# Curriculum Vitæ Kevin Crowston

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#### RESEARCH INTERESTS

## New ways of organizing made possible using information and communications technology.

I approach this question in several ways: empirical studies of coordination-intensive processes in human organizations; theoretical characterizations of coordination problems and alternative methods for managing them; and design and empirical evaluation of new kinds of computer systems to support people working together. Specific topics of interest are virtual organizations particularly Free/Libre Open Source Software development teams and citizen science projects.

#### **EDUCATION**

## **Harvard University**

1980–1984 A. B., magna cum laude, June 1984, Applied Mathematics (Computer Science).

## **Massachusetts Institute of Technology**

1984–1991 **Ph. D.**, February 1991, Information Technologies, Sloan School of Management. Minor in statistics. Additional coursework in organizational studies.

Dissertation: *Towards a coordination cookbook: Recipes for multi-agent action.* Case studies and modelling of the engineering change process in three manufacturing organizations, leading to a typology of coordination problems and mechanisms.

#### **APPOINTMENTS**

- 1991 **Lecturer**, Massachusetts Institute of Technology.
- 1991–1996 Assistant Professor, University of Michigan Business School.
- 1996– Distinguished Professor, School of Information Studies, Syracuse University. Assistant Professor, 1996–2001; Associate Professor with tenure, 2001–2006; Full Professor, 2006–2012; Distinguished Professor, 2012–.
- 2016- Associate Dean for Research.

# **Visiting Positions**

**Visiting Researcher**, London Business School, London, United Kingdom, Summer 1995; Erasmus University, Rotterdam, The Netherlands, Summer 1997, 1998; CeTIM, University of the Federal Armed Forces, Munich, Germany, Summer 1999–2011.

February-Visiting Lecturer, University of Auckland, Department of Management Science and Information June, 2000 Systems. Shidler Visiting Scholar, University of Hawai'i, Shidler College of Business, Department of January-Information Technology Management. February 2008 March-May Visiting Scholar, Centre for Work, Technology and Organizations, Department of Management Science and Industrial Engineering, Stanford University. 2008 September Program Director, Cyber-Human Systems & Human-Centered Computing Program, Information 2012and Intelligent Systems Division, Computer and Information Science and Engineering December Directorate, United States National Science Foundation. 2014

# **RESEARCH GRANTS** (16 grants totalling \$5.9M; \$3.2M weighted by contribution)

- 1993–1997 **Co-principal investigator** on NSF IRI Grant 92–24093, \$969,993, for "Tools for inventing organizations: toward a handbook of organizational processes" (with Thomas W. Malone, Brian Pentland and Jin-tae Lee).
- 1998–1999 **Co-principal investigator** on NSF IIS Grant 97–32799, \$70,000, for "A multi-method multi-level pilot study of the use of information technology in real estate" (with Rolf Wigand and Steven Sawyer).
- 1998–1999 **Principal investigator** on Grant from iLab, London Business School, £5000 (\$8,367) for "Study of Web buyer's agents".
- 2000–2002 **Co-principal investigator** on NSF IIS Grant 00–00178, \$269,969, for "Towards friction-free work: a multi-method study of the use of information technology in the real estate industry" (with Rolf Wigand and Steven Sawyer).
- 2003–2004 **Principal investigator** on NSF IIS SGER Grant 03–41475, \$12,052, for "Effective work practices for Open Source software development".
- 2004–2006 **Principal investigator** on NSF IIS Grant 04–14468, \$327,026 for 24 months, for "Effective work practices for Open Source Software development".
- 2004–2006 **Principal investigator** on NSF IIS Grant 04–14482, \$302,685 for 24 months, for "How can document-genre metadata improve information-access for large digital collections?" (with Barbara Kwaśnik).
- 2005–2008 **Co-principal investigator** on NSF HSD Grant 05–27457, \$684,882 for 36 months, for "Investigating the dynamics of Free/Libre Open Source Software development teams" (with Robert Heckman and Elizabeth Liddy). Additional \$29,488 to support international travel for students.
- 2007–2010 **Co-principal investigator** on NSF CRI Grant 07–08437, \$100,000 for 36 months, for "Data and analysis archive for research on Free and Open Source Software and its development" (with Megan Conklin, Elon University).

2008–2011 International professor on Regione Puglia Grant PS025 €1,032,000 for 36 months, for "ICT supporting logistic services: a model of organized market (L'OrMaICT)".

- 2009–2011 **Principal investigator** on NSF OCI Grant 09–43049, \$150,000 for 24 months, for "Theory and design of virtual organizations for citizen science".
- 2010–2013 **Principal investigator** on NSF SOCS Grant 09–68470, \$478,858 for 36 months, for "SOCS: Socially intelligent computing to support citizen science". Additional \$15,969 for 2 REU supplements. Replacement PI (2012–2013): June Wang.
- 2011–2014 **Principal investigator** on NSF SOCS Grant 11–11107, \$747,831 for 36 months for "SOCS: Socially intelligent computing for coding of qualitative data" (with Nancy McCracken).
- 2012–2015 Principal investigator on NSF SOCS Grant 12–11071, \$305,099 for 36 months for "Collaborative Research: Focusing Attention to Improve the Performance of Citizen Science Systems: Beautiful Images and Perceptive Observers" (with Arfon Smith, Adler Planetarium). Replacement PI (2012–2015): Carsten Østerlund.
- 2015–2018 **Co-Principal investigator** on NSF INSPIRE Grant 15–47880, \$999,663 for 36 months for "Teaming Citizen Science with Machine Learning to Deepen LIGO's View of the Cosmos" (with Vassiliki Kalogera, Northwestern; Joshua Smith, Cal State Fullerton; Shane Larson, Northwestern & Laura Trouille, Adler Planetarium). Syracuse subcontract \$294,818.
- 2016-2019 **Principal investigator** on NSF CHS Grant 16–18444, \$499,931 for 36 months for "CHS: Small: Supporting Stigmergic Coordination".

## **EDUCATIONAL, TRAVEL AND ORGANIZATIONAL GRANTS**

- 1998–1999 **Co-principal investigator** on Grant 99VF36L from the Vision Fund, Syracuse University, \$25,000 (plus \$14,925 in matching funds from the School of Information Studies) for "Development of an innovative interdisciplinary web-based course for all master's-level students in the School of Information Studies".
- 2004–2007 **Project director** on IMLS Grant, \$499,727 (plus \$119,488 in matching funds) for 36 months, for "Educating library faculty for the 21st century: The Future Professoriate for Librarianship project".
- **Principal investigator** on NSF HCC Grant 09–29125, \$19,994 for 12 months, for "Travel support for the OSS 2009 Doctoral Consortium".
- **Principal investigator** on NSF HCC Grant 10–05183, \$17,720 for 6 months, for "Travel support for the OSS 2010 Doctoral Consortium".
- 2010–2011 **Principal investigator** on NSF IIS Grant 11–02558, \$24,995 for 12 months for "Workshop: Organizational Communications and Information Systems Doctoral Consortium".
- **Principal investigator** on NSF IIS Grant 16–39136, \$13,272 for 12 months for "Travel Support for the Open Source Systems 2016 Doctoral Consortium".
- **Principal investigator** on NSF IIS Grant 17–13738, \$27,840 for 12 months for "WORKSHOP: The iConference 2017 Doctoral Colloquium".

Principal investigator on NSF IIS Grant 17–45463, \$499,796 for 60 months for "Convergence HTF: A Research Coordination Network to Converge Research on the Socio-Technological Landscape of Work in the Age of Increased Automation" (with Jeffrey Nickerson and Ingrid Erickson).

### **PUBLICATIONS**

# **Evidence of Scholarly Impact**

Citations and h-index: 17,169 / 56 (Google Scholar); 5,218 / 31 (Scopus)

19 publications with more than 200 citations according to Google Scholar (starred below)

#### **Best Publication Awards**

1991	International Centre for Information Technology (ICIT) Thesis Prize for best dissertation in
	Information Systems, 1990–1991.
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- Runner-up, International Conference on Information Systems (ICIS) **Thesis Prize**.
- 2005 OCIS Division Best Visual Presentation Award, Academy of Management
- 2012 **Best Published Paper** in Information Systems, Association for Information Systems
- 2016 **Best Published Social Informatics Paper** Award, Association for Information Science & Technology

## **Refereed Journal Publications (total: 54)**

Crowston, K., Malone, T. W., and Lin, F. Cognitive science and organizational design: A case study of computer conferencing. *Human Computer Interaction*, 3(1), 59–85, doi: 10.1207/s15327051hci0301\_4.

Originally appeared in *Proceedings of the Conference on Computer Supported Cooperative Work (CSCW '86)* (pp. 43–61). Austin, TX: ACM, 1986.

Reprinted in I. Grief (Ed.) Computer-supported cooperative work: A book of readings (pp. 713–740). San Mateo, CA: Morgan Kaufmann, 1988.

\*1994 Malone, T. W. & Crowston, K. The interdisciplinary study of coordination. *ACM Computing Surveys*, 26(1), 87–119, doi: 10.1145/174666.174668.

Reprinted in Olson, G. M, Malone, T. W., and Smith, J. B. (Eds.) *Coordination Theory and Collaboration Technology* (pp. 7–50). Mahwah, NJ: **Lawrence Erlbaum Associates**, 2001.

Reprinted in Malone, T. W., Crowston, K. & Herman, G. (Eds.) *Organizing Business Knowledge: The MIT Process Handbook*. Cambridge, MA: **MIT Press**, 2002.

- 1996 Crowston, K. An approach to evolving novel organizational forms. *Computational and Mathematical Organization Theory*, 2(1), 29–47, doi: 10.1007/BF00125762.
- \*1997 Crowston, K. A coordination theory approach to organizational process design. *Organization Science*, 8(2), 157–175, doi: 10.1287/orsc.8.2.157.

\*1998 Crowston, K. & Kammerer, E. E. Coordination and collective mind in software requirements analysis. *IBM Systems Journal*, 37(2), 227–245, doi: 10.1147/sj.372.0227.

- \*1999 Malone, T. W., Crowston, K., Lee, J., Pentland, B., Dellarocas, C., Wyner, G., Quimby, J., Osborne, C., Bernstein, A., Herman, G., Klein, M. & O'Donnell, E. Tools for inventing organizations: Toward a handbook of organizational processes. *Management Science*, 45(3), 425–443. doi: 10.1287/mnsc.45.3.425.
  - Reprinted in Malone, T. W., Crowston, K. & Herman, G. (Eds.) *Organizing Business Knowledge: The MIT Process Handbook*. Cambridge, MA: **MIT Press**, 2003.
  - Reprinted in Malone, T. W., Laubacher, R. & Scott Morton, M. S. (Eds.). *Inventing the Organizations of the 21st Century*. Cambridge, MA: **MIT Press**, 2003.
- 1999 Crowston, K. & Wigand, R. Real estate war in cyberspace: An emerging electronic market? *International Journal of Electronic Markets*, 9(1–2), 1–8. Available from http://surface.syr.edu/ischool\_other/6/.
- \*2000 Crowston, K. & Williams, M. Reproduced and emergent genres of communication on the World-Wide Web. *The Information Society*, *16*(3), 201–215, doi: 10.1080/01972240050133652.
- Crowston, K., Sawyer, S. & Wigand, R. Investigating the interplay between structure and information and communications technology in the real estate industry. *Information, Technology and People*, *14*(2), 163–183. (This paper received a "Highly commended award".) doi: 10.1108/09593840110695749.
- 2001 Crowston, K. & MacInnes, I. The effects of market-enabling Internet agents on competition and prices. *Journal of Electronic Commerce Research*, 2(1). Available from: http://surface.syr.edu/istpub/81/.
- \*2002 Crowston, K. & Scozzi, B. Open source software projects as virtual organizations: Competency rallying for software development. *IEE Proceedings Software*, 149(1), 3–17, doi: 10.1049/ipsen:20020197.
- Watson-Manheim, M.-B., Chudoba, K. M. & Crowston, K. Discontinuities and continuities: A new way to understand virtual work. *Information, Technology and People*, *15*(3), 191–209, doi: 10.1108/09593840210444746.
- Sawyer, S., Crowston, K., Wigand, R., and Allbritton, M. The social embeddedness of transactions: Evidence from the residential real estate industry. *The Information Society*, 19(2), 135–154, doi: 10.1080/01972240309460.
- 2003 Crowston, K. The evolution of high-reliability coordination mechanisms for collision avoidance. *The Journal of Information Technology Theory and Application (JITTA)*, 5(3), 1–29. Available from: http://aisel.aisnet.org/cgi/viewcontent.cgi?article=1145&context=jitta.
- Myers, M. D. and Crowston, K. Will real estate agents survive? The transformation of the real estate industry by information technology, *University of Auckland Business Review*, 6(1), 1–13. Available from: http://www.uabr.auckland.ac.nz/files/articles/Volume6/v6i1-myers-crowston.pdf.

2004 Crowston, K. & Myers, M. D. Information technology and the transformation of industries: Three research perspectives. *Journal of Strategic Information Systems*, 13(1), 5–28, doi: 10.1016/j.jsis.2004.02.001.

- \*2005 Crowston, K. & Howison, J. The social structure of Free and Open Source software development. *First Monday* 10(2), February. doi: 10.5210/fm.v10i2.1207
  - Reprinted in First Monday, Special issue #2: Open Source.
- \*2005 Scozzi, B., Garavelli, C. & Crowston, K. Methods for modeling and supporting innovation processes in SMEs. *European Journal of Innovation Management*, 8(1), 120–137, doi: 10.1108/14601060510578619.
- Sawyer, S., Wigand, R. & Crowston, K. Redefining access: Uses and roles of information and communication technologies in the US residential real estate industry from 1995 to 2005. **Journal of Information Technology**, 20(4), 213–223, doi: 10.1057/palgrave.jit.2000049.
- \*2006 Crowston, K., Howison, J. & Annabi, H. Information systems success in free and open source software development: Theory and measures. *Software Process—Improvement and Practice* (*SPIP*), 11(2), 123–148, doi: 10.1002/spip.259.
- \*2006 Howison, J., Conklin, M. & Crowston, K. FLOSSmole: A collaborative repository for FLOSS research data and analyses. *International Journal of Information Technology and Web Engineering (IJITWE)*, 1(3), 17–26, doi: 10.4018/jitwe.2006070102.

Reprinted in Tiako, P. F. (Ed.) *Software Applications: Concepts, Methodologies, Tools, and Applications* (pp. 85–94). Hershey, PA: **IGI Global**, 2009.

Reprinted in Alkhatib, G. I. & Rine, D. C. (Eds.) *Integrated Approaches in Information Technology and Web Engineering: Advancing Organizational Knowledge Sharing* (pp. 18–27). Hershey, PA: **IGI Global**, 2010, doi: 10.4018/978–1–60566–418–7.ch002.

- 2006 Crowston, K. & Howison, J. Hierarchy and centralization in Free and Open Source Software team communications. *Knowledge, Technology & Policy*. *18*(4), 65–85, doi: 10.1007/s12130–006–1004–8.
- 2006 Massad, N., Heckman, R. & Crowston, K. Customer satisfaction with electronic service encounters. *International Journal of Electronic Commerce*, 10(4), 73–104, doi: 10.2753/JEC1086–4415100403.
- 2007 Crowston, K., Li, Q., Wei, K., Eseryel, U. Y., & Howison, J. Self-organization of teams for free/libre open source software development. *Information and Software Technology*, 49(6), 564–575, doi: 10.1016/j.infsof.2007.02.004.
- 2007 Crowston, K., Howison, J., Masango, C., & Eseryel, U. Y. The role of face-to-face meetings in technology-supported self-organizing distributed teams. *IEEE Transactions on Professional Communications*, 50(3), 185–203, doi: 10.1109/TPC.2007.902654.
- 2008 Crowston, K. & Scozzi, B. Bug fixing practices within Free/Libre Open Source software development teams. *Journal of Database Management*, Special Issue on Open Source Software, 19(2), 1–30. doi: 10.4018/jdm.2008040101

Reprinted in Erickson, J. (Ed.) *Database Technologies: Concepts, Methodologies, Tools, and Applications* (pp. 797–828). Hershey, PA: **IGI Global**, 2009.

- Reprinted in Tiako, P. F. (Ed.) *Software Applications: Concepts, Methodologies, Tools, and Applications* (pp. 1079–1110). Hershey, PA: **IGI Global**, 2009.
- Reprinted in Siau, K. & Erickson, J. (Eds.) *Principle Advancements in Database Management Technologies: New Applications and Frameworks* (pp. 51–81). Hershey, PA: **IGI Global**, 2010.
- 2008 Katzy, B. & Crowston, K. Competency rallying for technical innovation: The case of the Virtuelle Fabrik. *Technovation*, 28(10), 679–692, doi: 10.1016/j.technovation.2007.11.003.
- Wiggins, A. & Crowston, K. Developing a conceptual model of virtual organizations for citizen science (Research note). *International Journal of Organizational Design and Engineering*, 1(1/2), 148–162, doi: 10.1504/IJODE.2010.035191.
- Chudoba, K. M. Watson-Manheim, M. B., Crowston, K., & Lee, C. S. ICT-supported meetings in practice. *Journal of Organizational and End User Computing*, 23(2), doi: 10.4018/joeuc.2011040102.
  - Reprinted in Dwivedi, A. & Clarke, S. (Eds.) *Innovative Strategies and Approaches for End-User Computing Advancements* (pp. 192–214), Hershey, PA: **IGI Global**, 2013.
- Howison, J., Wiggins, A. & Crowston, K. Validity issues in the use of social network analysis for the study of online communities. *Journal of the Association for Information Systems* 12(12), 323–346. doi: 10.5281/zenodo.913303
- \*2012 Watson-Manheim, M. B., Chudoba, K. & Crowston, K. Perceived discontinuities and constructed continuities in virtual work, *Information Systems Journal*, 22(1), 29–52, doi: 10.1111/j.1365–2575.2011.00371.x. (This paper was one of five named as **Best Published Paper in Information Systems** for 2012.)
- \*2012 Crowston, K., Wei, K., Howison, J. and Wiggins, A. Free/Libre Open Source Software: What we know and what we do not know. *ACM Computing Surveys*, 44(2). article 7, doi: 10.1145/2089125.2089127
- \*2012 Newman, G., Wiggins, A., Crall, A., Graham, E., Newman, S., and Crowston, K. Citizen science futures: Emerging technologies and shifting paradigms. *Frontiers in Ecology and the Environment*, 10(6), 298–304. doi: 10.1890/110294
- 2012 Crowston, K., Allen, E. E. & Heckman, R. Using natural language processing for qualitative data analysis. *International Journal of Social Research Methodology*, 15(6), 523–543. doi: 10.1080/13645579.2011.625764
- 2013 Crowston, K., Jullien N., & Ortega F. Sustainability of open collaborative communities:
  Analyzing recruitment efficiency. *Technology Innovation Management Review*. January, 20–26.
  Available from: http://timreview.ca/article/646
- Howison, J., & Crowston K. Collaboration through superposition: How the IT artifact as an object of collaboration affords technical interdependence without organizational interdependence. *MIS Quarterly*, 38(1), 29–50. doi: 10.5281/zenodo.906582

Sawyer, S., Crowston, K. and Wigand R. Digital assemblages: Evidence and theorizing from the computerization of the U.S. residential real estate industry. *New Technology, Work and Employment*, 29(1), 40–56. doi: 10.1111/ntwe.12020

- Wei, K., Crowston, K. & Li, N. Group maintenance in technology-supported distributed teams. *Information & Management*, 51(3), 297–309. doi: 10.1016/j.im.2014.02.001
- Wiggins, A. & Crowston, K. Surveying the citizen science landscape. *First Monday*, 26(1). doi: 10.5210/fm.v20i1.5520
- 2015 Crowston, K., Specht A., Hoover C., Chudoba K. M., & Watson-Manheim M. B. Perceived discontinuities and continuities in transdisciplinary scientific working groups. *Science of the Total Environment*, 534, 159–172. doi: 10.1016/j.scitotenv.2015.04.121
- Crowston, K., Sawyer, S. & Wigand, R. Social networks and the success of market intermediaries: Evidence from the US residential real estate industry. *The Information Society*, 31(5), 361–378. doi: 10.1080/01972243.2015.1041665. (This paper won the award for Best Published Social Informatics Paper of 2015.)
- 2015 Crowston, K. "Personas" to support development of cyberinfrastructure for scientific data sharing. *Journal of eScience Librarianship*, 4(2), e1082. doi: 10.7191/jeslib.2015.1082.
- Bolici, F., Howison, J. & Crowston, K. Stigmergic coordination in FLOSS development teams: Integrating explicit and implicit mechanisms. *Cognitive Systems Research*, 38, 14–22. doi: 10.1016/j.cogsys.2015.12.003. (This paper was one of the most downloaded articles from the journal in 2016.)
- 2016 Katzy, B., Crowston, K. & Sung, G. Alignment of IS and business strategies for interorganisational networks: The case of ARC Transistance. *European Journal of Information Systems*, 25(6), 553–568. doi: 10.1057/ejis.2016.9
- 2017 Prestopnik, N. R., Crowston, K. & Wang, J. Gamers, citizen scientists, and data: Exploring participant contributions in two games with a purpose. *Computers in Human Behaviour*, 68, 254–268. doi: 10.1016/j.chb.2016.11.035
- Zevin, M., Coughlin, S., Bahaadini, S., Besler, E., Rohani, N., Allen, S., Cabero, M., Crowston, K., Katsaggelos, A., Larson, S., Lee, T., Lintott, C., Littenberg, T., Lundgren, A., Østerlund, C., Smith, J., Trouille, L. and Kalogera, V. Gravity Spy: Integrating Advanced LIGO detector characterization, machine learning and citizen science. *Classical and Quantum Gravity*. 34(6), 1–22. doi: 10.1088/1361-6382/aa5cea
- Wei, K., Crowston, K., Eseryel, U. Y. & Heckman, R. Roles and politeness behavior in community-based Free/Libre Open Source Software development. *Information & Management*. 54(5), 573–582, doi: 10.1016/j.im.2016.11.006
- Jarrahi, M. H., Crowston, K., Bondar, K. & Katzy, B. Organizational IT infrastructures in the era of IT consumerization as changing interdependencies among technology, people and work practices. *International Journal of Information Management*. 37(6), 566–575. doi: 10.1016/j.ijinfomgt.2017.05.016

2017	Crowston, K. and Shamshurin, I. Core-periphery communication and the success of Free/Libre
	Open Source Software projects. <i>Journal of Internet Services and Applications (JISA</i> ), Thematic
	Series on FOSS Development. doi: 10.1186/s13174-017-0061-4

- Qin, J., Crowston, K. & Kirland, A. Pursuing best performance in research data management by using the capability maturity model and rubrics. *Journal of eScience Librarianship*. doi: 10.7191/jeslib.2017.1113
- 2018 Crowston, K. & Fagnot, I. Stages of motivation for contributing user-generated content: A theory and empirical test. *International Journal of Human-Computer Studies*, 109, 89–101. doi: 10.1016/j.ijhcs.2017.08.005
- In press Lee, T. K., Crowston, K., Harandi, M., Østerlund, C. & Miller, G. Which motives are most effective in recruiting citizen scientists? Results of a field experiment. *Journal of Science Communication*.
- *In press* Curty, R. G., Crowston, K., Specht, A., Grant, B., & Walton, E. D. Attitudes and norms affecting scientists' data reuse. *PLOS ONE*.

# **Highly-Selective Conference Proceedings (total: 18)**

- Crowston, K. & Treacy, M. E. Assessing the impact of information technology on enterprise level performance. In *Proceedings of the Sixth International Conference on Information Systems (ICIS* 1986) (pp. 299–310). Indianapolis, IN, USA. Available from: http://openlibrary.org/books/OL17942878M.
- Mackay, W. E., Malone, T. W., Crowston, K., Rao, R., Rosenblitt, D. & Card, S. K. How do experienced Information Lens users use rules? In K. Bice and C. Lewis. (Eds.), *Proceedings of the Conference on Human Factors in Computing Systems (SIGCHI 1989)* (pp. 211–216). Austin, TX, USA. (Proceedings Reprinted as *ACM SIGCHI Bulletin*, Volume 20, Issue SI.) doi: 10.1145/67449.67491.
- \*1990 Malone, T. W. & Crowston K. What is coordination theory and how can it help design cooperative work systems? In *Proceedings of the Conference on Computer Supported Cooperative Work (CSCW 1990)* (pp. 357–370). Los Angeles, CA, USA: ACM. doi: 10.1145/99332.99367.
  - Reprinted in D. Marca and G. Bock. (Eds.) *Groupware: Software for Computer-Supported Cooperative Work* (pp. 100–115). Washington: IEEE Press, 1992.
- 1996 Crowston, K. Market-enabling Internet agents. In J. DeGross, S. Jarvenpaa and A. Srinivasan. (Eds.) *Proceedings of the International Conference on Information Systems (ICIS 1996)*, Columbus, OH, USA, December. Available from: http://aisel.aisnet.org/icis1996/27/
- Crowston, K. Price behaviour in a market with Internet buyer's agents (Research in progress paper). In *Proceedings of the International Conference on Information Systems (ICIS 1998)*, Atlanta, GA, USA, December 14–17. Available from: http://portal.acm.org/citation.cfm?id=353071.353221.
- Sawyer, S., Crowston, K., Allbritton, M. & Wigand, R. How do information and communication technologies reshape work? Evidence from the residential real estate industry (Research-in-progress paper). In *Proceedings of the International Conference on Information Systems (ICIS*

**2000**), Brisbane, Australia, December 10–13. (Nominated for best paper in *Advances in Organizational and Social Informatics* track.) Available from: http://dl.acm.org/citation.cfm?id=359640.359914.

- \*2003 Crowston, K., Annabi, H., & Howison, J. Defining Open Source Software project success. In Proceedings of the International Conference on Information Systems (ICIS 2003), Seattle, WA, USA, December. doi: 10.1287/mnsc.1060.0550
- 2005 Crowston, K., Wei, K., Li, Q., Eseryel, U. Y. & Howison, J. Coordination of Free/Libre Open Source Software development. In *Proceedings of the International Conference on Information Systems (ICIS 2005)*, Las Vegas, NV, USA, December. doi: 10.1145/1029997.1030003
- Heckman, R., Crowston, K., Li, Q., Allen, E., Eseryel, Y., Howison, J. & Wei, K. Emergent decision-making practices in technology-supported self-organizing distributed teams. In *Proceedings of the International Conference on Information Systems (ICIS 2006)*, Milwaukee, WI, 10–13 December. Available from: http://aisel.aisnet.org/icis2006/43/
- Annabi, H., Crowston, K. & Heckman, R. Depicting what really matters: Using episodes to study latent phenomenon. In *Proceedings of the International Conference on Information Systems (ICIS 2008)*, Paris, France, 14–17 December. Available from http://aisel.aisnet.org/icis2008/183/.
- Li, Q., Heckman, R., Allen, E., Crowston, K., Eseryel, U. Y. & Howison, J. Decision-making paths in self-organizing distributed teams. In *Proceedings of International Conference on Information Systems (ICIS 2008)*, Paris, France, 14–17 December. Available from http://aisel.aisnet.org/icis2008/99/
- Wei, K. & Crowston, K. The impact of national culture on knowledge sharing in global virtual collaboration. In *Proceedings of International Conference on Information Systems (ICIS 2010)*,
   St. Louis, MO, USA, 12–15 December. Available from http://aisel.aisnet.org/icis2010\_submissions/137
- Østerlund, C. & Crowston, K. Boundary-spanning documents in online communities (Research in progress). In *Proceedings of the International Conference on Information Systems (ICIS 2011)*, Shanghai, China, 4–7 December. Available from: http://aisel.aisnet.org/icis2011/proceedings/onlinecommunity/6/
- 2012 Prestopnik, N. R. & Crowston, K. Purposeful gaming and socio-computational systems: A citizen science design case. In *Proceedings of the International Conference on Supporting Group Work (Group 2012)*, Sanibel Island, FL, 27–31 October. doi: 10.1145/2389176.2389188
- Loebecke, C. & Crowston, K. Knowledge portals: Components, functionalities and deployment challenges. In *Proceedings of the International Conference on Information Systems (ICIS 2012)*, Orlando, FL, 16–19 December. Available from: http://aisel.aisnet.org/icis2012/proceedings/KnowledgeManagement/6/
- Mugar, G., Østerlund C., Hassman K. D. V., Crowston K., & Jackson C. B. Planet Hunters and Seafloor Explorers: Legitimate peripheral participation through practice proxies in online citizen science. In *Proceedings of the ACM Conference on Computer Supported Cooperative Work and Social Computing (CSCW 2014)*, Baltimore, MD, 15–19 February. doi: 10.1145/2531602.2531721

Jackson, C., Østerlund, C., Maidel, V., Mugar, G. & Crowston, K. Which way did they go? Newcomer movement through the Zooniverse. In *Proceedings of the ACM Conference on Computer Supported Cooperative Work and Social Computing (CSCW 2016)*, San Francisco, CA, 27 February–2 March. doi: 10.1145/2818048.2835197

Crowston, K., Jackson, C., Østerlund, C. & Mugar, G. "Guess what! You're the first to see this event": Increasing contribution to online production communities. *International Conference on Supporting Group Work (Group 2016)*. Sanibel Island, FL, 12–16 October. doi: 10.1145/2957276.2957284

## **Refereed Conference Proceedings (total: 49)**

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- 2018 Crowston, K., Mitchell, E. M., & Østerlund, C. Coordinating advanced crowd work: Extending citizen science. *Hawai'i International Conference on System Sciences (HICSS-51)*. Waikoloa, HI, 3–6 January.

## **Conference Proceedings as Editor**

- 2007 Crowston, K., Sieber, S., Wynn, E. (Eds.). Virtuality and Virtualization. Proceedings of the IFIP Working Groups 8.2 on Information Systems and Organizations and 9.5 on Virtuality and Society, Portland, Oregon, USA, 29-31 July. IFIP AICT 236. ISBN 978-0-387-73024-0
- Boldyreff, C., Crowston, K., Lundell, B., Wasserman, A. I. (Eds). *Open Source Ecosystems:*Diverse Communities Interacting. Proceedings of the 5th IFIP WG 2.13 International Conference on Open Source Systems (OSS 2009), Skövde, Sweden, 3-6 June. IFIP AICT 299. ISBN 978-3-642-02031-5
- Crowston, K., Hammouda, I., Lundell, B., Robles, G., Gamalielsson, J. and Lindman, J. (Eds.).
   Open Source Systems: Integrating Communities. Proceedings of the 12th IFIP WG 2.13
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- Crowston, K., Hammouda, I., Lindman, J., Lundell, B., and Robles, G. (Eds.). *Proceedings of the Doctoral Consortium at the 12th International Conference on Open Source Systems*, Skövde University Studies in Informatics 2016:1, ISSN 1653-2325, ISBN: 978-91-978513-9-8, University of Skövde, Skövde, Sweden. http://urn.kb.se/resolve?urn=urn:nbn:se:his:diva-13122

#### **Books**

\*2003 Malone, T. W., Crowston, K. & Herman, G. (Eds.) *Organizing Business Knowledge: The MIT Process Handbook*. Cambridge, MA: **MIT Press**. doi: 10.1111/j.0737–6782.2005.116\_4.x

## Book Chapters (total: 28, including 16 reprints of prior publications listed elsewhere)

- 1988 Crowston, K. & Malone, T. W. Information technology and work organization. In M. Helander (Ed.), *Handbook of Human-Computer Interaction* (pp. 1051–1070). Amsterdam: **Elsevier** (North-Holland).
  - Reprinted in Thomas J. Allen and Michael S. Scott Morton. (Eds), *Information Technology and the Corporation of the 1990s* (Ch. 11, pp. 249–275). New York: **Oxford**, 1994. Available from: http://goo.gl/kza4bi
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- Crowston, K. Evolving novel organizational forms. In K. M. Carley and M. J. Prietula. (Eds.), Computational Organization Theory (pp. 19–38). Hillsdale, NJ: Lawrence Erlbaum. doi: 10.1007/BF00125762
- Crowston, K. & Kammerer, E. Communicative style and gender differences in computer-mediated communications. In B. Ebo. (Eds.) *Cyberghetto or Cybertopia: Race, Class and Gender on the Internet* (pp. 185–204). **Praeger**. Available from http://crowston.syr.edu/sites/crowston.syr.edu/files/book%20chapter.pdf
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2010 Crowston, K. Internet Genres. In M. J. Bates & M. N. Maack, (Eds.) Encyclopedia of Library and Information Sciences (3rd ed.), CRC Press. Available from <a href="http://crowston.syr.edu/sites/crowston.syr.edu/sites/elischapter.pdf">http://crowston.syr.edu/sites/crowston.syr.edu/sites/crowston.syr.edu/sites/elischapter.pdf</a>

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#### Other Publications

- 1987 Crowston, K. Cognitive science and organizational design: Assessing the impact of information technology on organizations (abstract). *Data Base*, 18(3): 46.
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- 2005 Crowston, K. Future research on FLOSS development. *First Monday*. Special issue #2—Open Source. doi: 10.5210/fm.v0i0.1465
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Avital, M., Björk, B., Boland, R. J., Crowston, K., Lyytinen, K. & Majchrzak, A. ICIS 2008 panel report: Open access publishing to nurture the Sprouts of knowledge and the future of information systems research. *Communications of the Association for Information Systems* (*CAIS*), 24(1), 30. Available from: http://aisel.aisnet.org/cais/vol24/iss1/30/.

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- Niederman, F., Crowston, K., Koch, H., Krcmar, H., Powell, P. and Swanson, E. B. Assessing IS research impact. *Communications of the Association for Information Systems (CAIS)*, 36(1), 7. Available from: http://aisel.aisnet.org/cais/vol36/iss1/7. (Winner of the Paul Gray Award for the Most Thought Provoking Paper in 2015.)
- 2015 DataONE Personas. Available from: https://www.dataone.org/user-personas
- 2016 Crowston, K. Response to "Ideational influence, connectedness, and venue representation: Making an assessment of scholarly capital". *Journal of Association for Information Systems (JAIS)*.
- Manifesto on Engineering Academic Software (Dagstuhl Perspectives Workshop 16252).
  A. Allen, C. Aragon, C. Becker, J. Carver, A. Chiş, B. Combemale, M. Croucher, K. Crowston, D. Garijo, A. Gehani, C. Goble, R. Haines, R. Hirschfeld, J. Howison, K. Huff, C. Jay, D. S. Katz, C. Kirchner, K. Kuksenok, R. Lämmel, O. Nierstrasz, M. Turk, R. van Nieuwpoort, M. Vaughn and J. Vinju (Eds.), Dagstuhl Manifestos, 6(1). Wadern, Germany: Schloss Dagstuhl Leibniz Center for Informatics. doi: 10.4230/DagMan.6.1.1

## Internet columns for Information, Technology and People

- 1998 Crowston, K. Software development links. *Information, Technology and People*, 11(2), 161–162.
- 1998 Crowston, K. I/S in Latin America. *Information, Technology and People*, 11(3), 266–267.
- 1998 Crowston, K. Martin Heidegger. *Information, Technology and People*, 12(4), 376.
- 1999 Crowston, K. Making sense of information systems down under. *Information, Technology and People*, 13(1), 116–117.
- 1999 Crowston, K. Websites about phenomenology and action research. *Information, Technology* and *People*, 13(4), 408–410.
- 2000 Crowston, K. Internet column. *Information, Technology and People*, 14(4), 420–421.
- 2002 Crowston, K. Internet column. *Information, Technology and People*, 15(1), 87.
- 2002 Crowston, K. Websites related to gender and information technology. *Information, Technology and People*, 15(2).
- 2002 Crowston, K. Internet review. *Information, Technology and People*, 15(3), 276–278.
- 2003 Crowston, K. Information technology in the Middle East. *Information, Technology and People*, 16(1), 122.
- 2003 Crowston, K. Internet review. *Information, Technology and People,* 16(2). Omitted from paper publication; appears on-line.
- 2003 Crowston, K. Knowledge management. *Information, Technology and People*, 16(3).
- 2003 Crowston, K. Internet review. *Information, Technology and People*, 16(4).

#### **Data Curation**

Organizer (with Megan Squire and James Howison), **FLOSSmole** (http://flossmole.org/), a repository of data sets on Free/Libre Open Source Software development projects.

# **Presentations at Scientific Meetings**

1994 Techniques for business process redesign. Panel presentation, TIMS International Conference, Anchorage, AK, 12-15 June. 1994 Using distributed artificial intelligence models for business process redesign. Paper presentation, TIMS International Conference, Anchorage, AK, 12–15 June. 1994 Coordination and collective mind in requirements analysis. Panel presentation, IFIP 8.2 Working Group Meeting, Ann Arbor, MI, 10-13 August. 1994 Organizational processes for coordination. Symposium presentation, Academy of Management Conference, Dallas, TX, 14–17 August. 1996 Information systems and organizational research. Panel presentation, INFORMS Conference on *Information Systems and Technology*, Washington, DC, 5–6 May. 1996 Communicative style and gender differences in computer-mediated communications (with E. Kammerer). Presentation at the OCIS Division, Academy of Management Conference, Cincinnati, OH, 13 August. 1997 Resource allocation mechanisms in air traffic control. Presentation at the Information Systems Track of the Administrative Sciences Association of Canada Conference, St. John's NF, 31 May-2 June. 1998 Use of the web for electronic commerce in real estate (with R. Wigand). Presentation, Association for Information Systems Americas Conference, Baltimore, MD, 14–16 August. 1999 Investigating the interplay between structure and technology in the real estate industry (with S. Sawyer and R. Wigand). Presentation at the OCIS Division, Academy of Management Conference, Chicago, IL, 7-11 August. 1999 ICT in the real estate industry: Agents and social capital (with S. Sawyer and R. Wigand). Presentation at the Association for Information Systems Americas Conference, Milwaukee, WI, 13-15 August). This paper was selected as "Best in mini-track" for the Advances in Organizational and Social Informatics mini-track. 2000 The Virtual Factory: Discontinuous work in a virtual organization. Presentation as part of the symposium "Discontinuities: The Key to Understanding Virtual Work", OCIS Division, **Academy of Management Conference**, Toronto, Ontario, 6–9 August. 2000 Identifying document genre to improve web search effectiveness. Presentation, American Society for Information Science and Technology Conference, Chicago, IL, 13–16 November. 2002 Discontinuities and post-bureaucratic organizing: A framework and research propositions (with K. M. Chudoba and M. B. Watson-Manheim). Presentation at the OCIS Division, Academy of Management Conference, Denver, CO, 11–14 August.

2002	Evolving document genres on the World-Wide Web. Presentation as part of the symposium "Conceptualizing Change in Communicative Genres: Exploring Levels of Analysis and Drivers", OCIS Division, <i>Academy of Management Conference</i> , Denver, CO, 11–14 August.
2003	Collective mind to support coordination in software engineering. Presentation as part of the symposium "Revisioning Organization Design Theory: Alternative Perspectives", OCIS Division, <i>Academy of Management Conference</i> , Seattle, WA, 2–6 August.
2003	Coordination and collaboration in Open Source development teams. Presentation as part of the symposium "Coordination and Control In Distributed Teams", OCIS Division, <i>Academy of Management Conference</i> , Seattle, WA, 2–6 August.
2004	Customer satisfaction with electronic service encounters (with N. Massad and R. Heckman). Presentation at <i>Association for Information Systems Americas Conference</i> , New York, NY, 6–8 August).
2004	The paradox of discontinuities and continuities: Toward a more comprehensive view of virtuality (with M. B. Watson-Manheim and K. M. Chudoba). Presentation at the <i>OCIS Division</i> , <i>Academy of Management Conference</i> , New Orleans, LA, 8–11 August).
2004	Effective work practices for Software Engineering: Free/Libre Open Source Software Development (with H. Annabi, J. Howison and C. Masango). Presentation at the <i>WISER Workshop on Interdisciplinary Software Engineering Research</i> , SIGSOFT 2004/FSE–12 Conference, Newport Beach, CA, 5 November).
2005	OSSmole: A collaborative repository for FLOSS research data and analyses (with J. Howison & M. Conklin). Presentation at the <i>First International Conference on Open Source Systems</i> , Genova, Italy, 11–15 July).
2005	A structurational perspective on leadership in Free/Libre Open Source Software teams (with R. Heckman, H. Annabi & C. Masango). Presentation at the <i>First International Conference on Open Source Systems</i> , Genova, Italy, 11–15 July.
2005	Face-to-face interactions in self-organizing distributed teams (with J. Howison, C. Masango & U. Y. Eseryel). Presentation at the <i>OCIS Division, Academy of Management Conference</i> , Honolulu, HI, 7–10 August.
2006	Challenges in creating a taxonomy for genres of digital documents (with B. Kwaśnik , YL. Chun, J. D'Ignazio & J. Rubleske). Presentation at <i>International Society for Knowledge Organization ISKO2006</i> , Vienna, Austria, 5–7 July.
2006	A practice view on meetings: The impact of ICTs on organization form and function (with K. M. Chudoba, M. B. Watson-Manheim & C. S. Lee). Presentation at the <i>Academy of Management Conference</i> , Atlanta, GA, 11–16 August.
2006	Language and power in self-organizing distributed teams (with L. Qin K. & R. Heckman). Presentation at the <i>Academy of Management Conference</i> , Atlanta, GA, 11–16 August.
2007	Data and analyses sharing to support FLOSS research: A debate (with B. Fitzgerald, E. Berdou, M. Conklin, S. Koch, G. Madey and W. Scacchi). Panel session at the <i>IFIP 3nd International Conference on Open Source Software</i> , Limerick, Ireland, 10–14 June.

2007	Coordinating across boundaries and discontinuities. Presentation as part of the symposium "Coordination Complexity in Geographically Distributed Collaboration", OCIS Division, Academy of Management Conference, Philadelphia, PA, 4–8 August.
2007	Distance matters, except when it doesn't: discontinuities in virtual work (with M. B. Watson-Manheim & K. M. Chudoba). Paper presented at the <i>OCIS Division</i> , <i>Academy of Management Conference</i> , Philadelphia, PA, 4–8 August.
2008	The motivational arc of massive virtual collaboration (with I. Fagnot). Presentation at the <i>IFIP WG</i> 9.5 <i>Working Conference</i> on <i>Virtuality and Society: Massive Virtual Communities</i> , Lüneberg, Germany, 1–2 July.
2009	Little eScience, big eScience (with D. Ribes, S. Sawyer & A. Wiggins). Panel at the <i>iConference</i> , Chapel Hill, NC, 8–11 February.
2010	Crowston, K. Designing scholarly communications. Discussion paper, <i>IFIP Working Group</i> <b>8.2/8.6</b> <i>Joint Working Conference</i> , Perth, Australia, 30 March–2 April.
2010	Using natural language processing technology for qualitative data analysis. Presentation as part of the symposium "When the data are documents: Bridging quantitative and qualitative methodologies", OCIS Division, Academy of Management Conference, Montréal, PQ, 7–10 August).
2010	Shifting boundaries: How should IS researchers study non-organizational uses of ICT? (with B. Fitzgerald, P. Gloor, U. Schultze & Y. Yoo). Panel at the <i>International Conference on Information Systems</i> . ( <i>ICIS</i> ), St. Louis, MO, USA, 12–15 December.
2011	Integrated customer-focused knowledge portals: Design challenges and empirical approaches (with C. Loebbecke & N. Friederici). Presentation at the <i>OCIS Division</i> , <i>Academy of Management Conference</i> , San Antonio, TX, 12–16 August.
2011	Mechanisms for data quality and validation in citizen science (with A. Wiggins, G. Newman & R. D. Stevenson). Presentation at the <i>Computing for Citizen Science Workshop</i> at the <i>IEEE</i> eScience Conference, Stockholm, Sweden, 8 December.
2011	Gaming for (citizen) science: Exploring motivation and data quality in the context of crowdsourced science through the design and evaluation of a social-computational system (with N. Prestopnik). Paper presented at <i>Computing for Citizen Science Workshop</i> at the <i>IEEE</i> eScience Conference, Stockholm, Sweden, 8 December.
2012	Team dynamics in long-standing technology-supported virtual teams (with N. Misiolek & J. Seymour). Presentation at the <i>OB Division, Academy of Management Conference</i> , Boston, MA, 3–7 August.
2012	Innovation in academic-industry partnerships: Measuring the challenges to effective performance (with M. B. Watson-Manheim & K. Chudoba). Presentation at the <i>TIM Division</i> , <i>Academy of Management Conference</i> , Boston, MA, 3–7 August.
2012	Data as an alternative genre for information systems research. In <i>Alternative genres: Going where no one has gone before</i> (with M. Avital, O. A. El Sawy, S. Gregor & L. Mathiassen). Panel

session at the International Conference on Information Systems (ICIS 2012), Orlando, FL, 16-19 December. 2013 Open source software adoption: A technological innovation perspective (with F. Deltour & N. Jullien). Presentation at the Association Information et Management Conference, Lyon, France, 23-24 May. 2013 Understanding the implicit norms of different Academy of Management divisions (with J. Meuer, W. Felps, P. Chattopadhyay, G. Labianca & W. McKinley). Symposium at the Academy of Management Conference, Lake Buena Vista, FL, 9–13 August. 2013 Open data. In Open IS: The IS Discipline as an Open Community Ecosystem (with J. Feller, M. Germonprez & M. Avital). Panel session at the International Conference on Information Systems (ICIS 2013), Milan, Italy, 15–18 December. 2014 Learning and motivation in citizen science (with C. Østerlund, C. B. Jackson, G. Mugar & K. D. V. Hassman). Presentation at the American Association for the Advancement of Science (AAAS) Annual Meeting, Chicago, IL, 13–16 February. 2014 Socializing the crowd: Learning to talk in citizen science (with C. S. Oesterlund, G. Mugar, C. Jackson & K. D. Hassman). Presentation at the *Academy of Management Conference*, Philadelphia, PA, 2-5 August. 2014 Better collaboration plans to enhance collaborative capability (with K. Hall). Presentation at the Science of Team Science Conference, Austin, TX, 7–8 August. 2014 Experiments in goal setting for citizen science (with C. B. Jackson, G. Mugar, C. Østerlund, & K. D. Hassman). Presentation at the *Conference on Digital Experimentation*, Cambridge, MA, 10-11 October. 2015 Project diversity and design implications (with A. Wiggins). Presentation as part of the symposium "Human-centered technologies for citizen science", Citizen Science Conference, San Jose, CA, 11–12 February. 2015 Perceived discontinuities and continuities in transdisciplinary scientific groups (with A. Specht, C. Hoover, K. M. Chudoba & M.-B. Watson-Manheim). Presentation at the Science of Team Science Conference, Bethesda, MD, 3–5 June. 2016 Humans, machines, and the future of citizen science. Presentation at the AAAI Fall Symposium: Accelerating Science: A Grand Challenge for AI, Arlington, VA, 18 November. 2016 The hermeneutics of trace data: Building an apparatus (with C. Østerlund & C. Jackson). Presentation at the IFIP Working Group 8.2 Working Conference (IFIP 8.2), Dublin, Ireland, 9-

Work features to support stigmergic coordination in distributed teams (with J. Howison, F. Bolici & C. Østerlund). Presentation at the *Academy of Management Conference*, Atlanta, GA, 4–8

10 December.

August.

2017

#### **Poster Presentations**

1988	Modelling the effects of information technology on organizational structures and processes.
	Poster session, CHI '88, Washington, DC, 15–19 May.

- 2005 Meet me in Cyberspace: Meetings in the distributed work environment (with K. M. Chudoba, M.-B. Watson-Manheim & C. S. Lee). Visual presentation at the *OCIS Division*, *Academy of Management Conference*, Honolulu, HI, 7–10 August). Winner of OCIS Division Best Visual Presentation Award.
- A proposed data and analysis archive for research on Free and Open Source Software and its development (with M. Conklin & J. Howison). Poster at the **eSocial Science Conference**, Ann Arbor, MI, 7–9 October.
- Heckman, R., Crowston, K., Misiolek, N. & Eseryel, Y. Emergent leadership in self-organizing virtual teams (Research-in-progress poster presentation). In *Proceedings of the International Conference on Information Systems (ICIS 2007)*, Montréal, Québec, Canada, 9–12 December. Available from: http://aisel.aisnet.org/icis2007/60/.
- Towards a data and workflow collaboratory for research on Free and Open Source Software and its development (with M. Conklin & J. Howison). Poster at the *iConference*, Los Angeles, CA, 27–29 February).
- 2008 Group maintenance behaviors in self-organizing distributed teams (with R. Heckman, N. Li & M. J. Scialdone). Poster at the *iConference*, Los Angeles, CA, 27–29 February.
- Asynchronous decision-making in distributed teams (with Q. Li, R. Heckman, E. E. Allen, U. Y. Eseryel, J. Howison, & A. Wiggins). Poster at the *Conference on Computer-Supported Cooperative Work (CSCW)*, San Diego, CA, 8–12 November.
- Group maintenance behaviors in the decision-making styles of self-organizing distributed teams (with M. J. Scialdone, Q. Li & R. Heckman). Poster at the *iConference*, Chapel Hill, NC, 8–11 February).
- Appropriate network measures for on-line communities (with F. Bolici & J. Howison). Poster at the *INSNA Annual Conference* (**Sunbelt** XXIX), San Diego, CA, 10–15 March.
- 2010 Machine learning and rule-based automated coding of qualitative data (with X. Liu & E. E. Allen). Poster at the *American Society for Information Science and Technology (ASIST) Annual Conference*, Pittsburgh, PA, 23–27 October.
- 2010 A capability maturity model for scientific data management (with J. Qin). Poster at the *American Society for Information Science and Technology (ASIST) Annual Conference*, Pittsburgh, PA, 23–27 October.
- 2010 Educating eScience librarians (with J. Qin, J. D'Ignazio, M. Oakleaf, A. Wiggins, & G. Steinhart). Poster at the *Digital Curation Conference* (*DCC*), Chicago, 6–8 December.
- Semi-automatic content analysis of qualitative data (with J. S. Y. Liew & N. McCracken). Poster at the *iConference*, Berlin, Germany, 4–7 March. Available from: http://socqa.org/iConf2014

2014	Event-based analysis of a citizen science community: Are new non-sustained users included? (with C. Østerlund, C. B. Jackson, G. Mugar & K. D. V. Hassman). Poster at the <i>iConference</i> , Berlin, Germany, 4–7 March.
2015	Beyond data management: Exploring new roles for librarians in citizen science projects (with K. Hassman, C. Østerlund, G. Mugar & C. Jackson). Poster presented at the <i>Citizen Science Conference</i> , San Jose, CA, 11–12 February.
2015	Collaboration planning: Planning for success in team science (with K. L. Hall & A. L. Vogel). Poster at the <i>Science of Team Science Conference</i> , Bethesda, MD, 3–5 June.
2016	Encouraging work in citizen science: Experiments in goal setting and anchoring (with C. Jackson, G. Mugar and C. Østerlund). Poster at the <i>ACM Conference on Computer Supported Cooperative Work and Social Computing (CSCW 2016)</i> , San Francisco, CA, 27 February–2 March. doi: 10.1145/2818052.2869129
2016	Humans, machines, and the future of citizen science (with the Gravity Spy Team). Poster at the <b>De Lange Conference:</b> Humans, Machines and the Future of Work, Houston, TX, 5–6 December.
2017	Gravity Spy: Humans, machines and the future of citizen science (with the Gravity Spy Team). Poster at the <i>ACM Conference on Computer Supported Cooperative Work and Social Computing (CSCW 2017)</i> , Portland, OR, 25 February–1 March. doi: 10.1145/3022198.3026335
2017	Recruiting messages matter: Message strategies to attract citizen scientists (with T. K. Lee, C. Østerlund, and G. Miller). Poster at the <i>ACM Conference on Computer Supported Cooperative Work and Social Computing (CSCW 2017)</i> , Portland, OR, 25 February–1 March. doi: 10.1145/3022198.3026329
Workshop	Presentations
1991	A typology of organizational coordination methods. Invited presentation, <i>TIMS Workshop on Mathematical Organization Theory</i> , Nashville, TN, 11–12 May.
1992	Evolving novel organizational forms. Invited presentation, <i>TIMS Workshop on Mathematical Organization Theory</i> , Orlando, FL, 25–26 April.
1993	Modelling organizations using ideas from distributed artificial intelligence. Invited presentation, <i>TIMS Workshop on Computational Organization Theory</i> , Chicago, IL, 18 May.
1994	Using a Process Handbook to design organizational processes (with C. Dellarocas, J. Lee, T. W. Malone, & B. Pentland). In Ingemar Hulthage (Ed.), <i>Computational Organization Design: Papers from the 1994 Spring Symposium</i> (Technical Report SS–94–07) (pp. 50–56). Menlo Park, CA: <b>AAAI Press</b> . Available from https://www.aaai.org/Papers/Symposia/Spring/1994/SS–94–07/SS94–07–007.pdf
1994	Crowston, K. Evolving novel organizational forms. In Ingemar Hulthage (Ed.), Computational

(pp. 35-42). Menlo Park, CA: **AAAI Press**. doi: 10.1007/BF00125762

Organization Design: Papers from the 1994 Spring Symposium (Technical Report SS-94-07)

1994	Coordinating restaurant service: TGI Friday's process. Invited presentation, <i>TIMS Workshop on Mathematical and Computational Organization Theory</i> , Boston, MA, 24–25 April.
1994	Electronic communications and new organizational forms. Invited presentation, <i>Michigan Telecommunications Forum</i> , Ann Arbor, MI, 9 December.
1997	The benefit of cooperation among agents solving travelling salesman's problems. Presentation at the <i>TIMS Workshop on Computation and Mathematical Organization Theory</i> , San Diego, CA, 26–27 April.
1998	Using computer simulations to study information technology impacts in the real-estate industry. Invited presentation, <i>Workshop on the Potential of Simulation for the Social Sciences</i> , University of Surrey, Guildford, England, 14–15 January.
2002	Exploring the strengths and limits of Open Source Software engineering processes: A research agenda (with B. Scozzi). Presentation at the 2nd <i>Workshop on Open Source Software Engineering</i> , 24th International Conference on Software Engineering. ICSE 2002), Orlando, FL, 25 May.
2004	Coordination practices for bug fixing within FLOSS development teams (with B. Scozzi). Presentation at 1st International Workshop on Computer Supported Activity Coordination, 6th International Conference on Enterprise Information Systems, Porto, Portugal, 14 April.
*2004	The perils and pitfalls of mining SourceForge (with J. Howison). Presentation at the <i>Workshop on Mining Software Repositories</i> , 26th International Conference on Software Engineering, Edinburgh, Scotland, UK, 25 May.
2004	Towards a portfolio of FLOSS project success measures (with H. Annabi, J. Howison and C. Masango). Presentation at the <i>Workshop on Open Source Software Engineering</i> , 26th <i>International Conference on Software Engineering</i> , Edinburgh, Scotland, UK, 25 May.
2004	A structurational model of the dynamics of Free/Libre Open Source Software development teams (with H. Annabi and R. Heckman). Presentation at the <i>IFIP WG 8.2 OASIS Workshop</i> , Washington, DC, 12 December.
2005	An exploratory study of factors related to effectiveness of Free/Libre Open Source Software teams (with U. Y. Eseryel). Presentation at the <b>2005 Open Source Software International Symposium</b> , Padua, Italy, 14–15 April.
2005	Collaboration Using OSSmole: A repository of FLOSS data and analyses (with J. Howison & M. Conklin). Presentation at the <i>Symposium on Mining Software Repositories 2005</i> , St. Louis, 17 May.
2006	How can document-genre metadata improve information-access for large digital collections? (with B. Kwaśnik). Presentation at the <b>Second International Workshop on Digital Genre</b> , Halmstad, Sweden, 15–16 June.
2009	Coordination without discussion? Socio-technical congruence and Stigmergy in Free and Open Source Software projects (with F. Bolici & J. Howison). Presentation at the <i>Workshop on Socio-Technical Congruence</i> ( <i>STC</i> 2009), Vancouver, BC, 19 May.

2009	eScience to support research on free/libre/open source software development (with J. Howison & A. Wiggins). Poster at the <b>eScience Workshop</b> , Pittsburgh, PA, 15–17 October.
2009	Collaborative data analysis with Taverna workflows (with J. Howison & A. Wiggins). Presentation at the <b>eScience Workshop</b> , Pittsburgh, PA, 15–17 October.
2011	Work as coordination and coordination as work: A process perspective on FLOSS development projects (with C. Østerlund). Presentation at the <i>International Symposium on Process Organization Studies</i> , Corfu, Greece, 16–18 June.
2012	Motivating citizen scientists with a classification game (with N. Prestopnick & A. Wiggins). Poster at the <i>National Workshop on Public Participation in Scientific Research (PPSR)</i> , Portland OR, 4–5 August.
2014	Design of an active learning system with human correction for content analysis (with J. L. S. Yan & N. McCracken). Presentation at the <i>Workshop on Interactive Language Learning, Visualization, and Interfaces,</i> Annual Meeting of the Association for Computational Linguistics, Baltimore, MD, 26–27 June. Available from: http://socqa.org/ACL2014
2014	Optimizing features in active machine learning for complex qualitative content analysis analysis (with J. L. S. Yan, N. McCracken & S. Zhou). Presentation at the <i>Workshop on Language Technologies and Computational Social Science</i> , Annual Meeting of the Association for Computational Linguistics, Baltimore, MD, 26–27 June.
2016	Inter-team coordination in large-scale agile development: A test of organizational discontinuity theory (with K. Chudoba, M. B. Watson-Manheim & P. Rahmati). Presentation at the <i>Large Scale Agile Development Workshop</i> , <i>XP 2016 Conference</i> , Edinburgh, Scotland, UK, 24 May. doi: 10.1145/2962695.2962697
Other Pro	esentations
1996	A coordination theory approach to process description and redesign. Invited presentation, <i>Conference on Management of Advanced Information Technologies</i> , Syracuse, NY, 17–19 October.
2004	Theory for studying effective work practices for Open Source Software development. Invited presentation at <i>Dagstuhl Perspectives Seminar 04051: Empirical Theory and the Science of Software Engineering</i> , 25–29 January). Available from http://drops.dagstuhl.de/opus/volltexte/2006/532/pdf/04051_abstracts_collection.532.pdf
2004	Coordination theory: A ten-year retrospective. Keynote address at 1st International Workshop on Computer Supported Activity Coordination, 6th International Conference on Enterprise Information Systems, Porto, Portugal, 14 April.
2005	SE, IS & (FL)OSS @ EASE. Keynote address at the <i>Empirical Assessment of Software Engineering</i> ( <i>EASE</i> ) <i>Conference</i> , Keele, UK, 11–13 April.
2013	Peer production, collective intelligence, and open communities: Issues for researchers and educators (with M. Germonprez and J. Feller). Webinar hosted by the Association for Information Systems, 23 April. Available from: https://www.youtube.com/watch?v=bvL-Cpg4IK8

2013	Response to "Technology and Design for Team Science". Presentation at the Workshop on Institutional and Organizational Supports for Team Science, National Academies of Sciences, Engineering and Medicine, 24 October.
2013	Assessing research impact. In <i>The impact of IS research: Is it enough? How do we expand? How do we document?</i> (with F. Niderman, B. Swanson, H. Krcmar & P. Powell). Senior Scholars' Symposium at the <i>International Conference on Information Systems (ICIS 2013)</i> , Milan, Italy, 15–18 December.
2015	Response to "Implications of Team Science for Collaboration Technology". Presentation at the <i>Symposium on Enhancing the Effectiveness of Team Science</i> , <b>National Academies</b> of Sciences, Engineering and Medicine, 18 September.
2015	New modes of coordination for the collaborative economy. Keynote address at the <i>11th Brazilian Symposium of Information Systems</i> , Goiânia, Brazil, 26–29 May.
2015	New modes of coordination for the collaborative economy. Closing address at the <i>Journée d'échanges dans le cadre du programme OLASI</i> , Nantes, France, 17 June.
2015	Stigmergic coordination for open innovation. Plenary talk at the <i>13th Open and User Innovation Society Meeting</i> , Lisbon, Portugal, 13–15 July.
2016	Citizen Science: Learning to effectively contribute in virtual organizations. Keynote lecture at the 11th <b>Chais Conference</b> for the Study of Innovation and Learning Technologies, Ra'anana, Israel, 16 February.
Patents	
1998	Malone, T.W., Crowston, K., Lee, J., Pentland, B., & Dellarocas, C. Computer system for displaying representations of processes. US Patent No. 5,819,270 (October 6).
1998	Malone, T.W., Crowston, K., Lee, J., Pentland, B., & Dellarocas, C. A computerized handbook of processes. European Patent No. 0692113 (October 14). Canadian Patent No. 2,156,917 (April 22, 2003).
2000	Malone, T.W., Crowston, K., Lee, J., Pentland, B., & Dellarocas, C. Computer Handbook of Processes. US Patent No. 6,070,163 (May 30). US Patent No. 6,349,298 (February 19, 2002).

# **TEACHING**

# **Awards**

2007 Excellence in Graduate Education Faculty Recognition Award, Syracuse University Graduate School.

## **PhD Graduates**

Marcel Allbritton (consultant), Hala Annabi (University of Washington), Kangning Wei (Shandong University), James Howison (University of Texas), Andrea Wiggins (University of Maryland)

# **Degree Courses**

Introductory information systems courses at the undergraduate, masters and Ph.D. level. Advanced courses in *Database Systems, Systems Analysis, Information Technology Procurement, Strategic Information Systems.* Doctoral seminars in *Information, Systems and Organizations* and *Statistics and Research Methods.* 

# **Short Courses**

1993	An introduction to coordination theory (Tutorial, ICO '93 Conference, Montreal, 4 May).
1993	An introduction to groupware (Class, <b>Ecole de Printemps 1993</b> , 3eme Cycle Romand d'Informatique, Anzère, Switzerland). Taught a 2-day course on Groupware for approximately 50 Computer and Information Science faculty from Swiss French universities.
1999 & 2003	A coordination theory approach to process modelling and improvement (Seminar, <b>University of the Republic of San Marino</b> , 22–24 November 1999; <b>Polytechnic of Bari</b> , Italy, 25–26 November 1999; 3–4 November 2003). Taught a 2-day research seminar on process research to doctoral students and junior faculty.
2002 & 2009	Qualitative research methods (Seminar, <b>Polytechnic of Bari</b> at Taranto, Italy, 11–12 March 2002; <b>Polytechnic of Bari</b> , 4–5 May 2009). Taught a 2-day course on qualitative research methods to engineering Ph.D. students.
2005	Coordination in organizations (Lecturer for <b>Autumn School in Management Engineering</b> , Brixen/Bressanone Italy, 13 September).
2007 & 2009	Networks and collaborative production; Free/libre open source software (Lecturer, <b>E-Gov program</b> , 22 May 2007; 26 May 2009). Taught 2 classes for e-Gov certificate students.
2007	Introduction to data analysis (Lecturer for <b>International School of Information Management</b> , Mysore, India, 17 October–8 November). Taught 4-week course on basic data collection and statistical analysis for masters students.
2008	eScience (Class, <b>Scuola Interpoltecnica Di Dottorato</b> , Bari, Italy, 10–11 April). Taught a 2-day course on eScience to engineering Ph.D. students.
2008	Learning in virtual teams (Lecturer, <b>Advanced International Summer School,</b> Ostuni, Italy, 3–5 July). Taught session for summer school for engineering management Ph.D. students.
2010	Social network analysis (Class, <b>International School of Information Management</b> , University of Mysore, Mysore, India, 7–9 April). Taught a 3-day course on SNA to students and executives.
2015	Introduction to social network analysis (Summer School Class, <b>Department of Informatics, University of Zürich</b> , Zürich, Switzerland, 23 June). Taught one-day introductory class on SNA to PhD students.
2017	Organizational Design in the Age of AI ( <b>Cassino University</b> , Cassino, Italy, 19 May–5 June). Taught short course for masters students.

## **Other Teaching-related Activities**

1994 Faculty Advisor, India Telecommunications Team, **William Davidson Institute**, University of Michigan, Summer. Advised 4-member MBA team on 3-month study of Indian Telecommunications industry.

- 2007–2016 Member, Scientific Committee of the **Scuola Interpolitecnica di Dottorato**. Inter-polytechnic Doctoral School, Italy).
- Senior faculty member, **Research Institute for the Science of Socio-Technical Systems** (Inaugural session, Ann Arbor, MI, 20–25 July; Santa Fe, NM, 29 July–1 August).

Faculty member for doctoral consortia at the **iConference** (Ann Arbor, MI, 14–15 October 2006; Los Angeles, CA, 27 February 2008); **OSS Conference** (Notre Dame, IN, 30 May 2010); **Academy of Management OCIS** (Montreal, PQ, 6 August 2010).

Chair of doctoral consortia for the **Wikisym Conference** (Gdansk, Poland, 11 June 2010); **Academy of Management OCIS** (San Antonio, TX, 12 August 2011) and **iConference** (Wuhan, China, 25 March 2017).

# PROFESSIONAL ACTIVITIES

## **Elected Leadership Positions in Disciplinary Organizations**

International Federation for Information Processing. IFIP) **Working Group 8.2** on Information Systems and Organizations. Webmaster, 1997–. **Secretary**, 2008–2011. **Vice-chair**, 2011–2013. **Chair**, 2013–2015.

Organizational Communications and Information Systems Division (**OCIS**), Academy of Management. **PDW and Doctoral Consortium Chair**, 2010–2011. **Program Chair**, 2011–2012. **Division Chair**, 2013–2014.

## **Service Awards**

- 2004 Outstanding Service Award, International Federation for Information Processing (IFIP).
- 2016 Silver Core Award, International Federation for Information Processing (IFIP).

### **Editorial Positions**

**co-Editor-in-Chief,** *Information, Technology and People* (2008–). Associate editor, 1997–2008. Web editor, 1997–2003.

Rankings: Association of Business Schools: 3. Australian Business Deans Council: A.

Editor-in-chief, ACM Transactions on Social Computing (2017–). Associate Editor (2016–2017).

**Senior Editor**, *Journal of Information Technology Theory and Application (JITTA)* (2008–2015), *Information & Management (I&M)* (2012–2013).

**Member of editorial board,** Human Computation (2015–), Organizational Design and Enterprise Engineering (2016–), Electronic Journal of Organizational Virtualness (1999–2009).

Co-Editor, Sprouts Working Papers on Information System (http://sprouts.aisnet.org/).

**Organizer**, FLOSShub (http://flosshub.org/), a repository of working papers and other resources for research on FLOSS.

**Guest editor**, *Journal of the Association for Information System*, Special issue on Empirical Research on Free/Libre Open Source Software (FLOSS) (2010).

**Outside reviewer** for Management Science, Information Systems Research, MIS Quarterly, IEEE Transactions on Software Engineering, ACM Transactions on Information Systems, the US National Science Foundation, Science Foundation Ireland and numerous other organizations, journals and conferences.

## **Positions in Workshops and Conferences**

- 1992 **Organizer** (with Brian Pentland), University of Michigan ICOS *Working Conference on Generative Theories of Organization*, 17–19 January. Organized 3-day working conference for researchers interested in generative models.
- 1992–1993 **Organizer**, University of Michigan ISEF *Special interest group on Business Process Redesign*. Organized bi-annual 1-day meetings for members of industry associates group.
- Organizer, IFIP Working Group 8.2, Oasis '94 Workshop, Vancouver, BC, 17 December 1994;
   New Orleans, LA, 16 December 2001 (with Joe Nandhakumar & John Venable). Organized 1-day workshop for researchers on Information Systems and Organizations.
- 1994 **Organizer** (with Robert Halperin & Jin-tae Lee), CSCW Workshop, *The cobbler's children: How can and should we use CSCW tools in our own work?*, 22 October. Organized 1–day workshop on CSCW support for CSCW research community.
- 1997 **Organizer** (with Bernard Katzy), *Workshop on Virtual Operations and Agile Organizations*, Rotterdam, The Netherlands, 23 August. Organized two-day workshop for European researchers.
- 2004–2013 Chair, Hawai'i International Conference on System Science Mini-track. Genre of Digital Documents, 2004 & 2005 (with Barbara Kwaśnik); 2007 (with Dmitri Roussinov & Carina Ihlström); 2008 (with Carina Ihlström Eriksson & Tero Päivärinta). Studies of Open Source Software Development/Open Movements, 2005–2008 (with Hala Annabi); 2009 (with Felipe Ortega); 2010 (with Felipe Ortega & Vandana Singh). Classification of Digital Documents, 2009 (with Barbara Kwaśnik). Working Documents & Documenting Work, 2010–2012 (with Carsten Østerlund). Open Movements, 2011 (with Wolfgang Bein, Clinton Jeffery & Felipe Ortega); 2012–2013 (with Wolfgang Bein & Clinton Jeffery).
- 2006 **Panels Chair** and member of organizing committee. OSS 2006 Conference, Como, Italy, June.
- 2006 **Chair** (with Joel West), *Open Source Software Research Development Workshop*, Professional Development Workshop, Academy of Management Conference, Atlanta, GA, August.

2007	<b>Program co-Chair</b> (with Sandra Sieber), <i>IFIP Working Group 8.2 Working Conference on Virtuality and Virtualness</i> , Portland, OR, USA, 29–31 July.
2009	<b>Program co-Chair</b> (with Cornelia Boldyreff), <i>IFIP Working Group 2.13 Working Conference on Open Source Software</i> , Skövde, Sweden, 4–7 June. Proceedings doi: 10.1007/978–3–642–02032–2.
2010	<b>Track co-Chair</b> (with Francesco Bolici), <i>Open Source and the Open Collaboration Process Track, International Conference on Information System</i> , St. Louis, MO, 11–15 December.
2011	<b>Track co-Chair</b> (with Patrick Chau), <i>Theme Track (East Meets West: Connectivity and Collaboration through Effective Information Systems)</i> , <i>International Conference on Information System</i> , Shanghai, China, 4–7 December.
2012	<b>Program Chair</b> , Organizational Communications and Information Systems Division, Academy of Management Conference, Boston, MA, 4–7 August.
2013	<b>Program co-Chair</b> (with Martin Halbert), <i>iConference 2013</i> , Fort Worth, TX, 12–15 February.
2013–	<b>Track co-Chair</b> (with Karine Nahon), Digital and Social Media Track, Hawai'i International Conference on System Science.
2014	<b>Track co-Chair</b> (with Dov Te'eni), <i>Panels Track, International Conference on Information Systems (ICIS 2014)</i> , Auckland, New Zealand, 14–17 December.
2015	Track Chair, OpenSym, San Francisco, CA, 19–21 August.
2015	<b>Program co-Chair</b> (with Jan Pries-Heje, Jan Devos, George Kasper & Isabel Ramos), Big Data Information Systems Track, <i>IFIP World Computer Congress</i> , Daejeon, Korea, 4–7 October.
2016	General co-Chair (with Imed Hammouda), IFIP Working Group 2.13 Working Conference on Open Source Systems (OSS 2016), Gothenburg, Sweden, 30 May–2 June.
2019	<b>General co-Chair</b> (with Wayne Lutters & Mega Subramaniam), <i>iConference</i> , College Park, MD, USA.

# **Advisory Committees**

2015– Member, Advisory Board, Department of Informatics, University of Zürich.

2017–2019 Member, CSCW Conference Steering Committee.

# **University Administrative Responsibilities**

School of Information Studies

*1997–1998*, **Member, Personnel Committee**. **Co-chair**, 2011–12. *2011–2012* 

*1997–2002*, Member, Faculty Search Committees. Chair 2001–2002, 2008–2009. Member, Dean Search *2006–2009* Committee, 2006–2008.

2001–2006 **Director, PhD Program** in Information Transfer/Information Science & Technology. Oversaw admissions and program administration. Participated in all student reviews and advancements to candidacy. Revised program regulations.

2016- Associate Dean for Research.

Syracuse University

1999–2007 Elected Member, Faculty Senate

Senate Subcommittee on Curriculum (1999–2003). Subcommittee on Administrative Operations (2003–2004). Subcommittee on Computing Services (2004–2006); Chair (2005–2006). Subcommittee on Academic Affairs (2006–2007).

# **Membership in Professional Associations**

**Member** of the Academy of Management, IFIP Working Groups 8.2 & 2.13, the Association for Information Systems (AIS) and the Association for Computing Machinery (ACM).

## **Other Activities**

1996— **Principal**, **Web Arch LLC**, a consulting firm specializing in Web site and information access design (http://www.web-arch.com/).