egon w. stemle

Researcher

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Egon Stemle is a Cognitive Scientist: he studies skills like perception, thinking, learning, motor function, and language by combining the humanistic and analytical methods of the arts and the formal sciences.

His research focus within this relatively new 'inter-discipline' lies in the area where Computational Linguistics and Artificial Intelligence converge. He works on computer aided fabrication of ontologies from large document repositories, the technological feasibility thereof and the utilization of cross-linked structured data in applications, as well as on tools for editing, processing, and annotating linguistic data.

His curiosity in research is driven by the question why humans handle incomplete and – more often than not – inconsistent structured concepts just fine, whereas computational processes are often of little avail or fail completely.

Research and Professional Experience

- since 02.2012 **Researcher**, Institute for Specialised Communication and Multilingualism at the European Academy of Bozen/Bolzano (EURAC).
 - 04.2009 **Research Fellow**, LiveMemories sponsored grant, financed by the Provincia Autonoma of Trento, -01.2012 for research activities at the Center for Mind/Brain Sciences (CIMeC) of the University of Trento.
 - since 2009 **Technology Consultant and Shareholder**, *Whitematter Labs*. Provider of neuroscientific technologies for marketers.
 - 04.2008 **Project Member**, *GoodGaze*, Institute of Cognitive Science, University of Osnabrück, Germany.
 - 2010 Research project to predict where people will look on Web pages.
 - 2008 Freelancer, ontoprise GmbH.
 - Integrating in-house technology with IBM's OmniFind; Feasibility Study: evaluate to which extent very specific information extraction from large web data collections combined with semi-automatic cleaning is technically feasible, what benefits and efforts are to be expected while also considering external alternatives.
 - 10.2006 **Research Participant**, *DAAD funded research project (Project-linked exchange of academics and scientists, PPP)*, Collaboration between the Institute of Cognitive Science, U. Osnabrück, Germany, the CNRS UMR 8163 (Savoirs, Textes, Langages), U. of Lille (III), France, and the Departament de Traducció i Filologia, U. Barcelona (Pompeu Fabra), Spain.

 Reference to Abstract Objects in Natural Language (OntoRef).
 - 04.2006 Research Assistant, Institute of Applied Informatics and Formal Description Methods, University
 03.2008 of Karlsruhe, Germany, Knowledge Management Research Group.
 Maintenance and development of software and scientific counsel; e.g. evaluating CL tools for Om-
 - niFind+UIMA and hooking them together.

 08.2004 **Research Participant**, *ASADO*, Cooperation between the Universities of Osnabrück and
 - 09.2005 Hildesheim, and the aircraft manufacturer AIRBUS.
 Project to research methodologies and technologies to analyze and structure the huge amount of documentation produced during aircraft construction.
 - 08.2003 **Student Assistant**, *Institute of Cognitive Science, University of Osnabrück, Germany*, Artificial 12.2003 Intelligence Research Group.
 - Maintenance and development of software for the MiLCA (Media intensive learning units for courses in computational linguistics) project.
 - 10.2001 **System Administrator**, Institute of Cognitive Science, University of Osnabrück, Germany.
 - 03.2009 Maintenance of computer hardware and software, server administration (Web Services, Databases, File Sharing, Printing, Mail, Calendaring, (D)VCS, CMS), user support; assisting work groups in making strategic decisions about hardware and software.

Education

- 02.2006 MSc in Cognitive Science, with distinction, University of Osnabrück, Germany.
- 03.2009 Majors: Linguistics and Computational Linguistics, and Artificial Intelligence, One Year Study Project: Analysis and Structure of Aviation Documents (ASADO).
 - Thesis Hybrid Sweeping: Streamlined Perceptual Structured-Text Refinement.

 Development of a perceptually driven content extraction architecture for Web pages exemplified by a Web page cleaning system. Supervisors: Prof. Dr. Stefan Evert and Prof. Dr. Peter König.
- 03.2002 **Semester abroad**, *ILLC (Institute for Logic, Language and Computation)*, University of Amster-09.2002 dam, The Netherlands.
- 10.2000 **BSc in Cognitive Science**, University of Osnabrück, Germany.
- 01.2006
- 12.1998 Apprenticeship as Travel Agent, WORLDWIDE Touristik, Nürnberg, Germany.
- -07.2000
 - 06.1997 Abitur, Sigmund-Schuckert-Gymnasium, Nürnberg, Germany.

Teaching Experience

- 2009 2011 **Lecture on Web Corpora**, *Course in Text Processing class*, Coordinated by Marco Baroni, Uni-(yearly) versity of Trento, Italy, Offered to students of the School of Humanities and Philosophy, of the International Master in Cognitive Science and of the Master in Human Language Technologies and Interfaces.
 - 10.2003 **Artificial Intelligence Tutor**, *Methods of Artificial Intelligence class*, Institute of Cognitive Science, 02.2006 University of Osnabrück, Germany, Second year Cognitive Science class.
- (every other Weekly tutoring of the lecture material, assessment of programming assignments, homework corrections, semester) and exam preparation.
- 04.2003 **Computational Linguistics Tutor**, *Introduction to Computational Linguistics class*, Institute of 07.2006 Cognitive Science, University of Osnabrück, Germany, First year Cognitive Science class.
- (every other Weekly tutoring of the lecture material, preparation and assessment of programming assignments, homework semester) corrections, and exam preparation.
 - 10.2002 Theoretical Neuroscience Tutor, Introduction to Theoretical Neuroscience class, Institute of
 02.2003 Cognitive Science, University of Osnabrück, Germany, Second year Cognitive Science class.
 Weekly tutoring of the lecture material, homework corrections.
 - 10.2001 Computer Science Tutor, Algorithms class, Computer Science Department, University of Os-02.2002 nabrück, Germany, First year Computer Science class.
 Weekly oral assessment of 10 2-people groups and homework corrections.

Publications

- 09.2015 **Egon Stemle and Alexander Onysko**, Automated L1 identification in English learner essays and its implications for language transfer, In Peukert, editor, *Transfer Effects in Multilingual Language Development*, pages 297–321, [link].
- 09.2015 **Jennifer-Carmen Frey, Aivars Glaznieks, and Egon W. Stemle**, *The DiDi Corpus of South Tyrolean CMC Data*, In *Proceedings of the 2nd Workshop on Natural Language Processing for Computer-Mediated Communication / Social Media at GSCL2015 (NLP4CMC2015)*, Essen, German Society for Computational Linguistics & Language Technology.
- 06.2015 Lionel Nicolas, Egon Stemle, Aivars Glaznieks, and Andrea Abel, A Generic Data Workflow for Building Annotated Text Corpora, In Castello et al., editors, Studies in Learner Corpus Linguistics: Research and Applications for Foreign Language Teaching and Assessment.
- 12.2014 **Aivars Glaznieks and Egon Stemle**, Challenges of building a CMC corpus for analyzing writer's style by age: The DiDi project, In Beißwenger et al., editors, Journal for Language Technology and Computational Linguistics (JLCL), pages 31–57, [link].

- 12.2014 Aivars Glaznieks, Andrea Abel, Verena Lyding, Lionel Nicolas, and Egon Stemle, Establishing a Standardised Procedure for Building Learner Corpora, In Nikula et al., editors, Apples Journal of Applied Language Studies, pages 5–20, [link].
- 12.2014 Michel Généreux, Egon W. Stemle, Lionel Nicolas, and Verena Lyding, Correcting OCR errors for German in Fraktur font, In Basili et al., editors, Proceedings of the First Italian Conference on Computational Linguistics (CLiC-it 2014), Pisa, Italy, [link].
- 10.2014 **Jennifer-Carmen Frey, Egon W. Stemle, and Aivars Glaznieks**, *Collecting language data of non-public social media profiles*, In Faaß and Ruppenhofer, editors, *Workshop Proceedings of the 12th Edition of the KONVENS Conference*, pages 11–15, Hildesheim, Germany, Universitatsverlag Hildesheim, Germany, [link].
- 05.2014 **Verena Lyding, Lionel Nicolas, and Egon Stemle**, 'interHist' an interactive visual interface for corpus exploration, In Calzolari et al., editors, *Proceedings of the Ninth International Conference on Language Resources and Evaluation (LREC'14)*, pages 635–641, Reykjavik, Iceland, European Language Resources Association (ELRA), [link].
- 05.2014 Andrea Abel, Aivars Glaznieks, Lionel Nicolas, and Egon Stemle, KoKo: An L1 Learner Corpus for German, In Calzolari et al., editors, Proceedings of the Ninth International Conference on Language Resources and Evaluation (LREC'14), pages 2414–2421, Reykjavik, Iceland, European Language Resources Association (ELRA), [link].
- 04.2014 Verena Lyding, Egon Stemle, Claudia Borghetti, Marco Brunello, Sara Castagnoli, Felice Dell Orletta, Henrik Dittmann, Alessandro Lenci, and Vito Pirrelli, The PAISÀ Corpus of Italian Web Texts, In Proceedings of the 9th Web as Corpus Workshop (WaC-9), pages 36–43, Gothenburg, Sweden, Association for Computational Linguistics, [link].
- 12.2013 **Egon W. Stemle and Alexander Onysko**, *Language as a Detective Story*, Article in Academia (science magazine by EURAC and unibz), Bolzano, Italy.
- 11.2013 Verena Lyding, Claudia Borghetti, Henrik Dittmann, Lionel Nicolas, and Egon Stemle, Open Corpus Interface for Italian Language Learning, In Proceedings of the International Conference ICT for Language Learning, 6th edition, Florence, Italy, libreriauniversitaria.it, [link].
- 09.2013 Lionel Nicolas, Egon W. Stemle, Klara Kranebitter, and Verena Lyding, High-Accuracy Phrase Translation Acquisition Through Battle-Royale Selection, In Angelova et al., editors, Proceedings of Recent Advances in Natural Language Processing, RANLP 2013, pages 516–524, Hissar, Bulgaria, RANLP 2011 Organising Committee / ACL, [link].
- 07.2013 **Stefan Evert, Egon Stemle, and Paul Rayson, editors**, Proceedings of the 8th Web as Corpus Workshop (WAC-8), Workshop at the seventh international Corpus Linguistics conference (CL2013), Lancaster, UK.

 WAC-8 Organising Committee, [link]
- 06.2013 Klara Kranebitter and Egon W. Stemle, Constructing concept relation maps to support building concept systems in comparative legal terminology, In Roche et al., editors, Terminologie & Ontologie: Théories et Applications. Actes de la septième conférence TOTh 2013, pages 97–116, Chamébry, France, Institut Porphyre, Savoir et Connaissance.
- 09.2012 **Lionel Nicolas, Egon W. Stemle, and Klara Kranebitter**, *Towards high-accuracy bilingual phrase acquisition from parallel corpora*, In Jancsary, editor, *11th Conference on Natural Language Processing, KONVENS 2012, Empirical Methods in Natural Language Processing*, pages 471–479, Vienna, Austria, ÖGAI, [link].
- 07.2012 Francesca Bonin, Fabio Cavulli, Aronne Noriller, Massimo Poesio, and Egon W. Stemle, Annotating Archaeological Texts: An Example of Domain-Specific Annotation in the Humanities, In Proceedings of the Sixth Linguistic Annotation Workshop, number July in LAW VI '12, pages 134–138, Jeju, Republic of Korea, Association for Computational Linguistics, [link].
- 11.2011 Massimo Poesio, Eduard Barbu, Francesca Bonin, Fabio Cavulli, Asif Ekbal, Egon Stemle, and Christian Girardi, The Humanities Research Portal: Human Language Technology Meets Humanities Publication Archives, In Maegaard, editor, Proceedings of Supporting Digital Humanities (SDH2011): Answering the unaskable, Copenhagen, Denmark.

- 11.2011 Asif Ekbal, Francesca Bonin, Sriparna Saha, Egon Stemle, Eduard Barbu, Fabio Cavulli, Christian Girardi, and Massimo Poesio, Rapid Adaptation of NE Resolvers for Humanities Domains using Active Annotation, In Journal for Language Technology and Computational Linguistics (JLCL), pages 39–51, [link].
- 07.2011 **Brian Murphy and Egon W. Stemle**, PaddyWaC: A Minimally-Supervised Web-Corpus of Hiberno-English, In Proceedings of the First Workshop on Algorithms and Resources for Modelling of Dialects and Language Varieties, pages 22–29, Edinburgh, Scotland, UK, Association for Computational Linguistics, [link].
- 06.2011 Massimo Poesio, Eduard Barbu, Egon W. Stemle, and Christian Girardi, Structure-Preserving Pipelines for Digital Libraries, In Proceedings of the 5th ACL-HLT Workshop on Language Technology for Cultural Heritage, Social Sciences, and Humanities (LaTeCH 2011), pages 54–62, Portland, OR, USA, Association for Computational Linguistics, [link].
- 05.2010 Kepa Joseba Rodríguez, Francesca Delogu, Jannick Versley, Egon W. Stemle, and Massimo Poesio, Anaphoric Annotation of Wikipedia and Blogs in the Live Memories Corpus, In Calzolari et al., editors, Proceedings of the Seventh Conference on International Language Resources and Evaluation (LREC'10), Valletta, Malta, European Language Resources Association (ELRA), [link].
- 09.2009 **Johannes Steger and Egon Stemle**, *KrdWrd: Architecture for Unified Processing of Web Content*, In Alegria et al., editors, *Proceedings of the Fifth Web as Corpus Workshop (WAC5)*, pages 63–70, Donostia-San Sebastian, Basque Country, Spain, Elhuyar Fundazioa, [link].
- 09.2007 Daniel Bauer, Judith Degen, Xiaoye Deng, Priska Herger, Jan Gasthaus, Eugenie Giesbrecht, Lina Jansen, Christin Kalina, Thorben Krüger, Robert Märtin, Martin Schmidt, Simon Scholler, Johannes Steger, Egon Stemle, and Stefan Evert, FIASCO: Filtering the Internet by Automatic Subtree Classification, Osnabrück, In Fairon et al., editors, Proceedings of the Third Web as Corpus Workshop (WAC3), Louvain-la-Neuve, Presses universitaires de Louvain, [link].
- 07.2007 **Sebastian Blohm, Philipp Cimiano, and Egon Stemle**, Harvesting Relations from the Web Quantifying the Impact of Filtering Functions, In Proceedings of the 22nd Conference on Artificial Intelligence (AAAI-07), pages 1316–1323, Association for the Advancement of Artificial Intelligence, [link].
- 11.2005 Martin Bleichner, Eugenie Giesbrecht, Helmar Gust, Eva-Maria Leicht, Petra Ludewig, Sabine Möller, Wiebke Müller, Martin Schmidt, Moritz Stefaner, Egon Stemle, and Katja Wilke, ASADO: The Analysis and Structuring of Aviation Documents Final Report, Technical report, Institute of Cognitive Science at the University of Osnabrück and Institute of Applied Linguistics at the University of Hildesheim.

Presentations (talks, posters, etc. without proceedings)

- 10.2015 **Egon W. Stemle**, *The DiDi Project: Collecting, Annotating, and Analysing South Tyrolean Data of Computer-mediated Communication.*, Invited Talk at the first international research days (IRDs) on Social Media and CMC Corpora for the eHumanities, Rennes 2 University, Rennes, France, [link].
- 08.2015 Egon W. Stemle, Lionel Nicolas, and Verena Lyding, South Tyrolian Neologisms Project, Short presentation at the COST ENel WG3 meeting "Automatic Knowledge Acquisition for Lexicography", Herstmonceux Castle, Sussex, UK.
- 08.2015 **Egon W. Stemle**, Web Corpus Creation, Cleaning and Evaluation, Lecture at the Web as Corpus Meeting@eLex 2015, Herstmonceux Castle, UK.
- 04.2014 **Egon W. Stemle* and Alexander Onysko***, Automated L1 identification in English learner essays and its implications for language transfer, Talk in the 'Work in Progress Series' at the Kompetenzzentrum Sprachen, Freie Universität Bozen, Bozen/Bolzano, Italy.
- 11.2013 Andrea Abel, Aivars Glaznieks, and Egon W. Stemle, Automatische Annotation von Schülertexten Herausforderungen und Lösungsvorschläge am Beispiel des Projekts KoKo, Talk at the Workshop from the "Arbeitsgruppe: Korpusbasierte Linguistik" at the 40. Österreichische Linguistiktagung, Universität Salzburg, Salzburg, Austria, [link].

- 09.2013 Aivars Glaznieks and Egon W. Stemle, Herausforderungen bei der automatischen Verarbeitung von dialektalen IBK-Daten, Talk at the Workshop on "Verabeitung und Annotation von Sprachdaten aus Genres internetbasierter Kommunikation" at the International Conference of the German Society for Computational Linguistics and Language Technology (GSCL 2013), TU Darmstadt, Darmstadt, German, [link].
- 06.2013 **Egon W. Stemle and Verena Lyding**, *The future of BootCaT: A Creative Commons License filter*, Talk at BootCaTters of the world unite! (BOTWU), A workshop (and a survey) on the BootCaT toolkit, Department of Interpreting and Translation, University of Bologna, Forlì, Italy, [link].
- 02.2013 **Egon W. Stemle and Aivars Glaznieks**, (*Technical Aspects of*) Harvesting Data from Social Network Sites, Talk at the international workshop "Building Corpora of Computer-Mediated Communication: Issues, Challenges, and Perspectives", Department of German Language and Literature, Faculty of Culture Studies, TU Dortmund University, Dortmund, Germany, [link].
- 07.2012 **Egon W. Stemle**, Web Corpus Creation and Cleaning, Plenary Talk at Student Research Workshop Computer Applications in Linguistics (CSRW2012), English Corpus Linguistics Group at the Institute of Linguistics and Literary Studies, Technische Universität Darmstadt, Darmstadt, German, [link].
- 05.2012 **Egon W. Stemle, Verena Lyding, and Lionel Nicolas**, *On visual Approaches towards Corpus Exploration*, Short presentation at the 3rd workshop of the academic network on "Internet Lexicography", EURAC research, Bozen/Bolzano, Italy, [link].
- 11.2011 Massimo Poesio, Eduard Barbu, Egon Stemle, and Christian Girardi, Portale Ricerca Umanistica, Live Demo with Poster at the LiveMemories Final Event Internet, Memoria e Futuro and The Semantic Way, Povo di Trento, Italy.

Workshops, Conferences and Review Activities

- 08.2016 Member of the Organising Committee and Programme Committee, Workshop, 10th Web as Corpus Workshop (WAC-X), Workshop at the annual meeting of the Association for Computational Linguistics (ACL), Berlin, Germany.
- 08.2016 **Member of the Reviewing Board**, Special issue of the open-access journal Slovenščina 2.0 on Computer-Mediated Communication, [link].
- 09.2015 **Member of the Programme Committee**, *Workshop*, 2nd Workshop on Natural Language Processing for Computer-Mediated Communication / Social Media (NLP4CMC 2015), Pre-conference workshop at the International Conference of the German Society for Computational Linguistics and Language Technology (GSCL-2015), Essen, Germany.
- 10.2014 **Member of the Programme Committee**, *Workshop*, Natural Language Processing for Computer-Mediated Communication / Social Media (NLP4CMC), Pre-conference workshop at KONVENS 2014, Hildesheim, Germany.
- 04.2014 **Member of the Programme Committee**, *Workshop*, 9th Web as Corpus Workshop (WAC-9), Workshop at the 14th Conference of the European Chapter of the Association for Computational Linguistics (EACL 2014), Gothenburg, Sweden.
- 07.2013 Member of the Organising Committee and Programme Committee, Workshop, 8th Web as Corpus Workshop (WAC-8), Workshop day at the seventh international Corpus Linguistics conference (CL2013), Lancaster University, UK.
- 09.2006 **Student Worker at OTT06**, *Workshop*, Ontologies in Text Technology: Approaches to Extract Semantic Knowledge from Syntactic Information, jointly organized by the Institute of Cognitive Science at the University of Osnabrück and the project C2 of the distributed DFG-research group Text Technological Modelling of Information.

Administrative Experience

- since 08.2012 **Secretary of the Special Interest Group on the Web as Corpus (SIGWAC)**, SIG of the Association for Computational Linguistics.
 - 04.2006 Member of the Examination Board (Prüfungsausschuss), Cognitive Science Study Programme,
 - 03.2007 University of Osnabrück, Germany.
 - 12.2005 Member of the Search Committee (Besetzungkommission), Institute of Cognitive Science,
 - 02.2006 University of Osnabrück, Germany.
 - BAT IIa research associate in Artificial Intelligence.
 - 04.2005 Member of the Academic Studies Commission (Studienkommission), Cognitive Science Study
 - 03.2008 Programme, University of Osnabrück, Germany.
 - 02.2005 Member of the Search Committee (Berufungskommission), Faculty of Humanities, University
 - 01.2006 of Osnabrück, Germany.
 - W3 professor ship Artificial Intelligence and Cognitive Science.
 - 10.2003 Member of the Steering Committee (Vorstand), Institute of Cognitive Science, University of
 - 03.2008 Osnabrück, Germany.
 - 07.2003 Member of the Search Committee (Besetzungskommission), Institute of Cognitive Science,
 - 10.2003 University of Osnabrück, Germany.
 - BAT IIa research associate in Artificial Intelligence.

Other Activities

- 04.2006 A for Alibi Symposium, Uqbar Foundation, Utrecht University Museum [link].
- 12.2005 Amsterdam 2.0 Exhibition, Mediamatic, Amsterdam [link].

Technical counsel for Kasper Andreasen & Tine Melzer

- 03.2003 **Spring School**, Interdisciplinary College 2003 (IK2003), Günne at Lake Möhne.
 - Focus Theme: Applications, Brains and Computers
 - 2003 **The Complete Dictionary**, Tine Melzer, 26 volumes, A–Z.

Programming and Processing [link]

since 11.2002 Member of the German Cognitive Science Society (GK e.V.), [link].

Languages

German Native

English Excellent

French Basic

Italian Basic

Main education language at university. 5 years training during high-school.

Computer Skills

programming Python, Java, JavaScript (ECMAScrip),

Prolog, ML

scientific R, CQP, Oracle/Sun Grid Engine, Apache Hadoop, Matlab, OmniFind+UIMA, PDP++, Octave,

Protégé

OS Linux, OS X, Windows 2000/XP/Vista scripting Bash, Perl, PHP

design LaTeX, gnuplot, Inkscape, Scribus, InDesign, Illustrator, Photoshop, GIMP

services LAMP Stack, PostgreSQL, Apache Tomcat, Exim, Mailman, SpamAssassin, Trac, ISC Bind, Cyrus, Dovecot, OpenVPN, Shorewall, Darwin Calendar Server, FreeIPA, OpenLDAP, NIS/YP, Kerberos+NFSv4