

Information Architecture

Laboratory	Title
Fujimura	Anomaly detection based on image latent space by using GAN
Fujimura	Job Shop Scheduling Problem Solved by Self-adaptive Dispatching Rules Based on Deep Reinforcement Learning
Furuzuki	A Study of Multilayer Perceptron Pretraining for Composing Quasi-Linear Kernel
Furuzuki	Composite Relational Network for Click-Through Rate Prediction
Furuzuki	Image Captioning Evaluation: A Combined Metrics Method Based on BERTScore
Furuzuki	Speckle Noise Reduction in Digital Holograms Based on Spectral Convolutional Neural Networks
Iwaihara	Weakly Supervised Multi-label Text Classification
Iwaihara	Generating EmotionalRegion and Text Representations for Joint Visual-Textual Sentiment Analysis
Iwaihara	Identifying Topic Evolutionary Patterns Based on Component Decomposition of Temporal Sequence
Kamata	Generalization of Anisotropic Gaussian Filters with Gaussian Marginalization and Its Performance Evaluation
Kamata	Fast Bilateral Filter using Fast Image Gauss Transform by Othogonal Polynomial Expansion
Kamata	Video Super-Resolution using Wave-Shape Network
Koyanagi	Research on Shuffle Partitioner to Mitigating Data Skew in Spark
Koyanagi	Study on Flow Table Update Consistency in SDN
Lepage	Improving term translation consistency using term entropy and classifying texts into domains
Lepage	Automatic HamNoSys annotation of video-based Sign Language Corpus using Machine Learning
Lepage	Solving analogies between sentences using vector representations and function interpolation
Matsumaru	Modeling interaction using three-dimensional aerial image interface - simulated experience of pottery on potter's wheel -
J. Tanaka	Build Helper: Intuitive Interaction System for Assembly Tasks using Mixed Reality
J. Tanaka	Cooperation Between Multiple Markers in Augmented Reality
J. Tanaka	Combining AR markers with various kinds of markers to enhance user interactions
J. Tanaka	Walking Support for Visually Impaired Using AR/MR and Virtual Braille Block
Tsubokawa	Study on MMI based propagation mode converters to higher modes
Tsubokawa	Study on dielectric V-groove waveguides with high light confinement
Yoshie	Graph Global Attention Network for Quantum Chemistry
Yoshie	Head Guidance NMS Method for Human Detection in Occlusion
Yoshie	Temporal Space Reinforced Feature Learning for Video Action Recognition
Yoshie	NMS by Representative Region: Towards Crowded Pedestrian Detection by Proposal Pairing
Yoshie	Picking up people in a crowd by masking and redetection
Yoshie	Fine-grained Image Classification by KL-Divergence and Deformable Convolutional Networks
Yoshie	Painting Style Classification based on Feature Map Correlation

Production Systems

Laboratory	Title
Inuishi	Study on structure and process design o f N type lateral IGBT on SOI
Inuishi	Study on structure and process design o f N type lateral IGBT on bulk Si with optimized resurf structures
Lee	Sliding Mode Control of In-Wheel Motors in Electric Vehicles
Lee	Drowsy Driving Detection using Neural Network
Miyake	Transparent and conductive Au mesh films for smart contact lens applications
Miyake	Intracellular delivery into adhesive cells using Au nanotube membrane
Miyake	Stretchable wireless-powered resonators printed on moist and soft contact lens
Murata	Facility Location Distribution Planning for Emergency Logistics with Probabilistic Distance-Depended Road Availability Model
Murata	Delivery Route Planning with Time Windows and Uncertain Vehicle Traveling Time by considering Fuel Consumption and Customer Satisfaction
Murata	Stochastic lot-sizing schedule of production and remanufacturing in Closed loop Supply Chain for Construction Waste recycling
Murata	SD model for Strategic Capacity Planning for Closed Loop Supply Chain with Collection and Remanufacturing
Murata	Multi-AGV path planning based on improved A* algorithm with adding artificial potential field model for avoiding AGV congestion.
Murata	Study on Automatic Parameter Tuning Approach of Discrete Brain Storm Algorithm for Combinatorial Optimization Problems
Murata	Study on Split Delivery Vehicle Routing Problem for Minimizing Delivery Cost with Unloading Cost
Murata	Interval prediction of electricity price based on Improved Bootstrap method with Envelope-based clustering technique
Ogai	Designing an Efficient Power Management Strategy Based on the Recharge mode for Power-Split Hybrid Electric Vehicle
Ogai	Improvement of exhaust gas at low temperature start of diesel engine
Ogai	PMV Prediction Model and Air Conditioner Temperature Control Based on Neural Network and PSO
Ogai	Autonomous Path Tracking Control System Based On Magnetic Sensor
Ogai	Accurate Image Segmentation Based on RCNN for Autonomous Driving
Shimizu	Extraction of blood vessel image by deep learning in NIR transillumination imaging
Shimizu	NIR functional transillumination imaging using original noise reduction for hyperspectral camera
E. Tanaka	Development of small and close-fitting type of the device for ascending and descending on stairs
E. Tanaka	A Kinect Sensor-Based Upper-Limb Tele-Rehabilitation System Considering the Motion Feedback with a Vibration Device
Tateno	Improved Corrosion Prediction Model for Insulated Pipes based on Semi-supervised Learning Method
Tateno	Area Mapping Method by Clustering Analysis for Indoor Positioning System based on RSSI
Tateno	Development of dirt detection device using portable board cleaner robot
Tatsumi	Study on high temperature reliability of semiconductor packaging using Ni micro-plating bonding technology
Tatsumi	Study on Ag micro particle addition in nano-Ni based sintering joints for SiC power device
Tatsumi	Influence of plating condition on mechanical properties in Ni micro-plating bonding for high temperature resistant power device
Tatsumi	Study on embedded interconnection technology for power semiconductor devices with chevron shape Cu lead

Integrated Systems

Laboratory	Title
Ikenaga	Multi-Layer Multi-Task Detection Neural Network for Real-Time Multi-Person Pose Estimation from Monocular Camera