Time	Session	Papers / Talks
		25th June (Monday)
1300 ~ 1400		Registration
1320 ~ 1400		Lunch (buffet)
1400 ~ 1540		Non-Orthogonal Multiple Access (NOMA) in 5G and Beyond in the Era of
	(Intl. Conf. Room)	Spectrum Scarcity S.M. Riazul Islam, Sejong University, South Korea
1540 ~ 1600		Coffee break
1600 ~ 1800	Tutorial 2 Raspberry Pi for Computer Vision, PiLab Hands-on Tutorial	
	(Intl. Conf. Room)	Shu Isaka , Mie University, Japan; Takumi Kitajima , Mie University, Japan; Atsushi Inoue, Eastern Washington University, USA
1800 ~ 1900	·	Welcome Reception & Dinner (Room 21ABCD)
		26th June (Tuesday)
0810 ~ 0900		Registration
0820 ~ 0850		Breakfast
0900 ~ 1015	S1-A: IoT, Control and	123: Companion Following Robotic Wheelchair with Bus Boarding
	Automation I	Capabilities
	(Room 22)	145: Implementation of Fuzzy Logic in Autonomous Irrigation System for Efficient Use of Water
		161: Fault Tolerant Control for Networked Control Systems with Sensor Faults
		256: Coverage Control of a Mobile Multi-Agent Serving System in Dynamical Environment
	S1-B: Computer Vision I	22: Damage Boundary Detection of Partially Scanned Models
	(Room 21CD)	24: Design of A Video-Based Vehicle Speed Measurement System - An
		Uncertainty Approach
		50: Chicken Meat Freshness Identification using Colors and Textures Feature 59: Efficient multi-cue predictive tracking of multiple similar interacting
		objects
		63: A Method to Recognize Food using Gist and SURF Features
	S1-C: Deep learning for pa	
	recognition	201: Bengali Sign Language Recognition Using Deep Convolutional Neural
	(Room 21AB)	Network
		227: Character Recognition in Japanese Historical Documents via Adaptive
		Multi-Region Mode
		262: Path Hole Detection to Assist the Visually Impaired People in Navigation
		265: A hybrid model in transfer learning based pre-trained model and a
		scale factor updating
1020 ~ 1100	Keynote 1 (Intl. Conf. Room	Takeshi Yamakawa, IEEE Fellow, IFSA Fellow, SOFT Fellow
		Fuzzy Logic Systems Institute, Japan Former Vice-President, Sojo University, Japan
1100 ~ 1120		TITLE: Identifying and Handling a Biological Cell by Employing Dielectrophoresis Coffee break
	S2-A: Invited Talk 1 & 2	Yasushi Makihara, Osaka University, Japan
. ===0	(Intl. Conf. Room)	TITLE: Joint Intensity and Spatial Metric Learning for Robust Gait Recognition
		Rin-ichiro Taniguchi, Kyushu University, Japan
		TITLE: Developing Social Services based on Cyber Physical System
	CO D. Elastradis I	72: Implementation and Feasibility Analysis of GSM Based Smart Energy
	S2-B: Electronics I (Room 22)	Meter for Digitalized Power Consumption with Advanced Features
	(NOUIII 22)	121: Design of the Lorentz Force Based Resonant Magnetic Sensor for SiGe MEMS on CMOS Process
		151: Optimization of Absorption in Patterned 2D Transition Metal
		Dichalcogenides
		240: Development of Two Wireless ECG Monitoring Systems and their
		Performance Assessment
	00 C T 4	4: Introducing ACO+ for Modeling Gene Regulatory Networks from
	S2-C: Informatics and IT I	
	(Room 21AB)	12: Human Upper Body Detection in Still Images Based on Extended PCA

1		23: Xth Person View Video for Observation from Diverse Perspectives	
		35: Effects of Chewing Gum on Differential Components of Psychomotor	
		Vigilance: Improved Sustained Attention with Prolonged Reaction Time	
1220 1200			
1220 ~ 1300 1300 ~ 1340	Large have Verrate 2 (Days 21 AD	Lunch (buffet)	
1300 ~ 1340	40 Luncheon Keynote 2 (Room 21AB) Shinichi Yoshiya, Hyogo College of Medicine, Japan TITLE: Management of sports-related musculoskeletal problems		
1350 ~ 1520	S3-A: Invited Talk 3 & 4	Tan Chee Pin, Monash University Malaysia, Malaysia	
1330 1320	(Intl. Conf. Room)	TITLE: Estimation of bounded faults using sliding mode observers	
	(mii. Conj. Room)	Kenji Suzuki, Illinois Institute of Technology, USA	
		TITLE: Overview of Deep Learning and Its Advanced Applications in Medical	
		Image Processing, Analysis, and Diagnosis	
		168: A Machine Learning Approach on Classifying Orthopedic Patients	
		Based on Their Biomechanical Features	
	S3-B: Pattern Recognition and Machine Learning I (Room 22)	232: Deep Metric Learning with Online Hard and Soft Selection for Person	
		Re-identification	
		233: Feature Selection using Singular Value Decomposition for Stop	
		Consonant Classification	
		238: A Regression based analysis of the effect of climate change on the	
		production of major crops in Bangladesh	
		239: Frontal Gait Recognition from Incomplete RGB-D Streams Using Gait	
		Cycle Analysis	
		274: F-transform in image inpainting applications	
		7: Lifting Scheme Based Bandelet Transform Improvements for Medical	
	S3-C: Image Processing I	Video Coding	
	(Room 21CD)	21: Computation Reduction for Decoding-Assisted HEVC Inter Prediction	
		34: Demosaicking filter using modified color conversion matrix	
		115: Color Image Enhancement Using Luminance Histogram Equalization	
		and Two-Factor Saturation Control	
		214: An Efficient Way to Represent Braille using YOLO Algorithm	
		55: A Novel Framework for Portfolio Selection using two Nascent	
		Parameters	
	S3-D: Soft Computing and	124: Automatic Text Summarization using Fuzzy C-Means Clustering	
	Computational Intelligence	142: Ovarian Follicle Classification using Numerical and B-mode Image	
	(Room 21AB)	Features from Ultrasound Scanning Devices	
		144: An Overview of FHSI: Fuzzy Color Space for Image Retrieval and	
		Modeling Aesthetic Perceptions	
		218: Artificial Neural Network Architecture Design for EEG Time Series	
		Simulation Using Chaotic System	
		254: Mechanical Property Prediction Method Based on Multi-material 3D	
		Printer	
1520 ~ 1545		Coffee break	
1545 ~ 1645	S4-A: Invited Talk 5 & 6	M.A.S. Kamal, Monash University, Malaysia	
	(Intl. Conf. Room)	TITLE: Road-Speed Profile for Enhanced Perception of Traffic Conditions	
		Sozo Inoue, Kyushu Institute of Technology, Japan	
	S4-B: Software Engineering for	TITLE: How to Conduct a Big Data Research in Real Fields? 43: A Cluster Compositional Algorithm for Incorporation of Multiple Sets of	
	Quality Assurance I	Clusters of Identical Data	
	(Room 22)	251: Evaluating the Effectiveness of Conventional Machine Learning	
	(166111 22)	Techniques for Defect Prediction: A Comparative Study	
		255: Inferring Bug Patterns for Detecting Bugs in JavaScript By Analyzing	
		Abstract Syntax Tree	
		169: Photonic Crystal based Liquid Sensor: A Theoretical Analysis for	
	S4-C: Informatics and IT II	Formalin Detection	
	(Room 21CD)	194: Learning Dictionary for Higher Secondary School Textbook in	
	(1667)	Bangladesh	
		235: Clothing Extremity Identification Using Convolutional Neural Network	
		Regressor	
		253: Sentiment Analysis Using R: An Approach to Correlate Cryptocurrency	
		Price Fluctuations with Change in User Sentiment Using Machine Learning	
1650 ~ 1730	Keynote 3 (Intl. Conf. Room)	Yasushi Yaqi, IPSJ Fellow	
	January Congression	Vice-President, Osaka University, Japan	
		TITLE: Human Gait Analysis	

	27th June (Wednesday)		
0820 ~ 0900		Registration	
0820 ~ 0850		Breakfast	
0900 ~ 1000	S5-A: Information Theory and Systems I (Room 22)	45: Global Localization from a Single Image in Known Indoor Environments 58: Inference of Gene Regulatory Network with S-system and Artificial Bee Colony Algorithm 66: Objective Functions in Fuzzy Cognitive Maps: the Case of Time Series Modeling 77: Aspect-based Query Expansion for Search Results Diversification	
	S5-B: Computer Vision II (Room 21CD)	136: Mouse Anatomical Cardinal Planes and Axes Towards Augmentation for Behavior Analysis 153: Recognition and Solution for Handwritten Equation Using Convolutional Neural Network 160: Faster Image Compression Technique Based on LZW Algorithm Using GPU Parallel Processing 163: Blind Watermarking for 3-D Printed Objects using Surface Norm Distribution	
	S5-C: IoT, Control and Automation II (Room 21AB)	70: Automated Aeroponics System for Indoor Farming using Arduino 278: DU-MD: An Open-Source Human Action Dataset for Ubiquitous Wearable Sensors 205: IoT Enabled Smart Bicycle Safety System	
1005 ~ 1045	Keynote 4 (Intl. Conf. Room)	Kenichi Kanatani, IEEE Fellow, Okayama University, Japan TITLE: Ellipse Fitting for Computer Vision	
1045 ~ 1100		Coffee break	
1100 ~ 1200	S6-A: Invited Talk 7 & 8 (Intl. Conf. Room)	Norliza Mohd Noor, SMIEEE, UTM, Malaysiaa TITLE: Convolution Neural Network for Khmer Handwritten Text Recognition Syoji Kobashi, SMIEEE, University of Hyogo, Japan TITLE: Neonatal Brain Development Modeling Using Brain MR images	
	Oilfield (Room 22)	285: A Fog Computing-based Method to Information and Control System Reliability Enhancement 286: Oil Fields Monitoring by Groups of Mobile Micro-robots Using Distributed Neural Networks 287: A Failure Prediction Method for Oil Field Complex Technical Objects	
		52: Delta T Source Location in AE Signal Processing Technique 133: Crack Propagation Analysis in Ductile Cast Iron by Acoustic Emission Technique 178: Human Identification Using WIFI Signal	
	S6-D: Poster Session I (Sub four)	28, 146, 157, 164, 217, 257, 260, 272, 283	
1200 ~ 1310		Lunch (buffet)	
1200 ~ 1310 1320 ~ 1450	S7-A: Invited Talk 9, 10 & 11 (Intl. Conf. Room)	Md Tawidul Islam Khan, Saga University, Japan TITLE: Optimization of Acoustic Emission Technique in Diagnosis of Knee Osteoarthritis - a Major Concentration in Damage Characterization and Source Localization M Julius Hossain, European Molecular Biology Lab (EMBL), Germany TITLE: Biology-driven Image Analysis across Scales A.K.M. Mahfuzul Islam, The University of Tokyo, Japan TITLE: Design Techniques for Low-Energy IoT devices: Circuit and System Challenges	
	S7-B: IoT, Control and Automation III (Room 22)	140: A Portable Braille Refreshable Display Using Micro Servos 252: Real-life Implementation of Internet of Robotic Things Using 5 DoF Heterogeneous Robotic Arm 156: IoT based Autonomous Class Attendance System using Non-Biometric Identification 281: A Study on DSR Routing Protocol in Adhoc Network for Daily Activities of Elderly Living 282: A Modern, IoT Platform for Medical Engineering: Vein Visualization 193: Traffic Analysis Using Decentralized Social Internet Of Things	
	S7-C: Traffic and Transport Technology (Room 21CD)	193. Halit Allarysis Using Decentralized Social Internet Of Hillings 198: Real Time Traffic Density Measurement using Computer Vision and Dynamic Traffic Control 199: A Traffic Congestion Forecasting Model using CMTF and Machine Learning 223: Parking Gate Control Based on Mobile Application	

800 ~ 2030		Banquet	
730 ~ 1800	TITLE: "Beyond Human Technology" Opens A New World Moving to Banquet Venue		
550 ~ 1730	Keynote 5 (Intl. Conf. Room)	Makoto Kaneko, IEEE Fellow, JSME Fellow, RSJ Fellow, SICE Fellow Osaka University, Japan TITLE: "Boyond Human Technology" Opens A New World	
		Learning 268: Implanted Knee Kinematics Prediction: comparative performance analysis of machine learning techniques	
		219: Automated tracking and change detection for Age-related Macular Degeneration Progression using retinal fundus imaging 243: Detection of Hard Exudates in Retinal Fundus Images Using Deep	
	S8-C: Pattern Recognition and Machine Learning II (Room 21CD) S8-D: Health and Medical Application (Room 21AB)	length during gait 154: Early detection of Parkinson's disease using image processing and artificial neural network	
		16: Hardware/Software Codesign for Portable Optical Coherence Tomography (OCT) Applications 44: Effect of plantar flexion resistance of ankle-foot orthosis on tendon	
		270: Mobilephone Sensor-based Real-Time Human Activity Recognition Using One-Vs-Rest SVM 271: A Study on Sensor-based Activity Recognition Having Missing Data	
		191: Embedded System based Bangla Intelligent Social Virtual Robot with Sentiment Analysis 196: Fuzzy transform and support vector machine for pedestrian detection	
		48: A Novel Lossless Coding Technique for Image Compression 179: Fake News Pattern Recognition using Linguistic Analysis	
	(Room 22)	230: Appearance inspection of wire harness using RGB-D Sensor 245: Real-time Surgical Tools Recognition in Total Knee Arthroplasty Usin Deep Neural Networks	
		X-ray Images 228: Deep Neural Networks with Mixture of Experts Layers for Complex Event Recognition from Images	
	S8-B: Advanced Image Recognition and its Application	200: Low Latency Image Processing of Transportation System Using Parall Processing co-incident Multithreading (PPcM) 216: A Convolutional Autoencoder for Detecting Tumors in Double Contra	
		TITLE: Imaging techniques in the field of fluid mechanics and applications 197: Texture-suppressed Visual Attention Model for Grain Insects Detection	
		TITLE: F-transform in image inpainting applications Naohisa Takagaki, University of Hyogo, Japan	
	(Intl. Conf. Room)	TITLE: Fuzzy Logic in Artificial Intelligence: ~A Classical View and Modern Trends~ Pavel Vlasanek, University of Ostrava, Czech Republic	
	S8-A: Invited Talk 12, 13 & 14	Atsushi Inoue, Eastern Washington University, USA	
450 ~ 1520		139: A Minimum Spanning Tree Based Routing Protocol For Multi-hop An Multi-channel Cognitive Radio Coffee break	
		231: Efficient Noise Aware Level Based Routing Protocol for Under Water Sensor Network (UWSNs)	
		148: A New Version of Kerberos Authentication Protocol Using ECC and Threshold Cryptography for Cloud Security 181: An Effective Infrastructure for Pocket Switch Network	
	S7-D: Computer Networking (Room 21AB)	138: Channel Assignment Augmentation Algorithm to Mitigate Interference for Heterogeneous "TV White Space" Users	
		127: Enhanced Energy Detection using Matched Filter for Spectrum Sensir in Cognitive Radio Networks	
		258: Understanding Real Time Traffic Characteristics of Urban Zones Using GPS Data: A Computational Study on Dhaka City	

	28th June (Thursday)				
0820 ~ 0850	Breakfast				
0900 ~ 1000	S9-A: Software Engineering for Quality Assurance II (Room 22)	46: Move Method Recommendation using Call Frequency of Methods and Attributes 155: Aspect Extraction from Bangla Reviews using Convolutional Neural Network			
		190: Security and Performance Bug Reports Identification with Class- Imbalance Sampling and Feature Selection 261: Bug Severity Classification Based on Class-Membership Information			
	S9-B: Electronics II (Room 21CD)	49: CZTS BASED THIN FILM SOLAR CELL: An Investigation into the Influence of Dark Current on Cell Performance 51: Neural Network Bayesian Regularization Backpropagation to Solve Inverse Kinematics on Planar Manipulator 141: Optimization of growth procedure for silicon oxinitride (Si4O5N3) single-layer on SiC(0001) 263: Soft Error Tolerance in Memory Applications			
	S9-C: Information Theory and Systems II (Room 21AB)	79: Modeling Irrational Consumer Behaviors with Cognitive Maps. An Outline of a Framework 120: A Nutrient Content Estimation Estimation System of Buffet Menu using RGB-D Sensor 195: Virtual Realty Implementation of Steering Hands Motion in Driving Simulator with Unity Technology 237: Glioma Subtypes Clustering Method using Histopathological Image Analysis			
	S9-D: Poster Session II (Sub-foyer) 135, 175, 204, 208, 236, 250, 267, 277, 279			
1000 ~ 1020		Coffee break			
	Keynote 6 (Intl. Conf. Room)	Mohamed-Slim Alouini, IEEE Fellow King Abdullah University of Science and Technology, KSA TITLE: Addressing spectrum scarcity through hybrid optical and radio-frequency wireless networks			
1100 ~ 1140	Keynote 7 (Intl. Conf. Room)	King Ngi Ngan, IEEE Fellow, FIET, FIEAsut National Thousand Talents Program Chair Professor, University of Science and Technology of China, China TITLE: Object Segmentation and Its Visual Quality Assessment for Images			
1140 ~ 1210		Award and Closing Ceremony			
1210 ~ 1300		Lunch (buffet)			
1300 ~ 1800		Tour			

 $N.B.: Presentation\ time\ of\ each\ paper\ is\ 15\ min.\ For\ Poster\ presentation,\ recommended\ size\ is\ A0.$