

KEVIN WILKINGHOFF

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I am a postdoctoral researcher at Aalborg University with the Pioneer Centre for AI. My work focuses on anomaly and out-of-distribution detection, representation learning, and domain generalization for audio signals. My long-term research vision is to develop robust, domain-generalizable anomaly detection systems that can operate with minimal supervision across diverse audio and multimodal environments.

RESEARCH INTERESTS

Anomaly and out-of-distribution detection
Representation learning for audio and multimodal signals
Domain generalization and robustness

EDUCATION

Ph.D. (Dr.rer.nat.) in Computer Science (summa cum laude) , University of Bonn, Germany	2022–2024
M.Sc. in Computer Science (with distinction) , University of Bonn, Germany	2014–2017
B.Sc. in Mathematics , University of Münster, Germany	2010–2014

PROFESSIONAL EXPERIENCE

Postdoctoral Researcher , Aalborg University with Pioneer Centre for AI, Aalborg, Denmark	2025–present
Visiting Research Scientist , Mitsubishi Electric Research Laboratories, Cambridge, MA, USA	2024–2025
Research Associate , Fraunhofer FKIE, Wachtberg, Germany	2017–2024

GRANTS AND AWARDS

Compute Grant for the <i>LUMI Supercomputer</i> , Grant Holder, DeIC (12,000 GPUh)	2026
Conference Grant for the <i>1st MMAD Workshop</i> , Grant Holder, Carlsberg Foundation (78,600 DKK)	2026
P1 Program on <i>Multimodal Anomaly Detection</i> , Program Director, Pioneer Centre for AI (50,000 DKK)	2025–2027
Best Paper Award (DCASE 2021, single author)	2021

PUBLICATIONS

30+ peer-reviewed publications including two TASLP journal articles

SELECTED PUBLICATIONS

K. Wilkinghoff, H. Yang, J. Ebbers, F. G. Germain, G. Wichern, and J. Le Roux. “Local Density-Based Anomaly Score Normalization for Domain Generalization”. In: IEEE Trans. Audio, Speech, Lang. Process. 33 (2025).
K. Wilkinghoff and F. Kurth. “Why do Angular Margin Losses work well for Semi-Supervised Anomalous Sound Detection?” In: IEEE/ACM Trans. Audio, Speech, Lang. Process. 32 (2024).
K. Wilkinghoff, H. Yang, J. Ebbers, F. G. Germain, G. Wichern, and J. Le Roux. “Keeping the Balance: Anomaly Score Calculation for Domain Generalization”. In: Proc. ICASSP. 2025.
K. Wilkinghoff. “Self-Supervised Learning for Anomalous Sound Detection”. In: Proc. ICASSP. 2024.
K. Wilkinghoff. “Sub-Cluster AdaCos: Learning Representations for Anomalous Sound Detection”. In: Proc. IJCNN. 2021.

COMMUNITY SERVICE AND OTHER ROLES

Workshop Organizer for the *1st Multimodal Anomaly Detection Workshop*
Reviewer for TASLP, TPAMI, SPL, ICASSP, Interspeech, WASPAA, EUSIPCO, ASRU, IJCNN, DCASE, and others
Area Chair for IJCNN 2025

TEACHING AND SUPERVISION

Supervised 4 M.Sc. theses, 3 lab projects, and 2 seminar talks; delivered 3 substitute lectures