Conference Program

2007 IEEE International Conference on International Conference on Vehicular Electronics and Safety

December 13 – 15, 2007
Beijing, China

Sponsor
IEEE Intelligent Transportation Systems Society

Technical Co-sponsors

Institute of Automation, Chinese Academy of Sciences

A MESSAGE FROM THE GENERAL AND PROGRAM CHAIRS

It is with great pleasure that we welcome you to attend the 2007 IEEE International Conference on Vehicular Electronics and Safety (ICVES07). The third of this annual conference series, ICVES07 is sponsored by the IEEE Intelligent Transportation Systems (ITS) Society. The conference is hosted by the Institute of Automation of the Chinese Academy of Sciences, in Beijing, China.

The purpose of this conference series is to provide a forum to debate technical and scientific advances by researchers and practitioners working in areas related to vehicle electronics and safety systems.

ICVES07 has received 82 submissions. The research topics were varied, encompassing many technical areas such as vehicle bus, vehicular sensor, advanced drive assistance systems, vehicular signal processing, vehicle control, vehicle testing, safety systems, and vehicle hardware/software systems. A majority of the submitted papers were reviewed by three reviewers. Only papers with at least two positive reviews were accepted. Through a rigorous peer review process, the Program Committee was able to select 56 papers for presentations in fourteen technical sessions.

The conference program is complemented by a keynote speech and a tutorial entitled, *On the Mechanical Mechanism of Stick and Non-stick Motions in a Simplified Brake Dynamical System*, by Albert C.J. Luo (Southern Illinois University); and *MAC (medium Access Control) Schemes for Message Dissemination in Vehicular Ad Hoc Networks*, by Liang Cheng (Lehigh University).

We would like to express our thanks to all participants. First, to the authors, whose quality work is the essence of the Conference. Next, our thanks go to those persons and organizations that helped to make ICVES07 possible, especially to the other members of the Organizing Committee, and to the members of the International Program Committee and reviewers, for their competent and careful review.

Finally, we would like to invite you to participate actively, and interact with the Conference speakers and other attendees. Besides attending the Conference, please, enjoy the social events and the cultural life Beijing offers you. We hope ICVES07 will be very successful and fruitful to all of you and will contribute to further development in the field of Vehicular Electronics and Safety.

Cordially,

Fei-Yue Wang
IEEE ICVES 2007 General Chair
CAS (China), and University of Arizona (USA)

Urbano Nunes
IEEE ICVES 2007 Program Chair
University of Coimbra, Portugal

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International Program Committee

Appreciated Reviewers:

2007 IEEE International Conference on Vehicular Electronics and Safety
December 13-15, 2007, Beijing, China

Keynote Speech

Friday, December14, 2007
9:00am – 10:00am

On the mechanical mechanism of stick and non-stick motions in a simplified brake dynamical system

Albert C.J. Luo
Department of Mechanical and Industrial Engineering
Southern Illinois University Edwardsville
Edwardsville, IL 62026-1805, USA

Abstract: The nonlinear dynamics mechanism of stick and non-stick motions in a brake system under a periodical excitation is presented. The necessary and sufficient conditions for motions switching and sliding on the boundary are developed, which can be used for slide mode controls for such a system. To achieve the specific motions, the switching sets and planes based on the discontinuous boundaries of motion are introduced, and the basic mappings are developed for the mapping structures of periodic motions. Further, periodic motion and stability will be analytically predicted. Illustrations of periodic motions will be presented from analytical predictions. In addition, the corresponding analytical conditions will be presented through the relative force responses. From such illustrations, the mechanical mechanism of the stick and non-stick motions in the brake system can be intuitively presented, which may present a clue for brake system controls.

Bio-Sketch: Dr. Albert C.J. Luo, ASME Fellow, has been working on the theory and application of Nonlinear Dynamics and Mechanics for more than 20 years. Dr. Luo recently developed the theory of flow global transversality in nonlinear dynamical systems, which enhanced the understanding of the gradient system of Steven Smale (1962). Dr. Luo's theory of stochastic and resonant layers in nonlinear Hamiltonian systems systematically described the resonance mechanism of chaos. The local theory of discontinuous dynamical systems developed by Dr. Luo is instrumental in solving many difficult problems in science and engineering, such as gear transmission systems and control systems. In addition, Dr. Luo also developed an approximate plate theory, a large damage theory for anisotropic materials and a generalized fractal theory. Currently, Dr. Luo is conducting the experimental research on accelerated fatigue and damage applied to the fatigue life evaluation of heavy-duty machines in aerospace and automobile industry. Dr. Luo has published over 130 peer-reviewed journal and conference papers, two monographs and one edited book on Nonlinear Dynamics. He has been an Editor for the journal Communications in Nonlinear Science and Numerical Simulation since 2002, an Editor for two book series on Nonlinear Science and Complexity (Elsevier) since 2004 and one book series on Complexity, Nonlinearity and Chaos (World Scientific) since 2007. He has been an Associate Editor for ASME Journal of Computational and Nonlinear Dynamics since 2006. He has been a member of editorial board for IMeCh E Part K Journal of Multi-body Dynamics since 2002 and Journal of Vibration and Control since 2005. Dr. Luo also organized over 18 international symposiums and conferences on Dynamics and Control, including 14 ASME Symposiums and conferences. He served as the Technical Program Chair for ASME 2005 IDETC.

Tutorial: MAC (medium Access Control) Schemes for Message Dissemination in Vehicular Ad Hoc Networks

Duration: 3 hours (half a day)

Speaker

Liang Cheng, Ph.D.
Director, Laboratory Of Networking Group (LONGLAB)
Assistant Professor, Computer Science and Engineering, Lehigh University

Abstract

The successful dissemination of emergency messages in vehicular ad hoc networks can make a difference between life and death. To achieve the life-saving goals, emergency message dissemination needs timely and lossless medium access in vehicular ad hoc networks. In the literature the existing medium access control (MAC) protocols for can be categorized into two groups: one focusing on scheduling unicast traffic, and the other focusing on broadcasting emergency traffic. This tutorial will provide an overview of the medium access control issues in wireless networks, a detailed look about the priority scheduling in vehicular ad hoc networks, and a comparative study of the MAC protocols for broadcast traffic in vehicular networks.

Outline

Part I: MAC in wireless networks (1 hour)

- Introduction to computer networks and the OSI architecture
- Medium access control in ALOHA
- Medium access control in IEEE 802.11

Part II: Priority scheduling in vehicular ad hoc networks (1 hour)

- Medium access control in vehicular ad hoc networks: challenges
- Priority scheduling in vehicular ad hoc networks: needs and challenges
- Busy tone priority scheduling
- Distributed priority scheduling

Part III: Broadcast MAC in vehicular ad hoc networks (1 hour)

- Broadcast MAC in vehicular ad hoc networks: challenges
- Vehicle-to-vehicle safety messaging in DSRC
- Statistical-priority based MAC protocols
- Strict-priority based MAC protocols

Profile

Liang Cheng currently directs LONGLAB (Laboratory Of Networking Group) as an Assistant Professor of Computer Science and Engineering at Lehigh University. He advises three Ph.D. students and has graduated three Ph.D. students and supervised one postdoc and two visiting scholars. He has published extensively in venues such as IEEE Transactions on Mobile Computing, IEEE Transactions on Vehicular Technology, IEEE Transactions on Wireless Communications, and major conferences; and holds one U.S. patent in the research areas of heterogeneous data networks and

their supporting middleware, which integrate Inter-, ad hoc, and sensor networks. He has been the Principal Investigator (PI) and a Co-PI of seven projects supported by the National Science Foundation (NSF), the Defense Advanced Research Projects Agency (DARPA), Pennsylvania Department of Community and Economic Development, and Agere Systems, Inc. Liang was the Program Chair of 2005 IEEE Sarnoff Symposium on Advances in Wired & Wireless Communications, which had over 200 attendees and featured 56 technical papers, 2 panels, inspiring keynote speakers including President and CEO of BBN Technologies, 10 tutorials as well as a student poster session and an exhibition, and its impact resulted in a 50% increase of paper submissions to 2006 IEEE Sarnoff Symposium. Dr. Cheng is an awardee of Christian R. & Mary F. Lindback Foundation Minority Junior Faculty Award.

IEEE ICVES 2007 Conference Program Schedule

Thursday, December 13, 2007	
Time	
13:00-17:00	**Registration**
13:00-17:00	**Tutorial: MAC (medium Access Control) Schemes for Message Dissemination in Vehicular Ad Hoc Networks** **Prof. Liang Cheng** Director, Laboratory Of Networking Group (LONGLAB) Computer Science and Engineering, Lehigh University

Friday, December 14, 2007		
Time	Track 1	Track 2
9:00-17:00	**Registration**	
9:00-10:00	Conference Room 2	
	On the mechanical mechanism of stick and non-stick motions in a simplified brake dynamical system **Prof. Albert C.J. Luo** Department of Mechanical and Industrial Engineering Southern Illinois University Edwardsville	
10:00-10:30	Coffee Break	
10:30-12:00	FrA1	FrA2
	Conference Room 1	Conference Room 2
	Vehicle Bus 9,90,122,121	Vehicular Sensor 42,19,74,21
12:00-13:00	Luncheon	
13:00-15:00	FrB1	FrB2
	Conference Room 1	Conference Room 2
	Sensor Network 109, 128,5, 79	Safety Systems-Telematics 72,123,101,115,30
15:00-15:30	Coffee Break	
15:30-17:00	FrC1	FeC2
	Conference Room 1	Conference Room 2
	Signal Processing 97,26, 118	Vehicle Control 70, 10, 114,
18:00-22:00	Room Name or Location TAB	
	Reception	

IEEE ICVES 2007 Conference Program Schedule

Saturday, December 15, 2007		
Time	Tracker 1	Tracker 2
8:00-17:00	Registration	
8:00-10:00	SaA1	SaA2
	Conference room 1	Conference room 2
	Pattern Recognition for Vehicles 76,89,125,96, 126	Driver Assistance Driving Systems, 127,36, Image sensor, 83, 112,22
10:00-10:30	Coffee Break	
10:30-12:00	SaB1	SaB2
	Conference room 1	Conference room 2
	Vehicle Hardware /Software System—Navigation 1 84, 110,44,117, 107,	Vehicle Testing 17,91,75,111
12:00-13:00	Luncheon	
13:00-15:00	SaC1	SaC2
	Conference Room 1	Conference Room 2
	Safety Systems—Active&Passive 81,106,82,77,16	Vehicle Hardware /Software System—Navigation 2 23,28,88,55, 64
15:00-15:30	Coffee Break	
15:30-17:00	SaD1	
	Conference Room 1	
	Others 13,47,49,119	
18:00 Night	Room Name or Location TAB	
	Conference Banquet	

TECHNICAL PROGRAM

Friday, December 14, 2007

Vehicle Bus, FrA1, Conference Room 1

Co-Chairs:
Danfang Wang Harbin Institute of Technology at Weihai
Jittiwut Suwatthikul, School of Engineering, University of Warwick

10:30-10:52 ***FrA1.1***

Adaptive OSEK Network Management for In-vehicle Network Fault Detection

Jittiwut Suwatthikul
Ross McMurran — School of Engineering, University of Warwick
R. Peter Jones

10:52-11:15 ***FrA1.2***

Research on Reflection of CAN Signal in Transmission Line

Meng Wu
Fengchun Sun
Jinrui Nan — Beijing Institute of Technology
Dafang Wang

11:15-11:38 ***FrA1.3***

Analysis of Schedule ability of CAN Based on RM Algorithm

Shengmin Cui
Dafang Wang
Jianfeng Wang — Harbin Institute of Technology at Weihai
Meng Wu

11:38-12:00 ***FrA1.4***

A Genetic Algorithms Based Optimization for TTCAN

Xin Qiao
Kun-Feng Wang
Yuan Sun
Wu-Ling Huang — Institute of Automation Chinese Academy of Sciences, The Key Laboratory of Complex Systems and Intelligence Science
Fei-Yue Wang

Vehicular Sensor, FrA2, Conference Room 2

Co-Chairs:
Christophe Blanc, UBP-LASMEA
Sangkyung Sung, Konkuk University

10:30-10:52 ***FrA2.1***

A Robust Method to Determine Relevant Target Vehicle using Vehicular Radar

Zhifeng Liu
Jianqiang Wang
Keqiang Li — State Key Laboratory of Automotive Safety & Energy, Tsinghua University, Beijing

10:52-11:15 ***FrA2.2***

Data Fusion Performance Evaluation for Range Measurements Combined with Cartesian ones for Road Obstacle Tracking

Christophe Blanc
Paul Checchin
Samuel Gidel
Laurent Trassoudaine
UBP-LASMEA

11:15-11:38 ***FrA2.3***

A vibration-controlled resonant accelerometer design and its application to the single structured gyroscope/accelerometer system

Sangkyung Sung
Byung Su Chang
Kang-Yoon Lee
Young Jae Lee
Konkuk University

11:38-12:00 ***FrA2.4***

Wireless Test Platform of Communication Based Train Control (CBTC) System in Urban Mass Transit

Yuan Cao
Ru Niu
Tianhua xu
Tao Tang
Jiancheng Mu
Rail Traffic Control and Safety State Key Laboratory, Beijing Jiaotong University

Sensor Network, FrB1, Conference Room 1

Co-Chairs:
Bin Liu, Chinese Academy of Sciences
Qingming Yao, Chinese Academy of Sciences

13:00-13:24 ***FrB1.1***

Location Estimation in ZigBee Network Based on Fingerprinting

Qingming Yao
Fei-Yue Wang
Hui Gao
Kunfeng Wang
Hongxia Zhao
Institute of Automation, Chinese Academy of Sciences

13:24-13:43 ***FrB1.2***

Intelligent Spaces: An Overview

Bin Liu
Fei-Yue Wang
Jason Geng
Qingming Yao
Hui Gao
Institute of Automation, Chinese Academy of Sciences

13:43-14:05 ***FrB1.3***

Regenerative Braking algorithm for a Parallel Hybrid Electric Vehicle with Continuously Variable Transmission

Feng Wang
Hu Zhong
Xiao-jian Mao — Shanghai Jiao Tong University
Lin Yang
Bin Zhuo

14:05-14:30 ***FrB1.4***

Automatic Mode Matching Control Loop Design and its application to the Mode Matched MEMS Gyroscope

Byung Su Chang
Woon Tahk Sung — Seoul National University, Korea, Republic of
Jang Gyu Lee — Samsung Electronics, Korea, Republic of
Kang-Yoon Lee
Sangkyung Sung,

Safety Systems-Telematics, FrB2, Conference Room 2

Co-Chiars:
Richard Wunderlich, The University of Tennessee
Ai Yunfeng, Chinese Academy of Sciences

13:00-13:24 ***FrB2.1***

A Stable Longest Queue First Signal Scheduling Algorithm for an Isolated Intersection

Richard Wunderlich
Itamar Elhanany — The University of Tennessee
Tom Urbanik
Hamar Elhanany

13:24-13:43 ***FrB2.2***

OSGi Based Integrated Service Platform for Automotive Telematics

Ai Yunfeng
Sun Yuan — Graduate University of Chinese Academy of Sciences
Huang Wuling
Qiao Xin

13:43-14:05 ***FrB2.3***

Algorithm and System for Traffic Safety on the Intersection

Jungsook Kim
Kyungtae Kim — Electronics and Telecommunications Research Institute
Byungtae Jang

14:05-14:30 ***FrB2.4***

Improved Highway Safety Messaging Procedures for Optimized Channel Utilization in 802.11 Based Vehicular Ad Hoc Networks

Sonu Shankar
Arvind Yedla — Texas A&M University

14:30-15:00 ***FrB2.5***

A Top-down Integration Approach To Vehicle Stability Control

Signal Processing, **FrC1,Conference Room 1**

Co-Chairs:
Valentin O. Roda, University of São Paulo
Tianyi Hong, SCUT

15:30-15:55 ***FrC1.1***

Vehicle Centroid Estimation Based on Radar Multiple Detections

Xun Dai
Anton Kummert — Faculty of Electrical information and Media
Su Birm Park — Engineering university of Wuppertal
Uri Iurgel

15:55-16:15 ***FrC1.2***

Drivers Drowsiness Detection in Embedded System

Tianyi Hong
Huabiao Qin — School of Electronic and Information Engineering SCUT

16:35-17:00 ***FrC1.3***

A method for agricultural machine guidance on row crops based on the vanishing point

Luciano O. Neris,
Valentin O. Roda, — University of São Paulo
Onofre Trindade Jr.

Vehicle Control, FrC2, Conference Room 2

Co-Chairs:
Baohua Mao, Beijing Jiaotong University
Bin Li, Shanghai Jiao Tong University

15:30-15:55 ***FrC2.1***

Vehicle Yaw Stability Control Using the Fuzzy-Logic Controller

Bin Li — State Key Laboratory of Mechanical System and Vibration
Daofei Li — Institute of Automotive Engineering
Fan Yu — Shanghai Jiao Tong University

15:55-16:15 ***FrC2.2***

A Computer-Aided Multi-train Simulator for Rail Traffic

Baohua Mao
Wenzheng Jia — State Key Laboratory of Rail Traffic Control and Safety
Shaokuan Chen — Beijing Jiaotong University
Jianfeng Liu

16:15-16:35 ***FrC2.3***

System-On-a-Chip Design of Electronic Control Unit for Car Body Control

LI Hong-qiang
MIAO Chang-yun
WANG Hua-ping — Tianjin Polytechnic University

Saturday, December 15, 2007

Pattern Recognition for Vehicles, SaA1, Conference room 1

Co-Chiars:
Liu DaXue, National University of Defense Technology
Xuezhi Wen, Northeastern University

8:00-8:24 ***SaA1.1***

Fusing Ladar and Color Image for Detection Grass Off-road Scenario

Liu DaXue
Tao Wu — National University of Defense Technology
Bin Dai

8:24-8:46 ***SaA1.2***

Vision-based Real-time Pedestrian Detection for Autonomous Vehicle

Xin Liu — Automation Institute
Bin Dai — National University of Defense Technology
Hangen He

8:46-9:06 ***SaA1.3***

An Improved Wavelet Feature Extraction Approach for Vehicle Detection

Xuezhi Wen
Huai Yuan
Wei Liu — Northeastern University
Hong Zhao

9:06-9:25 ***SaA1.4***

Detection of Passing Vehicle on the Highway

Zheng Li — Institute of Automation
Wei Chen — College of Mechatronic Engineering and Automation
Hangen He — NUDT

9:25-10:00 ***SaA1.5***

An Algorithm Based on SVM Ensembles for Motorcycle Recognition

Xuezhi Wen
Wei Liu
Chunyan Song
Huai Yuan — Northeastern University
Hong Zhao

Driver Assistance Driving Systems, SaA2, Conference room 2

Co-Chairs:
Huabiao Qin, South China University of Technology
Wei Liu, Neusoft Co., Ltd

8:00-8:24 ***SaA2.1***

A Monocular-vision Rear Vehicle Detection Algorithm

Wei Liu
Chunyan Song
Xuezhi Wen — Neusoft Co., Ltd
Huai Yuan
Hong Zhao

8:24-8:46 ***SaA2.2***

Modeling and implementation on the behavior of autonomous vehicle in the virtual traffic environment

Peifeng Kang
Kang Huang
Yang Yang — School of Information Engineering
Yanjiong Zhong — University of Science and Technology
Lili Wei

8:46-9:06 ***SaA2.3***

Precise Eye Location in Driver Fatigue State Surveillance System

Huabiao Qin
Yongping Gao — South China University of Technology
Honglin gan

9:06-9:25 ***SaA2.4***

Research on Lane-Marking Line Based Camera Calibration

Kunfeng Wang
Hua Huang — Institute of Automation
Yuantao Li — Chinese Academy of Sciences
Fei-Yue Wang

9:25-10:00 ***SaA2.5***

An Automatic Extrinsic Parameter Calibration Method for Camera-on-vehicle on Structured Road

Meng Wu — Automation Institute
Xiangjing An — National University of Defence Technology

Vehicle Hardware /Software System—Navigation 1, SaB1, Conference room 1

Co-Chairs:
Fei Yan, Beijing Jiaotong University
Tao Zhang, Tsinghua University

10:30-10:52 ***SaB1.1***

Multi-branch Model of Intersection for Vehicle Navigation

Zhang Tao
Yang Diange
Li Ting — Tsinghua University
Lian Xiaomin

10:52-11:13 ***SaB1.2***

A Fuzzy Control Strategy and Optimization for Four Wheel Steering System

Jie Zhang
Yunqing Zhang — Center for Computer-Aided Design, Huazhong
Liping Chen — University of Science & Technology
Jingzhou Yang

11:13-11:35 ***SaB1.3***

Formal Modeling and Verification of Real-Time Concurrent Systems

Fei Yan
Tao Tang — Beijing Jiaotong University

11:35-12:00 ***SaB1.4***

A Novel Brake Control Strategy for Electric Vehicles Based on Slip Trial Method

Lei Zhou
Yugong Luo
Diange Yang — Tsinghua University
Keqiang Li
Xiaomin Lian

12:00-12:25 ***SaB1.5***

Road Traffic Signs Guidance Analysis for Small Navigation Vehicle Control System

Songkran kantawong
kanta wong
Lian Xiaomin

Faculty of Engineering
Bangkok University

Vehicle Testing, SaB2, Conference room 2

Co-Chairs:
Kunfeng Wang, Chinese Academy of Sciences
Hongwen HE, Beijing Institute of Technology

10:30-10:52 ***SaB2.1***

A Location Method for Autonomous Vehicle Based on Integrated GPS/INS

Qingmei Yang
Jianmin Sun

Beijing Union University

10:52-11:13 ***SaB2.2***

Experimental Verification of Energy-regenerative Feasibility for an Automotive Electrical Suspension System

Yongchao Zhang
Kun Huang
Fan Yu
Yonghui Gu
Daofei Li

S.K.L. Mech. Sys. & Vib
Inst. Automotive Eng.
Shanghai Jiao Tong University

11:13-11:35 ***SaB2.3***

Dynamic Simulation and Experiment of Electric Drive System on Test Bench

Hongwen HE
Fengchun SUN
Jie XING

School of Mechanical and Vehicular Engineering
Beijing Institute of Technology

11:35-12:00 ***SaB2.4***

An Automated Vehicle Counting System for Traffic Surveillance

Kunfeng Wang
Zhenjiang Li
Qingming Yao
Wuling Huang
Fei-Yue Wang

Institute of Automation
Chinese Academy of Sciences

Safety Systems—Active&Passive, SaC1, Conference Room 1

Co-Chairs:
Jianmin Sun, Beijing University of Civil Engineering and Architecture
Guangcai Zou, Tsinghua University

13:00-13:24 ***SaC1.1***

A Research of DYC for Independent 4WD EV Based on Control Target Dynamic Regulation

Guangcai Zou
Yugong Luo
Xiaomin Lian
Keqiang Li

The State Key Laboratory of Automotive Safety & Energy,
Tsinghua Uni

13:24-13:42 ***SaC1.2***

Design of an Integrated AFS/DYC Based on Fuzzy Logic Control

Reza Karbalaei
Ali Ghaffari
Reza Kazemi
S. Hamed Tabatabaei

Department of Mechanical Eng, Azad University South Branch of Tehran

13:42-14:10 ***SaC1.3***

Slip Ratio Control of Independent AWD EV Based on Fuzzy DSMC

Guangcai Zou
Yugong Luo
Xiaomin Lian
Keqiang Li

The State Key Laboratory of Automotive Safety & Energy, Tsinghua Uni.

14:10-14:30 ***SaC1.4***

Obstacles Detection and Collision Avoidance System Developed with Virtual Models

Rene Sosa
Gerardo Velazquez

ITESM Campus Toluca

14:30-15:00 ***SaC1.5***

Automotive Suspension System with an Analytic Fuzzy Control Strategy

Jianmin Sun
Qingmei Yang

Beijing University of Civil Engineering and Architecture

Vehicle Hardware /Software System—Navigation, SaC2, Conference Room 2

Co-Chairs:
Zhen Dai, Center of Sensor systems (ZESS), University of Siegen
Lei Chen, Beijing Jiaotong University

13:00-13:24 ***SaC2.1***

Research on Modeling and Simulation of Vehicle-on-board Automatic Train Protection Subsystem of Communication Based Train Control System

Lei Chen
Bin Ning
Tian-Hua Xu

State Key Laboratory of Rail Traffic Control and Safety Beijing Jiaotong University

13:24-13:42 ***SaC2.2***

Integrated GPS Navigation for Civilian Vehicles in Challenging Environment

Zhen Dai
Stefan Knedlik
Pakorn Ubolkosold
Junchuan Zhou
Otmar Loffeld

Center of Sensor systems (ZESS) University of Siegen

13:42-14:10 ***SaC2.3***

A Vehicle Surveillance System for Face Detection

Zhichao Ji
Huabiao Qin
Weisong Lin

South China University of Technology

14:10-14:30 ***SaC2.4***

Formal Safety Verification for TTP/C Network in Drive-by-Wire System

Ru Niu
Yuan Cao
Tao Tang

State Key Laboratory of Rail Traffic Control and Safety
Beijing Jiaotong University

14:30-15:00 ***SaC2.5***

RESAERCH ON DRIVE FATIGUE DETECTION USING WAVELET TRANSFORM

Mingwang MAO
Liping DU

University of Science and Technology Beijing

Others, SaD1, Conference Room 1

Co-Chairs:
Liang Zhao, Chinese Academy of Sciences
Yuan Sun, Central University for Nationalities

15:30-15:52 ***SaD1.1***

Slip Ratio Control for a Semi-Track Air-Cushion Vehicle

Shuo Xu
Zhe Luo
Fan Yu
Ke Zhou
Yongchao Zhang

Shanghai Jiao Tong University

15:52-16:15 ***SaD1.2***

Short-Term Traffic Flow Prediction Based on Ratio-Median Lengths of Intervals Two-Factors High-Order Fuzzy Time Series

Liang Zhao

Institute of Automation
Chinese Academy of Sciences

16:15-16:35 ***SaD1.3***

Short-Term Fuzzy Traffic Flow Prediction Using Self-Organizing TSK-Type Fuzzy Neural Network

Liang Zhao

Institute of Automation
Chinese Academy of Sciences

16:35-17:00 ***SaD1.4***

Design of an OSEK/VDX and OSGi-based Embedded Software Platform for Vehicular Applications

Yuan Sun
Wu-Ling Huang

Central University for Nationalities

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