

Kenji Miyamoto

Curriculum Vitae

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Employment

- Nov. 2019–
Mar. 2020 **Teaching Assistant (part time)**, *Ludwig-Maximilians-Universität München*, Munich, Germany.
Teaching assistant for a lecture on mathematical logic.
- Nov. 2016–
Feb. 2019 **Research Assistant**, *Department for Computer Science, University of Innsbruck*, Innsbruck, Austria.
Working for the EU project FISP (Fine Structure for Proof Theory) as a research assistant for the topic of complexity analysis of Hilbert's epsilon calculus.
- Apr. 2016–
Sep. 2016 **Teaching Assistant (part time)**, *Ludwig-Maximilians-Universität München*, Munich, Germany.
Assistant for a lecture and a seminar on constructive analysis.
- Dec. 2015 **Researcher (parttime, freelance)**, *Research Institute for Symbolic Computation*, Linz, Austria.
Working for an industrial research project for automated reasoning software Theorema. My research goal is to implement an interface for Theorema, so that the reasoning engine of Theorema also works for the ontology language OWL. I am supposed to work for approx. 3 months.
- Jun. 2014–
Nov. 2015 **Research Staff**, *fortiss GmbH*, Munich, Germany.
fortiss GmbH is an institute associated with the Technical University of Munich. It is a research and technology transfer company in software-intensive systems and services. I have been enrolled in projects to provide solutions to customers by means of model-based software development. Additionally, I mentor PhD students in software engineering, supporting their official advisors.
- Apr. 2013–
Sep. 2013 **Teaching Assistant (part time)**, *Ludwig-Maximilians-Universität München*, Munich, Germany.
Assistant for a lecture and a seminar on proof theory. Gave lectures in realizability for three weeks. Gave exercises and tutorials for the whole semester.
- Dec. 2009–
Nov. 2012 **Guest Researcher**, *Ludwig-Maximilians-Universität München*, Munich, Germany.
Researched program extraction supporting coinduction. Developed new features for the proof assistant Minlog. (cf. <http://minlog-system.de/>)
- Nov. 2008–
Nov. 2009 **Software Developer**, *Hagenberg Software GmbH*, Hagenberg im Mühlkreis, Austria.
Developed add-on products for Microsoft SharePoint.
Used C#, Microsoft .NET, HTML, XML, JavaScript.
- Apr. 2007–
Sep. 2007 **Software Engineer**, *Hitachi Software Engineering, Co.,Ltd.*, Tokyo, Japan.
Engineer in a team for a mass storage management system.
Used Java, SQL, Python, and FAST Enterprise Search.

- Feb. 2007– **Programmer (part time)**, *Nippon Express Co.,Ltd.*, Kyoto, Japan.
 Mar. 2007 Assistant programmer for a web-based customer management system.
 Used PHP, HTML, JavaScript, Ajax, and MySQL.
- Dec. 2005– **Technical staff (part time)**, *Research Center for Verifications and Semantics*,
 Mar. 2006, *National Institute of Advanced Industrial Science and Technology*, Osaka, Japan.
 May. 2006– Research assistant in a verification project for a web system using π -calculus and the proof
 Aug. 2006 assistant Agda.
- Oct. 2004– **Teaching Assistant (part time)**, *Kyoto University*, Kyoto, Japan.
 Mar. 2005 Assistant for a course on Scheme interpreter development using OCaml for bachelor students
 of the 6th semester.
- Apr. 2004– **Teaching Assistant (part time)**, *Kyoto University*, Kyoto, Japan.
 Sep. 2004 Assistant for a course on hardware development using a programmable logic device by Xilinx
 for bachelor students of the 5th semester.

List of publications

- 2016 U. Berger, K. Miyamoto, H. Schwichtenberg and H. Tsuiki, *Logic for Gray-code computation*, in D. Probst and P. Schuster (eds), *Concepts of Proof in Mathematics, Philosophy, and Computer Science*, De Gruyter
- 2016 A. Bayha, L. Lúcio, V. Aravantinos, G. Igna and K. Miyamoto. *Factory Product Lines: Tackling the Compatibility Problem*, VaMoS 2016
- 2015 Kenji Miyamoto and Helmut Schwichtenberg. Program extraction in exact real arithmetic. *Mathematical Structures in Computer Science*. MSCS 25, Cambridge University Press.
- 2015 Ulrich Berger, Kenji Miyamoto, Helmut Schwichtenberg and Hideki Tsuiki. Logic for Gray code computation, submitted
- 2015 V. Aravantinos, K. Miyamoto, Z. Molotnikov, B. Schätz and N. Regnat. *Textual model-based software/system architecture documentation using MPS*, *Software Engineering & Management* 2015, LNI 239, pp. 232–237.
- 2013 Kenji Miyamoto, Fredrik Nordvall Forsberg, and Helmut Schwichtenberg. Program extraction from nested definitions. In Sandrine Blazy, Christine Paulin-Mohring, and David Pichardie, editors, *4th Conference on Interactive Theorem Proving*, volume 7998 of *Lecture Notes in Computer Science*, pages 370–385. Springer.
- 2011 Ulrich Berger, Kenji Miyamoto, Helmut Schwichtenberg, and Monika Seisenberger. Minlog — a tool for program extraction supporting algebras and coalgebras. In Andrea Corradini, Bartek Klin, and Corina Cîrstea, editors, *4th Conference on Algebra and Coalgebra in Computer Science*, volume 6859 of *Lecture Notes in Computer Science*, pages 393–399. Springer.
- 2004 Kenji Miyamoto and Atsushi Igarashi. A modal foundation for secure information flow. In Andrei Sabelfeld, editor, *Proceedings of the Workshop on Foundations of Computer Security*, number 31 in *Turku Centre for Computer Science General Publication*, pages 187–203.

Academic events

- 17–21 **Lecturer**, *Fourteenth International Tbilisi Summer School in Logic and Language*,
Sep. 2018 Tbilisi, Georgia.
Gave a lecture on epsilon calculus in the international summer school focused on the fields of mathematical logic and linguistics. <https://www.logic.at/tbilisi18/>
- 8–9 **Program committee**, *Fourth International Workshop on Structures and Deduction*,
Sep. 2017 Oxford, UK.
<http://anupamdass.com/sd17/>
- 3–8 **Lecturer**, *Autumn School “Proof and Computation”*, Fischbachau, Germany.
Oct. 2016 Gave a lecture on program extraction in the international autumn school which aims to bring together young researchers in the field of Foundation of Mathematics, Computer Science and Philosophy. <http://www.math.lmu.de/~schwicht/pc16.php>
- 8–13 **Organization committee**, *Mathematics for Computation*, Lower Bavaria,
May. 2016 Germany.
<https://mathematics4computation.org/>
- 5–6 **Organization committee**, *15th international workshop Proof, Computation, Complexity*, Munich, Germany.
May. 2016 <https://www.irit.fr/PCC2016/>

Education

- Dec. 2009– **Doctor of Natural Science**, *Mathematisches Institut der LMU*, Munich, Germany.
Dec. 2013 Thesis Title: Program Extraction from Coinductive Proofs and its Application to Exact Real Arithmetic.
Supervisor: Prof. Dr. Helmut Schwichtenberg.
- Oct. 2007– **Master of Science**, *International School for Informatics, Johannes Kepler University*, Linz, Austria.
Aug. 2008 Thesis title: Parallel Algorithms for Sparse Matrices in an Industrial Optimization Software.
Supervisor: Prof. Dr. Wolfgang Schreiner.
- Apr. 2004– **PhD student**, *Graduate School of Informatics, Kyoto University*, Kyoto, Japan.
Mar. 2007
- Apr. 2002– **Master of Informatics**, *Graduate School of Informatics, Kyoto University*, Kyoto,
Mar. 2004 Japan.
Thesis Title: A Modal Foundation for Secure Information Flow.
Supervisor: Prof. Dr. Masahiko Sato.
- Apr. 1998– **Bachelor of Engineering**, *Department of Electronics and Electrical Engineering*,
Mar. 2002 *Faculty of Science and Technology, Keio University*, Tokyo, Japan.

Languages

- Japanese **Mother tongue**
English **Fluent**
German **Basic**