



Prof. Dr. Henning Femmer

Professor für Wirtschaftsinformatik an der Fachhochschule Südwestfalen
und Mitgründer bei Qualicen GmbH

Geboren am 01. November 1986,
verheiratet, zwei Kinder

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Google Scholar: <https://scholar.google.de/citations?user=3zap2YUAAAAJ>

Werdegang

Wissenschaftlicher Werdegang

- Seit 07/2021 **Fachhochschule Südwestfalen (FH SWF)**, Fachbereich Technische Betriebswirtschaft, Deutschland
Professor für Wirtschaftsinformatik, inbs. Requirements Engineering und IT-Qualitätsmanagement
- 04/2012 – 07/2017 **Technische Universität München (TUM)**, Lehrstuhl für Software & Systems Engineering, Deutschland
Doktor der Naturwissenschaften (Dr. rer. nat.)
Thesis: *Requirements Engineering Artifact Quality: Definition and Control*
Gutachter: Prof. Dr. Dr. h.c. Manfred Broy (TUM),
Prof. Dr. Martin Glinz (Universität Zürich)
- 10/2009 – 03/2012 **Universität Augsburg, Technische Universität München (TUM), Ludwig-Maximilians-Universität München (LMU)**, Deutschland
Master of Science with Honours,
Software Engineering Elite Graduate Program
Masterarbeit am Fraunhofer Center for Experimental Software Engineering (CESE), College Park, Maryland, USA,
Publikation: H. Femmer et al. "Detecting Inconsistencies in Wrappers - A Case Study", ICSE 2013.
- 09/2008 – 01/2009 **Queen's University Belfast (QUB, ERASMUS)**, Belfast, United Kingdom
- 10/2006 – 10/2009 **Technische Universität München (TUM)**, München, Deutschland
Bachelor of Science,
Hauptfach Informatik, Nebenfach Logik & Wissenschaftstheorie
Bachelor's Thesis:
Recommendation and Recovery of Traceability Links
Prüfer: Prof. Brügge
- 08/2003 – 06/2006 **Richard-von-Weizsäcker-Berufskolleg**, Dülmen, Deutschland
Schwerpunkt Mathematik und Informatik
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Beruflicher Werdegang

Seit 11/2015	Gesellschafter, Leitung des Requirements Engineering Consultings und der Projektakquise bei Qualicen GmbH , Garching. Entwicklung der Akquisekanäle, Aufbau des Unternehmens
04/2012 – 11/2019	Wissenschaftlicher Angestellter an der Technischen Universität München , Forschungsgruppe für Software & Systems Engineering. Promotion, Beratungsprojekte mit Daimler, BMW, Munich Re, Wacker Chemie, MAN u.A.
02/2015 – 12/2015	Gesellschafter, Projektakquise und Projektmanagement bei HEJF GbR , München. Erfolgreicher Start des Unternehmens, das in die Qualicen GmbH aufgegangen ist
01/2013 – 03/2015	Selbstständige Tätigkeit in der Projektberatung und Umsetzung von Individualsoftware für ein Unternehmen im politischen Consulting
05/2011 – 10/2011	Praktikant am Fraunhofer Center for Experimental Software Engineering , College Park, Maryland, USA Erfolgreiche Analyse von NASA Flight Software die zum Auffinden vieler Defekte geführt hat. Auszeichnung mit dem NASA Group Achievement Award als Bestandteil des SARP Projekts.
09/2011	Co-Organisation des Agile Day New York City mit 150 Gästen (Aufgabenbereich: Evaluation)
08/2010 – 04/2011	Praktikant und Werkstudent bei der Siemens AG, Corporate Research and Technologies , München Erfolgreiche Entwicklung eines Visualisierungswerkzeuges für Smart Home Applikationen, Veröffentlichung der Ergebnisse dieser Arbeiten auf der COMPSAC 2011
07/2010 – 10/2010	Organisation eines Workshops, sowie eines Vortragstages zum Thema Agile Software Development für ca. 100 Studierende an der Universität Augsburg
04/2009 – 08/2009	Werkstudent bei der MobileX AG , München, Deutschland Anwendungsentwicklung für das Workforce Management.
10/2007 – 07/2008	Arbeit als Tutor an der Technischen Universität München

Wissenschaftliches Profil

Beiträge und Aktivitäten (Übersicht)

Veröffentlichungen	42 Beiträge (peer-reviewed), 852 Zitationen, h-Index: 15 (google scholar)
Ausgewählte Veröffentlichungen	<p>H. Femmer and A. Vogelsang, "Requirements Quality Is Quality in Use," IEEE Softw., vol. 36, no. 3, 2019. <i>Erläuterung:</i> Arbeit zu einer neuen praxisrelevanten Definition von Qualität im Kontext von Anforderungen.</p> <p>H. Femmer, D. M. Fernández, S. Wagner, and S. Eder, "Rapid quality assurance with Requirements Smells," J. Syst. Softw., vol. 123, 2017. <i>Erläuterung:</i> Empirische Untersuchung zu automatisch detektierbaren Fehlern in Software und System-Spezifikationen von Daimler und Wacker Chemie mittels Natural Language Processing Techniken.</p> <p>H. Femmer, D. Ganesan, M. Lindvall, and D. McComas, "Detecting inconsistencies in wrappers: a case study," in 35th International Conference on Software Engineering, ICSE, 2013. <i>Erläuterung:</i> Früher Ansatz um Machine Learning zur Detektion von Softwaredefekten einzusetzen, der 57 Bugs in NASA Flight Software aufgedeckt hat.</p> <p>B. Penzenstadler and H. Femmer, "A Generic Model for Sustainability with Process- and Product-specific Instances," in International Workshop on Green In Software Engineering and Green By Software Engineering, GIBSE, 2013. <i>Erläuterung:</i> Erstes formales Modell für Nachhaltigkeit im Software Engineering. Arbeit mit über 130 Zitationen.</p> <p>A. Mavin, P. Wilkinson, S. Teufl, H. Femmer, J. Eckhardt, and J. Mund, "Does Goal-Oriented Requirements Engineering Achieve Its Goal?," in 25th IEEE International Requirements Engineering Conference, RE, 2017. <i>Erläuterung:</i> Kritische, empirische Studie zum Fokus der wissenschaftlichen Forschung in der RE Community.</p>
Chairs	Co-Chair Third International Workshop on Artificial Intelligence for Requirements Engineering, 4th International Workshop on Artificial Intelligence for Requirements Engineering, Social Media Chair 25th Intl. Working Conference on Requirements Engineering: Foundation for Software Quality (REFSQ'19)
Program Committees	24 th -28 th International Requirements Engineering Conference (RE16-21), 25-26 th Intl. Working Conference on Requirements Engineering: Foundation for Software Quality (REFSQ'19-21), Software Quality Days (SWQD) Conference 2020-2021, 2 nd -3 rd Intl. Workshop on Requirements Engineering for Sustainable Systems (RE4SuSy), 3 rd -6 th International Workshop on Requirements Engineering and Testing (RET'16-19), 1 st -3 rd Workshop on Natural Language Processing for Requirements Engineering (NLP4RE'18-21), 5 th -7 th International Workshop on Artificial Intelligence for Requirements Engineering (AIRE'18-21), Workshop on Easy Approach to Requirements Syntax

Sonstige Reviewsdienste	TOSEM Journal, Automated Software Engineering Journal, IEEE Software, Models, European Conference on Software Maintenance and Reengineering, The Evaluation and Assessment in Software Engineering Conference, FormaliSE, Modelsward, Automotive - Safety & Security, The Ninth International Workshop on Variability Modelling of Software-intensive Systems (VaMOS), International Symposium on Empirical Software Engineering and Measurement (ESEM), International Conference on Software Engineering, International Workshop on Conflicts and Synergies Among Security, Reliability, and Other Qualities, Working Conference on Reverse Engineering
Co-Organisation Veranstaltungen	Agile Days Augsburg 2010, Agile Days New York City 2011, German Requirements Night 2016
Disseminations- vorträge auf Industrienahen Konferenzen oder bei firmeninternen Veranstaltungen	<p>Vorträge auf der Vortrag auf der OOP Conference 2020, Hamburg Requirements Engineering Symposium 2019, Tag des System Engineerings 2019, REConf 2017, 2018, 2019, Software Quality Days 2018, 2019, 2020 (Die Besten Vortragenden 2019 & 2020), Berliner RE Symposium 2018, 2019 (Keynote 2019), Forum Safety & Security 2019, Embedded World 2017, Embedded Testing 2019, PTC Executive Exchange 2016, GI RE Jahrestagung 2016, TechDivision TechTalks Munich, sechs Vorträge für die bayme vbm 2017, TEKOM Jahrestagung 2017, PTC Forum Europe – ALM User Group Meeting, mobileX User Group 2018, sowie ca. 50 firmeninterne Vorträge im Bereich Automotive, Avionics, Insurance, Healthcare, Embedded und sonstige Hersteller von Software und Softwareintensiven Produkten.</p> <p><i>Geplant:</i> Keynote auf den Software Quality Days Research Track 2022, Keynote auf dem Workshop on Academia-Industry Collaboration 2022, sowie diversen weiteren Corona-bedingt verschobenen Veranstaltungen 2022</p>
Pro-Lehre Zertifikate	Fit in die Lehre, Prüfungen als Spiegel der Lehre, Rechtliche Aspekte der Hochschullehre, PowerPoint ade: Präsentieren mal anders – mit Prezi

Vollständige Publikationsliste

Journale und Magazine

1. H. Femmer and A. Vogelsang, "Requirements Quality Is Quality in Use," *IEEE Softw.*, vol. 36, no. 3, 2019.
 2. H. Femmer, D. M. Fernández, S. Wagner, and S. Eder, "Rapid quality assurance with Requirements Smells," *J. Syst. Softw.*, vol. 123, 2017.
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Buchkapitel

3. M. Kuhrmann, H. Femmer, and J. Eckhardt, "Controlled Experiments as Means to Teach Soft Skills in Software Engineering," *Overcoming Challenges Softw. Eng. Educ. Deliv. Non-Technical Knowl. Ski. Deliv. Non-Technical Knowl. Ski.*, 2014.
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Konferenzen

4. J. Fischbach, J. Frattini, D. Mendez, M. Unterkalmsteiner, H. Femmer, & A. Vogelsang. How Do Practitioners Interpret Conditionals in Requirements?. In *International Conference on Product-Focused Software Process Improvement* (pp. 85-102). Springer, Cham, 2021.
 5. J. Fischbach, T. Springer, J. Frattini, H. Femmer, A. Vogelsang & D. Mendez. Fine-grained causality extraction from natural language requirements using recursive neural tensor networks. In *2021 IEEE 29th International Requirements Engineering Conference Workshops (REW)* (pp. 60-69), 2021.
 6. H. Femmer. "Assisted Requirements Engineering-What Will Remain in the Hands of the Future Requirements Engineer?(Invited Keynote)." *International Conference on Software Quality*. Springer, Cham, 2021.
 7. J. Fischbach, H. Femmer, D. Mendez, D. Fucci, & A. Vogelsang. What Makes Agile Test Artifacts Useful? An Activity-Based Quality Model from a Practitioners' Perspective. In *Proceedings of the 14th ACM/IEEE International Symposium on Empirical Software Engineering and Measurement (ESEM)*, 2020.
 8. K. Winter, H. Femmer, and A. Vogelsang. "How Do Quantifiers Affect the Quality of Requirements?." *International Working Conference on Requirements Engineering: Foundation for Software Quality*. Springer, Cham, 2020.
 9. H. Femmer, A. Müller, and S. Eder. "Semantic Similarities in Natural Language Requirements." *International Conference on Software Quality*. Springer, Cham, 2020.
 10. L. Allodi, S. Banescu, H. Femmer, and K. Beckers, "Identifying Relevant Information Cues for Vulnerability Assessment Using CVSS," in *Proceedings of the Eighth ACM Conference on Data and Application Security and Privacy, CODASPY*, 2018.
 11. H. Femmer, "Automatic Requirements Reviews - Potentials, Limitations and Practical Tool Support," in *Product-Focused Software Process Improvement - 18th International Conference, PROFES*, 2017.
 12. A. Mavin, P. Wilkinson, S. Teufl, H. Femmer, J. Eckhardt, and J. Mund, "Does Goal-Oriented Requirements Engineering Achieve Its Goal?," in *25th IEEE International Requirements Engineering Conference, RE*, 2017.
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13. H. Femmer, B. Hauptmann, S. Eder, and D. Moser, "Quality Assurance of Requirements Artifacts in Practice: A Case Study and a Process Proposal," in *Product-Focused Software Process Improvement - 17th International Conference, PROFES 2016*.
 14. A. Vogelsang, H. Femmer, and C. Winkler, "Take Care of Your Modes! An Investigation of Defects in Automotive Requirements," in *Requirements Engineering: Foundation for Software Quality - 22nd International Working Conference, REFSQ, 2016*.
 15. A. Vogelsang, H. Femmer, and M. Junker, "Characterizing Implicit Communal Components as Technical Debt in Automotive Software Systems," in *Proc. of the 13th Working IEEE/IFIP Conference on Software Architecture, WICSA, 2016*.
 16. J. Eckhardt, A. Vogelsang, H. Femmer, and P. Mager, "Challenging Incompleteness of Performance Requirements by Sentence Patterns," in *24th IEEE International Requirements Engineering Conference, RE, 2016*.
 17. M. R. Basirati, H. Femmer, S. Eder, M. Fritzsche, and A. Widera, "Understanding changes in use cases: A case study," in *23rd IEEE International Requirements Engineering Conference, RE, 2015*.
 18. A. Vogelsang, H. Femmer, and C. Winkler, "Systematic elicitation of mode models for multifunctional systems," in *23rd IEEE International Requirements Engineering Conference, RE, 2015*.
 19. J. Mund, H. Femmer, M. Daniel, and J. Eckhardt, "Does Quality of Requirements Specifications matter? Combined Results of Two Empirical Studies," in *Proc. of the 9th International Symposium on Empirical Software Engineering and Measurement, ESEM, 2015*.
 20. H. Femmer, J. Kucera, and A. Vetro, "On the impact of passive voice requirements on domain modelling," in *2014 ACM-IEEE International Symposium on Empirical Software Engineering and Measurement, ESEM, 2014*.
 21. B. Penzenstadler, A. Raturi, D. J. Richardson, C. Calero, H. Femmer, and X. Franch, "Systematic mapping study on software engineering for sustainability (SE4S)," in *18th International Conference on Evaluation and Assessment in Software Engineering, EASE, 2014*.
 22. D. Méndez Fernández, J. Mund, H. Femmer, and A. Vetrò, "In Quest for Requirements Engineering Oracles: Dependent Variables and Measurements for (good) RE," in *Proceedings of the 18th International Conference on Evaluation and Assessment in Software Engineering, EASE, 2014*.
 23. H. Femmer, M. Kuhrmann, J. Stimmer, and J. Junge, "Experiences from the Design of an Artifact Model for Distributed Agile Project Management," in *IEEE 9th International Conference on Global Software Engineering, ICGSE, 2014*.
 24. S. Eder, H. Femmer, B. Hauptmann, and M. Junker, "Which Features Do My Users (Not) Use?," in *30th IEEE International Conference on Software Maintenance and Evolution, ICSME, 2014*.
 25. B. Penzenstadler and H. Femmer, "Towards a definition of sustainability in and for software engineering.," in *ACM Symposium on Applied Computing, SAC, 2013*.
 26. H. Femmer, D. Ganesan, M. Lindvall, and D. McComas, "Detecting inconsistencies in wrappers: a case study," in *35th International Conference on Software Engineering, ICSE, 2013*.
 27. H. Femmer, N. Broy, M. Zec, A. MacWilliams, and R. Eckl, "Dynamic Software Visualization with BusyBorg - A Proof of Concept," in *Proceedings of the 35th Annual IEEE International Computer Software and Applications Conference, COMPSAC, 2011*.
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Workshops

28. H. Femmer, "Requirements Quality Defect Detection with the Qualicen Requirements Scout," in *Joint Proceedings of REFSQ-2018 Workshops, Doctoral Symposium, Live Studies Track, and Poster Track co-located with the 23rd International Conference on Requirements Engineering: Foundation for Software Quality, NLP4RE, 2018*.
29. H. Femmer and A. Vogelsang, "Good RE Artifacts? I Know It When I Use It!," *Softwaretechnik-Trends*, vol. 37, no. 2, Gesellschaft für Informatik FGRE, 2017.
30. H. Femmer, M. Unterkalmsteiner, and T. Gorschek, "Which Requirements Artifact Quality Defects are Automatically Detectable? A Case Study," in *IEEE 25th International Requirements Engineering Conference Workshops, AIRE, 2017*.
31. A. Beer, M. Junker, H. Femmer, and M. Felderer, "Initial Investigations on the Influence of Requirement Smells on Test-Case Design," in *Proc. 4th International Workshop on Requirements Engineering and Testing, RET, 2017*.
32. J. Eckhardt, A. Vogelsang, and H. Femmer, "An Approach for Creating Sentence Patterns for Quality Requirements," in *International Workshop on Requirements Patterns, RePa, 2016*.
33. H. Femmer, J. Mund, and D. Mendez Fernandez, "It's the Activities, Stupid! A New Perspective on RE Quality," in *Proc. 2nd International Workshop on Requirements Engineering and Testing, RET, 2015*.
34. S. Eder, H. Femmer, B. Hauptmann, and M. Junker, "Configuring Latent Semantic Indexing for Requirements Tracing," in *2nd IEEE/ACM International Workshop on Requirements Engineering and Testing, RET, 2015*.
35. M. Junker *et al.*, "Principles and a Process for Successful Industry Cooperation - The Case of TUM and Munich Re," in *2nd IEEE/ACM International Workshop on Software Engineering Research and Industrial Practice, SER&IP, 2015*. – **Best Paper Award**
36. H. Femmer, D. Méndez Fernández, E. Juergens, M. Klose, I. Zimmer, and J. Zimmer, "Rapid Requirements Checks with Requirements Smells: Two Case Studies," in *Proceedings of the 1st International Workshop on Rapid Continuous Software Engineering, RCoSE, 2014*.
37. B. Penzenstadler and H. Femmer, "RE@21: Time to Sustain!," in *Proceedings of the 2nd International Workshop on Requirements Engineering for Sustainable Systems, RE4SuSy, 2013*.
38. B. Penzenstadler and H. Femmer, "A Generic Model for Sustainability with Process- and Product-specific Instances," in *International Workshop on Green In Software Engineering and Green By Software Engineering, GIBSE, 2013*.
39. B. Penzenstadler, H. Femmer, and D. Richardson, "Who is the Advocate? Stakeholders for Sustainability," in *2nd International Workshop on Green and Sustainable Software, GREENS, 2013*.

Abschlussarbeiten

40. H. Femmer, "Requirements Engineering Artifact Quality: Definition and Control," Dissertation, Technische Universität München, 2017.
 41. H. Femmer, "Detecting Inconsistencies in Wrappers - A Case Study", Masterarbeit, Universität Augsburg, 2012.
 42. H. Femmer, "Recommendation and Recovery of Traceability Links", Bachelorarbeit, Technische Universität München, 2009.
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Sonstige Publikationen

43. H. Femmer, "Reviewing Natural Language Requirements with Requirements Smells--A Research Proposal", LASER Summer School, 2014.
 44. B. Penzenstadler, A. Raturi, D. Richardson, C. Calero, H. Femmer, and X. Franch, "Systematic mapping study on software engineering for sustainability (se4s)—protocol and results," *Technical Report, Technische Universität. München*, 2014.
 45. D. M. Fernández, B. Penzenstadler, M. Broy, J. Eckhardt, and H. Femmer, "AMDiRE- Artefact Model for Domain-independent RE," *Technical Report, Technische Universität. München*, 2013.
 46. B. Penzenstadler and H. Femmer, "A generic model for sustainability," *Technical Report, Technische Universität. München*, 2012.
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