

# PD Dr. habil. Tobias Grundgeiger

Psychologische Ergonomie  
Julius-Maximilians-Universität Würzburg  
Campus Hubland Nord  
Oswald-Külpe-Weg 82  
D-97074 Würzburg  
(p) +49 931 31 81743  
(f) +49 931 31 80613  
tobias.grundgeiger@uni-wuerzburg.de  
<https://www.mcm.uni-wuerzburg.de/psyergo/>

## Education

<i>Degrees</i>	<i>Field</i>	<i>Institution</i>	<i>Date</i>
Habilitation	Human-Computer-Interaction	Julius-Maximilians-Universität Würzburg	07/2022
Ph.D.	Applied Cognitive Psychology	The University of Queensland	05/2011
Diploma (M.A.)	Cognitive Psychology	Regensburg University	08/2006

## Professional and Academic Activities

Since 05/2023	Honorary Associate Professor of The University of Queensland, Brisbane, Australia
Since 05/2022	Akademischer Oberrat Rat [permanent position], Julius-Maximilians-Universität, Würzburg, Germany
04/2015 – 05/2022	Akademischer Rat [permanent position], Julius-Maximilians-Universität, Würzburg, Germany
04/2014 – 04/2023	Honorary Research Fellow of The University of Queensland, Brisbane, Australia
11/2012 – 03/2015	Lecturer/Postdoctoral fellow, Julius-Maximilians-Universität, Würzburg, Germany
10/2010 – 10/2012	Lecturer/Postdoctoral fellow, Heinrich-Heine-Universität, Düsseldorf, Germany
02/2007 – 09/2010	PhD student at The University of Queensland, Brisbane, Australia
10/2001 – 06/2006	Degree course Psychology at Regensburg University, Germany (grade 1.0)

## Awards and Scholarships

- 04/2026 CHI Honourable Mention for Ambe, Salisbury, Grundgeiger, Bodnar, Rothwell, Brown, & Matthews. Out of Emergency: How Doctors Navigate Jurisdictional Seams in Emergency Care Referrals. (only 5% of all submitted papers receive Honourable Mentions)
- 04/2025 CHI Honourable Mention for Wolf, Grundgeiger, Zähringer, Shishkova, Maas, Dilling, & Happel. How a Clinical Decision Support System Changed the Diagnosis Process: Insights from an Experimental Mixed-Method Study in a Full-Scale Anesthesiology Simulation. (only 5% of all submitted papers receive Honourable Mentions)
- 04/2025 CHI Honourable Mention for Bahnsen, Dischinger, & Grundgeiger. AR Cue Reliability for Interrupted Task Resumption Affects Users' Resumption Strategies and Performance. (only 5% of all submitted papers receive Honourable Mentions)
- 07/2023 CSCW Honourable Mention for Hohm, Happel, Hurtienne, & Grundgeiger. "When the beeping stops, you completely freak out" - How acute care teams experience and use technology. (only 2.4% of all submitted papers receive Honourable Mentions)
- 07/2021 DIS 2021 Honourable Mention for Kuge, Grundgeiger, Schlosser, Sanderson, & Happel. Design and Evaluation of a Head-Worn Display Application for Multi-Patient Monitoring. (only 3.7% of all submitted papers receive Honourable Mentions)
- 10/2020 The chapter „Prospective memory in safety-critical work contexts” by Loft, Dismukes, and Grundgeiger (2019) has been selected for a compilation volume of the most influential chapters of the *Current Issues in Memory* book series
- 10/2020 *Dieter W. Jahns Student Practitioner Award 2020* of the Foundation for Professional Ergonomics for Wolf und Maas (\$ 1000), supervised by Grundgeiger (\$ 1000 to support student projects) “CASSANDRA: A decision support tool for clinical assessment and reasoning in anesthesia”
- 03/2019 CHI 2019 Honourable Mention for Grundgeiger, Huber, Reinhardt, Steinisch, Happel, & Wurmb. Cognitive Aids in Acute Care: Investigating How Cognitive Aids Affect and Support In-hospital Emergency Teams. (only 4% of all submitted papers receive Honourable Mentions)
- 10/2018 *Dieter W. Jahns Student Practitioner Award 2018* of the Foundation for Professional Ergonomics for P. Schlosser (\$ 1000), supervised by T. Grundgeiger (\$ 1000 to support student projects) “Multiple-Patient Monitoring with a Head-Worn Display: Improving Supervising Anesthetists' Situation Awareness in the Operating Suite”

- 05/2017 *Presentation Travel Scholarship* of the German Academic Exchange Service [Deutscher Akademischer Austauschdienst, DAAD] (1600 Euro) to present at the Colorado State University, Fort Collins, USA
- 06/2016 *Research Award Vogel Stiftung Dr. Eckernkamp* (€ 25,000) awarded by the Universitätsbund Würzburg to Grundgeiger, Wurmb, & Happel for the project “Clinical evaluation and further development of a tablet-based application for in-hospital resuscitation documentation”, Julius-Maximilians-Universität, Würzburg, Germany
- 06/2016 *Research Award of the Faculty of Human Sciences 2016* (€ 1000), Julius-Maximilians-Universität, Würzburg, Germany
- 10/2015 HFES Healthcare Technical Group *Best Student Paper Award* for D. Reinhardt, M. Albert, & A.-K. Kraft who were supervised by T. Grundgeiger. The paper was also selected as finalist for the HFES *Alphonse Chapanis Student Paper Award*.
- 10/2015 *Dieter W. Jahns Student Practitioner Award 2015* of the Foundation for Professional Ergonomics for M. Albert, D. Reinhardt, & A.-K. Kraft, supervised by T. Grundgeiger
- 01/2015 Article ‘Effects of Sleep Deprivation on Prospective Memory’ by Grundgeiger et al. was in the top three most downloaded articles of the journal *Memory* in 2014
- 10/2014 HFES Cognitive Engineering and Decision Making TG 1. Place *Best Student Paper Award* for S. Huber and M. Weng, supervised by T. Grundgeiger and P. Sanderson
- 03/2012 American Psychological Association's Division 21 *George E. Briggs Dissertation Award 2012* in the Field of Applied Experimental Psychology
- 03/2012 The University of Queensland Dean's Award for Research Higher Degree Excellence 2012 (awarded to the top 10% of all PhD thesis per year; total of 580 PhDs in 2011)
- 04/2011 Grundgeiger et al. (2010) has been nominated by the *JEP: Applied* Editorial Team (Editor Rogers, Associate Editors Durso & Morrow) for the International Ergonomics Association (IEA) Liberty Mutual Medal Award in Occupational Safety and Ergonomics
- 10/2010 *SimTecT 2010 Healthcare Simulation* abstract by Grundgeiger et al. included in “TOP 20 abstract” for publication in *Simulation In Healthcare*
- 09/2010 Awarded *Student Member with Honors* of the Human Factors and Ergonomics Society for outstanding achievements and contributions to

- 01/2008      Awarded best abstract in Anesthesia Education/Information Systems at the Society for Technology in Anesthesia conference (STA2008), San Diego, CA, 16-19 January 2008 (second author)
- 2007 – 2010   Endeavour International Postgraduate Research Scholarship (IPRS) at The University of Queensland (AU \$ ~105,000)  
The University of Queensland Research Scholarship (UQRS) at The University of Queensland, (AU \$ ~67,000)

## Professional Societies

Association for Computing Machinery (ACM), member since 2017

## Reviewing Activities

### Special Recognition for Outstanding Reviews

CHI 26 papers, CHI 25 papers, 3 x CHI 25 LBW, CSCW 25 papers, DIS 25 papers, CHI LBW 24, CHI 23 papers, CHI 20 papers, CHI 19 papers

### Action Editor

CHI 2026 AC1 for Healthcare Subcommittee

### Peer reviews

**Healthcare:** *Advances in Simulation, British Medical Journal, British Journal of Anaesthesia, BMC Health Services Research, BMC Nursing, BMJ Quality & Safety (Quality and Safety in Healthcare), International Journal of Nursing Studies, Journal of Critical Care, Journal of Healthcare Engineering, Journal of Medical Systems, Pediatrics, Teaching and Learning in Medicine*

**Cognitive Science:** *Applied Cognitive Psychology, Applied Ergonomics, Current Directions in Psychological Science, Ergonomics, Human Factors, Human Factors and Ergonomics Society Meeting, Journal of Gerontology: Psychological Sciences, Journal of Experimental Psychology: Applied, Memory, Psychological Science, Int. J. of Human Factors and Ergonomics, Sleep*

**Human-Computer Interaction:** *Conference on Human Factors in Computing Systems (CHI), Conference on Computer-Supported Cooperative Work and Social Computing (CSCW), Designing Interactive Systems (DIS), International Journal of Human-Computer Studies, International Journal of Human-Computer Interaction, International Conference on Tangible, Embedded and Embodied Interactions (TEI), Transactions on Computer-Human Interaction (ToCHI)*

### Grant application reviews

*Deutsche Forschungsgemeinschaft (German National Science Foundation)*

## Teaching

### Julius-Maximilians-University, Würzburg, Germany (since 2012)

Human-Computer Systems Bachelor Program

- *Introduction to Psychological Ergonomics (Lecture), 3SWS*

Lecture mostly based on Lee, C., Wickens, C. D., Gordon, S. E., & Liu, Y. (2017). *Designing for People: An Introduction to Human Factors Engineering*, with extended literature on cognitive psychology.

- *Introduction to Human-Computer-Interaction* (Lecture), 3SWS, with Prof. Latoschik  
Lecture mostly based on Lee, C., Wickens, C. D., Gordon, S. E., & Liu, Y. (2017). *Designing for People: An Introduction to Human Factors Engineering*.
- *Topics of Psychology for HCI* (Lecture + Tutorial), 3 SWS  
Introduction to motivation, emotion, differential psychology (personality, ability, aging, intercultural), social psychology (attitudes, social influence groups), and training. Fortnightly tutorial to apply selected topics to human-machine-systems.
- *Research Methods* (Seminar + Tutorial), 4 SWS  
Introduction to quantitative and qualitative research methods, academic writing, and a short introduction to SPSS.
- *Human Factors in safety-critical domains* (Seminar), 2 SWS  
The seminar focuses on human factors in healthcare, air traffic control, and driving and included three excursions to the respective fields (operating theatre University Hospital Würzburg; Deutsche Flugsicherung; driving simulators at the WIVW)
- *10 x Guidelines* (Seminar), 2 SWS  
Each session of the seminar consists of 10 Guidelines for a specific context such as the design of online forms, text, or social websites.
- *Healthcare Usability & User Experience* (Seminar), 2 SWS  
The seminar focuses on usability and user experience in healthcare with a focus on regulatory requirements for technology, error, and accidents.

#### Human-Computer-Interaction Master Program

- *Human-Computer-Interaction Theories* (Seminar), 2 SWS  
Past, contemporary, and future HCI theories. Seminar mostly based on Rogers, I. (2012). *HCI Theory: Classical, Modern, and Contemporary - Synthesis Lectures on Human-Centered Informatics*. Morgan & Claypool.
- *Psychology of Interactive Systems* (Seminar), 2 SWS, with Prof. Wienrich  
Seminar on the research and application of psychology topics for the design human-computer interaction and socio-technical systems in general.
- *Work & Organisational Psychology* (Seminar), 2 SWS, with Prof. Hurtienne  
General introduction to Work & Organizational Psychology.
- *Joint Cognitive Systems* (Seminar), 2 SWS  
The seminar addresses the questions: What is “cognition”? How or what can do cognitive work? What is a cognitive system? The seminar is built on Hollnagel, E. & Woods D. D. (2005). *Joint cognitive systems: Foundations of cognitive systems engineering*. Boca Raton, FL: CRC Press / Taylor & Francis.
- *Eye-tracking: Method and application* (Seminar), 2 SWS  
Introduction to several eye tracking methods, presentations on eye-tracking applications, and projects.

#### Heinrich-Heine University, Düsseldorf, Germany (2010-2012)

##### Psychology Undergraduate Program

- *Experimental Research I & II* (Seminar), each 2 SWS
- *Research Methods* (Seminar), 2 SWS

Psychology Master Program

- *Quantitative Research Methods: Evaluation* (Lecture), 2 SWS, with Prof. Bayen

### The University of Queensland, Brisbane, Australia (2007-2010)

Psychology Undergraduate Program

- PSYC 1020, *Introduction to Psychology* (Tutorial), 2 SWS

Master of Human Factors Online Program

- HUFA 7012, *Human Factors in Medicine (Health Care)*

### Research Grants

#### Research Grants (Germany)

<b>Sponsor</b>	<b>Dates</b>	<b>Investigator Names and Title of Project</b>	<b>Amount (Euro)</b>
Bundesministerium für Forschung, Technik und Raumfahrt (Federal Ministry of Research, Technology, and Space)	12/2025-11/2028 (36 months)	medDV GmbH, University Würzburg, University Hospital Würzburg, & prognostica GmbH, „NIDAaiD: Verbesserte Notfallversorgung von verunfallten Autoinsassen durch KI-Algorithmen“	€ 1,350,000 (€ 306,300 for Grundgeiger)
Bundesministerium für Bildung und Forschung (Federal Ministry of Education and Research)	08/2022-07/2025 (36 months)	University Würzburg (project leader), University Hospital Würzburg, prognostica GmbH, & Kenbun IT GmbH, „CASSANDRA listens and helps: An AI team member for anesthesiology “	€ 1,340,000 (€288,156 for Grundgeiger)
Deutsche Forschungsgemeinschaft (German National Science Foundation)	06/2021-06/2024 (36 months)	GRUNDGEIGER, grant ID GR 3970/7-1, „Modeling Attention and Situation Awareness in Acute Care Workplaces“	€ 205,050
Deutsche Forschungsgemeinschaft (German National Science Foundation)	05/2020-05/2023 (36 months)	GRUNDGEIGER & Niebling, grant ID GR 3970/6-1, „Beyond safety and efficiency in acute care: The experience of an embodied staff-environment interaction“	€ 620,000 (€ 330,727 for Grundgeiger)

Research contract as part of the Bundesministerium für Wirtschaft und Energie sponsored national air traffic research program FUTURE led by the Deutsche Flugsicherung (air traffic control Germany)	01/2019-09/2021 (33 months)	GRUNDGEIGER & Hurtienne, research contract FUTURE (Fluglotsen-Unterstützung Endanflug)	€ 250,857
Universitätsbund Würzburg's <i>Research Award Vogel Stiftung Dr. Eckernkamp</i> , Julius-Maximilians-Universität, Würzburg, Germany	06/2016-12/2017	GRUNDGEIGER, Wurmb, & Happel, "Clinical evaluation and further development of a tablet-based application for in-hospital resuscitation documentation"	€ 25,000
Human Dynamics Centre of the Faculty of Human Sciences Start-up grant, Julius-Maximilians-University Würzburg, Germany	05/2015-09/2015	Hurtienne & GRUNDGEIGER, "Commission errors & Prospective memory"	€ 12,000
Deutsche Forschungsgemeinschaft (German National Science Foundation)	05/2013-04/2015	GRUNDGEIGER, grant ID GR 3970/1-1, "Delaying execution of intentions: What mechanisms cause forgetting or prevent forgetting"	€ 87,072
Heinrich-Heine-University Düsseldorf, Germany, Strategic Research Funding	02/2012-09/2012	GRUNDGEIGER, "The effect of sleep deprivation on the remembering of future intentions"	€ 7,966

#### *Research Grants (Australia)*

<b>Sponsor</b>	<b>Dates</b>	<b>Investigator Names and Title of Project</b>	<b>Amount (AUD\$)</b>
Australian Research Council, ARC	06/2022-05/2025	Sanderson, Matthews, Loab, & GRUNDGEIGER, "Information support tools for the trauma patient pathway " grant ID DP220102349	\$ 420,000
Australian Research Council, ARC	01/2018-12/2021	Sanderson, Liu, Matthews, GRUNDGEIGER, Loab, & Hill "Wearable displays for high-tempo work in mission-critical worlds" grant ID DP180103702	\$ 453,370
Australian Research Council, ARC	01/2014-01/2018	Sanderson, Aitken, Dekker, Venkatesh, GRUNDGEIGER, & Liu "Interruptions, work coordination, and resilience" grant ID DP140101821	\$ 489,000

ITEE Strategic Research Funding, School of Information Technology and Electrical Engineering (ITEE), The University of Queensland, Brisbane, Australia	01/2012	Sanderson, Venkatesh, Liu, & GRUNDGEIGER, "User-initiated portable reminder cues for healthcare and elsewhere"	\$ 20,000
National Health and Medical Research Council grant administered by Centre of Research and Excellence in Patient Safety, Monash University, Melbourne, Australia	01/2007-01/2010	Sanderson & GRUNDGEIGER, subproject on NHMRC grant ID 264643, "Managing interruptions and distractions in anaesthesia practice"	\$ 84,000

### Extracurricular Activities

- Since 04/2023 Chair of the ethics committee of the Institute Human-Computer-Media, Julius-Maximilians-Universität Würzburg
- 06/2019 Examiner for PhD thesis, The University of Western Australia, Australia
- 02/2019 Opponent at Ari Kolbeinsson's public defence at the University of Skövde, Sweden
- 10/2017 – 10/2019 Mitglied des Prüfungsausschusses Mensch-Computer-Systeme  
10/2013 – 10/2015 (B.Sc.) und Human-Computer-Interaction (M.Sc.), Julius-  
10/2021 – 03/2023 Maximilians-Universität Würzburg [Member of the examination  
committee for Human-Computer-System (B.Sc.) and HCI (M.Sc.)]
- 10/2017 – 10/2019 Fachstudienberatung Mensch-Computer-Systeme (B.Sc.) und  
10/2013 – 10/2015 Human-Computer-Interaction (M.Sc.), Julius-Maximilians-  
10/2021 – 03/2023 Universität Würzburg [Student Advisor for Human-Computer-  
System (B.Sc.) and HCI (M.Sc.)]
- 10/2017 – 10/2019 Mitglied der Eignungskommission für die Bewerbung zum Master  
10/2013 – 10/2015 Human-Computer- Interaction (M.Sc.), Julius-Maximilians  
10/2021 – 03/2023 Universität Würzburg [Member of Eignungskommission for  
Human-Computer-System (B.Sc.) and HCI (M.Sc.)]
- Since 01/2015 Member of the ethics committee of the Institute Human-Computer-Media, Julius-Maximilians-Universität Würzburg

- 02/2012 Basismodul "Professionelle Lehrkompetenz für die Hochschule" der Hochschuldidaktik in NRW, 80 Arbeitseinheiten à 45 Min. [Basic module "Professional university didactic for university", 80 work units each 45 min]
- 09/2011 – 10/2012 Fachstudienberatung [Student Advisor] Master of Science Psychology, Heinrich Heine Universität Düsseldorf
- 04/2009 – 04/2010 Founding President of the Human Factors Ergonomics Society Student Chapter at The University of Queensland

## Publications ([Google Scholar Grundgeiger](#))

\*indicates Bachelor or Master student co-author

†indicates PhD student co-author

### Peer reviewed journals and highly selective conferences (full papers)

1. GRUNDGEIGER, T., Maurer, L., Hölzing, C. R., & Happel, O. (2026). AI-Supported Electrocardiogram Interpretation: The Effect of Support Presentation on Diagnostic Accuracy, Psychological Need Satisfaction, and Diagnosis Time. Paper presented at the CHI Conference on Human Factors in Computing Systems Proceedings (CHI '26), Barcelona, Spain. <https://doi.org/10.1145/3772318.3790619>
2. Bahnsen, K. L., & GRUNDGEIGER, T. (2026). AR-Cues Change Users' Strategy for Dealing with Deferrable Interruptions. Paper presented at the CHI Conference on Human Factors in Computing Systems (CHI'26), Barcelona, Spain. <https://doi.org/10.1145/3772318.3790673>
3. Ambe, A. H., Salisbury, I., GRUNDGEIGER, T., Bodnar, D., Rothwell, S., Brown, N., & Matthews, B. (2026). Out of Emergency: How Doctors Navigate Jurisdictional Seams in Emergency Care Referrals. Paper presented at the CHI Conference on Human Factors in Computing Systems (CHI'26), Barcelona, Spain. <https://doi.org/10.1145/3772318.3791645> **[CHI 2026 Honourable Mentions]**
4. Hölzing, C. R., Heilgenthal, P., Sellmann, F., Meynhardt, C., GRUNDGEIGER, T., Scheuchenpflug, R., Meybohm, P., & Happel, O. (2026). Interruptions and multitasking in anaesthesia nursing: a prospective observational study of cognitive strain and workflow patterns. *BMJ Open Quality*, 15(1), e003972. <https://doi.org/10.1136/bmjog-2025-003972>
5. Ambe, A. H., Salisbury, I., Grundgeiger, T., Bodnar, D., Rothwell, S., Brown, N., & Matthews, B. (2026). Frames of Participation: Design as Enquiry in Exploring Technological Futures of Emergency Care. Participatory Design Conference, Milano, Italy, 15-19 June 2026.

6. Wolf, S., GRUNDGEIGER, T., Zähringer, R.\* , Shishkova, L.\* , Maas, F., Dilling, C., & Happel, O. (2025). How a Clinical Decision Support System Changed the Diagnosis Process: Insights from an Experimental Mixed-Method Study in a Full-Scale Anesthesiology Simulation. CHI Conference on Human Factors in Computing Systems Proceedings (CHI '25), Yokohama, Japan. April 26–May 01, 2025. <https://doi.org/10.1145/3706598.3713372> [CHI 2025 Honourable Mentions]
7. Bahnsen, K. L.\* , Dischinger, E.\* , & GRUNDGEIGER, T. (2025). AR Cue Reliability for Interrupted Task Resumption Affects Users' Resumption Strategies and Performance. CHI Conference on Human Factors in Computing Systems (CHI'25), Yokohama, Japan. April 26–May 01, 2025. <https://doi.org/10.1145/3706598.3713685> [CHI 2025 Honourable Mentions]
8. Ambe, A., Sailsbury, I., GRUNDGEIGER, T., Bodnar, D., Rothwell, S., Brown, N., Sanderson, P.M., Matthews, B. (2025). Patient Handover in the Emergency Department Is Not Just a Point Event: Insights for Designing Information Support Tools. CHI Conference on Human Factors in Computing Systems (CHI'25), Yokohama, Japan. April 26–May 01, 2025. <https://doi.org/10.1145/3706598.3713756>
9. GRUNDGEIGER, T., Juranz, C., & Happel, O. (2024). Motives and Fluent Interaction in Clinical Documentation: An Experience-Based design for a Documentation Tool in Anesthesiology. *Human Factors in Healthcare*, 5, 100071. <https://doi.org/10.1016/j.hfh.2024.100071>
10. Fischer, P., Abendschein, R., Berberich, M., GRUNDGEIGER, T., Meybohm, P., Smul, T., Happel, O. (revise & resubmit). Improved recall of handover information in a simulated emergency – a randomised controlled trial. *Resuscitation+*
11. Bahnsen, K.\* , Tiemann, L.\* , Plabst, L.\* , & GRUNDGEIGER, T. (2024). Augmented Reality Cues Facilitate Task Resumption after Interruptions in Computer-Based and Physical Tasks. Paper submitted to the 2024 CHI ACM Conference on Human Factors in Computing Systems, O'ahu, Hawai'i, USA. <https://doi.org/10.1145/3613904.3642666>
12. GRUNDGEIGER, T., Münz, A.\* , Schlosser, P., & Happel, O. (2023). Supervising Multiple Operating Rooms Using a Head-Worn display: A Longitudinal Evaluation of the Experience of Supervising Anesthesiologists and Their Co-Workers. Paper presented at the 2023 CHI ACM Conference on Human Factors in Computing Systems, Hamburg, GER. <https://doi.org/10.1145/3544548.3581180>

13. Hohm A.<sup>+</sup>, Happel O., Hurtienne J., & GRUNDGEIGER T. (2023). "When the beeping stops, you completely freak out" - How acute care teams experience and use technology. 26th ACM Conference On Computer-Supported Cooperative Work And Social Computing, Minneapolis, MN USA. <https://doi.org/10.1145/3579590> [**CSCW 2023 Honourable Mentions**]
14. GRUNDGEIGER T., Ertle, F.\* , Diethel, D.\* , Mengelkamp, C., Held, V. (2023) Improving procedural skills acquisition of students during medical device training: experiments on e-Learning vs. e-Learning with hands-on. *Advances in Health Sciences Education*. 28, 127–146 <https://doi.org/10.1007/s10459-022-10148-0>
15. Huber S., Gramlich J.\* , Pauli S.\* , Mundschenk S.\* , Haugg E., & GRUNDGEIGER T. (2022). Toward User Experience in ATC: Exploring Novel Interface Concepts for Air Traffic Control. *Interacting with Computers* 34 (2), 43–59. <https://doi.org/10.1093/iwc/iwac032>
16. Salisbury, I. S., Schlosser, P. D., Tang, T.-L., Browning, C., Mohamed, I., GRUNDGEIGER, T., Loeb, R. G., & Sanderson, P. M. (2022). Attention to changes on a head-worn display: Two preclinical studies with healthcare scenarios. *Human Factors*. <https://doi.org/10.1177/00187208221075851>
17. Hohm, A.<sup>+</sup>, Happel, O., Hurtienne, J., & GRUNDGEIGER, T.(2022). User Experience in Safety-Critical Domains: A Survey on Motivational Orientations and Psychological Need Satisfaction in Acute Care. *Cognition, Technology & Work* (24), 247–260. <https://doi.org/10.1007/s10111-022-00697-0>
18. GRUNDGEIGER, T., Michalek, A.\* Hahn, F., Wurmb, T., Meybohm, P., & Happel, O. (2022). Guiding Attention via a Cognitive Aid During a Simulated In-Hospital Cardiac Arrest Scenario: A SEEV Model Analysis. *Human Factors*. 64(1), 1181–1194 <https://doi.org/10.1177/00187208211060586>
19. GRUNDGEIGER, T., Hahn, F., Meybohm, P., Wurmb, T., & Happel, O. (2021). The use of a cognitive aid app supports guideline-conforming cardiopulmonary resuscitations: A randomized study in a high-fidelity simulation. *Resuscitation Plus*, 7, 100152. <https://doi.org/10.1016/j.resplu.2021.100152>
20. Kuge, J.\* , GRUNDGEIGER, T., Schlosser, P., Sanderson, P., & Happel, O. (2021). Design and Evaluation of a Head-Worn Display Application for Multi-Patient Monitoring. Paper presented at the ACM Conference on Designing Interactive Systems (DIS), Nowhere and Everywhere, June 28-July 2 2021. [**DIS 2021 Honourable Mentions**] (acceptance rate of 24.5%) <https://doi.org/10.1145/3461778.3462011>

21. GRUNDGEIGER, T., Hohm, A.\*, Michalek, A.\*, Egenolf, T.\*, Markus, C., & Happel, O. (2021). Situation awareness during simulated tracheal intubation: The effect of laryngoscopy device and experience on situation awareness and a SEEV model analysis. *Human Factors*. <https://doi.org/10.1177/0018720821991651>
22. Klüber, S.\*, Maas, F.\*, Schraudt, D.\*, Hermann, G.\*, Happel, O., & GRUNDGEIGER, T. (2020). Experience Matters: Design and Evaluation of an Anesthesia Support Tool Guided by User Experience Theory. ACM conference on Designing Interactive Systems (DIS), Eindhoven, Netherlands. 6-10 July 2020. pp. 1523–1535. (acceptance rate of 24%). <https://doi.org/10.1145/3357236.3395552>
23. Huber, S., Gramlich, J.\*, & GRUNDGEIGER, T. (2020). From Paper Flight Strips to Digital Strip Systems: Changes and Similarities in Air Traffic Control Work Practices. The 23<sup>rd</sup> ACM Conference on Computer Supported Cooperative Work, Minneapolis, MN, USA. 17 – 21 Oct 2020 (acceptance rate of about 28%). <https://dl.acm.org/doi/10.1145/3392833>
24. GRUNDGEIGER, T., Wurmb, T., & Happel, O. (2020). Modelling Visual Attention of Junior and Senior Anesthesiologists during the Induction of General Anesthesia in Real and Simulated Cases. *IEEE Transactions on Human-Machine Systems*, 50(4), 317-326. <https://doi.org/10.1109/THMS.2020.2983817>
25. GRUNDGEIGER, T., Hurtienne, J., Happel, O. (2020). Why and How to Approach User Experience in Safety-Critical Domains: The example of healthcare. *Human Factors*. <https://doi.org/10.1177/0018720819887575>
26. Sanderson, P., McCurdie, T., & GRUNDGEIGER, T. (2019). Interruptions in Health Care: Assessing Their Connection With Error and Patient Harm. *Human Factors*, 61(7), 1025-1036. <https://doi.org/10.1177/0018720819869115>
27. Schaper, P.†, & Grundgeiger, T. (2019). Commission errors with forced response lag. *Quarterly Journal of Experimental Psychology*, 72(10), 2380-2392. <https://doi.org/10.1177/1747021819840583>
28. Schlosser, P.\*, GRUNDGEIGER, T., Sanderson, P., & Happel, O. (2019). An exploratory clinical evaluation of a head-worn display based multiple-patient monitoring application: impact on supervising anesthesiologists' situation awareness. *Journal of Clinical Monitoring and Computing*, 33(6), 1119-1127. <https://doi.org/10.1007/s10877-019-00265-4>
29. Klüber, S.\*, Wolf, E.\*, Mohamed, I., Brecknell, B., GRUNDGEIGER, T. & Sanderson, S. (2019). Head-Worn Displays and Spearcons: Supporting Multiple Patient Monitoring. *Applied Ergonomics*, 78, 86-96. <https://doi.org/10.1016/j.apergo.2019.01.009>

30. GRUNDGEIGER, T., Huber, S., Reinhardt, D., Steinisch, A., Happel, O., & Wurmb, T. (2019). *Cognitive Aids in Acute Care: Investigating How Cognitive Aids Affect and Support In-hospital Emergency Teams*. Paper presented at the 2019 CHI Conference on Human Factors in Computing Systems, Glasgow, UK. **[CHI 2019 Honourable Mentions]** (acceptance rate of 24%) <https://doi.org/10.1145/3290605.3300884>
31. Schaper, P. †, & GRUNDGEIGER, T. (2018). The effect of different distractions on remembering delayed intentions. *Memory*, 26(2), 154-170. <https://doi.org/10.1080/09658211.2017.1339090>
32. GRUNDGEIGER, T., Klöffel, C., Mohme, S., Wurm, T. &, Happel, O. (2017). An investigation into the effects of real vs. simulated cases and level of experience on the distribution of visual attention during induction of general anaesthesia. *Anaesthesia*, 72(5), 624-632. <https://doi.org/10.1111/anae.13821>
33. Weng, M.\*, Huber, S.\*, GRUNDGEIGER, T., & Sanderson, P. (2017). The effect of visual cues on interruption management. *International Journal of Human-Computer Studies*, 103, 77-94. <https://doi.org/10.1016/j.ijhcs.2017.02.002>
34. GRUNDGEIGER, T., Albert, M.\*, Reinhardt, R. \*, Happel, O., Steinisch, M., & Wurmb, T. (2016). Real-time table-based resuscitation documentation by the team lead: Evaluating documentation quality and clinical performance. *Scandinavian Journal of Trauma, Resuscitation and Emergency Medicine*, 24(1), 1-7. <https://doi.org/10.1186/s13049-016-0242-3>
35. Schaper, P. †, & GRUNDGEIGER, T. (2016). Commission errors in delay-execute prospective memory tasks. *Quarterly Journal of Experimental Psychology*, 7, 1-16.
36. GRUNDGEIGER, T., Dekker, S., Sanderson, P., Liu, D., Brecknell, B., & Aitken, L. M. (2016). Obstacles to research on the effects of interruptions in healthcare. *BMJ Quality and Safety*, 25(6), 392-395. <https://doi.org/10.1080/17470218.2016.1187182>
37. GRUNDGEIGER, T., Kolb, L.\*, Korb, M.O.\*, Mengelkamp. C., & Held, V. (2015). Training students to use syringe pumps: An experimental comparison of e-learning and classroom training. *Biomedical Engineering/Biomedizinische Technik*. 61(2), 211–220. <https://doi.org/10.1515/bmt-2014-0116>
38. GRUNDGEIGER, T., Roewer, R., Grundgeiger, J., Hurtienne, J. &, Happel, O. (2015). Body posture during simulated tracheal intubation: Video laryngoscopy causes a more ergonomic posture than direct laryngoscopy for experts and novices. *Anaesthesia*, 70 (12), 1375-81. <https://doi.org/10.1111/anae.13190>

39. Sanderson, P., & GRUNDGEIGER, T. (2015). How do interruptions affect clinician performance in healthcare? Negotiating fidelity, control, and potential generalizability in the search for answers. *International Journal of Human-Computer Studies*, 79, 85-96. <https://doi.org/10.1016/j.ijhcs.2014.11.003>
40. GRUNDGEIGER, T., Harris, B., Ford, N., Sanderson, P., & Venkatesh, B. (2014). Emergency medical equipment storage: Benefits of visual cues tested in field and simulated settings. *Human Factors*, 56(5), 958-972. <https://doi.org/10.1177/0018720813514605>
41. GRUNDGEIGER, T., Sanderson, P., & Dismukes, R. K. (2014). Prospective memory in complex sociotechnical systems. *Zeitschrift für Psychologie*. 222(2), 100-109. <https://doi.org/10.1027/2151-2604/a000171>
42. GRUNDGEIGER, T. (2014). Noncompetitive retrieval practice causes retrieval-induced forgetting in cued recall but not in recognition. *Memory & Cognition*, 42(3), 400-408.
43. GRUNDGEIGER, T., Bayen, U. J., & Horn, S. (2014). Effects of sleep deprivation on prospective memory. *Memory*, 22(6), 679-86. <https://doi.org/10.3758/s13421-013-0372-z>
44. GRUNDGEIGER, T., Sanderson, P. M., Beltran Orihuela, C., Thompson, A., MacDougall, H. G., Nunnink, L., & Venkatesh, B. (2013). Remembering future Tasks in the ICU: The effect of visual cues on task execution in a representative simulation. *Ergonomics*, 56(4), 579-589. <https://doi.org/10.1080/00140139.2013.765604>
45. Bayen, U. J., Dogangun, A., GRUNDGEIGER, T., Haese, A., Stockmanns, G., & Ziegler, J. (2013). Evaluating the effectiveness of a memory aid system. *Gerontology*, 59(1), 77-84. <https://doi.org/10.1159/000339096>
46. GRUNDGEIGER, T., Sanderson, P.M., Venkatesh, B., & MacDougall, H. (2010). Interruption management in the intensive care unit: Predicting resumption times and assessing distributed support. *Journal of Experimental Psychology: Applied*. 16(4), 317–334. <https://doi.org/10.1037/a0021912>
47. GRUNDGEIGER, T., & Sanderson, P. (2009). Interruptions in healthcare: Theoretical views. *International Journal of Medical Informatics*, 78, 293-307. <https://doi.org/10.1016/j.ijmedinf.2008.10.001>
48. Liu, D., GRUNDGEIGER, T., & Sanderson, P., Jenkins, S., & Leane, T. (2009). Interruptions and blood transfusion checks: Lessons from the simulated operating room. *Anesthesia and Analgesia*, 108(1), 219-222. <https://doi.org/10.1213/ane.0b013e31818e841a>

49. Aslan, A., Bäuml, K.-H., & GRUNDGEIGER, T. (2007). The role of inhibitory processes in part-list cuing. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 33(2), 335-341. <https://doi.org/10.1037/0278-7393.33.2.335>

**Refereed conference papers (short papers)**

1. Huber, S., Weppert, L.\*, Baumeister, L.\*, Happel, O., & GRUNDGEIGER, T. 2025. Team Roles of Artificial Intelligence in Anesthesiology – A Scoping Review. In the Proceedings of the Extended Abstracts of the CHI Conference on Human Factors in Computing Systems (CHI EA '25), Yokohama, Japan. <https://doi.org/10.1145/3706599.3720186>
2. Huber, S., Fricke, R.\*, Pütz, C.\*, Baumeister, L.\*, Dilling, C., Happel, O., Ottenhaus, S., Nagel, A., Dunkelberg, M., & Grundgeiger, T. (2025). Evaluating an AI Documentation Assistant for Anesthesiology Teams. Extended Abstracts of the CHI Conference on Human Factors in Computing Systems (CHI EA '25), Yokohama, Japan. April 26–May 01, 2025. <https://doi.org/10.1145/3706599.3706658> (acceptance rate of ~30%).
3. Huber, S., Papenfuss, N., Wohlfart, V., Weppert, L., Basch, J., Happel, O., & Grundgeiger, T. (2024). Hiring an AI: Incorporating Personnel Selection Methods in User-Centered Design to Design AI Agents for Safety Critical Domains. Nordic Conference on Human-Computer Interaction, Uppsala, Sweden. <https://doi.org/10.1145/3677045.3685418>
4. Hohm, A., Hurtienne, J., Happel, O., & GRUNDGEIGER, T. (2021). It's okay, honey... shhh..." - The Media Equation and Computers-Are-Social-Actors-Hypothesis in Acute Care. *Mensch & Computer* 2021, 5. - 8. September 2021, Ingoldstadt, Germany. <https://doi.org/10.1145/3473856.3474227>
5. GRUNDGEIGER, T., Beck, K.\*, & Happel, O. (2020). The Effect of Effort on the Allocation of Visual Attention During the Induction of General Anesthesia: A SEEV Model Analysis. *Proceedings of the 64<sup>th</sup> Annual Meeting of the Human Factors and Ergonomics Society*. Chicago, IL, USA. October 5 - October 9, 2020. <https://doi.org/10.1177/1071181320641081>
6. Kruse, M.\*, Merdan, N.\*, Volk, V.\*, GRUNDGEIGER, T., & Sanderson, P. (2020). Comparison Between Head-Mounted Displays Regarding the Resumption of a Disrupted Work Task. *Proceedings of the 64<sup>th</sup> Annual Meeting of the Human Factors and Ergonomics Society*. Chicago, IL, USA. October 5 - October 9, 2020. <https://doi.org/10.1177/1071181320641082>

7. GRUNDGEIGER, T., Hahn, F.\* , Wurmb, T., & Happel, O. (2020). A Cognitive Aid to Support In-hospital Resuscitation Teams: An Experimental Evaluation in a Medical Simulation. *Proceedings of the 64<sup>th</sup> Annual Meeting of the Human Factors and Ergonomics Society*. Chicago, IL, USA. October 5 - October 9, 2020.  
<https://doi.org/10.1177/1071181320641153>
8. GRUNDGEIGER, T., Egenolf, T.\* , Markus, C., & Happel, O. (2019). The effect of device (video-based vs. direct laryngoscopy) and experience (junior vs. senior) on situation awareness during simulated tracheal intubation. *Proceedings of the 63<sup>rd</sup> Annual Meeting of the Human Factors and Ergonomics Society*. Seattle, Washington, USA. October 28 - November 1, 2019. <https://doi.org/10.1177/1071181319631206>
9. Wolf, E.\* , Heinrich, R.\* , Michalek, A.\* , Schraudt, D.\* , Hohm, A.\* , Hein, R.\* , GRUNDGEIGER, T., & Happel, O. (2019). Rapid preparation of eye tracking data for debriefing in medical training: A feasibility study. *Proceedings of the 63<sup>rd</sup> Annual Meeting of the Human Factors and Ergonomics Society*. Seattle, Washington, USA. October 28 - November 1, 2019. <https://doi.org/10.1177/1071181319631032>
10. Salisbury, I., Tang, T.-L., Browning, C., Schlosser, P., Mohamed, I., GRUNDGEIGER, T., Loeb, R., Sanderson, P.M. (2019). Cueing Attention to a Matrix of Values on a Head-Worn Display: Four Studies with a Multiple Patient Monitoring Task. *Proceedings of the 63<sup>rd</sup> Annual Meeting of the Human Factors and Ergonomics Society*. Seattle, Washington, USA. October 28 - November 1, 2019.  
<https://doi.org/10.1177/1071181319631330>
11. Schlosser, P.\* , GRUNDGEIGER, T., & Happel, O. (2018). Multiple patient monitoring in the operating room using a head-mounted display. *Proceedings of the 2018 CHI Conference Extended Abstracts on Human Factors in Computing Systems*, Montreal, QC, Canada: April 21–26, 2018 (acceptance rate of 40%).  
<https://doi.org/10.1145/3170427.3188460>
12. Diethel, D.\* , GRUNDGEIGER, T., & Schöning, J. (2018). *Designing a Power Plant Control Room: From Paper to Virtual Reality*. Paper presented at the VRST 2018: ACM Symposium on Virtual Reality Software and Technology, Tokyo, Japan, Nov 28 - Dec 1.
13. GRUNDGEIGER, T., Pichen, J.\* , Häfner, J.\* , Sperlich, B., & Löffler, D. (2017). Combating sedentary lifestyle: A distributed prospective memory approach. *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems 2017*, Denver, CO: May 6-13 2017, 1632-1639. (acceptance rate of 39%)  
<https://doi.org/10.1145/3027063.3053094>

14. GRUNDGEIGER, T., Hester, J.\*, Held, V., & Hurtienne, J. (2017). Beyond knowledge acquisition: Medical device training as a cooperative process. CSCW '17: Computer Supported Cooperative Work and Social Computing Companion Proceedings, 187-190. (acceptance rate < 40%) <https://doi.org/10.1145/3022198.3026315>
15. Diethel, D.\*, Ertle, F.\*, GRUNDGEIGER, T., Mengelkamp, C., & Held, V. (2017). E-Learning vs. E-Learning with hands-on: An experimental study to improve clinical skills. *Proceedings of the 61<sup>th</sup> Annual Meeting of the Human Factors and Ergonomics Society*. Austin, TX: October 9–13, 2017, pp. 660 – 660. <https://doi.org/10.1177/1541931213601651>
16. GRUNDGEIGER, T., Klöffel, C.\*, Mohme, S.+, Wurmb, T., & Happel, O. (2016). Eye tracking in anesthesiology: A preliminary analysis of the effect of the environment (simulated vs. real) on visual attention. *Proceedings of the 60<sup>th</sup> Annual Meeting of the Human Factors and Ergonomics Society*, Washington DC, September 19–23, 2016. <https://doi.org/10.1177/1541931215591106>
17. Schlosser, P.\*, Sanderson, P. M., GRUNDGEIGER, T., Loeb, R., & Liu, D. (2016). The effect of conventional screens vs. head-mounted displays on alarm monitoring strategies. *Proceedings of the 60<sup>th</sup> Annual Meeting of the Human Factors and Ergonomics Society*, Washington DC, September 19–23, 2016. <https://doi.org/10.1177/1541931213601357>
18. GRUNDGEIGER, T., Wurmb, T., & Happel, O. (2015). Eye tracking in anesthesiology: Literature review, methodological issues, and research topics. *Proceedings of the 59<sup>th</sup> Annual Meeting of the Human Factors and Ergonomics Society*. Los Angeles, CA: October 26–30, 2015. <https://doi.org/10.1177/1541931215591106>
19. Reinhardt, D.\*, Kraft, A-K.\*, Albert, M.\*, GRUNDGEIGER, T., Happel, O., Steinisch, A., & Wurmb, T. (2015). Development and formative evaluation of the DoRea App for real-time resuscitation documentation. *Proceedings of the 59<sup>th</sup> Annual Meeting of the Human Factors and Ergonomics Society*. Los Angeles, CA: October 26–30, 2015. **[Dieter W. Jahns Student Practitioner Award, Best Student Paper Award of the HFES Healthcare Technical Group, Finalist HFES Alphonse Chapanis Student Paper Award]** <https://doi.org/10.1177/1541931215591114>
20. Huber, S.\*, Weng, M.\*, GRUNDGEIGER, T., & Sanderson, P. (2014). The effect of visual cues on how people handle interruptions. *Proceedings of the 58<sup>th</sup> Annual Meeting of the Human Factors and Ergonomics Society*. Chicago, IL: 27 - 31 October. **[Best Student Paper Award of the HFES Cognitive Engineering and Decision Making Technical Group]** <https://doi.org/10.1177/1541931214581052>

21. GRUNDGEIGER, T., Scharf, M., Grundgeiger, J., & Scheuchenpflug, R. (2014). Manual distractions of ambulance drivers: Light-and-siren vs. non-light-and-siren travel. *Proceedings of the 58<sup>th</sup> Annual Meeting of the Human Factors and Ergonomics Society*. Chicago, IL: 27 - 31 October. <https://doi.org/10.1177/1541931214581237>
22. GRUNDGEIGER, T., Happel, O., Grundgeiger, J., & Roewer, R. (2014). Body posture during simulated tracheal intubation: Comparison of the effects of video laryngoscopy and direct laryngoscopy. *Proceedings of the 58<sup>th</sup> Annual Meeting of the Human Factors and Ergonomics Society*. Chicago, IL: 27 - 31 October. <https://doi.org/10.1177/1541931214581140>
23. Harris, B., Ford, N., GRUNDGEIGER, T., Sanderson, P., & Venkatesh, B. (2013). Evaluating the redesign of an ICU bedside emergency equipment drawer. *Proceedings of the 57<sup>th</sup> Annual Meeting of the Human Factors and Ergonomics Society*. San Diego, CA: 30 September-4 October. <https://doi.org/10.1177/1541931213571147>
24. GRUNDGEIGER, T., Sanderson, P., Beltran Orihuela, C., Thompson, A., McDougall, H., Nunnink, L., & Venkatesh, B. (2010). Distractions and interruptions in the intensive care unit: A field observation and a simulator experiment. *Proceedings of the 54<sup>th</sup> Annual Meeting of the Human Factors and Ergonomics Society*. San Francisco, CA: 27 September - 1 October. **[Finalist for Alphonse Chapanis Student Paper Award]** <https://doi.org/10.1177/154193121005401206>
25. GRUNDGEIGER, T., Sanderson, P. M., MacDougall, H. G., & Venkatesh, B. (2009). Distributed prospective memory: An approach to understanding how nurses remember tasks. *Proceedings of the 53<sup>rd</sup> Annual Meeting of the Human Factors and Ergonomics Society*. San Antonio, TX: 19-23 October. <https://doi.org/10.1177/154193120905301127>
26. GRUNDGEIGER, T., Sanderson, P. M., MacDougall, H. G., & Venkatesh, B. (2009). How nurses overcome interruptions: an analysis of distributed support. *Proceedings of the 17<sup>th</sup> Triennial Congress of the International Ergonomics Association (IEA2009)*. Beijing, PRC: 9-14 August 2009.
27. GRUNDGEIGER, T., Sanderson, P., Jenkins, S., & Leane, T. (2008). Effects of interruptions on prospective memory performance in anesthesiology. *Proceedings of the 52<sup>nd</sup> Annual Meeting of the Human Factors and Ergonomics Society*. New York, NY: 22-26 September 2008. <https://doi.org/10.1177/154193120805201209>

### **Conference abstracts and posters**

1. Huber, S., Happel, O., GRUNDGEIGER, T. (2024). Interactions, Tasks, and Roles of AI-Systems in Anaesthesiology – A Team Perspective. The Human Factors and Ergonomics Society Europe Chapter Annual Meeting 2024.

2. Abendschein, R. <sup>+</sup>, Happel, O., GRUNDGEIGER, T. (2024). Investigating the effect of salience and effort on the prediction of attentional distribution: A SEEV model analysis in the context of anaesthesiology. The Human Factors and Ergonomics Society Europe Chapter Annual Meeting 2024.
3. Kuge, J.\*, Huber, S., Haugg, E., & GRUNDGEIGER, T. (2021). Ecological Interface Design for a Spacing Assistant in Approach Control. The 2021 International Symposium on Aviation Psychology, Virtual Conference.
4. Kuge, J.\*, GRUNDGEIGER, T., Schlosser, P., Sanderson, P., & Happel, O. (2021). User-Centered Design and Qualitative Evaluation of a Head-Worn-Display Application for Multiple-Patient Monitoring in Anesthesia. The 21st Triennial Congress of the International Ergonomics Association, June 13-18 2021, Vancouver, Canada.
5. Schlosser, P.\*, GRUNDGEIGER, T., Sanderson, P., & Happel, O. (2019). An exploratory clinical evaluation of a head-worn display based multiple-patient monitoring application: impact on supervising anesthesiologists' situation awareness. Presentation as part of the CHI 2019 WISH Symposium Research Highlights Track, Glasgow, UK
6. Huber, S.\*, GRUNDGEIGER, T., Reinhardt, D., Happel, O., Steinisch, A., Wurmb, T. (2018). A cognitive aid to support emergency response teams during in-hospital cardiac arrest. Annual Meeting of the Human Factors and Ergonomics Society Europe Chapter, Berlin, Germany.
7. Schaper, P.<sup>+</sup>, & GRUNDGEIGER, T. (2018). Commission Errors – Determined to do the wrong thing? The 5th International Conference on Prospective Memory, Melbourne, Australia: Jan 03 - 06, 2018
8. Außenhofer, T.\*, Diethel, F.\*, Ertle, F.\* & GRUNDGEIGER, T. (2017). Typische vs. untypische Platzierung von Webobjekten mobiler Webseiten. Mensch & Computer 2017, Regensburg, Germany: Sep 08 – 12, 2017.
9. GRUNDGEIGER, T., Wurmb, T., & Happel, O. (2017). Experience of a Human Factor – Medical Collaboration: The Development, Evaluation, and Implementation of an Application to Support In-Hospital Resuscitation Teams. Presentation at the 2017 International Symposium on Human Factors and Ergonomics in Health Care, March 5–8, New Orleans, Louisiana.
10. Schaper, P.<sup>+</sup>, & GRUNDGEIGER, T. (2017). The role of response suppression in commission errors. The 20<sup>th</sup> European Society for Cognitive Psychology (ESCoP) Conference, September 3-6, Potsdam.
11. Wurmb, T., Huber, S., GRUNDGEIGER, T., Reinhardt, D., Steinisch, A., & Happel, O. (2017). "Cognitive Aid" und Echtzeit-Dokumentation bei innerklinischen Reanimationen:

- Weiterentwicklung einer Tablet-PC basierten „App“. Presentation at the *Wissenschaftliche Arbeitstage Notfallmedizin (WATN) 2017*, 12.-13.02.17, Kiel.
12. Schaper, P.<sup>+</sup>, & GRUNDGEIGER, T. (2017). I should have stopped – Investigating the role of response suppression in commission errors. Beiträge zur 59.Tagung experimentell arbeitender Psychologen, March 26-29, Dresden.
  13. Löffler, L., Wallmann-Sperlich, B., Wan, J., Knött, J., Vogel, A., & GRUNDGEIGER, T. (2016). Opportunities for standing up: Combating the sedentary workplace through contextual design. *The Proceedings of the Human Factors and Ergonomics Society Europe Chapter 2013 Annual Conference*, Prague, Czech Republic: October 26-28, 2016.
  14. Wurmb, T., Happel, O., Albert, T.M., Reinhardt, D., Kraft, A.-K., Steinisch, A., & GRUNDGEIGER, T. (2016). Echtzeit-Dokumentation bei innerklinischen Reanimationen: Chronik der Entwicklung einer Tablet-PC basierten „App“. Presentation at the *Wissenschaftliche Arbeitstage Notfallmedizin (WATN) 2016*, 07.02.16 - 08.02.16, Kiel.
  15. Schaper, P.<sup>+</sup>, & GRUNDGEIGER, T. (2015). The effects of divided attention on commission errors in the delay execute paradigm. In Bermeitinger, C., Mojzisch, A., & Greve, W. (Eds.), Beiträge zur 57.Tagung experimentell arbeitender Psychologen (p.219).
  16. Schaper, P.<sup>+</sup>, & GRUNDGEIGER, T. (2014). Errors of commission in the delayed execute paradigm: Analyzing reaction times and prospective memory performance. *The 4th International Conference on Prospective Memory*, Naples, Italy: 26-30 May, 2014.
  17. Schaper, P.<sup>+</sup>, & GRUNDGEIGER, T. (2014). Exploring commission errors after finished delayed intentions. In Schütz, A.C., Drewing, K., & Gegenfurtner, K.G.(Eds.), Beiträge zur 56.Tagung experimentell arbeitender Psychologen (p. 224).
  18. GRUNDGEIGER, T., & Sanderson, P. (2014). Prospective memory in safety-critical Domains. In Ansorge, U., Kirchler, E., Lamm, C., & Leder, H. (Eds.) Beiträge zur 54.Tagung experimentell arbeitender Psychologen, Vienna, Austria (p. 102).
  19. GRUNDGEIGER, T. , Bayen, U.J., & Horn, S.S. (2012). Effects of sleep deprivation on prospective memory. In Bröder, A., Erdfelder, E., Hilbig, B. E., Meiser, T., Pohl, R.F., & Stahlberg,D. (Eds.), Beiträge zur 53.Tagung experimentell arbeitender Psychologen, Mannheim, Germany (p. 280).
  20. Dogangün, A., & GRUNDGEIGER, T., Bayen, U. J., Haese, A., Stockmanns, G., & Ziegler, J. (2011). Der Awareness-Assistent: Ergebnisse einer Wirksamkeitsevaluation der elektronischen Gedächtnisassistenten. Paper presented at the REHACARE Internationale, Düsseldorf, Germany: 21-24 September 2011.

21. GRUNDGEIGER, T., Sanderson, P. M., Beltran Orihuela, C., Thompson, A., MacDougall, H. G., Nunnink, L., & Venkatesh, B. (2010). Using a full-scale simulation environment to investigate how nurses remember future intentions. Proceedings of the SimTecT 2010. Melbourne, VIC; 30 Aug - 2 Sep 2010. **[Selected as “TOP 20 abstract” for publication in *Simulation in Healthcare*: Grundgeiger, T, et al. (2010). Using a full-scale simulation environment to investigate how nurses remember future intentions. *Simulation in Healthcare*, 5(6), 366.]**
22. GRUNDGEIGER, T. (2010). The effect of different distractions on delayed intentions. The 3rd International Conference on Prospective Memory. Vancouver, Canada: 28-30 July 2010.
23. GRUNDGEIGER, T., Sanderson, P., Beltran Orihuela, C., Thompson, A., McDougall, H., Nunnink, L., & Venkatesh, B. (2010). Prospective memory in intensive care nursing. The 3rd International Conference on Prospective Memory. Vancouver, Ca: 28-30 July 2010.
24. Liu, D., GRUNDGEIGER, T., Sanderson, P. M., Leane, T., Jenkins, S. (2008). Interruptions, distractions, and situation awareness in advanced display studies. Abstract for Society for Technology in Anesthesia (STA2008) Annual Meeting. San Diego, CA: 16-19 Jan, 2008. **[Won Best Abstract Award in the area of Anesthesia Information Systems].**
25. GRUNDGEIGER, T., Alsan, A., & Bäuml, K.-H. (2006). Die negative Wirkung von Hinweisreizen beim episodischen Erinnern: Evidenz für inhibitorische Prozesse. In Hecht, H., Berti, S., Meinhardt, G. & Gamer, M. (Eds.), Beiträge zur. 48.Tagung experimentell arbeitender Psychologen, Mainz, Germany (p. 264).

### **Book chapters**

1. Hirsch, P., Koch, I., & GRUNDGEIGER, T. (2022). Task Interruptions. In A. Kiesel, L. Johannsen, I. Koch, & H. Müller (Eds.), *Handbook of Human Multitasking* (pp. 145-188). Cham: Springer International Publishing. [http://dx.doi.org/10.1007/978-3-031-04760-2\\_4](http://dx.doi.org/10.1007/978-3-031-04760-2_4)
2. Wickens, C.D., McCarley, J.S., Gutzwiller, R.S., GRUNDGEIGER, T. & Yamani, Y. (2022). Application. In Wickens, C.D., McCarley, J.S., Gutzwiller, R.S, *Applied Attention Theory* (2nd ed.). CRC Press. <https://doi.org/10.1201/9781003081579>
3. Loft, S., Dismukes, K., & GRUNDGEIGER, T. (2019). Prospective memory in safety-critical work contexts. In J. Rummel & M. McDaniel (Eds.), *Current Issues in Memory: Prospective Memory*: London: Routledge. <https://doi.org/10.4324/9781351000154>

### **Invited talks & other talks**

1. GRUNDGEIGER, T. (2020). User Experience & Medizintechnik: Ein zu wenig beachteter Aspekt. Online Symposium „Mit Sicherheit vernetzt: Digitalisierung, Cyber-Sicherheit & Ich – Perspektiven im Gesundheitswesen“, Universitätsklinikum Bonn (UKB) und Bundesamt für Sicherheit in der Informationstechnik (BSI), 6./7.11.2020.
2. GRUNDGEIGER, T. (2019). Understanding distractions and interruptions in anaesthesia care. Invited contribution to the panel discussion *From cell phones to noisy rooms – Can distractions in the OR harm your patients*. The European Society of Anaesthesiology annual meeting Euroanaesthesia 2019, 01 Juli – 3 Juli, Vienna, Austria.
3. GRUNDGEIGER, T. (2018). Technological support in acute care: From requirements to evaluations in the field. Invited Keynote at the 12th International Meeting on Behavioural Sciences Applied to Surgery and Acute Care Settings, 19 – 20 October, Munich, Germany.
4. GRUNDGEIGER, T. (2016). Visual attention distribution of anesthesiologist during the induction of general anesthesia: A descriptive and predictive analyses. Department of Psychology, Colorado State University, Fort Collins, Colorado, USA.
5. GRUNDGEIGER, T. (2016). Technikprobleme im Alltag und an der Arbeit: Menschliches Versagen oder unbrauchbare Technik? Hörsaal-on-Tour Vortragsreihe des Würzburger Universitätsbunds WS 15/16, Würzburg, Germany.
6. GRUNDGEIGER, T. (2014). Usability Problems: Past, Modern, & Contemporary. 2<sup>nd</sup> World Usability Day in Würzburg, 13.11.14, Würzburg, Germany.
7. GRUNDGEIGER, T. (2013). Prospective Memory in Critical Care. The 121<sup>st</sup> Annual Convention of the American Psychological Association, Honolulu, Hawaii, HI: July 31 - August 4, 2013. **[APA Div 21 George E. Briggs Dissertation Award 2012]**
8. GRUNDGEIGER, T. (2011). Distractions and interruptions in the intensive care unit. Invited talk at National Nursing Research Unit and the Patient Safety & Service Quality Research Centre, King's College London, UK, 14 Mar 2011.
9. GRUNDGEIGER, T. (2009). Invited short summary of students' perceptions of the conference at the closing ceremony. *17th Triennial Congress of the International Ergonomics Association (IEA2009)*. Beijing, PRC: 9-14 August 2009.

### **Organized symposium**

1. Huckauf, A., Sauter, M., & GRUNDGEIGER, T. (2022). Scalable interactions. Symposia at the 64.Tagung experimentell arbeitender Psychologen (TEAP), Cologne, Germany.

2. Schaper, P.<sup>+</sup> & GRUNDGEIGER, T. (2015). Prospective Memory – Current Trends and Theoretical Advances. Symposia at the 57.Tagung experimentell arbeitender Psychologen (TEAP), Hildesheim, Germany.

### **Media**

1. „Unterbrechungen im Krankenhaus“ JuKiP - Ihr Fachmagazin für Gesundheits- und Kinderkrankenpflege. Ausgabe 02.2014 [News item in paper]
2. „Verursachen Unterbrechungen Fehler?“ Personalführung. Magazin der Deutschen Gesellschaft für Personalführung e.V. Meldung unter Rubrik „Themen + Trends“. Ausgabe 01.2014. [News item in paper]
3. „Verursachen Unterbrechungen Fehler?“. einBLICK. Das Online-Magazin der Universität Würzburg Ausgabe 19. November 2013. [News item in paper]
4. „Prospektives Gedächtnis“. Gesendet am 17.07.2013 um 10.40 Uhr im Bayrischen Rundfunk 2, Sendung: Notizbuch. [Radio]
5. „Vergessen und erinnern: Da war doch was????“. Ausgestrahlt am 21.05.2013 im Bayrischen Fernsehen, Sendung: Abendschau. [Television]

### **Theses**

1. GRUNDGEIGER, T. (2022). *Attention distribution and guidance in complex, socio-technical systems*. Habilitation thesis. Institut Mensch-Computer-Medien, Julius-Maximilians-Universität Würzburg, Würzburg, Germany.
2. GRUNDGEIGER, T. (2011). *Distributed Prospective Memory in Critical Care: Resuming interrupted tasks and remembering future intentions*. PhD thesis. School of Psychology, The University of Queensland, Brisbane, Australia.
3. GRUNDGEIGER, T. (2006). *Part-list cuing mit impliziten Hinweisreizen [Part-list cuing with implicit cues]*. Diplom thesis [Masters Level]. Department of Psychology, Regensburg University, Regensburg, Germany.