Session: Image Processing I

[#0-18] Symmetry Based Semantic Analysis of Engineering Drawings  
_Thomas C. Henderson, Narong Boonsirisumpun, and Anshul Joshi_

[#0-26] Analysis on ghost image contrast using linearly polarized light  
_Tianran Zhang, Mingjie Sun and Lijing Li_

[#0-51] A Novel Texture Image Segmentation Model Based on Multi-scale Structure  
_Hai Min, Xiao-Feng Wang and De-Shuang Huang_

[#0-52] Reducing motion blurring associated with temporal summation in low light scenes for image quality enhancement  
_Gabriel Zahi and Shigang Yue_

[#0-71] Symmetric Bidirectional Expansion Algorithm to Remove Artifacts for View Synthesis Based DIBR  
_Hui Ding, Zhaohui Li and Rong Hu_

[#0-94] Object Segmentation and Recognition in 3D Point Cloud with Language Model  
_Yi Yang, Guang Yan, Hao Zhu, Meng-yin Fu and Mei-ling Wang_

[#0-112] The Research of Visual Attention Mechanism Model Fuse Multi-feature  
_Zhenkun Wen, Yihua Du, Huisi Wu and Lei Wang_
Session: Robot I

[0-8] A Double Guarantee Kidnapping Detection in Simultaneous Localization and Mapping
Yang Tian and Shugen Ma

[0-10] Unstructured Robot Perception through Internet Semantic Concept Learning
Fengchao Wang, Dongdong Chen and Peijiang Yuan

[0-21] SLAMBOT: Structural Health Monitoring Robot using Lamb Waves
Wenyi Wang, Thomas C. Henderson, Anshul Joshi and Edward Grant

[0-30] Application and Experiment of Tracking Control Method for AGV
Tao Bao, Peijiang Yuan, Tianmiao Wang, Dongdong Chen, Zhenyun Shi, Yong Li and Ting Lai

[0-32] Trajectory Generation and Control of A Biped Walking Robot Based on The Double Generating Functions Method
Zhiwei Hao, Kenji Fujimoto, Akihiro Hasegawa, Kotaro Asaba, Yoshikazu Hayakawa and Qiuhua Zhang

[0-36] A Learning Method for Returning Ball in Robotic Table Tennis
Akira Nakashima, Kota Takayanagi and Yoshikazu Hayakawa
Session: Robot II

[#0-40] Smart Locomotion Generation Based On Automatic Orientation And Topology Detection Of A Reconfigurable Modular Robot
   Dennis Krupke, Martin Noeske, Florens Wasserfall and Jianwei Zhang

[#0-42] Camera-Laser Projector Stereo System Based Anti-collision System for Robotic Wheelchair Users with Cognitive Impairment
   Ashutosh Natraj, Shailendra Natraj, Sonia Waharte and Daniel Kroening

   Diyuan Lu, Rongxin Cui and Ping Wang

   Zhangfeng Ju, Chenguang Yang, Zhijun Li, Long Cheng and Hongbin Ma

[#0-49] Teleoperation Control of Baxter Robot using Body Motion Tracking
   Himesh Reddivari, Chenguang Yang, Zhangfeng Ju, Peidong Liang and Zhijun Li

[#0-57] The interactive parameters estimation of multiple space robot manipulators
   Panfeng Huang and Zhenyu Lu

[#0-70] Design and Modeling of a New Variable Stiffness Robot Joint
   Yong Tao, Tianmiao Wang, Yunqing Wang, Long Guo, Hegen Xiong and Fang Chen
Session: Robot III

[0-37] Intraoperative Control for Robotic Spinal Surgical System with Audio and Torque Sensing
Haiyang Jin, Ying Hu, Peng Gao, Peng Zhang, Tianyi Zheng and Jianwei Zhang

[0-78] Flyable Path Planning for Multiple UAVs in Complicated Threat Environment
Yi Zhang, XiuXia Yang and Weiwei Zhou

[0-81] Modeling and Simulation of a Hybrid Palletizing Robot Arm
Fang Chen, Hegeng Xiong, Long Guo, Yong Tao and Tianmiao Wang

Weiwei Kong, Dianle Zhou, Daibing Zhang and Jianwei Zhang

[0-104] An argumentation based feedback system for action planning of service robots
Yanjuan Wang, Li Yao, Bin Liu and Junyi Xu
Session: Dexterous Operation I

[#0-9] Intelligent Surface Normal Measurement Method of End Effector for the Aeronautical Drilling Robot

Dongdong Chen, Peijiang Yuan, Tiammiao Wang, Qishen Wang, Chengkun Wang and Fengchao Wang
Session: Signal Processing

[#0-5] LiDAR Based Vehicle Detection in Urban Environment
Feihu Zhang, Daniel Clarke and Alois Knoll

[#0-47] Two-Stage Cubature Kalman Filter for Nonlinear System with Random Bias
Lu Zhang, Meilei Lv, Zhuyun Niu and Wenbi Rao

[#0-56] X-ray Pulsar-based Autonomous Navigation Based on Asynchronous Observation ST-REKF
Jian Sun, Xiliang Guo, Pengbin Guo and Bin Li

[#0-61] The Partially Wrapped Normal Distribution for SE(2) Estimation
Gerhard Kurz, Igor Gilitschenski, and Uwe D. Hanebeck

[#0-62] Efficient Bingham Filtering Based on Saddlepoint Approximations
Igor Gilitschenski, Gerhard Kurz, Simon J. Julier, and Uwe D. Hanebeck

[#0-63] Analysis on Adaptive Filtering for Nonlinear Dynamic Estimation Systems
Jianjun Wang

[#0-82] A Hybrid EMG Model for the Estimation of Multijoint Movement in Activities of Daily Living
Qichuan Ding, Xingang Zhao and Jianda Han

[#0-98] Dynamics-based Mass Property Identification of Non-cooperative Space Target
Haibo Zhang, Liang Tang and Chunling Wei

[#0-108] A least-square-based approach to improve the accuracy of laser ranging
Jin Xiao, Huijun Zheng, Xiaoguang Hu, Guofeng Zhang, Manor Iosilevich, Jizhong Xiao, and Janusz Cholewicki
Session: Information Fusion I

[0-16] Intelligent Network Storage On The Big Data
Haixia Li, Chuwei Lu and Sheng Sun

[0-24] Brain Potentials Reveal Audiovisual Integration in Bilinguals on Arithmetic Fact Retrieval
Lei Zhang, Alejandro Martinez and Elena Salillas

[0-27] Optimal Configuration of Multi-sensor Based on Positioning Accuracy
Can Xu, Zhi Li and Dongdong Yan

[0-34] Elongated Strip Oil Spill Segmentation Based on A Cooperative Model
Mengmeng Di, Huajun Song, Peng Ren and Chunbo Luo

[0-38] Hybrid-System-based Multiple-Model Approach for Transfer Alignment with Dynamic Flexure in IIN
Zhanping Yan, Jian Lan and Yachong Zhang

[0-41] Modular Multi Sensor Data Fusion Architecture for Autonomous Vehicles Using the RACE System on a Segway RMP 440
Carsten Simon, Daniel Clarke and Alois Knoll

[0-44] Conditionally Factorized DDF for General Distributed Bayesian Estimation
Nisar Ahmed

[0-46] Flexible Fusion Structure for Air Task Networks
Tianfa Cheng, Quanbo Ge, Teng Shao and Shaodong Chen

[0-66] What to do first: the initial behavior in a multi-sensory household object recognition and categorization system
Haojun Guan, Weipeng He and Jianwei Zhang
Session: Information Fusion II

[0-73] Fourier Analysis Techniques Applied in Data Registration: A Survey
Bo Sun, Weiwei Kong, Liwei Zhang and Jianwei Zhang

[0-75] A Variable Scale Approach for Neighbor Search in Point Cloud Data
Lingwei Min, Zhangjun Song, Xiaoping Yang and Jianwei Zhang

[0-95] Emotion Classification Based on Structured Information
Kai Gao, Hua Xu and Jiushuo Wang

[0-101] A Method of Multi-surface Evidence Fusion Slope Stability Analysis Based on Random Set
Kefei Zhou, Chenglin Wen and Xiaobin Xu

[0-102] The Fusion Methods of Multi-sensor System based on Pseudo-measurement Model Library
Haihong Ye, Chenglin Wen and Xiaoliang Feng

[0-106] Non-Linear Compensation of Production Inaccuracies and Material Drift by Adjusting the Sensor Data Fusion Algorithms for Shape Sensing Based on FBG-Optical Fibers
Hendrikje Pauer, Christoph Ledermann, Wilderich Tuschnmann and Heinz Woern

[0-115] Secure the Control System against DoS Attacks: A JDL Data Fusion Method
Yuan Yuan and Fuchun Sun
Session: Implementation I

[#0-22] Swarm Olfactory Search in Turbulence Environment
Siqi Zhang, Rongxin Cui and Demin Xu

[#0-28] A CMOS Physiological Monitoring Frontend for Wearable Health Applications
Yuan Wang, Xu Zhang, Jianqiang Han, Ming Liu and Hongda Chen

Yan Li, Xu Wang, Chunxi Zhang, Lijing Li and Yanfeng Sun

[#0-54] A Fiber Optical Gyroscope with Shupe Error Compensated Optically
Xiaobin Xu, Zuchen Zhang, Ningfang Song, LiJing Li and Dongjiang Li

[#0-58] Study on Module Control of Low-Speed PEMS Train
Xiaolong Li, Zhiqiang Wang, Aming Hao and Mingda Zhai

[#0-59] The Lap Structure Modeling and Controller Design of Permanent Magnet Electromagnetic Hybrid Maglev Trains
Aming Hao, Qingzhen Wang, Xiaolong Li and Mingda Zhai

[#0-96] Design and Implement of Remote Maintenance Data Warehouse for Low-speed Maglev Train
Hongfeng Qi, Fengshan Dou and Qingzheng Bao
Session: Information Processing and Vision System

[#0-35] Structurally Refined Feature Matching for Multi-source Images
Bin Du, Yanjiang Wang and Peng Ren

[#0-45] Generalized Covariance Intersection based on Noise Decomposition
Marc Reinhardt, Sanjeev Kulkarni and Uwe D. Hanebeck

[#0-69] Spiking Neural Network for Visual Pattern Recognition
Daqi Liu and Shigang Yue

[#0-83] Traversable Region Detection based on Near-to-far Self-supervised Incremental Learning
Yunlei Chen, Huimin Lu, Junhao Xiao, Hui Zhang

[#0-88] A Lane Detection Method based on Track Management Approach
Shasha Dong and Cheng Peng

[#0-92] Research on Binocular Vision-Aided Inertial Navigation System
Ping Wu, Hai Zhang and RuiFeng Du

[#0-99] SVD-based Scattered Small Targets Detection
Jingli Gao, Chenglin Wen and Meiqin Liu

[#0-105] Chinese Sentiment Classification Using A Neural Network Tool - Word2vec
Zengcai Su, Hua Xu, Dongwen Zhang and Yunfeng Xu
Session: Intelligent Control and Optimization

[#0-19] Design for Autonomous Self-Organizing Target Detection System Based on Artificial Swarms
Meiyan An, Li Fan, Zhaokui Wang and Yulin Zhang

[#0-91] Trajectory tracking controller of high precise positioning system based on iterative learning control with wavelet filtering method
Fei Zhao, Jing Cui and Zhongyi Chu

[#0-93] Intelligent Combination Projection System
Xianwei Lv, Mengyin Fu, Yijin Li, Yi Yang, Fan Pu and Yu Li

Mehdi Rahimi and Yantao Shen
Session: Machine Learning and Cognitive

[#0-12] An Ordering Method of Fuzzy Sets Based on Rough Fuzzy Numbers
Zixin Liu, Xuesheng Liu, Mingming Niu and Jiatai Gang

[#0-14] A Capacity Self-Adaption Information Hiding Algorithm Based on RS Code
Hengtai Ma, Xiaowei Yi, Xiaohui Wu, Dingfeng Gu, Hui Pan, Changwen Zheng and Xiaowei Yi

[#0-60] Emotional state transfer model based on FSM
Jing Han, Lun Xie, Xin Liu and Zhiliang Wang

[#0-74] Using Hierarchical Dirichlet Processes to Regulate Weight Parameters of Restricted Boltzmann Machines
Wenbing Huang and Fuchun Sun

[#0-85] A Linguistic Approach of Knowledge Representation With Both Negative and Positive Factors
Yingxin Wang, Yunxia Zhang, Xiaochang Wu and Li Zou
Session: Dexterous Operation II

[0-110] Velocity Jump Reduction for Manipulator with Single Joint Failure

Qingxuan Jia, Tong Li, Gang Chen, Hanxu Sun and Jian Zhang

[0-114] A novel method for hand pose estimation based on inertial and magnetic sensors

Bin Fang and Fuchun Sun
Session: Complex System

[#1-56] A Multi-dimensional Modeling to Support Architecture Dynamic Evolution in Internetware

Jian Wang, Qimin Peng and Xiaohui Hu

[#1-95] Global Parameters Estimation and Convergence Proof of Isomorphic Networks Using Historical Data

Zhenyu Lu and Panfeng Huang

[#1-116] Adaptive RISE Control of A Multi-Link Flexible Manipulator Based on Integral Manifold Approach

Jian Luo, Wen Tan and Fuchun Sun
Session: Robot IV

[#1-96] Nonlinear Model Predictive Control for WMR with Input Constraint
Rong Li, Mou Chen and Qingxian Wu

Lixia Meng, Fuchun Sun

[#1-115] Multi-robot Environment Exploration Based on Label Maps Building via Recognition of Frontiers
Bin Wang and Shiyin Qin

[#1-122] Representation Methods for Recognizing and Grasping Object of Robots
Chunfang Liu, Di Guo and Fuchun Sun
**Session: Machine Learning**

[#1-72] Spacecraft Electrical Characteristics Identification Study Based on Offline FCM Clustering and Online SVM Classifier  
*Yi Liu, Ke Li, Shimin Song, Yi Sun, Yong Huang and Jun Wang*

[#1-87] Extreme Learning Machine Based Traffic Sign Detection  
*Zhiyong Huang, Yuanlong Yu, Shaozhen Ye and Huaping Liu*

[#1-105] Optimization-based Multi-kernel Extreme Learning for Multimodal Object Image Classification  
*Lele Cao, Wenbing Huang and Fuchun Sun*

[#1-114] A Kernel Principal Component Analysis Algorithm Based on Sample Selection According to Pseudo-eigenvalue Contribution  
*Xiaolin Chen, Shunfang Wang and Hao Zhang*
Session: Cognitive Biometrics I

[#1-13]  Vessel Track Information Mining Using AIS Data  
  Feng Deng, Sitong Guo, Yong Deng, Hanyue Chu, Qingmeng Zhu and Fuchun Sun

[#1-45]  The Identification Model of Visual Images Using Berkeley Wavelet Pyramid based on fMRI  
  Jialu Niu, Xinyue Ma, Jiacai Zhang

[#1-67]  Abnormality of Inter-network Dynamic Interaction in Resting-state Brains of Schizophrenic Patients  
  Zhenfeng Li, Hui Shen, Ling-Li Zeng, Lin Yuan and Dewen Hu
Session: Cognitive Biometrics II

1-68 Gait Cadence Detection Based on Surface Electromyography (sEMG) of Lower Limb Muscles  
Qinglei Sun, Zongtan Zhou, Jun Jiang and Dewen Hu

1-81 An Improved Random-walk Approach for Visualizing Periodicities Hidden in Biological Sequences  
Bo Chen

1-85 Use of Non-reward Based Electrical Stimuli of The Ventral Posteromedial Thalamic Nucleus to Control the Turning Behavior of Rat Motor Navigation  
Hong Zhou, Yechao Han, Mingqian Zhao, Lee Ji Chao Tristan, Kedi Xu

1-89 A Noninvasive Real-time Driving Fatigue Detection Technology Based on Left Prefrontal Attention and Meditation EEG  
Jian He, Dongdong Liu, Zhijiang Wan and Chen Hu

1-97 Clustering and Observation on Neuron Tuning Property for Brain Machine Interfaces  
Xiwei She, Yuxi Liao, Hongbao Li, Qiaosheng Zhang, Yiwen Wang, and Xiaoxiang Zheng
Session: Cognitive Inference

[#1-9] Relative Perception System and Intelligence
Yujian Li

[#1-52] Event-related Potentials and The Decision Making under Risk and Ambiguity
Lei Wang, Jiehui Zheng and Qiang Lu

[#1-109] Meta-Cognitive Interval Type-2 Neuro-Fuzzy Inference System for Wind Prediction
Ankit Kumar Das, Suresh Sundaram and Narasimalu Srikanth
Session: Cognitive System

[#1-55] Human-Computer Interaction Extended Resource Model based on Distributed Cognition
Pin Lv, Menglu Xu, Shangzhou Li

[#1-60] A Hypergraph-based Service Dependency Model for Cloud Services
Rui Wang, Qimin Peng, Xiaohui Hu

Haixia Li, Chuiwei Lu, Sheng Sun
Session: Image Processing II

[#1-21] Auto Localization for Coastal Satellite Imagery Based on Curve Matching
Yue Dong, Jinfang Zhang, Fanjiang Xu

Yong Fu, Xiaowei Yi and Hengtai Ma

[#1-46] A Biologically-inspired Model for Dynamic Saliency Detection
Zhiyong Gao, Jie Zeng and Haihua Liu

[#1-66] A Fast Face Detection Method Combining Skin Color Feature and AdaBoost
Saiping Ji, Xiaobo Lu, Qianzhou Xu

[#1-92] A New Approach of Image Enhancement Based on Improved Fuzzy Domain Algorithm
Liejun Wang and Ting Yan

[#1-93] Visual Saliency Detection by DCT Coefficient Dissimilarity
Fusheng Li, Xia Li, Wenbin Zou, Yu Chen

[#1-111] Fusion Algorithm of Infrared and Visible Images Based on NSCT and PCNN
Guoli Chen
**Session: Text Processing**

[#1-29] Research of Literature Information Retrieval Method Based on Ontology

*Yibing Song and Qinglong Ma*

[#1-34] Acoustic Model Optimization for Automatic Pronunciation Quality Assessment

*Yan Ke*

[#1-84] The Identification of Chinese Named Entity in the field of Medicine based on Bootstrapping Method

*Liying Long, Jianzhuo Yan, Liying Fang, Pengying Li and Xinyue Liu*

[#1-99] Parallel Collaborative Filtering Recommendation Model Based on Expand-vector

*Hongyi Su, Ye Zhu, Caiqun Wang, Bo Yan and Hong Zheng*
Session: Implementation II

[#1-58] Design and Implementation of the Automatic Generation Workflow System
Ling Lin and Qimin Peng

[#1-59] An Effective Automatic Update Approach for Web Service Recommender Systems Based on Feedforward-Feedback Control Theory
Yan Hu, Qimin Peng and Xiaohui Hu

[#1-117] Implementation of Fuzzy Color Extractor on NI myRIO Embedded Device
David Oswald, Wei Li, Linwei Niu, Jin Zhang, Yan Li, Jiangchen Yu and Fuchun Sun
Session: Intelligent Control

[1-42] The Design and Simulation for the Meter-level Gap Electromagnet Permanent Magnet Fixed-point Levitation Control System
  Pengshuai Han and Tao Wen

[1-62] The Chattering-eliminating Sliding Mode Controller of Multi-arm Space Manipulator for Coordinated Operation
  Jianchao Li and Zhongyi Chu

[1-64] Synchronization of Uncertain Chaotic Systems via An Adaptive Terminal Sliding Mode Control
  Xiaohui Yang, Tieshan Li and Liyou Fang

[1-65] Stabilization of Nonholonomic Chained Systems via Model Predictive Control
  Hanzhen Xiao, Zhijun Li and Chunyi Su

[1-98] Trajectory Planning for Variable Geometry Truss Manipulator via LMI Optimization
  Yanchun Zhao, Shiqiang Hu and Yongsheng Yang

[1-103] H∞ Robust Control Design for Optical Scanning of the Fourier Spectrometer
  Wei Nian and Danni Nian
Session: Dexterous Operation And Vision System

[#1-14] Pushing Operation of Manipulator Based on Experience Learning: Position Prediction of An Object and Pushing Analysis
Haolin Yang, Fuchun Sun and Di Guo

[#1-16] The PTZ Tracking Algorithms Evaluation Virtual Platform System
Chang Liu, Ruipeng Cao, Sa Jia, Yanan Zhang, Bo Wang and Qingjie Zhao

[#1-91] Gesture Interaction Algorithm Based on Navigation Information
Zhiquan Feng, Yuanyuan Su, Tingfang Zhang and Fanwen Min

[#1-113] A Concept Acquisition Method Based on Visual Perception
Tingting Sui and Xiaofeng Wang

[#1-120] Dynamics and Capture Strategy Study of Space Rope-Based End Effectors
Yuqiang Liu, Dong Pan, Yongjian Liu and Chunlin Tan
Session: Intelligent Optimization And Signal Processing

[#1-17] NUM-Based Distributed Cross-Layer Optimization Algorithm for Multi-Hop Satellite Networks
Changlong Wang, Jianzhou Chen, Pei Zhao and Lixiang Liu

[#1-22] Link Scheduling Algorithm for Constrained Inter-satellite Links
Zhejun Huang, Jianzhou Chen, Xiangqun Li and Lixiang Liu

[#1-78] A new collaborator selection method of cooperative co-evolutionary genetic algorithm and its application
Min Huang, Jie Chen and Bo Sun

[#1-83] Waveform Design for Cognitive Radar Based on Information Theory
Fengming Xin, Jinkuan Wang, Bin Wang and Xin Song

[#1-107] Genetic algorithm based on wavelet neural network for the displacement prediction of landslide
Ping Jiang, Zhigang Zeng, Jiejie Chen, and Tingwen Huang

[#1-108] Human Meta-cognition Inspired Collaborative Search Algorithm for Optimization
M. R. Tanweer, S. Suresh and N. Sundararajan