

Curriculum Vitae

Dr.-Ing Thomas Mildner
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Research interest.

My research explores deceptive designs known as dark patterns and develops approaches to protect users from their harms. Leveraging contemporary advances in AI and machine learning, I aim to create systems that detect manipulative designs in real time. This transdisciplinary work involves collaboration with legal experts to enhance transparency and user agency in digital environments.

Education.

- **2021-2024:** University of Bremen – **Ph.D. in Computer Science (Dr.-Ing)**, Thesis title: *Mitigating Dark Patterns Through Responsible Design - Ethical Design Considerations for User-Centred Technologies*, (summa cum laude), Advisor: Prof. Dr. Rainer Malaka
- **2018-2020:** University College Dublin – **M.Sc. in Computer Science**, Thesis title: *Scéalability - Assessing Multi-Agent Storytelling Performances With Amazon's Alexa*, Advisor: Prof. Dr. Tony Veale
- **2014-2017:** University of the Arts, Bremen – **B.A. in Digital Media**, Thesis title: *Anwendung von Style Transfer Algorithmen auf die Generierung geographischer Karten*, Advisor: Prof. Peter von Maydell and Prof. Dr. Johannes Schöning

Teaching activities.

I supervise and mentor several Bachelor, Master, and Ph.D. students. I enjoy teaching and was part of the following courses:

- **Guest Lecturer** – Angewandte und aktuelle Forschungsthemen in Prävention und Gesundheitsförderung (2024) - University of Bremen
- **Mentoring** – User Experience Project (2024) - Indiana University Bloomington
- **Lecturer** – Seminar on “Information Security, Data Protection, and How Dark Patterns Navigate Johnny’s Behaviour” (2022) – University of Bremen
- **TA** – Formal Foundations (2019) - University College Dublin
- **TA** – Software Engineering Project (2019) - University College Dublin
- **TA** – Computational Creativity (2018) - University College Dublin
- **TA** – Introduction to Relational Databases and SQL (2018) – University College Dublin

Experience.

- **Since 2024:** Postdoc and research cluster coordinator at the Leibniz ScienceCampus DiPH.
- **2021-2024:** Researcher at the University of Bremen in the Digital Media Lab.

- **Since 2020:** Freelance full stack developer and consultation.
 - **2018-2020:** Researcher at the University College Dublin in the Creative Language Systems group.
 - **2018:** Erasmus+ at the University College Dublin in the Creative Language Systems group.
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Academic activities.

I was a student volunteer at the following conferences CHI in 2022 and 2023. Further, I chaired for different roles at the following conferences:

- **Interactivity & Creativity Chair** – CUI 2025
- **Web Chair** – MuC 2025
- **Assistant Subcommittee Chair** – CHI 2025
- **Paper Chair** – MUM 2024
- **Associate Chair** – MuC 2024

Reviewing

I volunteered as a reviewer for the various HCI conferences and journals, including, but not limited to, ACM CHI, ACM DIS, ACM CUI, ACM CSCW, Behaviour & Information Technology, and IJHCS, receiving 5 special recognitions for outstanding reviews.

Talks

Outside conferences, I was invited to engage with communities and present my research at the following venues as talks or lectures:

- Technical University of Eindhoven (2024) – “Introduction to Responsible Design and Dark Patterns”
- Lorentz Workshop on Fair Patterns (2024)
- AI IN HEALTH Bremen (2023) – “Auf der Schattenseite von Sozialen Medien - Wie Dark Patterns unsere Entscheidungen beeinflussen”
- Portugal Digital Wellbeing Week (2023) – “How Dark Patterns Influence Our Decision Making”
- M-EPLI Talks (2023) – “Uncovering Dark Patterns In Social Media”

Active memberships in scientific societies, fellowships in renowned academies

- I am an active member of the Association of Computing Machinery (ACM), contributing to conferences associated with ACM and serving as an active reviewer in the ACM community and beyond.
- Moreover, I am a member of the Early Career Research Academy (ECRA) of the Leibniz Science-Campus Digital Public Health (DiPH).

Awards

- Honourable Mention Award – MUM 2024 in Stockholm, Sweden, for the paper: *Finding a Way Through the Social Media Labyrinth: Guiding Design by Following User Expectations*
- Honourable Mention Award – CHI 2023 in Hamburg, Germany, for paper: *About Engaging and Governing Strategies: A Thematic Analysis of Dark Patterns in Social Networking Services*

List of Publications

I have contributed to and presented my research at many relevant conferences in HCI, such as ACM CHI, ACM DIS, ACM CUI, and MuC. I have published peer-reviewed full articles as a first author and have contributed to other work as a co-author. Furthermore, I co-organised several workshops and special interest groups (SIGs) at high-ranking conferences in the field.

Scientific Publications.

Top publications are marked with an asterisk.

1. * **Mildner, T.**, Savino, G.-L., Putze, S., & Malaka, R. (2024). Finding a Way Through the Social Media Labyrinth: Guiding Design by Following User Expectations. Proceedings of the 23rd International Conference on Mobile and Ubiquitous Multimedia (MUM '24), 1-15.
<https://doi.org/10.1145/3701571.3701605>
2. Niknejad, S., **Mildner, T.**, Zargham, N., Putze, S., and Malaka, R. (2024). Level Up or Game Over: Exploring How Dark Patterns Shape Mobile Games. Proceedings of the 23rd International Conference on Mobile and Ubiquitous Multimedia (MUM '24), 1-13.
<https://doi.org/10.1145/3701571.3701604>
3. Zargham, N., Avanesi, V., **Mildner, T.**, Javanmardi, K., Porzel, R., and Malaka, R. (2024). HASI: A Model for Human-Agent Speech Interaction. ACM Conversational User Interfaces 2024, 1–8.
<https://doi.org/10.1145/3640794.3665885>
4. **Mildner, T.**, Savino, G.-L., Schöning, J., and Malaka, R. (2024). Dark Patterns: Manipulative Designstrategien in digitalen Gesundheitsanwendungen. Bundesgesundheitsblatt - Gesundheitsforschung - Gesundheitsschutz. <https://doi.org/10.1007/s00103-024-03840-6>
5. * Gray, C. M., Santos, C. T., Bielova, N., and **Mildner, T.** (2024). An Ontology of Dark Patterns Knowledge: Foundations, Definitions, and a Pathway for Shared Knowledge-Building. Proceedings of the CHI Conference on Human Factors in Computing Systems, 1–22.
<https://doi.org/10.1145/3613904.3642436>
6. * **Mildner, T.**, Cooney, O., Meck, A.-M., Bartl, M., Savino, G.-L., Doyle, P. R., Garaialde, D., Clark, L., Sloan, J., Wenig, N., Malaka, R. and Niess, J. (2024). Listening to the Voices: Describing Ethical Caveats of Conversational User Interfaces According to Experts and Frequent Users. Proceedings of the 2024 CHI Conference on Human Factors in Computing Systems, 1-18.
<https://doi.org/10.1145/3613904.3642542>
7. Zargham, N., Alexandrovsky, D., **Mildner, T.**, Porzel, R., and Malaka, R. (2023). “Let’s Face It”: Investigating User Preferences for Virtual Humanoid Home Assistants”. International Conference on Human-Agent Interaction, 246–256.
<https://doi.org/10.1145/3623809.3623821>
8. * **Mildner, T.**, Freye, M., Savino, G.-L., Doyle, P. R., Cowan, B. R., and Malaka, R. (2023). Defending Against the Dark Arts: Recognising Dark Patterns in Social Media. Proceedings of the 2023 ACM Designing Interactive Systems Conference, 2362–2374.
<https://doi.org/10.1145/3563657.3595964>

9. * **Mildner, T.**, Savino, G.-L., Doyle, P. R., Cowan, B. R. and Malaka, R. (2023). About Engaging and Governing Strategies: A Thematic Analysis of Dark Patterns in Social Networking Services. Proceedings of the 2023 CHI Conference on Human Factors in Computing Systems, 1–15. <https://doi.org/10.1145/3544548.3580695>
10. Stefanidi, E., Bentvelzen, M., Woźniak, P. W., Kosch, T., Woźniak, M. P., **Mildner, T.**, Schneegass, S., Müller, H. and Niess, J. (2023). Literature Reviews in HCI: A Review of Reviews. Proceedings of the 2023 CHI Conference on Human Factors in Computing Systems, 1–24. <https://doi.org/10.1145/3544548.3581332>
11. Wagener, N., Reicherts, L., Zargham, N., Bartłomiejczyk, N., Scott, A. E., Wang, K., Bentvelzen, M., Stefanidi, E., **Mildner, T.**, Rogers, Y. and Niess, J. (2023). SelVReflect: A Guided VR Experience Fostering Reflection on Personal Challenges. Proceedings of the 2023 CHI Conference on Human Factors in Computing Systems, 1–17. <https://doi.org/10.1145/3544548.3580763>
12. **Mildner, T.**, Doyle, P., Savino, G.-L. and Malaka, R. (2022). Rules Of Engagement: Levelling Up To Combat Unethical CUI Design. 4th Conference on Conversational User Interfaces, 1–5. <https://doi.org/10.1145/3543829.3544528>
13. ***Mildner, T.** and Savino, G.-L. (2021). Ethical User Interfaces: Exploring the Effects of Dark Patterns on Facebook. In Extended Abstracts of the 2021 CHI Conference on Human Factors in Computing Systems (pp. 1–7). Association for Computing Machinery. <https://doi.org/10.1145/3411763.3451659>
14. Veale, T., Wicke, P. and **Mildner, T.** (2020). Duets Ex Machina: On The Performative Aspects of “Double Acts” in Computational Creativity.
15. Reinschluessel, A. V., Teuber, J., Herrlich, M., Bissel, J., Van Eikeren, M., Ganser, J., Koeller, F., Kollasch, F., **Mildner, T.**, Raimondo, L., Reising, L., Ruedel, M., Thieme, D., Vahl, T., Zachmann, G. and Malaka, R. (2017). Virtual Reality for User-Centered Design and Evaluation of Touch-free Interaction Techniques for Navigating Medical Images in the Operating Room. Proceedings of the 2017 CHI Conference Extended Abstracts on Human Factors in Computing Systems, 2001–2009. <https://doi.org/10.1145/3027063.3053173>

Workshops, Symposia, and SIGs

1. Zargham, N., Dubiel, M., Desai, S., **Mildner, T.**, and Belz, H.-J. (2024). Designing AI Personalities: Enhancing Human-Agent Interaction Through Thoughtful Persona Design. Proceedings of the 23rd International Conference on Mobile and Ubiquitous Multimedia, 1-6. December 1st - 4th, Stockholm, Sweden.
2. **Mildner, T.**, Zargham N., and Malaka, R. (2024). Workshop on Responsible and Ethical AI in CUI Technologies (REACT). November 4th-6th. Bremen, Germany.
3. Gray, C. M., Gunawan, J., Schäfer, R., Bielova, N., Chamorro, L. S., Seaborn, K., **Mildner, T.**, and Sandhaus, H. (2024). Mobilizing Research and Regulatory Action on Dark Patterns and Deceptive Design Practices. Extended Abstracts of the 2024 CHI Conference on Human Factors in Computing Systems, 1–6. <https://doi.org/10.1145/3613905.3636310>

4. Gray, C. M., Santos, C. T., Tong, N., **Mildner, T.**, Rossi, A., Gunawan, J. T., and Sinderson, C. (2023). Dark Patterns and the Emerging Threats of Deceptive Design Practices. Extended Abstracts of the 2023 CHI Conference on Human Factors in Computing Systems, 1–4. <https://doi.org/10.1145/3544549.3583173>
5. Avanesi, V., Rockstroh, J., **Mildner, T.**, Zargham, N., Reicherts, L., Friehs, M. A., Kontogiorgos, D., Wenig, N. and Malaka, R. (2023). From C-3PO to HAL: Opening The Discourse About The Dark Side of Multi-Modal Social Agents. Proceedings of the 5th International Conference on Conversational User Interfaces, 1–7. <https://doi.org/10.1145/3571884.3597441>