Curriculum Vitae

Marvin Schiller
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Professional Experience

Dec. 2010 – today	*Centre for the Study of Expertise*, Brunel University, London, UK: Postdoctoral Researcher
June 2008 – Nov. 2010	Competence Center for e-Learning (CCeL) at the *German Research Center for Artificial Intelligence* (DFKI), Germany:
	Jan. 2010 – Nov. 2010: Guest Researcher
	June 2008 – Dec. 2009: Assistant Researcher
June and July 2008	Research visit at Carnegie Mellon University, Pittsburgh, USA
July 2005 – May 2008	*Dialog Project* in the Collaborative Research Center (SFB 378) *Resource Adaptive Cognitive Processes*, *Universität des Saarlandes*, Germany:
	Apr. 2007 – May 2008: Assistant Researcher (part-time)
	Jan. 2006 – March 2007: Researcher (fulltime)
	July 2005 – Dec. 2005: Student Researcher

Education

April 2007 – October 2010	Doctorate *Dr.-Ing.* (equivalent to Ph.D.) *magna cum laude* in Computer Science at *Universität des Saarlandes*, Germany, title: *Granularity Analysis for Tutoring Mathematical Proofs*
Sept. 2000 – Sept. 2006	"Diplom" (M.Sc.) in Computer Science with modules in Cognitive Psychology, *Universität des Saarlandes*, Germany, grade 1.0 (best possible grade), title: *Mechanizing Proof Step Evaluation for Mathematics Tutoring - the Case of Granularity*
Sept. 2003 – March 2004	Student exchange to Sophia Antipolis, France, in the scope of the *Erasmus* program

Grants

February 2010 – July 2010	Ph.D. scholarship from the Graduate School of Computer Science, Universität des Saarlandes, Germany
April 2007 – Dec. 2009	Ph.D. scholarship from *Studienstiftung des Deutschen Volkes e.V.* (German National Merit Foundation)
June and July 2008	Travel grant from *Studienstiftung des Deutschen Volkes* for research visit to Carnegie Mellon University, Pittsburgh, USA

Teaching

April – Sept. 2009 and Oct. 2009 – March 2010	Advisor/supervisor for two cycles of the seminar "Intelligent Tutoring Systems" at *Universität des Saarlandes, Germany*
Oct. 2006 – March 2007	Head Teaching Assistant for the core module "Artificial Intelligence" at Universität des Saarlandes
Oct. 2002 – March 2003	Teaching Assistant for the programming module *"Programmierung"*, Universität des Saarlandes

Publications

Book

Schiller, M. (2011). Granularity Analysis for Tutoring Mathematical Proofs. Heidelberg: AKA.

Peer Reviewed Journal Articles and Chapters in Books

Schiller, M. (submitted). Granularity Analysis for Mathematical Proofs. *Special Issue of TopiCS: Mathematical Practice and Cognition.*

Benzmüller, C., Schiller, M., & Siekmann, J. (2010). Resource-bounded Modelling and Analysis of Human-level Interactive Proofs. In M. W. Crocker & J. Siekmann (Eds.) *Resource Adaptive Cognitive Systems.* Cogn. Technologies Series (pp. 263-283). Springer.

Schiller, M., Dietrich, D., & Benzmüller, C. (2008). Proof step analysis for proof tutoring – a learning approach to granularity. *Teaching Mathematics and Computer Science, 6*(2):325-343.

Peer Reviewed Articles in Proceedings (the name(s) of the presenter(s) is/are underlined)

Schiller, M. & Gobet, F. (submitted). A Comparison between Cognitive and AI Models of Blackjack Strategy Learning. *Annual German Conference on Artificial Intelligence (KI-2012).*

Autexier, S., Dietrich, D., & Schiller, M. (2012). Towards Intelligent Tutors for Mathematical Proofs. In P. Quaresma and R.-J. Back: Proceedings of the First Workshop on CTP Components for Educational Software (THedu'11), Wroclaw, Poland, July 2011, *EPTCS,* 79, pp. 1-28.

Gobet, F., & Schiller, M. (2011). A Manifesto for Cognitive Models of Problem Gambling. In B. Kokinov, A. Karmiloff-Smith, & N. J. Nersessian (Eds.) *European Perspectives on Cognitive Sciences – Proc. European Conf. on Cognitive Science.* Sofia: New Bulgarian University Press. Available from http://nbu.bg/cogs/eurocogsci2011/proceedings/pdfs/EuroCogSci-paper171.pdf.

Schiller, M. & Benzmüller, C. (2009). Presenting Proofs with Adapted Granularity. In *KI 2009: Advances in Artificial Intelligence, 32nd Annual German Conference on AI* (LNCS, Vol. 5803, pp. 289-297). Springer.

Schiller, M. & Benzmüller, C. (2009). Granularity-Adaptive Proof Presentation. Intl. Conference on Artificial Intelligence in Education (AIED), Frontiers in Artificial Intelligence and Applications (Vol. 200, pp. 599-601). IOS Press.

Schiller, M. and Benzmüller, C. (2009). Proof Granularity as an Empirical Problem?. In *Proc. 1st Intl. Conference on Computer Supported Education - CSEDU 2009* (pp. 350-354). Setubal, Portugal: INSTICC Press.

Benzmüller, C., Dietrich, D., Schiller, M., & Autexier, S. (2007). Deep inference for automated proof tutoring. In *KI 2007: Advances in Artificial Intelligence* (Vol. 4667, pp. 435-439). Springer.

Schiller, M., Benzmüller, C., & Van de Veire, A. (2006). Judging Granularity for Automated Mathematics Teaching. *13th Intl. Conference on Logic for Programming, Artificial Intelligence and Reasoning (LPAR-13),* Phnom Penh, Cambodia. Available from www.lix.polytechnique.fr/~hermann/LPAR2006/short/submission_147.pdf.

Benzmüller, C., Horacek H., Lesourd, H., Kruijff-Korbajova, I., Schiller, M., & Wolska, M. (2006). A corpus of tutorial dialogs on theorem proving; the influence of the presentation of the study-material. In *Proc. Intl. Conference on Language Resources and Evaluation*, Genoa, Italy: ELDA. Available from http://hnk.ffzg.hr/bibl/lrec2006/pdf/778_pdf.pdf.

Benzmüller, C., Horacek, H., Lesourd, H., Kruijff-Korbajova, I., Schiller, M., & Wolska, M. (2006). DiaWOz-II - A Tool for Wizard-of-Oz Experiments in Mathematics. In *Proceedings of the 29th Annual German Conference on Artificial Intelligence* (LNAI, Vol. 4314, pp. 159-173). Springer.

Schiller, M. & Benzmüller, C. (2006). Granularity judgments in proof tutoring. In *Poster*

papers at KI 2006: Advances in Artificial Intelligence: 29th Annual German Conference on AI, Bremen, Germany. Available from http://www.ags.uni-sb.de/~chris/papers/W33.pdf.

Proceedings

Gobet, F. & Schiller, M. (2011). *2011 London Workshop on Problem Gambling - Proceedings of Abstracts. London*: Brunel University. Available from http://www.gamblingresearch.net/pg-workshop/2011lwpg.pdf.

Further Presentations at Conferences and Workshops

- Presentation "Models of Emotion and Gambling", *CHREST Tutorial: An Introduction to Cognitive Modelling* (workshop), London, UK, September 14th, 2011.
- Presentation "Cognitive Models for Problem Gambling", *2011 London Workshop on Problem Gambling*, London, UK, September 13th, 2011.
- Presentation "Development of Problem Gambling: Towards a Cognitive Model", *8th Nordic Conference on Prevalence, Prevention, Treatment and Responsible Gaming*, Reykjavik, Iceland, June 13-15th, 2011.
- Presentation "The Making-Of the Problem Gambler: Towards a Cognitive Model", *International Conference on Gambling Studies*, Nottingham, UK, April 3rd-5th, 2011.
- Invited presentation "Adaptive Assertion-Level Proofs" (with Christoph Benzmüller), Workshop *EMSQMS*, Edinburgh, UK, July 20th, 2010.
- Presentation "Human-Oriented Proof Techniques are Relevant for Proof Tutoring", W*orkshop on Mathematically Intelligent Proof Search*, Paris, France, July 10th, 2010.
- Presentation "Automated Granularity Judgments for Proof Steps: A Learning Approach", Edinburgh University, UK, June 8th, 2010.
- Poster presentation and system demonstration at *Deduktionstreffen 2009* in Bremen, Germany, October 15th and 16th, 2009.
- Presentation at Carnegie Mellon University in Pittsburgh (USA) "A Learning Approach to Step Size in Proof Tutoring", July 10th, 2008.
- Presentation "Granularität von Beweisschritten in Tutoriellen Dialogen", Saar-Weser-Workshop, DFKI Bremen, Germany, May 15th, 2008.
- Poster (and system demonstration) at Deduktionstreffen 2008 in Saarbrücken, Germany, March 17th and 18th, 2008.
- Presentation "Using Omega for Proof Tutoring in Activemath", CIAO Workshop 2009 in Darmstadt, Germany, February 21st, 2008.
- Presentation "Automatisierte Analyse von Beweisschritten in Lerndialogen - Das Problem der Granularität", Doctoral Symposium of Studienstiftung des Deutschen Volkes e.V., Bonn, Germany, October 10th, 2007.
- Presentation "Towards Computer-Assisted Proof Tutoring", JEM Workshop "Identifying and supporting mathematical communities (of practice) in educational scenarios", SCOOP-2007, Bremen, Germany, August 30th, 2007.
- Presentation "Proof Step Analysis for Proof Tutoring - A Learning Approach to Granularity", *First Central- and Eastern European Conference on Computer Algebra- and Dynamic Geometry Systems in Mathematics Education* (CADGME), Pecs, Hungary, June 21st, 2007.
- Presentation "Towards the Mechanization of Granularity Judgments for Mathematics Tutoring", *15th CLAM - INKA - OMRS Workshop*, CIAO-2006, Braunshausen, Germany, April 6th, 2006.
- Presentation "Studying Tutorial Dialog in Mathematics: A Wizard-of-Oz Tool, an Experiment, and a Case Study on Granularity", *MathDIALOG Workshop on Tutorial*

Natural Language Dialog in Mathematics, Saarbrücken, Germany, March 14th, 2006.

- Presentation "Granularity in Mathematical Dialog", *Theorema-Ultra-Omega Workshop, Saarbrücken*, Germany, November 15th, 2005.
- Presentation "A Wizard of Oz Study in Mathematics", *1st Saarbrücken-Nancy Workshop on Higher-order Logic and Hybrid Logics*, Saarbrücken, Germany, May 3rd, 2005.

Further Experiences

September 2011	Organiser (together with Fernand Gobet) of the *2011 London Workshop on Problem Gambling* and the workshop *CHREST Tutorial: An Introduction to Cognitive Modelling*, September 13th an 14th, 2011, at Brunel University, London, UK
January 2008	Selection panel member for student grant applicants at *Studienstiftung des Deutschen Volkes*
August 2006	Participant in the 18th European Summer School in "Logic Language and Information", University of Malaga, Spain
July 2001 – July 2003	Member of the Computer Sciences student's council (Fachschaft), Universität des Saarlandes
June 1999 – August 2000	Caretaker for disabled adults at *Camphill Communities*, Northern Ireland

Memberships

- GI (German Association for Informatics, subscription)
- Freunde der Saarbrücker Informatik (Supporters of Informatics in Saarbrücken, subscription)
- Cognitive Science Society

Services to the Scientific Community

- Reviewer for the journal *International Gambling Studies* since 2012
- Ad hoc reviewer for *Substance Abuse Treatment, Prevention, and Policy* since 2011
- Ad hoc reviewer for the *10th International Conference on Artificial Intelligence and Symbolic Computation (*AISC 2010), Paris, France
- Ad hoc reviewer for the conference *Artificial Intelligence and Applications* (AIA 2010), Innsbruck, Austria
- Ad hoc reviewer for the 21. *Conference on Automated Deduction* (CADE-21), 2007, Bremen, Germany
- Ad hoc reviewer for one article in the SEKI publication series (published by DFKI Bremen, Jacobs Universität Bremen and Universität des Saarlandes) in 2007

Technologies and Skills

- Programming (currently Java, Lisp, formerly C++, SML)
- Object-oriented design, UML
- Web technologies: XML-RPC, PHP, HTML, databases (SQL)
- LaTeX, SVN, CVS

Languages

German (native speaker), English (fluent, working language), French (fluent)