Novice and Expert, How Are They Programming Differently?

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Abstract

Software is a human-intensive technology and the studies of cognitive processes in software engineering can shed light on many software engineering problems. Studying the expertise, i.e., how programmers do the programming, may have implications for knowledge engineering. In this talk, we introduce the current status of research on the differences of cognitive process between expert and novice programmers when they do programming. The related empirical research methods and cognitive models are also elaborated. We also discuss some possible research directions in this field.

Biography

Simon Xu is the department chair and a professor of Computer Science at Algoma University, Canada. He received his Ph.D. degrees from Wayne State University, USA and University of Liege, Belgium. His research interests include cognitive process during software development, software evolution, and program comprehension. Dr. Xu has published numerous articles and a few authored/co-authored books. He has also chaired a few international conferences and has been invited to give talks by a lot of universities and conferences.