

ANIKA BOELHOUWER

HUMAN FACTORS ENGINEER

CONTACT

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LANGUAGE

Dutch- Native
English -
Full professional proficiency
German -
Limited professional
proficiency

DIGITAL SKILLS

BM SPSS
R Studio
PsychoPy
BORIS
SILAB (C++)
Wordpress
Adobe Photoshop
Adobe Illustrator
Adobe After Effects
Adobe Premiere
Microsoft Office



About Me

Inquisitive and creative PhD candidate on Human Factors and Human Machine Interaction. Flexible in application domains with a core focus on healthcare and transportation. Particularly passionate about the research and development of assistive technology with high usability and accessibility. **For a visual impression and overview of all my work projects see anikaboelhouwer.com**



Education

- 2016-2020 **PHD HUMAN-MACHINE INTERACTION**
University of Twente. Enschede, NL
- 2015-2016 **MSC HUMAN FACTORS AND ENGINEERING PSY**
University of Twente. Enschede, NL
- 2014-2015 **PRE-MSC PSYCHOLOGY**
University of Twente. Enschede, NL
- 2010-2014 **BA ART AND TECHNOLOGY**
Saxion University of Applied Sciences. Enschede, NL



Work Experience

- 2016-2021 **HMI RESEARCH AND DEVELOPMENT OF DRIVER SUPPORT IN PARTIALLY AUTOMATED CARS**
PhD research University of Twente. Enschede, NL
Doctoral research, development and evaluation of a Digital In-car Tutor to support drivers in using partially automated cars.
- 2016 **HUMAN-ROBOT INTERACTION ANALYSIS OF ROBOT ASSISTANCE FOR CHILDREN WITH DIABETES**
MSC Internship TNO. Soesterberg, NL
Analysis of system usage and knowledge development of a robotic PAL system for children with type 1 diabetes mellitus
- 2015 **USABILITY AND USER EXPERIENCE ANALYSIS INTELLIGENT BICYCLE FOR ELDERLY CYCLISTS**
Pre-MSc Internship Roessingh R&D Enschede, NL
Evaluation of the usability and user experience of an intelligent bicycle designed at the rehabilitation centre Roessingh for elderly cyclists.



Research Skills

DESIGN, EXECUTION AND ANALYSIS OF HUMAN MACHINE INTERACTION STUDIES

- Usability testing
- (Semi-) structured interviews
- Focus groups
- Questionnaires
- Literature review
- Controlled observational studies
- Controlled experimental studies
- Ethnography
- Heuristics evaluation
- Task analysis



Teaching

INTELLIGENT TRANSPORTATION SYSTEMS
Master Course 2018-2019. University of Twente, NL.
Assistance in course development, organization and execution.

RAPID PROTOTYPING WORKSHOPS
Master Course 2017-2019. University of Twente, NL.
Development, organization and execution of workshops and lectures.

SUPERVISION OF BSC AND MSC STUDENTS
2016-2020. University of Twente, NL.



Publications

JOURNAL PAPERS

van den Beukel, A. P., van Driel, C.J.G., Boelhouwer, A., Veders, N., Heffelaar, T. (2021). Assessment of Driving Proficiency When Drivers Utilize Assistance Systems—The Case of Adaptive Cruise Control. *Safety*, 7(33), 1-24. <https://doi.org/10.3390/safety7020033>

Boelhouwer, A., van den Beukel, A. P., Van Der Voort, M. C., W. B. Verwey, & Martens, M. H. (2020). Supporting Drivers of Partially Automated Cars Through an Adaptive Digital In-Car Tutor. *Information*, 11(185), 1-22. <https://doi.org/10.3390/info11040185>

Boelhouwer, A., Voort, M. C. Van Der, Hottentot, C., Wit, R. Q. De, & Martens, M. H. (2020). How are car buyers and car sellers currently informed about ADAS ? Supporting the safe use of complex driver support systems. *Transportation Research Interdisciplinary Perspectives*, 4, 1-19. <https://doi.org/10.1016/j.trip.2020.100103>

Boelhouwer, A., van den Beukel, A. P., Van Der Voort, M. C., & Martens, M. H. (2019). Should I take over? Does system knowledge help drivers in making take-over decisions while driving a partially automated car? *Transportation Research Part F: Traffic Psychology and Behaviour*, 60, 669–684. <https://doi.org/10.1016/j.trf.2018.11.016>

Walker, F., Boelhouwer, A., Alkim, T., Verwey, W. ., & Martens, M. H. (2018). Changes in Trust after Driving Level 2 Automated Cars. *Journal of Advanced Transportation*, 2018. <https://doi.org/10.1155/2018/1045186>

PEER REVIEWED CONFERENCE PAPERS

Boelhouwer, A., van den Beukel, A. P., van der Voort, M. C., & Martens, M. H. (2020). Determining Environment Factors That Increase the Complexity of Driving Situations. In N. A. Stanton (Ed.), *Proceedings of the AHFE 2020 International Conference on Human Factors in Transportation*. https://doi.org/10.1007/978-3-030-50943-9_1

Boelhouwer, A., van Dijk, J., & Martens, M. H. (2019). Turmoil behind the Automated Wheel An embodied perspective on current HMI developments in partially automated vehicles. In Krömker H. (Ed.), *HCI in Mobility, Transport, and Automotive Systems (LNCS 11596, pp. 3–25)*. Springer, Cham. https://doi.org/10.1007/978-3-030-22666-4_1

Boelhouwer, A., van den Beukel, A. P., Van Der Voort, M. C., & Martens, M. H. (2019). Designing a Naturalistic In-Car Tutor System for the Initial Use of Partially Automated Cars: Taking Inspiration from Driving Instructors. *Proceedings of the 11th International Conference on Automotive User Interfaces and Interactive Vehicular Applications: Adjunct Proceedings*, pp. 410–414. <https://doi.org/10.1145/3349263.3351504>



Conference Presentations

Boelhouwer, A., van den Beukel, A. P., van der Voort, M. C., & Martens, M. H. (2020). Determining Environment Factors That Increase the Complexity of Driving Situations. Paper presentation at the AHFE 2020 International Conference on Human Factors in Transportation. Online due to COVID-19, July 2020.

Boelhouwer, A., van Dijk, J., & Martens, M. H. (2019). Turmoil Behind the Automated Wheel. Paper presentation at HCI in Mobility, Transport, and Automotive Systems, Orlando, FL, July 2019.

Boelhouwer, A., van den Beukel, A. P., Van Der Voort, M. C., & Martens, M. H. (2019). Designing a Naturalistic In-Car Tutor System for the Initial Use of Partially Automated Cars: Taking Inspiration from Driving Instructors. Poster presentation delivered at the International Conference on Automotive User Interfaces and Interactive Vehicular Applications, Utrecht, NL, September 2019.

Boelhouwer, A., van den Beukel, A. P., Van Der Voort, M. C., & Martens, M. H. (2019). Should I take over? Does system knowledge help novice drivers in operating a highly automated car? Poster presentation delivered at the Automated Vehicles Symposium, San Francisco, CA, July 2018.

Boelhouwer, A. (2016-2019) Yearly project presentations at the annual TRAIL PhD Conferences, Utrecht, NL.

Awards

Work-in-Progress Honourable Mention. (2019). Designing a Naturalistic In-Car Tutor System for the Initial Use of Partially Automated Cars: Taking Inspiration from Driving Instructors. 11th International Conference on Automotive User Interfaces and Interactive Vehicular Applications

FOR A VISUAL IMPRESSION AND OVERVIEW OF ALL MY WORK PROJECTS SEE [ANIKABOELHOUWER.COM](https://www.anikaboelhouwer.com)