

Pavlo Bazilinsky

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Education:

2014 - 2018	<i>TU Delft (Netherlands)</i>	PhD in Human Factors of Automated Driving: Auditory Interface Marie Curie ITN fellow within HFAuto : large European project aimed to generate knowledge on human factors of automated driving towards safer road transportation (15 partners, 13 PhDs and 1 post-doc).
2012 - 2014	<i>University of St Andrews (Scotland) and Maynooth University (Ireland)</i>	Erasmus Mundus Double MSc in Dependable Software Systems 1 st year specialisation - AI, 2 nd year - Rigorous Software Development. GPA - 17.8/20.0, double distinction. Scholarship B. Class representative for MSc Computer Science students of the University of St Andrews, 2012 - 2013.
2009 - 2012	<i>South-Eastern Finland University of Applied Sciences (Finland)</i>	BEng in Information Technology. Software Development 5, Networking 5, Telecommunications 4. 278 ECTS. GPA - 4.5/5.0. Microsoft Student Partner 2011 - 2012.
2011 - 2012	<i>University of Wolverhampton (England)</i>	<i>Exchange abroad in Computer Science.</i> Databases A, HPC A, Games Development B. GPA - A14/A16. ERASMUS Scholarship.
2008 - 2009	<i>National University of 'Kyiv-Mohyla Academy' (Ukraine)</i>	<i>BSc in Computer Science</i> , 1st year. Mathematics 91, Physics 100, Algorithms and Data Structures 81. GPA - 93/100.

Work experience:

2018 - present	<i>TU Delft (Netherlands)</i>	Postdoctoral researcher in VIDI project of Joost de Winter "How should automated vehicles communicate with other road users?". Focus on communication between automated vehicles and vulnerable road users. Developed open-source coupled simulator .
2018 - 2021	<i>SD-Insights (Netherlands)</i>	Director of data science research. Startup with a focus on Safety as a Service in mobility in YES!Delft incubator ecosystem. Managed projects with big data on traffic behaviour in The Netherlands. Currently leading development of AI-based vision sensor.
2011 - 2014	<i>OneHourTranslation.com, freelance</i>	Freelance translations and localisations. Languages: English, Russian, Ukrainian. More than 7,000 projects, 4.9/5.0 rating, reviewer status, preferred translator of a number of international companies.
2011 - 2012	<i>Cluetail (Finland), trainee</i>	Part of the eleet.fi team, which was selected to the finals of the 'Uutisraivaaja' innovation contest. Web design and programming using Apache Wicket framework.
2010 - 2011	<i>MHG Systems (Finland), trainee</i>	Developed 'MHG Public' module. Resulted in increased revenue and improved customer service. Localisation (into Ukrainian and Russian) and internalisation of software products.

Research visits:

2022 (planned)	<i>Nissan Silicon Valley (USA)</i>	On-road experiment on the use of visual interfaces for automated cars on the highway. Postponed due to COVID-19.
10 - 12.2019	<i>Nissan (Japan)</i>	On-road experiment on perception of automated driving by pedestrians. Resulted in publication [25].
11 - 12.2017	<i>Virginia Tech Transportation Institute (USA)</i>	Analysis of data on communication between pedestrians and drivers of manually-driven cars in USA.
05 - 06.2017	<i>Volvo Trucks (Sweden)</i>	On-road experiment on auditory in-vehicle feedback for automated trucks. Resulted in publication [15].

04 - 06.2016	<i>Continental (Germany)</i>	Developing methodology for designing and verification of auditory assets for automotive industry. Resulted in publication [22].
04 - 06.2015	<i>TU München (Germany)</i>	Simulator experiment on multimodal feedback for take-over requests for automated driving. Resulted in publication [9].

Academic activities:

2014 - present	<i>TU Delft (Netherlands)</i>	Data champion of 3mE faculty (2019 - present, sharing knowledge about data management and open data/science in the faculty). Member of PhD Council of 3mE faculty (2015 - 2018). Member of Research Council of HFAuto (2014 - 2017). Participant of Open Cloud for Research Environments (OCRE, 2019 - participant).
2015 - present	<i>Marie Curie Alumni Association (MCAA, international)</i>	Association of alumni of Marie Skłodowska-Curie actions programmes with 14,400 members. Chair (2015 - 2017) and vice-chair (2017 - 2019) of BeNeLux chapter , chair (2017 - 2021) and vice-chair (2021 - now) of Bridging Science and Academia working group .
2013 - present	<i>Erasmus Mundus Students and Alumni Association (EMA, international)</i>	Association of alumni of Erasmus Mundus programmes with 15,000 members. Global course representative (2013 - 2014 and 2017 - 2018), member of Communications and Funding teams (2017 - 2018), member of board of Eurasian chapter (2017 - 2019), quantitative analyst of Course Quality Advisory Board (2017 - 2018), member of Capacity building task force of ESAA (Erasmus+ Student and Alumni Alliance, 2018 - 2019). Director of research and innovation of EMA (2019 - 2021).

Publications (all published versions and preprints are open access):

1. Jeon, M., **Bazilinskyy, P.**, Hammerschmidt, J., Hermann, T., Landry, S., & Wolf, K. E. (2015). Report on the in-vehicle auditory interactions workshop: taxonomy, challenges, and approaches. In *Proceedings of AutomotiveUI*. Graz, Austria. <https://pub.uni-bielefeld.de/record/2775049>
2. **Bazilinskyy, P.**, Kyriakidis, M., & De Winter, J. C. F. (2015). An international crowdsourcing study into people's statements on fully automated driving. In *Proceedings of Applied Human Factors and Ergonomics (AHFE)*. Las Vegas, USA. <https://doi.org/10.1016/j.promfg.2015.07.540>
3. **Bazilinskyy, P.**, & De Winter, J. C. F. (2015). Auditory interfaces in automated driving: an international survey. *PeerJ Computer Science*, 1, e13. <https://doi.org/10.7717/peerj-cs.13>
4. **Bazilinskyy, P.**, Geest, L. Van Der, Van Leeuwen, S., Numan, B., Pijnacker, J., & De Winter, J. C. F. (2016). Blind driving by means of auditory feedback. In *Proceedings of 13th IFAC/IFIP/IFORS/IEA Symposium on Analysis, Design, and Evaluation of Human-Machine Systems*. Kyoto, Japan. <https://doi.org/10.1016/j.ifacol.2016.10.612>
5. **Bazilinskyy, P.**, Van Haarlem, W., Quraishi, H., Berssenbrugge, C., Binda, J., & De Winter, J. C. F. (2016). Sonifying the location of an object: A comparison of three methods. In *Proceedings of 13th IFAC/IFIP/IFORS/IEA Symposium on Analysis, Design, and Evaluation of Human-Machine Systems*. Kyoto, Japan. <https://doi.org/10.1016/j.ifacol.2016.10.614>
6. **Bazilinskyy, P.**, Kováčsová, N., Al Jawahiri, A., Kapel, P., Mulckhuyse, J., Wagenaar, S., & De Winter, J. C. F. (2016). Object-alignment performance in a head-mounted display versus a monitor. In *Proceedings of IEEE International Conference on Systems, Man, and Cybernetics (SMC)*. Budapest, Hungary. <https://research.tudelft.nl/en/publications/object-alignment-performance-in-a-head-mounted-display-versus-a-m>
7. **Bazilinskyy, P.**, Eriksson, A., Petermeijer, S. M., & De Winter, J. C. F. (2017). Usefulness and satisfaction of take-over requests for highly automated driving. In *Proceedings of Road Safety and Simulation (RSS)*. The Hague, The Netherlands. <https://research.tudelft.nl/en/publications/usefulness-and-satisfaction-of-take-over-requests-for-highly-auto>
8. **Bazilinskyy, P.**, Beaumont, C. J. A. M., Geest, X. O. S. van der, Jonge, R. F. de, Kroft, K. van der, & De Winter, J. C. F. (2017). Blind driving by means of a steering-based predictor algorithm. In *Proceedings of Applied Human Factors and Ergonomics (AHFE)*. Los Angeles, USA. <https://research.tudelft.nl/en/publications/blind-driving-by-means-of-a-steering-based-predictor-algorithm>
9. Petermeijer, S. M., **Bazilinskyy, P.***, Bengler, K., & De Winter, J. C. F. (2017). Take-over again: Investigating multimodal and directional TORs to get the driver back into the loop. *Applied Ergonomics*, 62, 204–215. <https://doi.org/10.1016/j.apergo.2017.02.023>

10. **Bazilinskyy, P.**, & De Winter, J. C. F. (2017). Analyzing crowdsourced ratings of speech-based take-over requests for automated driving. *Applied Ergonomics*, 64, 56–64. <https://doi.org/10.1016/j.apergo.2017.05.001>
11. **Bazilinskyy, P.**, Van der Aa, A., Schoustra, M., Spruit, J., Staats, L., Van der Vlist, K. J., & De Winter, J. C. F. (2018). An auditory dataset of passing vehicles recorded with a smartphone. In *Proceedings of Tools and Methods of Competitive Engineering (TMCE)*. Las Palmas de Gran Canaria, Spain. <https://research.tudelft.nl/en/publications/an-auditory-dataset-of-passing-vehicles-recorded-with-a-smartphon>
12. **Bazilinskyy, P.**, Heisterkamp, N., Luik, P., Klevering, S., Haddou, A., Zult, M., Dialynas, G., Dodou, D., & De Winter, J. C. F. (2018). Eye movements while cycling in GTA V. In *Proceedings of Tools and Methods of Competitive Engineering (TMCE)*. Las Palmas de Gran Canaria, Spain. <https://research.tudelft.nl/en/publications/eye-movements-while-cycling-in-gta-v>
13. **Bazilinskyy, P.**, Petermeijer, S. M., Petrovych, V., Dodou, D., & De Winter, J. C. F. (2018). Take-over requests in highly automated driving: A crowdsourcing survey on auditory, vibrotactile, and visual displays. *Transportation Research Part F: Traffic Psychology and Behaviour*, 56, 82–98. <https://doi.org/10.1016/j.trf.2018.04.001>
14. **Bazilinskyy, P.**, Cieler, S., & De Winter, J. C. F. (2018). Sound design process for automotive industry. Preprint. https://www.researchgate.net/publication/325846614_Sound_design_process_for_the_automotive_industry
15. **Bazilinskyy, P.**, & De Winter, J. C. F. (2018). Crowdsourced measurement of reaction times to audiovisual stimuli with various degrees of asynchrony. *Human Factors*, 60, 1192–1206. <https://doi.org/10.1177/0018720818787126>
16. **Bazilinskyy, P.**, Larsson, P., Johansson, E., & De Winter, J. C. F. (2019). Continuous auditory feedback on the status of adaptive cruise control, lane deviation, and time headway: An acceptable support for truck drivers? *Acoustical Science and Technology*, 40, 382–390. <https://doi.org/10.1250/ast.40.382>
17. **Bazilinskyy, P.**, Bijker, L., Dielissen, T., French, S., Mooijman, T., Peters, L., & De Winter, J. C. F. (2019). Blind driving by means of the track angle error. In *Proceedings of International Congress on Sound and Vibration (ICSE)*. Montreal, Canada. <https://research.tudelft.nl/en/publications/blind-driving-by-means-of-the-track-angle-error>
18. **Bazilinskyy, P.**, Kyriakidis, M., & De Winter, J. C. F. (2019). When will most cars drive fully automatically? An analysis of international surveys. *Transportation Research Part F: Traffic Psychology and Behaviour*, 64, 184–195. <https://research.tudelft.nl/en/publications/when-will-most-cars-be-able-to-drive-fully-automatically-projecti>
19. **Bazilinskyy, P.**, Dodou, D., & De Winter, J. C. F. (2019). Survey on eHMI concepts: The effect of text, color, and perspective. *Transportation Research Part F: Traffic Psychology and Behaviour*, 67, 175–194. <https://research.tudelft.nl/en/publications/survey-on-ehmi-concepts-the-effect-of-text-color-and-perspective>
20. **Bazilinskyy, P.**, Kooijman, L.*, & De Winter, J. C. F. (2020). Coupled simulator for research on the interaction between pedestrians and (automated) vehicles. In *Proceedings of Driving Simulation Conference (DSC)*. Antibes, France. <https://research.tudelft.nl/en/publications/coupled-simulator-for-research-on-the-interaction-between-pedestr>
21. **Bazilinskyy, P.**, Dodou, D., & De Winter, J. C. F. (2020). External Human-Machine Interfaces: Which of 729 colors is best for signaling ‘Please (do not) Cross’? In *Proceedings of IEEE International Conference on Systems, Man, and Cybernetics (SMC)*. Toronto, Canada. <https://doi.org/10.1109/SMC42975.2020.9282998>
22. **Bazilinskyy, P.**, Eisma, Y. B., Dodou, D., & De Winter, J. C. F. (2020). Risk perception: A study using dashcam videos and participants from different world regions. *Traffic Injury Prevention*, 21, 347–353. <https://doi.org/10.1080/15389588.2020.1762871>
23. **Bazilinskyy, P.**, Kooijman, L., Dodou, D., & De Winter, J. C. F. (2021). How should external Human-Machine Interfaces behave? Examining the effects of colour, position, message, activation distance, vehicle yielding, and visual distraction among 1,434 participants. *Applied Ergonomics*, 95, 103450. <https://doi.org/10.1016/j.apergo.2021.103450>
24. **Bazilinskyy, P.**, Sakuma, T., & De Winter, J. C. F. (2021). What driving style makes pedestrians think a passing vehicle is driving automatically?. *Applied Ergonomics*, 95, 103428. <https://doi.org/10.1016/j.apergo.2021.103428>
25. Onkhar, V., **Bazilinskyy, P.**, Stapel, J. C. J., Dodou, D., Gavrilu, D., & De Winter, J. C. F. (2021). Towards the detection of driver–pedestrian eye contact. *Pervasive and Mobile Computing*, 76, 101455. <https://doi.org/10.1016/j.pmcj.2021.101455>
26. De Winter, J. C. F., **Bazilinskyy, P.**, Wesdorp, D., De Vlam, V., Hopmans, B., Visscher, J., & Dodou, D. (2021). How do pedestrians distribute their visual attention when walking through a parking garage? An eye-tracking study. *Ergonomics*, 64, 793–805. <https://doi.org/10.1080/00140139.2020.1862310>
27. Sripada, A., **Bazilinskyy, P.**, & De Winter, J. C. F. (2021). Automated vehicles that communicate implicitly: examining the use of lateral position within the lane. *Ergonomics*, 1–13. <https://doi.org/10.1080/00140139.2021.1925353>
28. **Bazilinskyy, P.**, Dodou, D., & De Winter, J. C. F. (2021). Visual attention of pedestrians in traffic scenes: A crowdsourcing experiment. In *Proceedings of International Conference on Applied Human Factors and Ergonomics (AHFE)*. <https://research.tudelft.nl/en/publications/visual-attention-of-pedestrians-in-traffic-scenes-a-crowdsourcing>

29. Oudshoorn, M. P. J., De Winter, J. C. F., **Bazilinskyy, P.**, & Dodou, D. (2021). Bio-inspired intent communication for automated vehicles. *Transportation Research Part F: Traffic Psychology and Behaviour*, 80, 127-140. <https://doi.org/10.1016/j.trf.2021.03.021>
30. **Bazilinskyy, P.**, Dodou, D., Eisma, Y. B., Vlakveld, W. V., & De Winter, J. C. F. (2020). Blinded windows and empty driver seats: The effects of automated vehicle characteristics on cyclist decision-making. Under review. https://www.researchgate.net/publication/342637884_Blinded_windows_and_empty_driver_seats_The_effects_of_automated_vehicle_characteristics_on_cyclists'_decision-making
31. Oudshoorn, M. P. J., De Winter, J. C. F., **Bazilinskyy, P.**, & Dodou, D. (2021). *Intent communication in nature: an overview of biological paradigms and their applicability to automated vehicles*. Manuscript in preparation.
32. Mok, C. S., **Bazilinskyy, P.**, & De Winter, J. C. F. (2021). *A two-agent VR study: The effects of driver eye gaze visualisation on AV-pedestrian interaction*. Manuscript in preparation.
33. Kooijman, L., **Bazilinskyy, P.***, Dodou, D., Mallant, K. P. T., Roosens, V. E. R., Middelweerd, M. D. L. M., Overbeek, L. D., & De Winter, J. C. F. (2021). *Can eHMI's mitigate vehicle-pedestrian collisions?*. Manuscript in preparation.
34. **Bazilinskyy, P.**, Merino-Martinez, R., Vieirac, E. O., & De Winter, J. C. F. (2021). *Survey on the noticeability, understanding and annoyance of synthetic sound signals for electric vehicles*. Manuscript in preparation.

* Joint first author.

Posters:

1. Bazilinskyy, P., Cabrall, C. D., Eriksson, A., Gonçalves, J., Heikoop, D., Kyriakidis, M., ... Varotto, S. (2017). HFauto research highlights. In *Automotive Week 2017*.
2. Bazilinskyy, P. (2017). Auditory displays for automated driving. In *2017 MCAA Conference*.
3. Siegling, L., Dodou, D., De Winter, J. C. F., Bazilinskyy, P., & Stuit, S. (2020). A naturalistic pilot study of cyclists' eye- and head movement using head-mounted eye tracking.

Conferences:

1. Student Conference on Optimisation of Software (StuConOS 2013), London, UK, June 25–26, 2013.
2. International Conference on Applied Human Factors and Ergonomics (AHFE 2015), Las Vegas, NV, USA, July 17–21, 2015.
3. International Conference on Auditory Display (ICAD 2015), Graz, Styria, Austria, July 6–10, 2015.
4. IFAC/IFIP/IFORS/IEA Symposium on Analysis, Design, and Evaluation of Human-Machine Systems (IFAC HMS 2016), Kyoto, Japan, August 30 – September 2, 2016.
5. IEEE International Conference on Systems, Man, and Cybernetics (SMC 2016), Budapest, Hungary, October 9–12, 2016.
6. International Robotics Week (RV17), The Hague, The Netherlands, April 19–21, 2017.
7. International Conference on Applied Human Factors and Ergonomics (AHFE 2017), Los Angeles, USA, July 17–21, 2017.
8. Road Safety and Simulation conference 2017 (RSS 2017), The Hague, The Netherlands, October 17–19, 2017.
9. Tools and Methods of Competitive Engineering (TMCE 2018), Las Palmas de Gran Canaria, Spain, May 7–11, 2018.
10. International Congress on Sound and Vibration (ICSV 2019), Montreal, Canada, July 7–11, 2019.
11. International Conference on Human-Computer Interaction (HCII 2019), Orlando, FL, USA, July 26–31, 2019.
12. Driving Simulation Conference (DSC 2020), Antibes, France, September 9–11, 2020.
13. IEEE International Conference on Systems, Man, and Cybernetics (SMC 2020), Toronto, Canada, October 11–14, 2020. Chair of session "Human-Machine Cooperation: Assistance".
14. International Conference on Applied Human Factors and Ergonomics (AHFE 2021), New York, USA, July 25–29, 2021.

Awards:

- [Convergence Health and Technology Open Research award 2021](#) from Convergence Alliance.
- Finalist of [2020 IEEE SMC Franklin V. Taylor award](#) (5 finalists in SMC 2020).
- [Open science award 2020](#) within National Programme Open Science of the Netherlands (NPOS).
- [Best innovator award 2018](#) from MCAA: to reward a member of MCAA who presents the best innovation approach.
- [Alumni award 2018](#) from EMA: to celebrate the outstanding achievements of alumni of Erasmus Mundus programmes.

- [European Young Researchers' award 2017](#) from EuroScience: to recognise PhD candidate who has demonstrated an outstanding research performance, leadership and outreach and has incorporated a clear European dimension in their research.
- [Best student](#) out of 20 students in MSc DESEM from University of St Andrews, 2013 and Maynooth University, 2014.
- [Best paper during StuConOS 2013](#) from University College London.

Grants:

- [FAIR data fund 2021](#) from 4TU.ResearchData.

Teaching and supervision:

- Guest lectures during Human-machine systems course of Dr. Joost de Winter at TU Delft.
- Supervision of 13 BSc final project groups and 13 MSc final projects, co-supervision of 2 PhD students, and co-supervision of 1 internship at TU Delft.

Technical skills and interests:

- **Programming languages:** advanced *Python, C, C++, HTML/CSS/PHP, MATLAB*; intermediate *Java SE, R*; reasonably good command of *Java EE, Qt, Ruby, Pascal*. **Databases:** advanced *MySQL*; average *Oracle, PL/SQL*.
- **Networking:** CCNA, mobile and wireless networks, telecommunications. **Research:** LaTeX, BibTeX, Mendeley.
- **Languages:** Ukrainian (mother tongue), Russian (mother tongue), English (fluent, TOEFL iBT: 104, IELTS: 8.0), German (intermediate, Goethe Institute: A2), Dutch (intermediate, B1), Finnish (basic).
- **Volunteering:** work camp [Holzlabor](#) (Thalheim, Switzerland; SCI), volunteer for the Vedic festival [Vedalife 2013](#), [LEAD 2014 Conference](#) student tutor, member of the charity [Your600th Marathon team](#) of University of St Andrews, restoration of Your600th legacy garden.
- **Organisation:** MCAA Bridging Science and Academia workshops in [Gdansk](#), 2017 (50 people) and [Paris](#), 2018 (70 people), [Kyiv](#), 2019 (40 people), [Berlin](#), 2019 (100 people), session [Environmental impact of transportation on Europe](#) at ESOF 2018.

Other activities:

- Peer review of submissions to [CHI 2020](#), [IJDS 2019](#), [RSS 2017](#), [TMCE 2018/2020](#) conferences; journals: [Applied Ergonomics](#), [Case Studies on Transport Policy](#), [Ergonomics](#), [Forschung im Ingenieurwesen](#), [Frontiers](#), [Human Factors](#), [Information](#), [Multimodal Technologies and Interaction](#), [PeerJ](#), [Psych](#), [Transportation Research Part A](#), [Transportation Research Part F](#).
- Awardee of [micro grants](#) for participating in EMA GA (2014, 2016, 2017, 2019, 2020) and MCAA GA (2016, 2017, 2018, 2019, 2020).
- Participant of [Berlin Summer School Human Factors](#), 2015; [ETH Zürich Cortona Week](#), 2017.
- Presentation of VR-based work on automated driving during the [Researchers' Night 2018](#) exhibition in Brussels.
- Awardee of [scholarship](#) for participating in [European Forum Alpbach](#) (2020, 2021).
- Charing session on sonification for blind astronomers at the [Audible Universe workshop 2021](#) by Lorentz Center.