

2019 2nd China Symposium on Cognitive Computing and Hybrid Intelligence (CCHI 2019)

**Xi'an, China
21 – 22 September 2019**



**IEEE Catalog Number: CFP19V74-POD
ISBN: 978-1-7281-4092-6**

**Copyright © 2019 by the Institute of Electrical and Electronics Engineers, Inc.
All Rights Reserved**

Copyright and Reprint Permissions: Abstracting is permitted with credit to the source. Libraries are permitted to photocopy beyond the limit of U.S. copyright law for private use of patrons those articles in this volume that carry a code at the bottom of the first page, provided the per-copy fee indicated in the code is paid through Copyright Clearance Center, 222 Rosewood Drive, Danvers, MA 01923.

For other copying, reprint or republication permission, write to IEEE Copyrights Manager, IEEE Service Center, 445 Hoes Lane, Piscataway, NJ 08854. All rights reserved.

****** This is a print representation of what appears in the IEEE Digital Library. Some format issues inherent in the e-media version may also appear in this print version.***

IEEE Catalog Number:	CFP19V74-POD
ISBN (Print-On-Demand):	978-1-7281-4092-6
ISBN (Online):	978-1-7281-4091-9

Additional Copies of This Publication Are Available From:

Curran Associates, Inc
57 Morehouse Lane
Red Hook, NY 12571 USA
Phone: (845) 758-0400
Fax: (845) 758-2633
E-mail: curran@proceedings.com
Web: www.proceedings.com

CURRAN ASSOCIATES INC.
proceedings
.com

Table of Contents

Research on Path Planning and Tracking Method of Auto-driving Vehicles under Complex Constraint, pp.1-5
Niaona Zhang ; Xuanxuan Bao ; Yang He ; Xiaohui Lu

Discriminate and Reconstruct: Learning from Language Model to Answer Keyword Questions, pp.6-11
Boyuan Pan ; Yazheng Yang ; Yueting Zhuang ; Deng Cai

Fast Two-cycle Level Set Tracking with Interactive Superpixel Segmentation, pp.12-17
Huayun Pan ; Yaochen Li ; Xiao Wu ; Xiao Wu ; Yuxiao Wang ; Yuehu Liu

VFH Based Local Path Planning for Mobile Robot*, pp.18-23
Wenqiang Chen ; Ning Wang ; Xiaofeng Liu ; Chenguang Yang

Fully in Tensor Computation Manner: A One-Shot Dense 3D Acquisition Method using Structured Light, pp.24-29
Xuan-Li Chen ; Luc Van Gool

Semi-Supervised Nonlinear Feature Selection on Attributed Networks, pp.30-35
Zhongping Lin ; Minnan Luo ; Zhen Peng ; Jundong Li ; Qinghua Zheng

Double Decision Method for Static Gesture Based on Fully Convolutional Networks, pp.36-40
Qi Cheng ; Mingqiang Yang ; Yi Du ; Deqiang Wang

Multiple Context Aggregation Network for Saliency Prediction, pp.41-46
Lingtong Meng ; Shuai Li ; Jiaqi Feng ; Yipeng Liu ; Ce Zhu

Human Machine Joint Decision Making in Distorted Surveillance Scenario, pp.47-52
Sen Liu ; Shuxin Zhao ; Yingxue Pang ; Zhibo Chen

*The Robust Kernel Conjugate Gradient Least Mean p -Power Algorithm**, pp.53-58
Xuewei Huang ; Kui Xiong ; Lin Wang ; Shiyuan Wang

PMSGM: PatchMatch Semi-Global Matching for Efficient Stereo Correspondence, pp.59-63
Xuchong Zhang ; He He Dai ; Miaomiao Sang ; Hongbin Sun ; Nanning Zheng

An Autonomous Task Algorithm based on Behavior Trees for Robot, pp.64-70
Haotian Zhou ; Huasong Min ; Yunhan Lin

Active Learning for Image Classification: A Deep Reinforcement Learning Approach, pp.71-76
Le Sun ; Yihong Gong

Performance Prediction Based on Neural Architecture Features, pp.77-80
Duo Long ; Shizhou Zhang ; Yanning Zhang

Infrared Small Target Detection Based on The Effective Rank-Layering of Image, pp.81-86
Xiao-jie Liang ; Yun-hong Xin

Visual Tracking using Online Deep Reinforcement Learning with Heatmap, pp.87-92
Xingyu Wan ; Wenli Huang ; Jinjun Wang ; Pengzhan Zhao

Classify Multivariate Time Series by Deep Neural Network Image Classification, pp.93-98
Yuxuan Zhao ; Zhongmin Cai

A Deep Image Compression Framework for Face Recognition, pp.99-104
Nai Bian ; Feng Liang ; Haisheng Fu ; Bo Lei

Arm Motion Classification Based on sEMG and Angle Signal for A Lower Limb Exoskeleton Control System, pp.105-110
Lufeng Zhang ; Ziming Guo ; Can Wang ; Ye Yuan ; Xinyu Wu

Within-Class Scatter Constraint Based Randomized Autoencoder for One-Class Classification, pp.111-116
Tianlei Wang ; Jiuwen Cao ; Xiaoping Lai ; Q. M. Jonathan Wu

Semantic Segmentation and Scene Reconstruction for Traffic Simulation Using CNN, pp.117-122
Huo Huihui ; Li Yaochen ; Wu chuan ; Wu xiao ; Tian zhiqiang ; Yuehu Liu

Surface EMG Decoding for Hand Gestures Based on Spectrogram and CNN-LSTM, pp.123-126
Dawei Huang ; Badong Chen

Sparse Model-Agnostic Meta-Learning Algorithm for Few-Shot Learning, pp.127-130
Sibo Gai ; Donglin Wang

Leveraging User Profiling in Click-through Rate Prediction based on Zhihu Data, pp.131-136
Yueqi Sun ; Bin Guo ; Zhimin Li ; Jiahui Cheng ; Liang Wang ; Zhiwen Yu

A fast and non-directional calibration method for fiber optic gyro inertial navigation system, pp.137-142
Zhi Wang ; Fangjun Qin ; Feng Zha ; Lin Tong ; Chunfu Huang

The Semi-supervised Structure from Motion with Ground Plane Constraint, pp.143-148
xin wang ; Yuanqi Su ; Danchen Zhao ; Yuehu Liu ; Xiaoning Zhang

Visual-Based Semantic SLAM System with Landmarks for Large-Scale Outdoor Environment, pp.149-154
Zirui Zhao ; Yijun Mao ; Yan Ding ; Pengju Ren ; Nanning Zheng

A Defect Classification Network based on Deformation Dense Connection in Wire Rod Surface Image, pp.155-160
Zeshuang Mi ; Yonghong Song ; Yue Yan

Topological higher-order neuron model based on homology-continuity principle, pp.161-166
Xin Ning ; Weijun Li ; Wei Wang ; Weijuan Tian

Variable Impedance Learning from Human Demonstrations, pp.167-171
Caiyue Xu ; Bin He ; Zhipeng Wang ; Yanmin Zhou ; Gang Li

Robust Sequence Recognition using Biologically Inspired Temporal Learning Mechanisms, pp.172-177
Yang Xiao ; Shaobing Gao ; Rui Yan

EAN: Error Attenuation Network for Long-term Human Motion Prediction, pp.178-183
Jie Xu ; Xuguang Lan ; Jin Li ; Xingyu Chen ; Nanning Zheng

Event-Triggered Steering Control for Semiautonomous Vehicles with a Stochastic Driver Model, pp.184-189
Jun-Wei Wang ; Cheng Chen ; Zhou-Yang Liu ; Huai-Ning Wu

An End-to-end Clustering and Classification Learning Network, pp.190-195
Yulong Pei ; Jinyan Liu ; Yan Zhang ; Yanyun Qu

Aggregated Transformation and Attention Neural Network for Remote Sensing Scene Recognition, pp.196-200
Chao Jing ; Meng Yu ; Qinqin Dong

Multi-scale Iterative Network for Underwater Image Restoration, pp.201-206
Ming Hong ; Yanyun Qu ; Cuihua Li ; Shuxin Chen

The Feasibility of a Virtual Reality System for Attention Analysis, pp.207-211
Bin Ji ; Zhiyong Wang ; Kai Xu ; Honghai Liu

A new scheme of EEG Identification based on MFDC, pp.212-217
Fabing LI ; Huijun Huijun DAI

Imitating Driver Behavior for Fast Overtaking through Bagging Gaussian Process Regression, pp.218-224
Hongjun Chen ; Xin Yin ; Yujun Zeng

Research and Application of Face Anti-spoofing Based on Depth Camera, pp.225-229
jie Zhou ; Chenyang Ge ; Jiaqi Yang ; Huimin Yao ; Xin Qiao ; Pengchao Deng

Adjustable Autonomy for Human-UAVs Collaborative Searching Using Fuzzy Cognitive Maps, pp.230-234
Zhe Zhao ; Chang Wang ; Yifeng Niu ; Lincheng Shen ; Zhaowei Ma ; Lizhen Wu

Examinee Behavior Description Method based on Image Captioning, pp.235-240
Miao Ma ; Ziang Gao

High-performance template matching-based precision measurement using GoogLeNet, pp.241-245
Chenyang Zhao ; Bing Li

MST-ResNet: A Multiscale Spatial Temporal ResNet for Steering Prediction, pp.246-251
Long Wen ; Yang Zhao ; Shuguang Li ; Hong Cheng ; Chen Zhang

A Novel Visual Odometry Aided by Vanishing Points in the Manhattan World, pp.252-257
Han Bingxin ; Li Xiao ; Yu Qinghua ; Zhang Lilian ; Lu Huimin

A Low-Rank Minimization Method for Depth Map Denoising, pp.258-262
Li Li ; Xiaohong She ; Shanshan Gao

Macromanagement and Strategy Classification in Real-Time Strategy Games, pp.263-267
Fuheng Dai ; Jianxing Gong ; Jian Huang ; Jianguo Hao

Research on Turnout Fault Diagnosis Methods Based on K-means/ABC-RBF, pp.268-273
CHEN Guangwu ; LI Xutong ; XING Dongfeng ; SI Yongbo

Object Detection Algorithm Based on Deformable Convolutional Networks for Underwater Images, pp.274-279
Dong Zhang ; Lan Li ; Zizhong Zhu ; Shangang Jin ; Weizhe Gao ; Ce Li

Video Object Detection base on RGB and Optical Flow Analysis, pp.280-284
Shun Yao Zhang ; Tian Wang ; Chuanyun Wang ; Yan Wang ; Guangcun Shan ; Hichem Snoussi

SqueezeDet-Based Nighttime Traffic Light Detection with Filtering Rules, pp.285-291
Yongbo Huo ; Zhijing Xu ; Shitao Chen ; Yu Chen ; Yuhao Huang ; Nanning Zheng

Surface Defect Detection of Solar Cells Based on Feature Pyramid Network and GA-Faster-RCNN, pp.292-297
Lixing Liu ; Yifan Zhu ; MUHAMMAD RAMEEZ UR RAHMAN ; Peng Zhao ; Haiyong Chen