



LANGUAGES

- ▶ German (fluent, native tongue)
- ▶ English (fluent, bilingual secondary education, Cambridge *Certificate in Advanced English*, Grade A)
- ▶ French (basic)

WORK EXPERIENCE AND EMPLOYMENT

**PricewaterhouseCoopers GmbH Wirtschaftsprüfungsgesellschaft, Düsseldorf** since 4/2018  
*Senior Consultant (Technology Consulting / CIO Advisory)*

- ▶ technology and IT consulting with focus on the automotive industry
- ▶ support for the implementation of the General Data Protection Regulation (GDPR) in a national and international context

**Henning Kerstan und Roman Ortmann GbR, Duisburg, Germany** since 5/2009  
*Manager and Proprietor (Geschäftsführender Gesellschafter)*

- ▶ sound and light equipment for small events (concerts, sport events, proms, weddings, birthdays)
- ▶ IT support for individuals and local medium-sized companies
- ▶ website development (TYPO3, Wordpress) and hosting
- ▶ software development (Objective-C on iOS and Mac OS X)

**Technische Universität Darmstadt, Germany** 4/2017 – 3/2018  
*Postdoctoral Researcher (Wissenschaftlicher Mitarbeiter) in IT Security*

- ▶ teaching of basics in cryptography and IT security (creation and editing of lecture material, exercises, exams as well as giving the lectures)
- ▶ recruitment and mentoring of a new team of student teaching assistants
- ▶ international collaboration with scientists in Germany and Italy
- ▶ referee for several international conference submissions

**PricewaterhouseCoopers GmbH Wirtschaftsprüfungsgesellschaft, Düsseldorf** 5/2016 – 3/2017  
*Senior Consultant (Technology Consulting / CIO Advisory)*

- ▶ technology and IT consulting with focus on the automotive industry
- ▶ IT project management in an international post merger integration
- ▶ negotiation of an IT Transitional Services Agreement in an international post merger integration
- ▶ revision of a market sizing model in a connected car study

**Universität Duisburg-Essen, Duisburg, Germany** 11/2011 – 5/2016  
*Research and Teaching Assistant (Wissenschaftlicher Mitarbeiter) in Theoretical Computer Science*

- ▶ international collaborations with scientists in France, Italy, the Netherlands
- ▶ speaker at various international conferences and workshops (Barbados, India, Germany, France, Netherlands, Poland, Estonia, Portugal, UK)
- ▶ teaching (exercises, tutorials, exams, thesis supervision)
- ▶ referee for several international conference and journal submissions

**Universität Duisburg-Essen, Duisburg, Germany**

3/2009 – 7/2011

*Student Research and Teaching Assistant (Studentische Hilfskraft)*

- ▶ C++ prototype implementation of an algorithm for solving a scheduling problem in steel production
- ▶ teaching (exercises)

**EDUCATION**

**PhD in Computer Science (summa cum laude)**

11/2011 – 4/2016

*Universität Duisburg-Essen, Duisburg, Germany*

- ▶ degree: Doktor der Naturwissenschaften (Dr. rer. nat.)
- ▶ topic: algebraic modeling and behavior analysis of transition systems
- ▶ Award for the best PhD thesis of the faculty of engineering (Fakultät für Ingenieurwissenschaften) in 2016/17  
(see <https://www.uni-due.de/de/absolventenehrung/abschluss2017.php>)

**Diplom (equivalent to M.Sc. degree) in Mathematics (Grade 1.0)**

4/2007 – 9/2011

*Universität Duisburg-Essen, Duisburg, Germany*

- ▶ degree: Diplom-Mathematiker (Dipl.-Math.)
- ▶ specialization: algebra, cryptography, operations research
- ▶ minor: computer science

**Abitur (Grade 1.0)**

8/1997 – 6/2006

*Landfermann Gymnasium, Duisburg, Germany*

- ▶ bilingual education in German and English
- ▶ development of a network application for the school's weather station

**PUBLICATIONS**

**Monographs**

- [1] Henning Kerstan. “Coalgebraic Behavior Analysis – From Qualitative to Quantitative Analyses”. PhD thesis. Universität Duisburg-Essen, Fakultät für Ingenieurwissenschaften, Abteilung für Informatik und Angewandte Kognitionswissenschaft, May 2016. urn:nbn:de:hbz:464-20160509-140627-6.
- [2] Henning Kerstan. “Trace Semantics for Probabilistic Transition Systems – A Coalgebraic Approach”. Diplomarbeit. Universität Duisburg-Essen, Sept. 2011.

**Refereed Articles in International Journals**

- [3] Paolo Baldan, Filippo Bonchi, Henning Kerstan, and Barbara König. “Coalgebraic Behavioral Metrics”. In: *Logical Methods in Computer Science* (2018). – accepted article, publication pending / akzeptierter Artikel, Veröffentlichung ausstehend –.
- [4] Henning Kerstan and Barbara König. “Coalgebraic Trace Semantics for Continuous Probabilistic Transition Systems”. In: *Logical Methods in Computer Science* 9 [4:16].834 (Dec. 2013). doi:10.2168/LMCS-9(4:16)2013. arXiv:1310.7417v3 [cs.LO].

## Refereed Articles in Proceedings of International Conferences

- [5] Paolo Baldan, Filippo Bonchi, Henning Kerstan, and Barbara König. “Towards Trace Metrics via Functor Lifting”. In: *6th Conference on Algebra and Coalgebra in Computer Science (CALCO'15)*. Ed. by Lawrence S. Moss and Paweł Sobociński. Vol. 35. Leibniz International Proceedings in Informatics (LIPIcs). Schloss Dagstuhl – Leibniz-Zentrum für Informatik, Oct. 2015, pp. 35–49. doi:10.4230/LIPIcs.CALCO.2015.35. arXiv:1505.08105 [cs.LO].
- [6] Paolo Baldan, Filippo Bonchi, Henning Kerstan, and Barbara König. “Behavioral Metrics via Functor Lifting”. In: *34th International Conference on Foundations of Software Technology and Theoretical Computer Science (FSTTCS 2014)*. Ed. by Venkatesh Raman and S. P. Suresh. Vol. 29. Leibniz International Proceedings in Informatics (LIPIcs). Schloss Dagstuhl – Leibniz-Zentrum für Informatik, 2014, pp. 403–415. doi:10.4230/LIPIcs.FSTTCS.2014.403. arXiv:1410.3385 [cs.LO].
- [7] Henning Kerstan, Barbara König, and Bram Westerbaan. “Lifting Adjunctions to Coalgebras to (Re)Discover Automata Constructions”. In: *Coalgebraic Methods in Computer Science*. Ed. by Marcello M. Bonsangue. Vol. 8446. Lecture Notes in Computer Science. Springer Berlin Heidelberg, 2014, pp. 168–188. doi:10.1007/978-3-662-44124-4\_10.
- [8] Henning Kerstan and Barbara König. “Coalgebraic Trace Semantics for Probabilistic Transition Systems Based on Measure Theory”. In: *CONCUR 2012 – Concurrency Theory*. Ed. by Maciej Koutny and Irek Ulidowski. Vol. 7454. Lecture Notes in Computer Science. Springer Berlin Heidelberg, Sept. 2012, pp. 410–424. doi:10.1007/978-3-642-32940-1\_29.

## Other Publications

- [9] Richard Viereckl, Dietmar Ahlemann, Alex Koster, Evan Hirsh, Felix Kuhnert, Joachim Mohs, Marco Fischer, Walter Gerling, Kaushik Gnanasekaran, Julia Kusber, Juliane Stephan, David Crusius, Henning Kerstan, Trent Warnke, Manuel Schulte, et al. *Connected car report 2016: Opportunities, risk, and turmoil on the road to autonomous vehicles*. Ed. by Richard Viereckl, Alex Koster, Evan Hirsh, and Dietmar Ahlemann. Sept. 2016. <https://www.strategyand.pwc.com/reports/connected-car-2016-study>.
- [10] Henning Kerstan and Barbara König. *Coalgebraic Trace Semantics for Probabilistic Transition Systems Based on Measure Theory*. Tech. rep. 2012-02. Abteilung für Informatik und Angewandte Kognitionswissenschaft, Universität Duisburg-Essen, June 2012. urn:nbn:de:hbz:464-20120703-101943-2.