

Journal Articles (refereed)

1. Weyer, T.; Daun, M.; Tenbergen, B.: **The Changing World and the Adapting Machine: How Digital Transformation Changes Requirements Engineering in the Embedded and Cyber-Physical Systems Industry.** IEEE Software, IEEE Computer Society, November 2020. IF 2.589 (Early Access)
2. Brings, J.; Daun, M.; Weyer, T.; Pohl, K.: **Analyzing goal variability in cyber-physical system networks.** SIGAPP Applied Computing Reviews **20**(2), ACM, 2020, 19-35.
3. Brings, J.; Daun, M.; Keller, K.; Aluko Obe, P.; Weyer, T.: **A systematic map on verification and validation of emergent behavior in software engineering research.** Future Generation Computer Systems (FGCS) 112:1010-1037, Elsevier, 2020. IF 6.125
4. Tenbergen, B.; Weyer, T.: **Generation of Hazard Relation Diagrams: Formalization and Tool Support.** Software and Systems Modeling (SoSyM), **20**(1), Springer (2021), 175-210. IF 1.915
5. Bandyzsak, T.; Daun, M.; Tenbergen, B.; Kuhs, P.; Wolf, S.; Weyer, T.: **Orthogonal Uncertainty Modeling in the Engineering of Cyber-Physical Systems.** IEEE Transactions on Automation Science and Engineering, **17**(3), IEEE (2020), 1250-1265. IF 6.836
6. Daun, M.; Weyer, T.; Pohl, K.: **Improving manual reviews in function-centered engineering of embedded software using automatically generated review models.** Software and Systems Modeling (SoSyM), **18**(6), Springer (2019), 3421-3459. IF 1.915
7. Brings, J.; Daun, M.; Bandyzsak, T.; Stricker, V.; Weyer, T.; Mirzaei, E.; Neumann, M.; Zernickel, J. S.: **Model-based Documentation of dynamicity constraints for collaborative cyber-physical system architectures: Findings from an industrial case study.** Journal of Systems Architecture (JSA), Elsevier (2019), **97**, 153-167. IF 2.552
8. Méndez Fernández, D.; Böhm, W.; Vogelsang, A.; Mund, J.; Broy, M.; Kuhrmann, M.; Weyer, T.: **Artefacts in Software Engineering: A Fundamental Positioning.** Software and Systems Modeling (SoSyM), Expert's Voice, **18**(5), Springer (2019), 2777-2786. IF 1.915
9. Brings, J.; Daun, M.; Brinckmann, S.; Keller, K.; Weyer, T.: **Approaches, Success Factors, and Barriers for Technology Transfer in Software Engineering: Results of a Systematic Literature Review.** Journal of Software: Evolution and Process (JSEP) **30**(11), Wiley (2018), e1981. IF 1.178

10. Tenbergen, B.; Weyer, T.; Pohl, K.: **Hazard Relation Diagrams: A diagrammatic representation to increase validation objectivity of requirements-based hazard mitigations**. Requirements Engineering (REJ) **23**(2), Springer (2018), 291-329. **IF 2.282**
11. Tenbergen, B.; Vogelsang, A., Weyer, T.; Froese, A.; Wehrstedt, J. C.; Brandstetter, V.: **Modeling Requirements and Context as a means for Automated Requirements Validation: An Example from the Automation Industry**. Requirements Engineering Magazine, **2016**(2), IREB, Karlsruhe (2016).
12. Brandstetter, V.; Froese, A.; Tenbergen, B.; Vogelsang, A.; Wehrstedt, J. C.; Weyer, T.: **Early Validation of Automation Plant Control Software using Simulation Based on Assumption Modeling and Validation Use Cases**. Complex Systems Informatics and Modeling Quarterly (CSIMQ), **2015**(4), 50-65.
13. Braun, P.; Broy, M.; Houdek, F.; Kirchmayr, M.; Müller, M.; Penzenstadler, B.; Pohl, K.; Weyer, T.: **Guiding Requirements Engineering for software-intensive Embedded Systems in the Automotive Industry**. Computer Science – Research and Development (CSR D) **29**(1), Springer (2014), 21-43.

Journal Articles (non-refereed)

14. Weyer, T.; Goger, M.; Koch, W.; Kremer, B.: **Einführungsstrategie für ein durchgängiges modellbasiertes Systems Engineering**. ATZ Automobiltechnische Zeitung **123**, 82–87 (2021).
15. Weyer, T.; Goger, M.; Koch, W.; Kremer, B.: **Implementation Strategy for Seamless Model-Based Systems Engineering**. ATZ Worldwide **123**, 66–71 (2021).
16. Daun, M.; Bohn, P.; Brings, J.; Weyer, T.: **Structured Model-Based Engineering of Long-living Embedded Systems**. In: Softwaretechnik-Trends **36**(1), Gesellschaft für Informatik, Bonn, (2016).
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18. Pohl, K.; Weyer, T.: **Requirements Engineering**. In: WISU – Das Wirtschaftsstudium **5**(3), (2005), Lange Verlag, Düsseldorf, 349-355.

Conference Contributions

19. Daun, M.; Brings, J.; Goger, M.; Koch, W.; Weyer, T.: **Teaching Model-based Requirements Engineering to Industry Professionals: An Experience Report.** 43rd International Conference on Software Engineering (ICSE 2021, Madrid, Spanien), Joint Software Engineering Education and Training, ACM, New York, 40-49. *Best Paper Award*
20. Daun, M.; Weyer, T.; Pohl, K.: **Verbesserung manueller Validierungsprozesse von CPS Spezifikationen durch Review-Modelle auf Instanzebene.** Software Engineering 2021, Fachtagung des GI-Fachbereichs Softwaretechnik (SE 2021, Braunschweig), Lecture Notes in Informatics (LNI), P-310, Gesellschaft für Informatik, Bonn, 2021, 33-34.
21. Daun, M.; Brings, J.; Weyer, T.: **Do instance-level review diagrams support validation processes of cyber-physical system specifications? Results from a controlled experiment.** 2020 IEEE/ACM International Conference on Software and System Processes (ICSSP 2020, Seoul, Südkorea), ACM, New York, 2020, 11-20.
22. Brings, J.; Daun, M.; Weyer, T.; Pohl, K.: **Goal-based configuration analysis for networks of collaborative cyber-physical systems.** 35th ACM/SIGAPP Symposium on Applied Computing (SAC 2020, Brno, Tschechische Republik), ACM, New York, 2020, 1387-1396.
23. Daun, M.; Weyer, T.; Pohl, K.: **Review-Modelle zur Unterstützung in der funktionszentrierten Entwicklung eingebetteter Systeme.** Software Engineering 2020, Fachtagung des GI-Fachbereichs Softwaretechnik (SE 2020, Innsbruck, Österreich), Lecture Notes in Informatics (LNI), 300, Gesellschaft für Informatik, Bonn, 2020, 39-40.
24. Stenkova, V.; Daun, M.; Brings, J.; Weyer, T.: **Generic negative scenarios for the specification of collaborative cyber-physical systems.** 38th International Conference on Conceptual Modeling (ER 2019, Salvador, Bahia, Brazil), Lecture Notes in Computer Science (LNCS), Springer, Cham, 2019, 412-419.
25. Daun, M.; Brings, J.; Krajinski, L.; Weyer, T.: **On the benefits of using dedicated models in validation processes for behavioral specifications.** International Conference on Software and Systems Process (ICSSP 2019 co-located with ICSE 2019, Montréal, Canada), Computer Society, Los Alamitos, 2019, 44-53.

26. Daun, M.; Stenkova, V.; Krajinski, L.; Brings, J.; Bandyszak, T.; Weyer, T.: **Goal modeling for collaborative groups of cyber-physical systems with GRL: Reflections on applicability and limitations based on two studies conducted in industry.** 34th ACM Symposium on Applied Computing (SAC 2019, Limassol, Zypern) ACM, New York, 2019, 1600-1609.
27. Weyer, T.; Koziolok, A.: **Preface: REFSQ 2019 Doctoral Symposium.** Joint Proceedings of REFSQ-2019 Workshops, Doctoral Symposium, Live Studies Track, and Poster Track co-located with the 25th International Conference on Requirements Engineering: Foundation for Software Quality (REFSQ 2019, Essen). CEUR Workshop Proceedings 2376, CEUR-WS.org 2019.
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29. Daun, M.; Brings, J.; Keller, K.; Brinckmann, S.; Weyer, T.: **Erfolgreicher Technologietransfer im Software Engineering: Transferansätze, Erfolgsfaktoren und Fallstricke.** Software Engineering und Software Management 2019 (SE/SWM 2019, Stuttgart), Lecture Notes in Informatics (LNI), 292, Gesellschaft für Informatik, Bonn, 2019, 135-136.
30. Keller, K.; Brings, J.; Daun, M.; Weyer, T.: **A comparative analysis of MSC-based requirements specification approaches used in the automotive industry.** 10th System Analysis and Modeling Conference (SAM 2018, Kopenhagen, Dänemark), Lecture Notes in Computer Science (LNCS) 11150, Springer, Cham, 2018, 183-201.
31. Bandyszak, T.; Daun, M.; Tenbergen, B.; Weyer, T.: **Model-based Documentation of Context Uncertainty for Collaborative Cyber-Physical Systems: An Approach and Application to an Industry Automation Case Example.** 14th IEEE International Conference on Automation Science and Engineering (CASE 2018, München), IEEE Computer Society, Los Alamitos, 2018, 1087-1092.
32. Brings, J.; Kempe, M.; Daun, M.; Weyer, T.: **On Different Search Methods for Systematic Literature Reviews and Maps: Experiences from a Literature Search on Validation and Verification of Emergent Behavior.** 22nd International Conference on Evaluation and Assessment in Software Engineering (EASE 2018, Christchurch, Neuseeland), ACM, New York, 2018, 35-45.

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34. Daun, M.; Brings, J.; Weyer, T.: **On the Impact of the Model-based Representation of Inconsistencies to Manual Reviews: Results from a Controlled Experiment**. 36th International Conference on Conceptual Modeling (ER 2017, Valencia, Spanien), Lecture Notes in Computer Science (LNCS) 10650, Springer, Heidelberg, 2017, 466-473.
35. Daun, M.; Salmon, A.; Weyer, T.; Pohl, K.; Tenbergen, B.: **Project-based Learning with Examples from Industry in University Courses**. Software Engineering 2017 (SE 2017, Hannover), Lecture Notes in Informatics (LNI) 267, Gesellschaft für Informatik, Bonn, 2017, 59-60.
36. Bandyszak, T.; Moffie, M.; Goldsteen, A.; Melas, P.; Nasser, B. I.; Kalogiros, C.; Barni, G.; Hartenstein, S.; Giotis, G.; Weyer, T.: **Supporting Coordinated Maintenance of System Trustworthiness and User Trust at Runtime**. 10th IFIP International Conference on Trust Management (IFIPTM 2016, Darmstadt), Advances in Information and Communication Technology 473, Springer, Heidelberg, 2016, 96-112.
37. Daun, M.; Tenbergen, B.; Salmon, A.; Weyer, T.; Pohl, K.: **Project-based Learning with Examples from Industry in University Courses: An Experience Report from an Undergraduate Requirements Engineering Course**. 29th IEEE International Conference on Software Engineering Education and Training (CSEE&T 2016, Dallas, USA), IEEE Computer Society, Los Alamitos, 2016, 184-193.
38. Daun, M.; Salmon, A.; Bandyszak, T.; Weyer, T.: **Common Threats and Mitigation Strategies in Requirements Engineering Experiments with Student Participant**. 22th International Working Conference on Requirements Engineering - Foundation for Software Quality (REFSQ 2016, Göteborg, Schweden), Lecture Notes in Computer Science (LNCS) 9619, Springer, Heidelberg, 2016, 269-285.
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42. Brandstetter, V.; Froese, A.; Tenbergen, B.; Vogelsang, A.; Wehrstedt, J. C.; Weyer, T.: **Early Validation of Control Software for Automation Plants on the Example of a Seawater Desalination Plant**. 27th International Conference on Advanced Information Systems Engineering (CAiSE 2015, Stockholm, Schweden), Forum, CEUR Proceedings 1367, 2015, 189-196.
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48. Bender, O.; Böhm, W.; Henkler, S.; Sander, O.; Vogelsang, A.; Weyer, T.: **Fünfter Workshop zur Zukunft der Entwicklung softwareintensiver eingebetteter Systeme**. Software Engineering & Management 2015 (SE 2015, Dresden), Lecture Notes in Informatics (LNI) 239, Gesellschaft für Informatik, Bonn, 2015, 271-271.
49. Gol Mohammadi, N.; Bandyszak, T.; Moffie, M.; Chen, X.; Weyer, T.; Kalogiros, C.; Nasser, B.; Surridge, M.: **Maintaining Trustworthiness of Socio-Technical Systems at Run-Time**. 11th International Conference on Trust, Privacy and Security in Digital Business (TRUSTBUS 2014, München), Lecture Notes in Computer Science (LNCS) 8647, Springer, Heidelberg, 2014, 1-12.
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52. Daun, M.; Höfflinger, J.; Weyer, T.: **Function-Centered Engineering of Embedded Systems: Evaluating Industry Needs and Possible Solutions**. 9th International Conference on Evaluation of Novel Approaches to Software Engineering (ENASE 2014, Lissabon, Portugal), SciTePress, Setúbal, 2014, 226-234.
53. Daun, M.; Salmon, A.; Tenbergen, B.; Weyer, T.; Pohl, K.: **Industrial Case Studies in Graduate Requirements Engineering Courses: Impact on Student Motivation**. 27th International Conference on Software Engineering Education and Training (CSEE&T 2014, Klagenfurt, Österreich), IEEE Computer Society, Los Alamitos, 2014, 3-12.

54. Böhm, W.; Henkler, S.; Houdek, F.; Vogelsang, A.; Weyer, T.: **Bridging the Gap Between Systems and Software Engineering by Using the SPES Modeling Framework as a General Systems Engineering Philosophy.** 12th Annual Conference on Systems Engineering Research (CSER 2014, Redondo Beach, USA), Procedia Computer Science, Elsevier, New York, 2014, 187-194.
55. Daun, M.; Weyer, T.; Pohl, K.: **Validating the Functional Design of Embedded Systems against Stakeholder Intentions.** 2nd International Conference on Model-Driven Engineering and Software Development (MODELSWARD 2014, Lissabon, Portugal), SciTePress, Setúbal, 2014, 233-239.
56. Paulus, S.; Gol Mohammadi, N.; Weyer, T.: **Trustworthy Software Development.** 14th IFIP International Conference on Communications and Multimedia Security (CMS 2013, Magdeburg), Lecture Notes in Computer Science (LNCS) 8099, Springer, Heidelberg, 2013, 233-247.
57. Gol Mohammadi, N.; Alebrahim, A.; Weyer, T.; Heisel, M.; Pohl, K.: **A Framework for Combining Problem Frames and Goal Models to Support Context Analysis during Requirements Engineering.** International Cross Domain Conference and Workshop on Availability, Reliability and Security (CD-ARES 2013, Regensburg), Lecture Notes in Computer Science (LNCS) 8127, Springer, Heidelberg, 2013. 272-288.
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Book Chapters

62. Bandyszak, T.; Weyer, T.; Daun, M.: **Uncertainty Theories for Real-Time Systems.** In: Tian, Y.-C.; Levy, D. C. (Eds.): Handbook of Real-Time Computing, Springer, Cham, 2020. (angenommen)
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66. Daun, M.; Tenbergen, B.; Brings, J.; Weyer, T.: **Context Modeling Extension.** In: Pohl, K.; Daembkes, H.; Hönninger, H.; Broy, M. (Eds.): Advanced Model-Based Engineering of Embedded Systems – Extensions of the SPES 2020 Methodology. Springer, Heidelberg, 2016, 55-68.
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Workshop Contributions

77. Daun, M.; Brings, J.; Weyer, T.: **A Semi-Automated Approach to Foster the Validation of Collaborative Networks of Cyber-Physical Systems**. IEEE/ACM International Workshop on Software Engineering for Smart Cyber-Physical Systems (SEsCPS), International Conference on Software Engineering (ICSE 2018, Göteborg, Schweden), ACM, New York, 2018, 6-12.
78. Daun, M.; Brings, J.; Bandyszak, T.; Bohn, P.; Weyer, T.: **Collaborating Multiple System Instances of Smart Cyber-Physical Systems: A Problem Situation, Solution Idea, and Remaining Research Challenges**. IEEE/ACM International Workshop on Software Engineering for Smart Cyber-Physical Systems (SEsCPS), International Conference on Software Engineering (ICSE 2015, Florenz, Italien), ACM, New York, 2015, 48-51.
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83. Tenbergen, B.; Sturm, A. C.; Weyer, T.: **A Hazard Taxonomy for Embedded and Cyber-Physical Systems**. 1st International Workshop on Cyber-Physical Systems Engineering - Design Space Exploration, Emerging Ideas, and Trends (EITEC 2014@CPSWeek, Berlin), 2014, 2:1-2:15.
84. Kaufmann, T.; Manz, C.; Weyer, T.: **Extending the SPES Modeling Framework for Supporting Role-specific Variant Management in the Engineering Process of Embedded Software**. 4. Workshop zur Zukunft der Entwicklung softwareintensiver, eingebetteter Systeme (ENVISION 2020, Kiel), CEUR Proceedings 1129, 2014, 77-86.
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88. Tenbergen, B.; Bohn, P.; Weyer, T.: **Ein strukturierter Ansatz zur Ableitung methodenspezifischer UML/SysML-Profile am Beispiel des SPES 2020 Requirements Viewpoints**. In: Tagungsband Software Engineering 2013 (SE 2013, Aachen), Lecture Notes in Informatics (LNI) 215, Gesellschaft für Informatik, Bonn, 2013, 235-244.
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Editorship of Journals

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