

Tutorial Title:	<b><i>Company-University Collaboration Strategies and Outcomes</i></b>
Tutorial Leaders:	Steven Fraser, Dennis Mancl
Audience:	Academics (researchers, students) and industry professionals wishing to develop effective research collaborations (suggest maximum of 20 attendees)
Length:	4.5 hours
Format:	Instructor led with facilitated discussion sessions
Topics:	agility in research, benchmarking, company collaborations, contracts, consortia, education, funding, gifts, grand challenges, internships, open innovation, intellectual property rights, ITAR, outcomes, partnership use cases, recruiting, research, research reviews, sabbaticals, seminars, strategies, training, visiting scientists, university research
Outcomes:	Attendees will: <ul style="list-style-type: none"> <li>• increase awareness of: <ul style="list-style-type: none"> <li>○ the value of collaboration in the context of universities, companies, governments, and students</li> <li>○ the differences in company and university perspectives on research constraints on funding and decision making from university/company perspectives</li> </ul> </li> <li>• increase understanding of mechanisms to foster and support company/university collaborations</li> <li>• discuss next-steps to increase opportunities for collaboration in their context</li> </ul>
Agenda:	<p>The tutorial is structured into three 90-minute segments to match the segmentation of the XP2019 program blocks. Each tutorial segment is self-sustaining and need not be scheduled contiguously.</p> <ol style="list-style-type: none"> <li>1) Part I – Company Perspectives (90 mins) <ol style="list-style-type: none"> <li>a) Introduction and overview to tutorial - Agile strategies for developing effective collaborations (30 mins)</li> <li>b) Company perspectives on company-university collaborations: strategies and desired outcomes (45 mins)</li> <li>c) How to keep intellectual property issues from blocking company collaboration and “open innovation” (15 mins)</li> </ol> </li> <li>2) Part II – University Perspectives (90 mins) <ol style="list-style-type: none"> <li>a) University perspectives on university-company collaborations: strategies and desired outcomes (45 mins)</li> <li>b) How to keep intellectual property issues from blocking university collaboration and “open innovation” (15 mins)</li> </ol> </li> </ol>

- c) Student perspectives on university-company collaborations (30 mins)
- 3) Part III – Facilitated Discussion (90 mins)
  - a) Facilitated discussion on building company-university partnership roadmaps and desired outcomes
  - b) Wrap-up and Summary

Tutorial History: The tutorial draws on previous tutorials, workshops, and extensive real-world experience presented at a variety of conferences (XP, OOPSLA, SPLASH, ICSE, PROFES) and companies/universities including: HP, Cisco, Qualcomm, Nortel, Alcatel-Lucent Labs, UCLA, Columbia University, University College London, Harvard, ETH, Free University of Bozen-Bolzano, DTU Copenhagen, CERN, Rutherford Appleton Labs, JPL.

Selected References:

- Steven Fraser, Dennis Mancl: **Innovation through Collaboration: Company-University Partnership Strategies**. SER&IP@ICSE2017: 17-23
- Steven Fraser, Dennis Mancl: **Strategies for Building Successful Company-University Research Collaborations**. SER&IP@ICSE2016: 10-15
- Steven Fraser: **Reflections on Software Engineering Research Collaborations: From Ottawa to the Software Engineering Institute to Silicon Valley**. SER&IP@ICSE2015: 5-10
- Steven D. Fraser, Dennis Mancl, Nancy R. Mead, Mary Shaw, Werner Wild: **Software Professionalism - Is it 'Good Enough?'**. SPLASH (Companion Volume) 2015: 60-62
- Steven Fraser, Luciano Baresi, Jane Cleland-Huang, Carlo A. Furia, Georges Gonthier, Paola Inverardi, Moshe Y. Vardi: **A Publication Culture in Software Engineering**. ESEC/SIGSOFT FSE 2013: 19-23
- Steven Fraser, Judith Bishop, Rajarshi Gupta, Dennis Mancl, J. Christopher Ramming, Salvador Rivas: **Industry-Academic Research partnerships**. OOPSLA Companion 2011: 175-178
- Steven Fraser, Hannah Faye Chua, Gail E. Harris, Orit Hazzan, Jean Tabaka, Rob Tucker, Dave West: **Collaboration**. SPLASH/OOPSLA Companion 2010: 255-258
- Steven Fraser, Bjørn Alterhaug, David Anderson, Diana Larsen, Scott Page: **Collaboration in an Agile World**. XP 2010: 410-415
- Steven Fraser: **Software "Best" Practices: Agile Deconstructed**. PROFES 2009: 8-13
- Steven Fraser, Dennis Mancl: **No Silver Bullet: Software Engineering Reloaded**. IEEE Software 25(1): 91-94 (2008)
- Steven Fraser, Barry W. Boehm, Frederick P. Brooks Jr., Tom DeMarco, Tim Lister, Linda Rising, Edward Yourdon: **Retrospectives on Peopleware**. ICSE Companion 2007: 21-24
- Steven Fraser, Frederick P. Brooks Jr., Martin Fowler, Ricardo Lopez, Aki Namioka, Linda M. Northrop, David Lorge Parnas, Dave A. Thomas: **"No**

**Silver Bullet" Reloaded: Retrospective on "Essence and Accidents of Software Engineering"** OOPSLA Companion 2007: 1026-1030

- Dennis Mancl, Steven Fraser, Ricardo Lopez, William F. Opdyke, Greg Utas: **Escaped from the lab: software practices in large organizations.** OOPSLA Companion 2006: 627
- Steven Fraser, Barry W. Boehm, Jack Järkvik, Erik Lundh, Kati Vilkki: **How Do Agile/XP Development Methods Affect Companies?** XP 2006: 225-228
- Steven Fraser, Ray Bareiss, Barry W. Boehm, Mark Hayes, Laura Hill, Gabby Silberman, Dave A. Thomas: **Meeting the Challenge of Software Engineering Education for Working Professionals in the 21st Century.** OOPSLA Companion 2003: 262-264