CURRICULUM VITAE

Uli Grasemann

Department of Computer Science
The University of Texas at Austin, Austin, TX 78712, USA
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Research Interests

Cognitive Science and Computational Neuroscience: Neural-network modeling of perception, memory, emotion, language. Embodied/situated models. Modular/heterogeneous architectures. Developmental models.

Artificial Intelligence: Evolutionary computation, neuroevolution, robotics, natural language processing, computer vision.

Other interests: Data visualization, applications of wavelet analysis, computer graphics.

Education

Ph.D. in Computer Science, The University of Texas at Austin
December 2010. GPA 4.0/4.0. Advisors: Risto Miikkulainen and Ralph Hoffman. Dissertation: "A Computational Model of Language Pathology in Schizophrenia."

Master of Science (Diplom-Informatiker), Technische Universität München
October 2002. Major in computer science, minor in Physics. Graduated with distinction (mit Auszeichnung). Thesis: "Evolving Wavelets."

Publications

Journal papers

Ralph E. Hoffman, Uli Grasemann, Ralitza Gueorguieva, Donald Quinlan, Douglas Lane, Risto Miikkulainen. Using computational patients to evaluate illness mechanisms in schizophrenia. *Biological Psychiatry*. In press.

Uli Grasemann, Swathi Kiran, Chaleece Sandberg, Risto Miikkulainen. A connectionist model of aphasia in bilinguals. In preparation.

Conference proceedings

Uli Grasemann, Risto Miikkulainen, and Ralph Hoffman. (2009). Hyperlearning: A connectionist model of psychosis in schizophrenia. In *Proceedings of the 31st Annual Meeting of the Cognitive Science Society* (COGSCI-09), pp. 224–229. Amsterdam, The Netherlands.

Uli Grasemann, Risto Miikkulainen, and Ralph Hoffman (2007). A Subsymbolic Model of Language Pathology in Schizophrenia. In *Proceedings of the 29th Annual Conference of the Cognitive Science Society* (COGSCI-07, Nashville, TN), pp. 311–316. Hillsdale, NJ: Erlbaum.

Uli Grasemann and Risto Miikkulainen (2005). Effective Image Compression using Evolved Wavelets. In Proceedings of the Genetic and Evolutionary Computation Conference (GECCO-2005), pp. 1961–1968. Washington, DC.

Uli Grasemann and Risto Miikkulainen (2004). Evolving Wavelets using a Coevolutionary Genetic Algorithm and Lifting. In Proceedings of the Genetic and Evolutionary Computation Conference (GECCO-2004, Seattle, WA), pp. 969–980. San Francisco, CA: Morgan Kaufmann.

Book chapters

Uli Grasemann, Daniel Stronger, and Peter Stone. A neural network-based approach to robot motion control. In Ubbo Visser et. al. (Eds.): *RoboCup-2007: Robot Soccer World Cup XI*, Lecture Notes in Artificial Intelligence, pp. 480–87, Springer Verlag, Berlin, 2008.

Talks

Uli Grasemann, Chaleece Sandberg, Swathi Kiran, and Risto Miikkulainen (2010). Rehabilitation and cross-language transfer in bilingual aphasia: Towards a computational model. Fourteenth International Conference on Cognitive and Neural Systems (ICCNS-2010), Boston, MA, USA.

Uli Grasemann, Risto Miikkulainen, and Ralph Hoffman (2009). Hyperlearning: A connectionist model of psychosis in schizophrenia. COGSCI-09, Amsterdam, The Netherlands.

Uli Grasemann, Risto Miikkulainen, and Ralph Hoffman (2007). A subsymbolic model of language pathology in schizophrenia. COGSCI-07, Nashville, TN, USA.

Uli Grasemann and Risto Miikkulainen (2005). Effective Image Compression using Evolved Wavelets. GECCO-2005, Washington, DC, USA.

Uli Grasemann and Risto Miikkulainen. (2004). Evolving wavelets using a co-evolutionary genetic algorithm and lifting. GECCO-2004, Seattle, WA, USA.

Posters

Uli Grasemann, Ralph Hoffmann, and Risto Miikkulainen (2010). Evaluating comuptational models of language disturbance in schizophrenia. CNS*2010, San Antonio, TX.

Uli Grasemann, Chaleece Sandberg, Swathi Kiran, Risto Miikkulainen (2010). Rehabilitation and cross-language transfer in bilingual aphasia: Towards a computational model. CNS*2010, San Antonio, TX.

Uli Grasemann, Daniel Stronger, and Peter Stone (2008). A neural network-based approach to robot motion control. RoboCup-2007: Robot Soccer World Cup XI. Atlanta, GA, USA.

Awards and Honors

CNS*Org travel grant, CNS*2010, San Antonio, TX.

NSF student travel award, CogSci 2007, 2009.

Bronze medal, Human Competitive Results Competition (HUMIES)
Genetic and Evolutionary Computation Conference, 2005.

MCD Fellow, University of Texas at Austin, 2003 – 2007.

Dean's Excellence Award, University of Texas at Austin, 2003.

Graduated with distinction (mit Auszeichnung), TU Munich, 2002.

IMCC Engineering Exchange Scholarship, TU Munich, 1999 – 2000.

Jugend Forscht (German youth science competition).
3rd place of Bavaria in computer science/mathematics, 1994.

Service

Program committee member, Genetic and Evolutionary Computation Conference (GECCO), 2005 — present

Referee, Journal of Information Sciences.

Referee, The Computer Journal, Section C: Computational Intelligence.

Session chair, CogSci 2009, Neuroscience session.

Software

PyLEX – Python implementation of a bilingual version of the DISLEX model of the human lexicon. Work in progress.

DISCERN – Extensions to (and reimplementation of) the original model. `http://nn.cs.utexas.edu/?discern`

LiftLib – A C++ library for 1D and 2D discrete wavelet transforms implemented as lifting steps. `http://nn.cs.utexas.edu/?liftlib`

OpenDAVE - An extensible C++ framework for data analysis and visualization. `http://www.frm2.tum.de/en/science/service-groups/it-services/nexus-frm-ii/opendave/`

Experience

Research

Graduate Research Assistant, Department of Computer Science, UT Austin
Fall 2005 to Summer 2007, Spring 2009 to present, Austin, TX

Research Scientist (Wissenschaftlicher Angestellter), FRM-II, TU Munich
November 2002 to July 2003, Garching, Germany

Teaching

Graduate Teaching Assistant, Department of Computer Science, UT Austin

— Linear Algebra (Fall 2008)

— Intro to Java Programming (Spring 2008)

— Computer Fluency (Fall 2007)

— Artificial Intelligence (Fall 2004, Spring 2005)

Teaching Assistant, Department of Computer Science, TU Munich

— Intro to Computer Science III (Operating systems, assembly; Fall 2000)

Industry

Summer Intern, Stottler Henke Inc. Summer 2005, Seattle, WA

Summer Intern, 4soft GmbH. Summer 2000, Munich, Germany

Software Developer, SIMI GmbH. 1996 – 1999, Munich, Germany

Technical Skills

Programming languages: Expert knowledge in C, C++, Python.
Proficient in Java, bash, Perl.

Operating systems: Linux, MacOS, Unix, Windows

Environment: SciPy, Condor, MatPlotLib, gnuplot, autoconf, cvs, R, awk, LaTex, Qt, wxWidgets, openGL