

**Prof. Dr. Marcin Grzegorzek**

[www.linkedin.com/in/marcin-grzegorzek](http://www.linkedin.com/in/marcin-grzegorzek)

University of Lübeck  
Institute of Medical Informatics  
Ratzeburger Allee 160, 23562 Lübeck

Tel.: +49 451 3101 5603  
[marcin.grzegorzek@uni-luebeck.de](mailto:marcin.grzegorzek@uni-luebeck.de)  
[www.imi.uni-luebeck.de](http://www.imi.uni-luebeck.de)

**Scientific Goal**

**Data → Knowledge:** Extracting knowledge from large data collections using explainable machine learning algorithms.

**Scientific Fields**

Artificial Intelligence

Machine Learning

Pattern Recognition

Wearable Computing

Digital Health

**Selected Functions**

- Full Professor at the Institute of Medical Informatics at the University of **Lübeck**
- Head of the Medical Data Science Lab at the University of **Lübeck**
- Head of the AI Motion Lab at the Fraunhofer IMTE in **Lübeck**
- Co-Founder of expandAI GmbH based in **Lübeck**
- Associate Editor of Elsevier Pattern Recognition and Springer Visual Computer Journals

**Academic Employment and Degrees**

- Since 10/2018*      **Professor (W3)** — Institute of Medical Informatics — University of **Lübeck**
- 10/2016 – 09/2018*      **Senior Lecturer (A14)** — Research Group for Pattern Recognition — University of **Siegen**
- 01/2014*      **Habilitation** in Pattern Recognition — AGH University of Science and Technology in **Kraków**
- 10/2010 – 09/2016*      **Assistant Professor (W1)** — Research Group for Pattern Recognition — University of **Siegen**
- 03/2008 – 09/2010*      **Research Assistant** — Institute for Web Science and Technologies — University of **Koblenz-Landau**
- 04/2007*      **Doctorate with Distinction** in Pattern Recognition — University of **Erlangen-Nürnberg**
- 07/2006 – 02/2008*      **Research Assistant** — Multimedia & Vision Research Group — Queen Mary University of **London**
- 12/2002 – 06/2006*      **Doctoral Student** — Pattern Recognition Lab — University of **Erlangen-Nürnberg**
- 11/2002*      **M.Sc.** in Computer Science — Silesian University of Technology in **Gliwice**

## Selected Publications

**Google Scholar:** <https://scholar.google.de/citations?user=afSJW1IAAAAJ&hl=en>

**Scopus:** <https://www.scopus.com/authid/detail.uri?authorId=6504608152>

**Web of Science:** <https://www.webofscience.com/wos/author/rid/AAF-1647-2021>

1. Xinyu Huang, Franziska Schmelter, Muhammad Tausif Irshad, Artur Piet, Muhammad Adeel Nisar, Christian Sina, and Marcin Grzegorzek. Optimizing Sleep Staging on Multimodal Time Series: Leveraging Borderline Synthetic Minority Oversampling Technique and Supervised Convolutional Contrastive Learning. *Computers in Biology and Medicine (Elsevier, IF: 7.0)*, 166, November 2023. DOI: 10.1016/j.combiomed.2023.107501.
2. Naoki Takashima, Frédéric Li, Marcin Grzegorzek, and Kimiaki Shirahama. Embedding-Based Music Emotion Recognition Using Composite Loss. *IEEE Access (IEEE, IF: 3.9)*, 11, April 2023. DOI: 10.1109/ACCESS.2023.3265807.
3. Cong Yang, Zhenyu Yang, Yan Ke, Tao Chen, Marcin Grzegorzek, and John See. Doing More With Moiré Pattern Detection in Digital Photos. *IEEE Transactions on Image Processing (IEEE, IF: 10.6)*, 32:694–708, January 2023. DOI: 10.1109/TIP.2022.3232232.
4. Muhammad Hassan Khan, Muhammad Shahid Farid, and Marcin Grzegorzek. Vision-based Approaches towards Person Identification Using Gait. *Computer Science Review (Elsevier, IF: 12.9)*, 42, November 2021. DOI: 10.1016/j.cosrev.2021.100432.
5. Xinyu Huang, Kimiaki Shirahama, Frédéric Li, and Marcin Grzegorzek. Sleep Stage Classification for Child Patients Using DeConvolutional Neural Network. *Artificial Intelligence in Medicine (Elsevier, IF: 4.383)*, 110, November 2020. DOI: 10.1016/j.artmed.2020.101981.

## Selected Projects

1. MoveGroup: Junior Research Group – Integration and Analysis of Multimodal Sensor Signals for Investigating Neurological Movement Disorders. **Main Applicant and Overall Coordinator**. German Federal Ministry of Education and Research (BMBF). 10/2021 – 09/2026. Overall Budget: 1,431,000 €.
2. KIBA: AI-Assisted Movement Analysis and Therapy. **Main Applicant and Overall Coordinator**. European Regional Development Fund. 01/2022 – 06/2023. Overall Budget: 1,340,000 €.
3. CogAge: Cognitive Village – Adaptively Learning Technical Assistance for Elderly. **Main Applicant and Overall Coordinator**. German Federal Ministry of Education and Research (BMBF). 09/2015 – 11/2018. Overall Budget: 3.615.000 €.
4. INDICATE-FH: Improving Diagnostics and Therapy of Food Hypersensitivity. Principal Investigator and Leader of the Subproject “Digital Marker: Wearable-based Food Hypersensitivity Recognition”. German Federal Ministry of Education and Research (BMBF). 07/2021 – 06/2024.
5. My-AHA: My Active and Healthy Ageing. Principal Investigator and Leader of the Work Package “Data Fusion and Analytics”. European Commission, Horizon 2020. 01/2016 – 03/2020.
6. GRK 1564: Research Training Group 1564 “Imaging New Modalities”. Principal Investigator Leader of the Subproject “Multimodal Scene Analysis”. German Research Foundation (DFG). 10/2010 – 09/2018.

## Supervised Doctorates

1. Raoul Hoffmann. Analysing Data from Capacitive Floor Sensors for Human Gait Assessment Using ANNs. Exam: 10/2023.
2. Xinyu Huang. Sensor-Based Sleep Stage Classification Using Deep Learning. Exam: 11/2022.
3. Muhammad Adeel Nisar. Sensor-based Human Activity Recognition for Assistive Health Technologies. Exam: 06/2022.
4. Frédéric Li. Deep Transfer Learning for Time-series Classification. Exam: 09/2021.
5. Frank Ebner. Smartphone-Based 3D Indoor Localization and Navigation. Exam: 09/2020.
6. Ahmad Delforouzi. New Approaches for Object Tracking and Image-based Quality Control. Exam: 07/2020.
7. Muhammad Hassan Khan. Human Activity Analysis in Visual Surveillance and Healthcare. Exam: 09/2018.
8. Lukas Köping. Probabilistic Fusion of Multiple Distributed Sensors. Exam: 09/2018.
9. Sergey Kosov. Multi-layer Conditional Random Fields for Revealing Unobserved Entities. Exam: 07/2018.
10. Zeyd Boukhers. 3D Trajectory Extraction from 2D Videos for Human Activity Analysis. Exam: 09/2017.
11. Cong Yang. Object Shape Generation, Representation and Matching. Exam: 09/2016.
12. Christian Feinen. Object Representation and Matching Based on Skeletons and Curves. Exam: 03/2016.
13. Chen Li. Content-based Microscopic Image Analysis. Exam: 02/2016.