



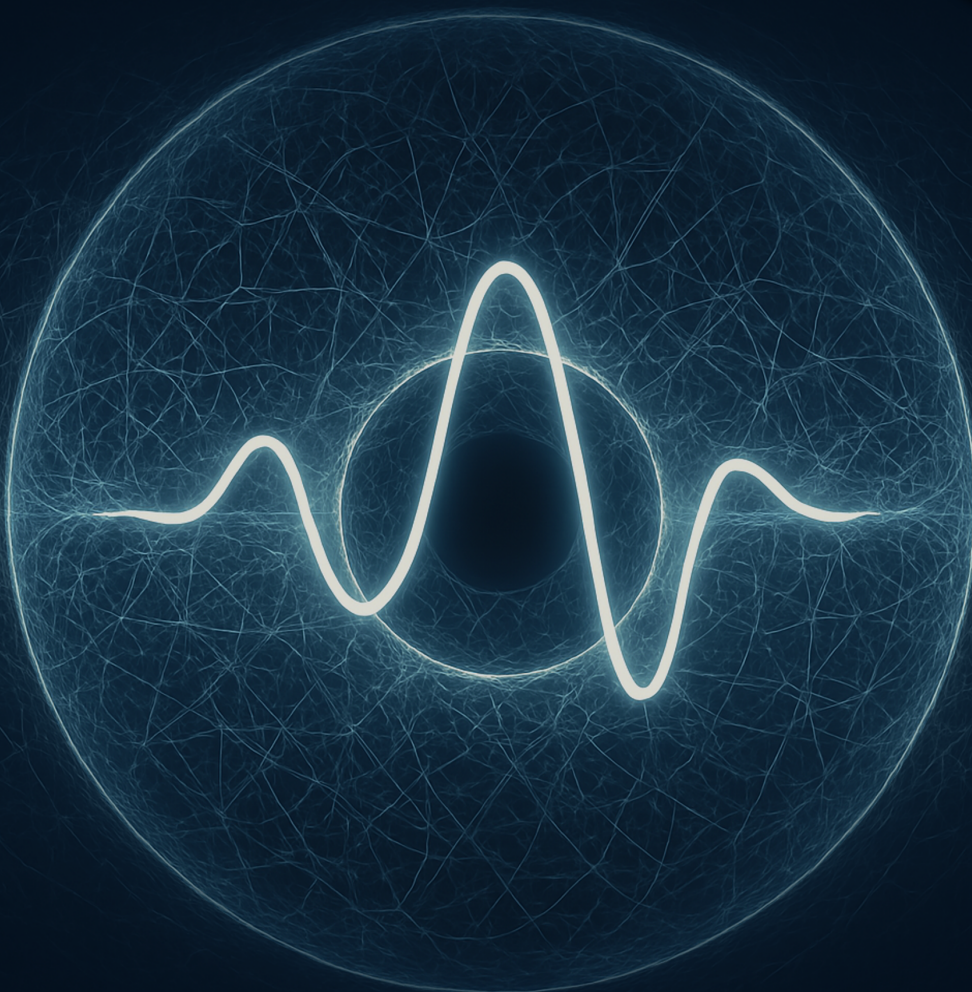
Friedrich-Alexander-Universität
Faculty of Engineering



Pattern
Recognition
Lab

Pattern Recognition Symposium Summer 2025

27 - 31
July 2025



July 28, 2025

Breakfast	08:00 - 08:45
Confidential Talks	09:00 - 10:00
Break	10:00 - 10:20
Annette Schwarz (LAMBDA) <i>Tracking the Invisible: Exploring the Link Between External Motion and Internal Oncology Targets</i>	10:20 - 10:40
Julian Oelhaf (DPUI/TSI) <i>Learning to Protect: Reinforcement Learning for Coordinated Power System Protection</i>	10:40 - 11:00
Break	11:00 - 11:10
Poster Session	11:10 - 12:30
Lukas Buess (LAMBDA /SAGI) <i>Fine-Grained Retrieval-Based Report Generation for 3D CT Imaging</i>	
Chengze Ye (IPA) <i>GB-SVFBP: Gaussian-Based Shift-Variant FBP neural network</i>	
Adarsh Raghunath (LAMBDA) <i>Scalable Automated Framework for Left Atrial Appendage Segmentation, Clustering, and CFD Analysis</i>	
Mohammad Moataz Tolba (DPUI/TSI) <i>Leak Localization in Intermittent-Flow Water Pipes Using Thermal Numerical Analysis</i>	
Joshua Scheuplein (IPA) <i>DINO Adapted to X-Ray (DAX): Foundation Models for Intraoperative X-Ray Imaging</i>	
Marcel Dreier (CV) <i>2+1 = Time Travel? Spatiotemporal Learning for Calving Front Segmentation</i>	
Siyuan Mei (IPA) <i>Vision transformer hook for dense predictions</i>	
Eduardo Castaneda (LAMBDA) <i>Fast multi-label parameterization of left atrium by learned template morphing</i>	
Melika Qahqaie (LAMBDA) <i>Intelligent Lesion Selection: A Novel Method for Longitudinal Assessment of Breast Cancer Lung Metastases</i>	
Lunch Break	12:30 - 13:50
Changhun Kim (DPUI/TSI) <i>Physics Informed Graph Neural Network and Reinforcement Learning for Power Grid Congestion Management.</i>	13:50 - 14:10
Mathias Zinnen (CV) <i>ED-ActionPose</i>	14:10 - 14:30
Nico Meyer (external (IIS)) <i>Learning Encodings by Maximizing State Distinguishability: Variational Quantum Error Correction</i>	14:30 - 14:50
Mental Health Break	14:50 - 15:10
Break	15:10 - 15:30
Guest Talk (Extern) <i>TBD</i>	15:30 - 16:30
Dinner	18:30 - 19:30

July 29, 2025

Breakfast	08:00 - 08:45
Confidential Talks	09:00 - 10:00
Break	10:00 - 10:20
Abner Hernandez (SAGI) <i>Improving ASR for Pathological Speech Using LLM-Based Error Correction Techniques</i>	10:20 - 10:40
Stefan Ploner (IPA) <i>Volume Fusion Optical Coherence Tomography: 7 years in 11 minutes</i>	10:40 - 11:00
Break	11:00 - 11:10
Poster Session	11:10 - 12:30
Daniel Mosig (LAMBDA/IPA) <i>Patient Table Motion Compensation in Coronary Angiography Video Sequences</i>	
Aline Sindel (CV) <i>CraquelureNet Extension: High-resolution Keypoint Refinement for Non-rigid Multi-modal Image Registration of Panel Paintings</i>	
Franziska Weber (LAMBDA) <i>Impact of Plasticity-Based Reservoir Adaptation on Spectral Radius and Performance of Echo State Networks</i>	
Hiu Ching Hung Tobias Pertlwieser (SAGI/CV) <i>Multimodal Analysis of Clinical Interviews: Towards More Empathetic and Effective Doctor-Patient Communication</i>	
Sally Zeitler (TSI) <i>Classifying the Unclassifiable: A Deep Learning Approach to Localized Necking Classification</i>	
Merlin Nau (IPA) <i>Null space evaluation for multi-focal collimator SPECT on a digital brain phantom</i>	
Lisa Hofbauer (LAMBDA) <i>Multi-modal Image Registration for Prostate Cancer Diagnosis</i>	
Linda Vorberg (LAMBDA) <i>Estimating Stroke Onset Time from Non-Contrast CT Using Radiomics and Machine Learning-Based Models</i>	
Florian Goldmann (IPA) <i>Multispectral Atherosclerotic Soft-Plaque Classification from Photon Counting Computed Tomography</i>	
Lunch Break	12:30 - 13:50
Mental Health Break	13:50 - 14:10
Yipeng Sun (IPA) <i>Interpretable Self-Supervised Single-Image Denoising of Low-Dose CT</i>	14:10 - 14:30
Tri Nguyen (LAMBDA /SAGI) <i>Beyond Contrast: How is AI Enabling New Possibilities in Breast MRI Screening?</i>	14:30 - 14:50
Nora Gourmelon (CV) <i>Pre-Training a Hybrid Transformer-CNN for Glacier Segmentation</i>	14:50 - 15:10
Dinner	18:30 - 19:30

July 30, 2025

Breakfast	08:00 - 08:45
Daiqi Liu (SAGI) <i>Audio-Vision Contrastive Learning for Phonological Class Recognition</i>	09:00 - 09:20
Alexander Jung (IPA) <i>FDK and virtual detectors for twin robotic CT reconstruction</i>	09:20 - 09:40
Hakan Calim (CV) <i>SidewalkGPT : Empowering the Blind with Vision-Language Intelligence</i>	09:40 - 10:00
Break	10:00 - 10:20
Nyvenn Castro (sMRI Lab FAU (SAGI/MRI Guest)) <i>Motion Robust Imaging Techniques for Unsedated Pediatric MRI</i>	10:20 - 10:40
Linda Schneider (IPA) <i>Behind the Scans: How I Collected Arbitrary CT Data at Tsinghua University</i>	10:40 - 11:00
Break	11:00 - 11:10
Poster Session	11:10 - 12:30
Farid Tasharofi (IPA) <i>FIND-Net – Fourier-Integrated Network with Dictionary Kernels for Metal Artifact Reduction</i>	
Dominik Stecher (DPUI/TSI) <i>Power of Ensemble Learning: Small Experts vs Large Generalists for Time Series Fault Detection</i>	
Manuela Goldmann (IPA) <i>VAE-Based Realistic Head Motion Simulation for Motion Compensation in Interventional CBCT</i>	
Aniol Serra Juhé (CV) <i>Extended Reality Preparation for Shoulder MRI</i>	
Saahil Islam (LAMBDA) <i>ECG-free Dynamic Coronary Roadmapping Using Spatio-Temporal Transformers</i>	
Md Hasan (SAGI) <i>Region-guided Text Report Generation from X-ray Images</i>	
Badhan Das (MRI/LAMBDA) <i>AdaViT for Variable MRI input images</i>	
Zijin Yang (MRI) <i>Biosignature brain area segmentation</i>	
Lunch Break	12:30 - 14:00
PhD Q&A Session with Prof. Maier	14:00 - 15:00
Dinner	18:30 - 19:30

Responsible people:

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Dr.-Ing. Paula Andrea Pérez-Toro

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Changhun Kim

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