Title: The Requirements Problem in Software Engineering

Abstract: The requirements problem is the problem of deriving a specification consisting of functions and quality constraints that along with a set of domain assumptions satisfy a given set of requirements. We present several formulations of the requirements problem to account for changing requirements, adaptive software design and the next release problem. In each case, we discuss the tractability of algorithms that search spaces of alternatives to find Pareto-optimal solutions to the problem. This is joint work with many colleagues and students, including Roberto Sebastiani, Paolo Giorgini, Fatma Aydemir, Chi Mai Nguyen (UniTN), Neil Ernst (CMU), Alex Borgida (Rutgers) and Ivan Jureta (Namur). This talk is based on a keynote at ACM SAC ’16 and an invited talk at KR ’16.

Bio: John Mylopoulos is a visiting researcher at the University of Ottawa; also a professor emeritus at the Universities of Toronto and Trento. He earned a PhD degree from Princeton University in 1970 and joined the faculty of the Department of Computer Science at the University of Toronto the same year. His research interests include requirements engineering, conceptual modelling, data semantics and knowledge management. Mylopoulos is a fellow of the Association for the Advancement of Artificial Intelligence (AAAI) and the Royal Society of Canada (Academy of Applied Sciences). He has served as programme/general chair of international conferences in Artificial Intelligence, Databases and Software Engineering, including IJCAI (1991), Requirements Engineering (1997, 2011), and VLDB (2004). Mylopoulos recently completed a project titled "Lucretius: Foundations for Software Evolution", funded by an advanced grant from the European Research Council.

Time: Tuesday, November 22, 2016, 11.00−12.00
Location: Room CF0153, Gußhausstr. 25 (Altes EI)
Contact: John Mylopoulos, jm@cs.toronto.edu