講演１の講師　Dr. Jungpil SHIN（愼　重弼）教授

Title:
Vision and Sensor Based System for Human Activity Recognition using Machine Learning

Abstract:

本研究は、相互信頼に基づく円滑な情報社会の実現を目的とし、パターン認識と生体認証を基盤に発展してきた。筆順非依存文字認識や署名認証、ジェスチャ認識などの技術を確立し、CNN・RNN・注意機構を用いた直感的な非接触インタフェースを提案している。近年はAIセンシングを医療へ応用し、パーキンソン病、アルツハイマー病、ADHD/ASD、転倒検知などで高精度な診断支援を実現し、AI 医療の可能性を示している。

Biography:

JUNGPIL SHIN (Senior Member, IEEE) received the B.Sc. degree in computer science and statistics and the M.Sc. degree in computer science from Pusan National University, South Korea, in 1990 and 1994, respectively, and the Ph.D. degree in computer science and communication engineering from Kyushu University, Japan, in 1999, under a scholarship from the Japanese Government (MEXT). He was an Associate Professor, a Senior Associate Professor, and a Full Professor with the School of Computer Science and Engineering, The University of Aizu, Japan, in 1999, 2004, and 2019, respectively. He has co-authored more than 500 published papers for widely cited journals and conferences. His research interests include pattern recognition, image processing, computer vision, machine learning, human–computer interaction, non-touch interfaces, human gesture recognition, automatic control, Parkinson's disease diagnosis, ADHD diagnosis, user authentication, machine intelligence, bioinformatics, and handwriting analysis, recognition, and synthesis. He is a member of ACM, IEICE, IPSJ, KISS, and KIPS. He serves as an Editorial Board Member for Scientific Reports. He was included among **the top 2% of scientists worldwide edition of Stanford University/Elsevier, in 2025, 2024**, and **the top 0.5% of AI researcher worldwide edition of ScholarGPS, in 2025, 2024**. He served as the general chair, the program chair, and a committee member for numerous international conferences. He serves as an Editor for IEEE journals, Springer, Sage, Taylor & Francis, Sensors (MDPI), Electronics (MDPI), and Tech Science. He serves as a reviewer for several major IEEE and SCI journals.

講演２の講師　加賀谷　修　（かがや　おさむ）博士

題目：
透明アンテナとメタサーフェイス反射板

略歴：
所属：　AGC株式会社　材料融合研究所
略歴：　1999年　東京農工大学工学部卒業
　　2001年　同大学大学院工学研究科修士課程修了
　　2022年　同大学大学院工学研究科博士課程修了，博士（工学）
　　2001年　AGC株式会社（当時：旭硝子株式会社　中央研究所）に入社．以来ガラスアンテナ，電磁波散乱の研究に従事　現在，技術本部　材料融合研究所に所属

講演３の講師　Dr. Chang GE（葛　暢）

Title:

When Antenna Design Meets Large Language Models（LLMs）

Abstract:

Antenna design is fundamentally an inverse problem: mapping desired electromagnetic performance back to concrete geometric structures and design parameters. Most existing approaches rely on repeatedly invoking full-wave computational electromagnetics (CEM) solvers for iterative search and optimization, which is computationally expensive and significantly lengthens the design cycle. If an end-to-end antenna inverse design workflow can be established by leveraging state-of-the-art AI techniques, it could markedly improve design efficiency, thereby accelerating both large-scale exploration and practical deployment.
Motivated by the recent breakthroughs of large language models (LLMs), exemplified by applications such as ChatGPT and Gemini, in modeling and reasoning over complex tasks, this talk introduces a new direction for addressing antenna inverse design with LLM-inspired ideas. Drawing on the “translation” paradigm in natural language processing, this approach replaces the time-ordered sequence representation used in language with a spatially structured sequence representation tailored to antenna design, thereby bridging LLM-style sequence modeling with inverse antenna design. Overall, this perspective offers a viable and extensible new pathway for antenna inverse design, with strong potential for future research extensions and practical engineering applications.

Biography:

Chang Ge (Member, IEEE) received the B.S. and M.S. degrees from Northwestern Polytechnical University, China, in 2014 and 2017, respectively. From 2018 to 2020, she worked at Xi'an University of Posts and Telecommunications. She received the Ph.D. degree from Tohoku University, Japan, in 2023. Since 2024, she has been an Assistant Professor with Tohoku University. Her research interests include antenna modeling and design, AI-assisted inverse-design methods for engineering applications, optimization and machine learning algorithms, and wireless communication systems and signal processing.