

## CURRICULUM VITÆ

**Name:** Tobias Kuhn, M.S., Dr. Inform.  
**Born:** 15 April 1981, Switzerland  
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**Education**

Apr 2010 *Dr. Inform.* Computer Science and Computational Linguistics, University of Zurich (equivalent to a *Ph.D.*); title of thesis: “Controlled English for Knowledge Representation”  
 Feb 2006 *M.S.* Computer Science and Economics, University of Zurich

**Career/Academic Appointments**

Feb 2013 – present Postdoctoral researcher, Chair of Sociology, in particular of Modeling and Simulation, ETH Zurich  
 Jan – Apr 2015 Visiting scientist, Stanford University  
 Apr – Jul 2014 Researcher, Swiss Institute of Bioinformatics at the University of Geneva, Switzerland  
 Jan – Dec 2012 Postdoctoral associate, Yale Center for Medical Informatics, Yale University  
 Feb – Dec 2011 Lecturer and researcher, Department of Intelligent Computer Systems, University of Malta  
 Mar 2006 – Dec 2010 Doctoral Student and Postdoctoral researcher, Institute of Computational Linguistics, University of Zurich  
 May – Jul 2010 Visiting scientist, Computer Science Department, University of Chile  
 Oct 2005 – Mar 2006 Visiting scientist, Biotechnology Center at the Technical University Dresden, Germany  
 May 2004 – Sep 2005 Undergraduate research assistant, Department for Computer Science, ETH Zurich

**Professional Honors & Recognition**

- 2014 Best Research Paper Award at the 11th Extended Semantic Web Conference (ESWC 2014) for the paper *Trusty URIs: Verifiable, Immutable, and Permanent Digital Artifacts for Linked Data*
- 2013 Winner of the 1k Challenge at the Beyond the PDF 2 conference in 2013 for the proposal of an *Open Scholar Foundation*
- 2009 Mercator Award, University of Zurich, for the dissertation project on *Controlled English for Knowledge Representation*
- 2009 Best Paper Award, Fourth Workshop on Semantic Wikis, for the paper *How Controlled English Can Improve Semantic Wikis*

**Grant History**

- Apr 2014 – Mar 2016 “High-Performance Computing Equipment for Sophisticated Agent Simulations and Big Data Analytics,” awarded by the Swiss National Science Foundation; main proposal writer but not official applicant; CHF 236,000
- Jan 2012 – May 2013 “Multilingual On-Line Translation — Enlarged,” awarded by the European Commission; co-writer of proposal but not official applicant; EUR 600,000
- Nov 2008 – Oct 2009 “Attempto Controlled English as a Knowledge Representation Language” (extension), awarded by the research grant program of the University of Zurich; main applicant and P.I.; CHF 50,616
- Nov 2006 – Oct 2008 “Attempto Controlled English as a Knowledge Representation Language,” awarded by the research grant program of the University of Zurich; main applicant and P.I.; CHF 82,975

**Teaching**

- fall 2013 – present ETH Zurich: Lecturer for “Modelling and Simulating Social Systems with Matlab” (Bachelor/Master course), given so far three times
- spring/fall 2011 University of Malta: Lecturer for “Logic, Representation and Inference” (Master course), given two times
- fall 2006 – spring 2008 University of Zurich: Teaching assistant for “Programming Techniques in Computational Linguistics,” each of the two parts given two times
- spring 2005 University of Zurich: Teaching assistant for “Formal Foundations of Computer Science,” given once

**Selected Invited Talks**

17 Jun 2015	CERN Workshop on Innovations in Scholarly Communication (OAI9), Geneva: “Trusty URIs and the Nanopublication Server Network” (preliminary title)
25 Nov 2014	Colloquium at the Institute of Computational Linguistics of the University of Zurich: “Meme Extraction from Corpora of Scientific Literature using Citation Networks”
8 Jun 2013	Keynote at the International Workshop on Terminology, Languages, and Content (LaRC), Pretoria (South Africa): “Controlled Natural Language and Opportunities for Standardization”
23 Aug 2011	Grammatical Framework Summer School, Barcelona: “AceWiki”
1 Feb 2011	16th KnowTalk at KnowGravity Inc., Zurich: (in German) “Semantic Web für Menschen wie du und ich”
14 Sep 2010	Second Workshop on Controlled Natural Language, Marettimo Island, Italy: “An Introduction to AceWiki”
20 Nov 2008	Semantic Wiki Mini Series, Session 2, Ontolog Conference Call: “AceWiki: Controlled English in a Semantic Wiki”

**Journal Service, Peer Review, and Events**

2006 – present	Reviewer for the following journals: International Journal of Semantic Web and Information Systems, Journal of Data Semantics, Data and Knowledge Engineering Journal, Advances in Human-Computer Interaction, Advances in Complex Systems
2007 – present	Reviewer for the following conferences and workshops: American Medical Informatics Association Annual Symposium, International Symposium on Semantic Mining in Biomedicine, Latin American Conference of Informatics, European Semantic Web Conference, International Web Rule Symposium, CCURL (Collaboration and Computing for Under-Resourced Languages in the Linked Open Data Era), Conference on Intelligent Text Processing and Computational Linguistics, European Conference on Computational Biology
2013 – present	Reviewer for the following grant agencies: Swiss National Science Foundation, South Africa’s National Research Foundation
2009 – present	Program committee member for the International Workshop on Controlled Natural Language
2014	Organizer and Chair: Fourth International Workshop on Controlled Natural Language, Galway, Ireland
2009 – 2010	Program committee member, Semantic Wiki Workshop
2012	Organizer and Chair: Third International Workshop on Controlled Natural Language, Zurich

- Technology:** Java, Prolog, Perl, Python, Bash, JavaScript, R, C++, Matlab, Visual Basic, XML, HTML+CSS, LaTeX, SVG, SQL, OWL, RDF, SPARQL, Eclipse, HTTP, REST, Tomcat, Jetty, Echo Web Framework, Wicket, Maven, Ant, Git, VirtualBox, Lucene, Virtuoso Triple Store, Weka, Gephi, Unix/Linux
- Languages:** German (native), English (fluent), French (intermediate), Spanish (intermediate), Italian (beginner)

## Publications

The *h*-index is 16 according to Google Scholar and 11 according to Scopus.

### Journal Articles

- Tobias Kuhn, Matja Perc, and Dirk Helbing. Inheritance patterns in citation networks reveal scientific memes. *Phys. Rev. X*, 4:041036, November 2014.
- Kaarel Kaljurand, Tobias Kuhn, and Laura Canedo. Collaborative multilingual knowledge management based on controlled natural language. *Semantic Web*, to appear.
- Tobias Kuhn, Mate Levente Nagy, ThaiBinh Luong, and Michael Krauthammer. Mining images in biomedical publications: Detection and analysis of gel diagrams. *Journal of Biomedical Semantics*, 5(10):26–33, 2014.
- Tobias Kuhn and Alexandre Bergel. Verifiable source code documentation in controlled natural language. *Science of Computer Programming*, 96(1):121–140, December 2014.
- Tobias Kuhn. A survey and classification of controlled natural languages. *Computational Linguistics*, 40(1):121–170, 2014.
- Tobias Kuhn. A principled approach to grammars for controlled natural languages and predictive editors. *Journal of Logic, Language and Information*, 22(1):33–70, 2013.
- Tobias Kuhn. The understandability of OWL statements in controlled English. *Semantic Web*, 4(1), 2013.
- Tobias Kuhn and Stefan Höfler. Coral: Corpus access in controlled language. *Corpora*, 7(2):187–206, 2012.

### Papers in Conference Proceedings

- Kurt Winkler, Tobias Kuhn, and Martin Volk. Evaluating the fully automatic multi-language translation of the swiss avalanche bulletin. In *Proceedings of the Fourth International Workshop on Controlled Natural Language (CNL 2014)*, pages 44–54. Springer, 2014.
- Tobias Kuhn and Michel Dumontier. Trusty URIs: Verifiable, immutable, and permanent digital artifacts for linked data. In *Proceedings of the 11th Extended Semantic Web Conference (ESWC 2014)* (**acceptance rate: 23%**), **best research paper award**, pages 395–410. Springer, 2014.
- Tobias Kuhn, Paolo Emilio Barbano, Mate Levente Nagy, and Michael Krauthammer. Broadening the scope of nanopublications. In *Proceedings of the 10th Extended Semantic Web Conference (ESWC 2013)* (**acceptance rate: 26%**), pages 487–501. Springer, 2013.
- Kaarel Kaljurand and Tobias Kuhn. A multilingual semantic wiki based on Attempto Controlled English and Grammatical Framework. In *Proceedings of the 10th Extended Semantic Web Conference (ESWC 2013)* (**acceptance rate: 26%**), pages 427–441. Springer, 2013.
- Tobias Kuhn and Michael Krauthammer. Underspecified scientific claims in nanopublications. In *Proceedings of the Workshop on the Web of Linked Entities (WoLE 2012)* (acceptance rate: 50%). CEUR-WS, 2012.
- Tobias Kuhn and Michael Krauthammer. Image mining from gel diagrams in biomedical publications. In *Proceedings of the 5th International Symposium on Semantic Mining in Biomedicine (SMBM 2012)*, pages 26–33. University of Zurich, 2012.

- Tobias Kuhn, ThaiBinh Luong, and Michael Krauthammer. Finding and accessing diagrams in biomedical publications. In *Proceedings of the American Medical Informatics Association (AMIA) 2012 Annual Symposium*, 2012.
- Tobias Kuhn. Codeco: A practical notation for controlled English grammars in predictive editors. In *Proceedings of the Second International Workshop on Controlled Natural Language (CNL 2010)*, pages 95–114. Springer, 2012.
- Tobias Kuhn. Codeco: A grammar notation for controlled natural language in predictive editors. In *Pre-Proceedings of the Second Workshop on Controlled Natural Languages (CNL 2010)*. CEUR-WS, 2010.
- Richard N. Shiffman, George Michel, Michael Krauthammer, Norbert E. Fuchs, Kaarel Kaljurand, and Tobias Kuhn. Writing clinical practice guidelines in controlled natural language. In *Proceedings of the Workshop on Controlled Natural Language (CNL 2009)*, pages 265–280. Springer, 2010.
- Tobias Kuhn. An evaluation framework for controlled natural languages. In *Proceedings of the Workshop on Controlled Natural Language (CNL 2009)*, pages 1–20. Springer, 2010.
- Tobias Kuhn. How controlled English can improve semantic wikis. In *Proceedings of the Forth Semantic Wiki Workshop (SemWiki 2009)*, **best paper award**. CEUR-WS, 2009.
- Richard N. Shiffman, George Michel, Michael Krauthammer, Norbert E. Fuchs, Kaarel Kaljurand, and Tobias Kuhn. Controlled natural language for clinical practice guidelines. In *Pre-Proceedings of the Workshop on Controlled Natural Language (CNL 2009)*. CEUR-WS, April 2009.
- Tobias Kuhn. How to evaluate controlled natural languages. In *Pre-Proceedings of the Workshop on Controlled Natural Language (CNL 2009)*. CEUR-WS, April 2009.
- Tobias Kuhn. AceWiki: A natural and expressive semantic wiki. In *Proceedings of the Fifth International Workshop on Semantic Web User Interaction (SWUI 2008) — Exploring HCI Challenges*. CEUR-WS, 2009.
- Tobias Kuhn. AceWiki: Collaborative ontology management in controlled natural language. In *Proceedings of the Third Workshop on Semantic Wikis — The Wiki Way of Semantics*. CEUR-WS, 2008.
- Tobias Kuhn and Rolf Schwitter. Writing support for controlled natural languages. In *Proceedings of the Australasian Language Technology Association Workshop 2008*, pages 46–54, December 2008.
- Gerold Schneider, Kaarel Kaljurand, Fabio Rinaldi, and Tobias Kuhn. Pro3Gres parser in the CoNLL domain adaptation shared task. In *Proceedings of the CoNLL Shared Task Session of EMNLP-CoNLL*, 2007.
- Tobias Kuhn. AceRules: Executing rules in controlled natural language. In *Web Reasoning and Rule Systems — First International Conference (RR 2007)* (acceptance rate: 48%), pages 299–308. Springer, 2007.
- Tobias Kuhn, Loïc Royer, Norbert E. Fuchs, and Michael Schroeder. Improving text mining with controlled natural language: A case study for protein interactions. In *Data Integration in the Life Sciences — Proceedings of the Third International Workshop (DILS 2006)* (acceptance rate: 39%), pages 66–81. Springer, 2006.

### *Edited Books*

- Brian Davis, Kaarel Kaljurand, and Tobias Kuhn, editors. *Proceedings of the Fourth International Workshop on Controlled Natural Language (CNL 2014)*, volume 8625 of *Lecture Notes in Computer Science*. Springer, Berlin / Heidelberg, Germany, 2014.
- Tobias Kuhn and Norbert E. Fuchs, editors. *Proceedings of the Third International Workshop on Controlled Natural Language (CNL 2012)*, volume 7427 of *Lecture Notes in Computer Science*. Springer, Berlin / Heidelberg, Germany, 2012.

*Book Chapters*

- Norbert E. Fuchs, Kaarel Kaljurand, and Tobias Kuhn. ACE can be described by itself. In Simon Clematide, Manfred Klenner, and Martin Volk, editors, *Searching Answers — Festschrift in Honour of Michael Hess on the Occasion of His 60th Birthday*, pages 45–48. Monsenstein und Vannerdat, Münster, Germany, 2009.
- Juri Luca De Coi, Norbert E. Fuchs, Kaarel Kaljurand, and Tobias Kuhn. Controlled English for reasoning on the Semantic Web. In François Bry and Jan Małuszyński, editors, *Semantic Techniques for the Web — The REWERSE Perspective*, volume 5500 of *Lecture Notes in Computer Science*, pages 276–308. Springer, 2009.
- Norbert E. Fuchs, Kaarel Kaljurand, and Tobias Kuhn. Attempto Controlled English for knowledge representation. In Cristina Baroglio, Piero A. Bonatti, Jan Małuszyński, Massimo Marchiori, Axel Polleres, and Sebastian Schaffert, editors, *Reasoning Web — 4th International Summer School 2008*, volume 5224 of *Lecture Notes in Computer Science*, pages 104–124. Springer, 2008.

*Consensus Statements*

- Adam Wyner, Krasimir Angelov, Guntis Barzdins, Danica Damjanovic, Brian Davis, Norbert Fuchs, Stefan Hoefler, Ken Jones, Kaarel Kaljurand, Tobias Kuhn, Martin Luts, Jonathan Pool, Mike Rosner, Rolf Schwitter, and John Sowa. On controlled natural languages: Properties and prospects. In Norbert E. Fuchs, editor, *Proceedings of the Workshop on Controlled Natural Language (CNL 2009)*, volume 5972 of *Lecture Notes in Computer Science*, pages 281–289. Springer, 2010.

*Thesis*

- Tobias Kuhn. *Controlled English for Knowledge Representation*. PhD thesis, Faculty of Economics, Business Administration and Information Technology of the University of Zurich, 2010.