

Collaborative software development and social networks in action: A framework and experiences from studies of collaboration and project outcomes in global software teams

When: Thursday 12 March 2009 11am to 12 noon

Where: WT126

Presenter: Dr. Daniela Damian

Abstract:

Software engineering research has documented, over the last ten years, communication problems faced by software teams and how they affect processes of coordination and integration, ultimately leading to poor software quality and dissatisfied customers. In global teams in particular ineffective communication leads to lack of awareness of related work and progress in the project. This in turn significantly impacts the quality of social interaction and collaboration of those that have coordination needs due to technical dependencies in the project. In this talk I discuss experiences from a series of studies that employed a social network approach in the study of communication of global software development teams in two large international organizations. Our findings (1) confirm that communication does indeed play a crucial role in affecting the quality of project outcomes and (2) provide some insights into patterns of information flow in teams with high coordination needs. Finally, I describe a framework for constructing social networks by mining data from large software repositories in order to study collaboration of distributed teams. I discuss implications for software practice and highlight some challenges in conducting research in global software development with social network approaches.

Biography:

Daniela Damian is an Associate Professor in the Department of Computer Science at the University of Victoria, BC, Canada, where she leads research in the Software Engineering Global interAction Laboratory (SEGAL, segal.uvic.ca). Her broad research interests include Software Engineering, Computer-supported Cooperative Work and Human-Computer Interaction. Daniela was the program co-chair for the First International Conference on Global Software Engineering (ICGSE06), and a guest editor of Special issues on Global Software Engineering in the IEEE Software Magazine (2006) and Journal of Software Process Improvement and Practice (2003 and 2008). She serves on the Steering Committee for the Conference on Global Software Engineering, editorial boards of the Journals of Empirical Software Engineering, Requirements Engineering, Human Computer Studies and Software Process Improvement and Practice, as well as on the program committee boards of several conferences including the International Conference on Software Engineering and Foundations of Software Engineering. Daniela has studied practices of global software development in large organizations such as Unisys, Dell and IBM, and now at Siemens. She is an IBM Visiting Research Fellow. Contact her at danielad@cs.uvic.ca.