

Information Architecture

Laboratory	Title
Fujimura	Metal surface defect detection system
Fujimura	Measurement of remaining amount of liquid pesticide by image recognition
Fujimura	AI inference acceleration research based on model compression and embedded GPU
Fujimura	An Improved Economic Order Quantity Model for B2C E-Commerce Retail
Fujimura	Multi-objective Optimization in Microgrid using Renewable Energy
Fujimura	Research on Multi-objective shop scheduling based on improved NSGA-III
Fujimura	Production Scheduling Management Based on Multi-Agent System
Fujimura	Abnormal Behavior Detection of Industrial Workers Based on 3D-CNN
Furuzuki	Unsupervised Person Re-Identification via Non-Local Hybrid Attention and Camera Label Constraint
Furuzuki	A Study of Domain Adaptation for Microscope Image Segmentation
Furuzuki	High-Precision Image Registration with Reducing Jacobian Determinant of the Deformation Predicted
Iwaihara	Keyphrase Generation by Utilizing BART Finetuning and BERT-Based Ranking
Iwaihara	Multi-Label Text Classification Using Only Label Names
Iwaihara	Annotating Column Type Utilizing BERT and Knowledge Graph Over Wikipedia Categories and Lists
Kamata	Two-Stage Refinement Network for Nuclei Segmentation in Histopathological Images
Kamata	Classification of COVID-19 on Chest-CT Images Using Higher Order Residual Networks
Kamata	Phase-Based High-Speed Motion Magnification Using Image Pyramid Hierachy
Kamata	Spectral Attention-Based Multi-Stage Vision Transformer for Hyperspectral Image Classification
Lepage	Data creation for text morphing using sentence analogy
Lepage	Increasing the precision of plagiarism detection by using N-gram self-information
Lepage	Parallel data augmentation for style transfer by generating middle sentences
Lepage	Laplacian positional embedding for linearization of AMR graphs: application to semantic parsing, text generation and machine translation
J.Tanaka	Kicking Together: A Remote Football Experience With Interactive Feedback Using Augmented Reality
J.Tanaka	Fighting with COVID-19: An AR System to Prevent the Spread of the Virus at Shopping Malls
J.Tanaka	Function Simulation and Instructional Preview Based on Augmented Reality
J.Tanaka	Online Open Campus Using Remote AR and Avatar for Real Time Communication
J.Tanaka	A Study on AR Pet That Acts in Response to the Owner's Gaze
J.Tanaka	Increasing the Walking Exercise Motivation Using Full-body 3D Personalized Avatar in Augmented Reality
J.Tanaka	Eye-Based Shopping: Gaze-Assisted Interaction and Communication in Offline Shopping
Yoshie	Feature Fusion Text Clustering Based on Information Quantity
Yoshie	Surface reconstruction based on multi-view images
Yoshie	Application of Muti-modal Fusion Attention Mechanism in Semantic Segmentation
Yoshie	Empathy and Persona Based Arabic Conversational Agent
Yoshie	Analysis of Changes in Reaction Time of Goalkeepers and Its Causing Factors in Futsal
Yoshie	BoxPaste: A Powerful Mask-free Augmentation Method for Object Detection
Yoshie	COVID-19 Question Answering System Based on Knowledge Graph

Production Systems

Laboratory	Title
Inuishi	Device structure and layout design of trench type RC-IGBT with multiple cell
Inujima	Night-Vision Object Detection with Modified CenterNet
Lee	Design of Sliding Mode Control for Ultra-Compact Binary Power Generation
Lee	Driver's Drowsiness Detection based on Long Short-TermMemory with Whale Optimization Algorithm
Lee	An Improved Drowsy Driving Detection Method by Removing Abnormalityusing iForest with DBSCAN
Ogai	Real-Time Small Obstacle and Object Detection Method by Modified YOLOv3
Ogai	A Method for Improving vSLAM Accuracy Based on Vision-Inertial Fusion
Ogai	Path Planning Method based on Improved RRT Algorithm
Ogai	Kinematic-model-based Predictive control with the correction of PID method for autonomous vehicle
Ogai	A Fast Lane Detection System based on Modified Line-CNN for Autonomous Driving
Ogai	Damage Detection of Bridge Structure based on Sparse Overcomplete Autoencoder
Ogai	Pedestrian Trajectory and Intention Prediction based on improved LSTM Method
Ogai	Intersection Vehicle Detection using Light Reflections on the Road by Front Lamps on High Place
Ogai	Trajectory planning method for autonomous vehicles by using modified quadratic programming
Ogai	Lane Detection in Challenging Scenarios by Two-task Deep Learning Network for Autonomous Driving
Ogai	Traffic sign recognition and detection method based on improved YOLOV4 for autonomous driving
E.Tanaka	A Door Recognition and Opening Assistance System Based on Kinect and YOLO for Wheel Chair User
Tateno	Improvement of Adaptability to RSSI-based Positioning System using Scaling Circle Method
Tatsumi	AI-AI connection by using Ni electroless plating and electroplating
Tatsumi	Research on the mechanical properties of stainless steel joints formed by Ni micro plating bonding.
Tatsumi	A study on stress relaxation structure of SiC power module packaging by using Ni micro planting bonding.

Integrated Systems

Laboratory	Title
Ohsawa	Linearity-Enhanced Compute-In-Memory Macro Using Floating Gate Transistors
Shinohara	A Side-Channel Attack Resilient Strong PUF Using Pre-Charge Logic in Address Circuits