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10h30 – 12h00

UT3 Paul Sabatier, IRIT, Salle des Thèses

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Coping with the Software Dependability Analysis Leap

Abstract: The original definition of dependability is the ability to deliver service that can justifiably be trusted. As well pointed out by Avizienis et al in their seminal paper, such definition of dependability stresses the need for justification of trust. From the perspective of the software engineering community, we are aware that the complexity of the software systems has leaped to orders of magnitude much higher than our assurance on delivering the systems under justifiable trust. In this context, we have conducted research work that copes with dependability analysis that can be accommodated into complex software systems from their initial stages to their runtime execution environment. Such software systems we have targeted include those where a goal-oriented strategy of the software should be prioritised, e.g. suitable to self-adaptive systems domain, and various contexts of system operation should be explicitly taken into account at design- and run-time. In this presentation, we will share our recent contributions on those aspects and some experimental results on a vital signal monitoring prototype we developed in our group as well as on a public transport Android app called Mobee.

Short bio: Genaina Rodrigues is a tenure professor in the Department of Computer Science at the University of Brasilia, Brazil. She received her Ph.D. in Computer Science from University College London (2008) in the Software Engineering group. In 2009 she completed her post-doctorate research at Federal University of Minas Gerais, in the Performance and Distributed Systems group. She obtained her bachelor's degree in Computer Science from the University of Brasilia in 1999 and her Master's Degree in Computer Science from the Federal University of Pernambuco (2002) in the Distributed Systems group. Her research interests are mostly in Software Systems Engineering including dependability analysis and modeling, autonomous systems, goal-oriented requirements engineering, model-driven development for quality requirements, verification of probabilistic models, as well as distributed platforms. In 2013, she co-organized the Brazilian Software Engineering Congress (CBSOFT), the largest Software Engineering venue in Brazil, organised by the Brazilian Computer Society (SBC). Together with her research group, LADECIC, she has published in various highly ranked journals and conferences and engaged national as well as international cooperations in her topics of research interest.

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