algorithms is discussed. Several open problems and the difficulty encountered when trying to solve them will be discussed.