

## CLAUDIA MÜLLER-BIRN

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### Goal

I obtain a position in higher education that allows me to combine applied research and teaching in the areas of network analysis, web intelligence and social computing. I am looking forward to bringing my ability to transfer research results into corporate settings to the table, and to continue encouraging students to critically analyze existing systems and to stay curious.

### Academic Degrees

*Dr. rer. nat. (PhD)*, Department of Computer Science, University of Potsdam (summa cum laude).

PhD thesis: "Graph theoretical analysis of wiki-based networks for self-organized knowledge management" (in German) April 2008, Advisor: Prof. Dr.-Ing. Norbert Gronau, Prof. Dr. Helmut Krcmar, Prof. Dr.-Ing. Tiziana Margaria-Steffen.

*Dipl.-Ing. (M.Sc.)* in Electrical Engineering at Technical University of Berlin (Grade: A).

Main subjects: telecommunication networks, business information systems.

Diploma thesis: "XML-based and SCORM-compliant standardization and modularization for sustainable and reusable content objects" (in German), March 2004, Advisor: Prof. Hermann Krallmann.

### Academic Positions

Post-doctoral Associate at the research group on Coordination, Technology and Distributed Work, Institute for Software Research, Carnegie Mellon School of Computer Science, USA, August 2009 – present

Research Associate at the research group "Open Knowledge Models", Institute of Information Technology Services (IITS), Department for Computer Science, Electrical Engineering & Information Technology, University of Stuttgart, Germany, June 2008 – May 2009.

Project Manager of open-source project SONIVIS (<http://www.sonivis.org>), April 2008 – Present.

Research Associate at the research group "Corporate Knowledge Management", Institute of Computer Science, Group of Business Information System and Electronic Government, University of Potsdam, Germany, Mai 2004 – May 2008.

Research Assistant at the research group "E-Learning and Integrated Knowledge Management", Institute of Computer Science, Group of Systems Analysis and IT, Technical University of Berlin, Germany, March 2003 – April 2004.

Working Student, Department of Information and Communication Networks (ICN), Siemens AG, Berlin, Germany, September 1998 – August 2001.

### Publications

#### *Journal Publications*

Müller, C.; Meuthrath, B.; Baumgraß, A. (2008): Analyzing Wiki-based networks to improve knowledge processes in organizations. Published in the Journal of Universal Computer Science, Vol. 14, No. 4, 526-545.

Müller, C.; Dibbern, P. (2006): Self-organized knowledge management in companies based on Wiki technology – a case study (in German). Hildebrand, K.; Hofmann, J. (Eds.): Social Software. HMD 252, dpunkt.verlag, Heidelberg 45-54.

Müller C.; Bahrs J.; Gronau, N. (2005): Considering the Knowledge Factor in Agile Software Development. J.UCS Journal of Universal Computer Science Volume 0 Issue 2. 128-147.

#### *Books*

Müller, C. (2008): Graph theoretical analysis of wiki-based networks for self-organized knowledge management (in German). GITO-Verlag, Berlin.

Müller, C.; Gronau, N. (Eds.) (2007): Analysis of social networks and social software - Foundations and Applications (in German). GITO-Verlag, Berlin.

Auer, S.; Bizer, C.; Müller, C.; Zhdanova, A. V. (Eds.) (2007): The Social Semantic Web 2007. Proceedings of the 1st Conference on Social Semantic Web (CSSW). Lecture Notes in Informatics (LNI), Leipzig.

### *Book Chapters*

- Müller, C. (2008): Analysis of Wiki-based networks to enhance corporate knowledge exchange processes (in German). In: Stegbauer, C. (Eds.): *Netzwerkanalyse und Netzwerktheorie. Ein neues Paradigma in den Sozialwissenschaften*. VS-Verlag, Wiesbaden, 529 – 539.
- Müller, C.; Gronau, N. (2008): Examination of virtual information spaces based on network analysis (in German). In: Back, A.; Gronau, N.; Tochtermann, K. (Eds.): *Web2.0 in der Unternehmenspraxis*. Oldenbourg Verlag, München, 256-266.
- Müller, C. (2008): Analysis of social information spaces to foster self-organized knowledge management (in German). In: Alpar, P.; Blaschke, S. (Eds.): *Web2.0 - Eine empirische Bestandsaufnahme*. Vieweg+Teubner, Wiesbaden, 159-181.
- Müller, C. (2008): Analysis of knowledge communication in Wiki-based networks (in German). In: Zerfaß, A.; Welker, M.; Schmidt, J. (Eds.): *Kommunikation, Partizipation und Wirkungen im Social Web*. Herbert von Halem Verlag, Düsseldorf, 348-369.
- Müller, C. (2007): Social Network in corporate application systems (in German). In: Hein, F.-M. (Eds.): *Elektronische Unternehmenskultur*. Deutscher Fachverlag, Frankfurt/Main, 250-257.
- Müller, C.; Trier, M.; Herzog, M. (2005): Process-Oriented Production of Learning Units for Sustainable E-Learning Offerings. In: Breitner, M.H.; Hoppe, G. (Eds.): *E-Learning - Einsatzkonzepte und Geschäftsmodelle*. Physica-Verlag, Heidelberg, 331-348.

### *Conference Publications*

- Müller-Birn, C.; Lehmann, J.; Jeschke, S. (2009): A composite calculation for author activity in Wikis: accuracy needed. *IEEE/WIC/ACM Web Intelligence 2009 (WI09)*. Acceptance rate: 18%. Accepted contribution.
- Müller, C.; Meuthrath, B.; Jeschke, S. (2009): Defining a universal actor content-element model for exploring social and information networks considering the temporal dynamic. *Advances in Social Networks Analysis and Mining (ASONAM 2009)*. Acceptance rate: not provided. Accepted contribution.
- Müller, C.; Kröger, S. (2008): Visualizing Dynamics in Virtual Information Spaces. Published in the *Proceedings of Triple-I'08, Graz (Austria)*. 413 – 420.
- Müller, C.; Gronau, N.; Lembcke, R. (2008): Application of social network analysis in knowledge processes. *Proceedings of 16th European Conference on Information Systems (ECIS), Dublin (Ireland)*.
- Müller, C.; Meuthrath, B. (2007): Analyzing Wiki-based networks to improve knowledge processes in organizations. Published in the *Proceedings of Triple-I'07, Graz (Austria)*, 103-110.
- Müller, C. (2007): Analysis of self-organization in Wikis (in German). Published in the *Proceedings of the Doctoral Consortium at the 8th International Conference on Business Informatics, Karlsruhe (Germany)*.
- Müller, C.; Weber, E.; Gronau, N. (2006): Requirements for an Integration of Methods analyzing Social Issues in Knowledge Organizations. Published in the *Proceedings of the 12th Americas Conference on Information Systems (AMCIS), Acapulco (Mexico)*, 4049-4056.
- Müller, C.; Birn, L. (2006): Wikis for Collaborative Software Documentation. Published in the *Proceedings of I-Know'06, Graz (Austria)*.
- Müller, C.; Bahrs, J.; Gronau, N. (2005): Evaluation of KMDL Models of Knowledge intensive Business Processes in the Area of Software Engineering. Published in the *Proceedings of I-Know'05, Graz (Austria)* 365-372.
- Müller, C.; Trier, M. (2005): A Procedural Model for the Production of reusable and standard-compliant E-Learning Offerings. Published in the *Proceedings of Business Informatics (Wirtschaftsinformatik), Bamberg, 2005*, 881-900.
- Trier, M.; Müller, C. (2004): Towards a systematic approach for capturing Knowledge-intensive Business Processes. Published in the *Proceedings of PAKM 2004, Vienna (Austria)*, 239-250.
- Gronau, N.; Müller, C.; Uslar (2004), M.: The KMDL Knowledge Management Approach: Integrating Knowledge Conversions, Business Process Modeling, Skill Management and Knowledge Management Systems, Published in the *Proceedings of PAKM 2004, Vienna (Austria)*, 1-10.
- Trier, M.; Müller, C.; Herzog, M. (2004): Efficient video production processes for component-based E-Learning contents (in German). Published in the *Proceedings of Potsdamer Multimedia Conference, Potsdam (Germany)*.

### *Others*

- Batagelj, V.; Hoser, B.; Müller, C.; Staab, S.; Stumme, G. (2008): The Evolution and Dynamics of Research Networks (08391 Group Summary). In: Alani, H.; Staab, S.; Stumme, G.: *Social Web Communities*. Dagstuhl Seminar Proceedings, Schloss Dagstuhl - Leibniz-Zentrum fuer Informatik, Dagstuhl, Germany.

### *Presentations*

- Müller, C. (2008): SONIVIS: Social networks in virtual information spaces – a wiki-approach. Presentation at the XXVIII Sunbelt Social Network Conference, St. Pete, FL, January 2008.

### *Invited Talks*

Müller, C.: "Interdependent evolution of social and information networks in Wikis"; Freie Universität Berlin, Department of Mathematics and Computer Science, Networked Information Systems (NBI), Berlin, Germany, February, 2009.

Müller, C.: "Applying Social Network Analysis and explorative statistics on Wiki-based information spaces" (Slides), University of Tübingen, Department of Applied Cognitive Psychology and Media Psychology Workshop on "Collaborative knowledge building based on Wikis", Tübingen, Germany, November 12/13, 2008.

Müller, C.: "SONIVIS:Tool - Analysis of social information spaces", Data and Knowledge Engineering (DKE) Colloquium, University of Magdeburg, Magdeburg, Germany, June 12, 2008.

Müller, C.; Meuthrath, B.: "Wikis, users, activities...SONIVIS?". Interview, Radio Fritz, Broadcast "Trackback" TRB 076: Wikis, Net-Testament, Cheatbots., Potsdam, Germany, May 10, 2008.

Müller, C.: "Using Social Network Analysis in Competence Management", Track 2: Social Software: Web 2.0 and Competences, Professional Training Facts 2007 Learning – Competence – Performance, November 13th and 14th, 2007.

### **Teaching Experience**

- 2008 - 2009, Co-Instructor, "Free/Libre Open Source Software Engineering", University of Stuttgart, Germany.
- 2006 - 2008, Instructor, seminar "Online Communities, Knowledge Work and Web2.0", University of Potsdam, Germany.
- 2007: Instructor, seminar "Knowledge Discovery, Data Mining and Network Analysis in virtual Knowledge Spaces", University of Potsdam, Germany.
- 2005 - 2006: Instructor, seminar "Analysis and Design of IT-Systems" (in German), University of Potsdam, Germany.
- 2004 - 2008: Co-Instructor, lecture/tutorials "Business Process Management" (in German), University of Potsdam, Germany.

### **Student Advising**

2009: Master thesis Computer Science, Janette Lehmann "Revealing content-based relations in social and information networks from Wiki-based information spaces using text mining techniques".

2009: Master thesis Computer Science, Jens Wunschlik "Analysis of SVN repositories to evaluate open source projects" (in German).

2009: Master thesis Computer Science, Robert Schmidl "Community structures in tagging systems" (in German).

### **Student Co-Advising**

2008: Master thesis Business Administration, Kerstin Hoffmann "Open Innovation – A change in the cardiac rhythm management market?"

2008: Master thesis Computer Science, Stefan Kröger "Analysis of dynamics in social networks using the example of MediaWiki-based collaboration networks".

2008: Master thesis Computer Science, Anne Baumgraß "Statistical analysis of knowledge activities in Wiki-based networks" (in German).

2007: Master thesis Computer Science, Benedikt Meuthrath "Wiki-Mining to compare open open-source- and corporate networks" (in German).

2007: Master thesis Business Administration, Mareen Dräger "Incentive systems for social software" (in German).

2007: Master thesis Business Administration, Michael Stoffer "Knowledge Management in spatial and temporal distributed project teams" (in German).

2006: Master thesis Business Administration, Katja Richter "Specification of a model for introducing Wikis in companies" (in German).

### **Academic Honors & Fellowship**

- Feodor Lynen Research Fellowship, Alexander-von-Humboldt (AvH) Foundation, 2008-2009.
- Donated Multimedia Award 2004 of the University of Potsdam for a component-based E-Learning content production approach.
- Donated Erasmus-Scholarship for one year of MBA Studies at the Dublin City University, 2001.

## Professional Services

### *Program Committee Memberships*

- International Conference on Knowledge Management (ICKM 2009), Hong Kong, China, 2009.
- European Semantic Web Conference (ESWC) 2007, Workshop on "SemWiki – The Wiki Way of Semantics", "Scripting for the Semantic Web", 2009.
- K-CAP 2009 - "The Fifth International Conference on Knowledge Capture" is sponsored by ACM SIGART and held in cooperation with AAAI, Redondo Beach, California, 2009.
- ACM Hypertext 2009 "Linking people, resources and annotations", 2009.
- Conference on Professional Knowledge Management, Workshop on "Corporate Web 2.0: Knowledge networks and social software in companies", "Knowledge Services & Mashups", 2009.
- Professional Aspects of Knowledge Management (PAKM) 2009, Workshop on "Knowledge Networks: Discovering network structure and patterns using Social Network Analysis", 2009.
- TRIPLE-I '08, International Workshop on "Knowledge Acquisition from the Social Web", Special Track on "Knowledge Services", 2008.
- European Semantic Web Conference (ESWC) 2008, Workshop on "Scripting for the Semantic Web", "SemWiki – The Wiki Way of Semantics", 2008.
- European Semantic Web Conference (ESWC) 2007, Workshop on "Bridging the Gap between Semantic Web and Web 2.0", "Scripting for the Semantic Web", 2007.

### *Organization / Chairing of Workshops*

- Co-Chair, Conference on "Social Semantic Web (CSSW)", SABRE - Software, Agents and Services for Business, Research, and E-Sciences 2007, Leipzig, Germany, 2007.
- Co-Chair, Workshop on "Collaborative Knowledge Management", 4th Conference Professional Knowledge Management, 2007, Potsdam, Germany, 2007.
- Member of Organizing Committee, 4th Conference Professional Knowledge Management, 2007, Potsdam, Germany, 2007.
- Co-Chair, Workshop on "Applying Social Software for Knowledge Management", 2nd International Symposium in Media Informatics - "Cow Paths: Agency in Social Software", Aachen, Germany, 2006.
- Chair, Workshop on "Formation of Social Networks in Social Software Applications", INFORMATIK 2006, Dresden, Germany, 2006.
- Co-Chair, Workshop on "Modeling and Analysis of Knowledge Intensive Business Processes", 3rd Conference Professional Knowledge Management, 2005, Kaiserslautern, Germany, 2005.

### *Reviews for Conferences*

- AMCIS - American Conference on Information Systems, 2007/08.
- ECIS - European Conference on Information Systems, 2007/08/09.
- HICSS - Hawaii International Conference on System Sciences, 2007/08/09.
- ICIS - International Conference on Information Systems, 2007.

### *Reviews for Publishers*

- Springer, Textbook: Social Semantic Web, 2008.
- Special Issue on "Social Networking through ICTS" Journal of Information Technology, 2009.

### *Editorship*

- Editorial Board Member, Journal of Emerging Technologies in Web Intelligence (JETWI).

### *Service*

Equal opportunity commissioner, Department for Computer Science, Electrical Engineering & Information Technology, University of Stuttgart, 2008-2009.

Femtec – Carrier Center for Women in Engineering and Natural Science. Invited speaker in workshops to attract young females to the field of computer science, Berlin, 2005-2007.

### *Memberships in Professional Associations*

- ACM - Association of Computing Machinery, 2006 – present.
- INSNA - International Network for Social Network Analysis, 2006 – present.
- FSF - Free Software Foundation, 2009 – present.
- GI - Association of Computer Science Germany, 2005 – present.

## Languages

English – fluent, German – native, Spanish – basic

## References

Prof. Dr.-Ing. Norbert Gronau (PhD Advisor)  
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Prof. Dr. Sabina Jeschke (Research Advisor/Collaborator)  
ZLW - Center for Learning and Knowledge Management &  
IMA - Institute of Information Management in Mechanical Engineering  
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