

# Program

## The 2014 Korea Institute of ITS International Conference

\*Date : October 31, 2014

\*Venue: International Exchange & Cooperation Center, Korea Maritime And Ocean University, Busan, Korea

| Time                         | Program  | Details   |
|------------------------------|--|---|
| 09:00 ~                      | Registration   |   |
| 11:10 ~<br>12:00<br>(50min)  | - Opening Ceremony<br>- Opening Speech (President of KITS, Prof. Youngchan Kim)<br>- Welcoming Speech (President of KMOU, Prof. Han-il Park) | Moderator<br>(Prof. Sang Woon Lee, Namseoul University)         |
|                              | - Keynote Speech:<br>Automated Driving and the<br>Communication Needs  | Mr. T. Russell Shields, Chair, Ygomi                            |
| 12:00 ~<br>12:30<br>(30min)  | Regular membership meeting   |   |
| 12:30 ~<br>13:30<br>(60min)  | Lunch time   |   |
| 13:30 ~<br>15:40<br>(130min) | International Session 1 :<br>Indoor Positioning and ITS<br>(Chairman: Prof. Dong Soo Han, KAIST)   | 1-A: Dr. Francesco Potorti, ISTI                                |
|                              |  | 1-B: Mr. Daniel Becker, Fraunhofer FOKUS                        |
|                              |  | 1-C: Dr. Yoshiharu Doi, TOYOTA                                  |
|                              |  | 1-D: Dr. Sorawit Narupiti, Chulalongkorn University             |
|                              |  | 1-E: Prof. Ying-en Ge, Shanghai Maritime University             |
|                              |  | 1-F: Mr. Joonsoo Shin, Korea Expressway Corporation             |
| 15:40 ~<br>16:00<br>(20min)  | Coffee Break   |   |
| 16:00 ~<br>18:05<br>(125min) | International Session 2 :<br>Simulation for ITS<br>(Chairman: Prof. Seungjae Lee, University of Seoul)                                       | 2-A: Prof. Edward Chung, QUT                                    |
|                              |  | 2-B: Dr. Alex Erath, ETH-Singapore                              |
|                              |  | 2-C: Mr. Ali Atizaz and Prof. Seungjae Lee, University of Seoul |
|                              |  | 2-D: Dr. Ryota Horiguchi, i-Transport Lab                       |
|                              |  | 2-E: Dr. Jan-Dirk Schmöcker, Kyoto University                   |
|                              |  | 2-F: Mr. Nate Chanchareon, PTV Group                            |
| 18:05~                       | Farewell Dinner(International Speaker)   |   |

| Time                     | Program  | Details   |
|--------------------------|--|---|
| 09:00 ~                  |  | Registration  |
| 9:30~11:00<br>(90min)    | Session 1  | I -A: ATIS, ATMS, APTS                                  |
|                          |  | I -B: ITS Application Services I                        |
|                          |  | I -C: Communication and Application I                   |
| 11:10 ~ 12:00<br>(50min) | - Opening Ceremony<br>- Opening Speech (President of KITS, Prof. Youngchan Kim)<br>- Welcoming Speech (President of KMOU, Prof. Han-il Park) | Moderator<br>(Prof. Sang Woon Lee, Namseoul University) |
|                          | - Keynote Speech:<br>Automated Driving and the Communication Needs   | Mr. T. Russell Shields, Chair, Ygomi                    |
| 12:30 ~ 13:30<br>(60min) |  | Lunch time  |
| 13:30 ~ 15:00<br>(90min) | Session 2  | II -A: ITS Application Services II                      |
|                          |  | II -B: Others I   |
|                          |  | II -C: Communication and Application II                 |
|                          |  | II -D: Communication Systems and Rfmaterial             |
| 15:00 ~ 15:30<br>(30min) |  | Coffee Break  |
| 15:30 ~ 17:00<br>(90min) | Session 3  | III-A: Others II  |
|                          |  | III-B: Policies and Evaluation I                        |
|                          |  | III-C: Policies and Evaluation II                       |

# Details

## ■ International Session 1: (13:30–15:40)

| SESSION I - Rm. convention hall     |  |  |
|-------------------------------------|--|--|
| Chairman: Prof. Dong Soo Han, KAIST |  |  |
| Title : Indoor Positioning and ITS  |  |  |
| No.                                 | Title  | Speaker  |
| 1                                   | On-site Indoor Positioning and Navigation Competition  | Dr. Francesco Potorti, ISTI                    |
| 2                                   | Vehicle and Pedestrian Collision Prevention System based on Smart Video Surveillance and C2I Communication | Mr. Daniel Becker, Fraunhofer FOKUS            |
| 3                                   | V2X in Japan   | Dr. Yoshiharu Doi, TOYOTA                      |
| 4                                   | ITS development in Thailand  | Dr. Sorawit Narupiti, Chulalongkorn University |
| 5                                   | Using Intelligent Transportation Systems (ITS) for Environmental Improvement                               | Prof. Ying-en Ge, Shanghai Maritime University |
| 6                                   | Smart Highway Project & Test Road  | Mr. Joonsoo Shin, Korea Expressway Corporation |

## ■ International Session 2: (16:00–18:05)

| SESSION II - Rm. convention hall                  |   |  |
|---|---|--|
| Chairman: Prof. Seungjae Lee, University of Seoul |   |  |
| Title : Simulation for ITS                        |   |  |
| No.   | Title   | Speaker  |
| 1   | Use of Bluetooth and Wifi for measuring vehicles and people movements   | Prof. Edward Chung, QUT                                    |
| 2   | Using Smart Card Data for Agent-based Transport Simulation: the case of Singapore   | Dr. Alex Erath, ETH-Singapore                              |
| 3   | MATSim Application in Seoul   | Mr. Ali Atizaz and Prof. Seungjae Lee, University of Seoul |
| 4   | Nowcast Traffic Simulation Using Floating Car Data for the Successive Monitoring of Traffic Performance and Environmental Impacts | Dr. Ryota Horiguchi, i-Transport Lab                       |
| 5   | Effects of Transit Real-Time Information Usage Strategies   | Dr. Jan-Dirk Schmöcker, Kyoto University                   |
| 6   | Pedestrian Modeling Case Study - Sochi Winter Olympics 2014   | Mr. Nate Chanchareon, PTV Group                            |

■ Session 1: (09:30–11:00)

| SESSION I -A -Rm. 705    |   |  |
|--------------------------|---|--|
| Chairman:                |   |  |
| Title : ATIS, ATMS, APTS |   |  |
| No.                      | Title   | Speaker                                      |
| 1                        | Quantitative Analysis of Real-Time Traffic Information                                    | Jeong YangRok, Bae SangHoon, Choi JiEun      |
| 2                        | Diagnostics Research in Tunnel Management System using IPA Analysis                       | Roh. Chang-Gyun, Park. Bum jin               |
| 3                        | Importance Analysis of Tunnel Management System to apply for Realtime Tracking Technology | Park. Bum jin, Roh. Chang-Gyun               |
| 4                        | An analysis of collaborative delivery in last-mile network -focused on courier industry   | Hyeongjun Park, Dongjoo Park, In-Jae Jeong   |
| 5                        | A Study of Ramp metering Algorithm Based on Three Phase Theory                            | Lee Byung Jun, Kim Young chan, Lee Min Hyung |
| 6                        | Queue Constrained Mainline Tollbooth Metering Algorithm                                   | Hochul Park, Chungwon Lee                    |
| 7                        | Correlation between Vehicle Stability and Emissions under Car-following                   | Lee.Jung-Beom, Lee. Chungwon                 |

| SESSION I - B - Rm. 706            |   |  |
|------------------------------------|---|--|
| Chairman:                          |   |  |
| Title : ITS Application Services I |   |  |
| No.                                | Title   | Speaker  |
| 1                                  | Development of Incident Detecting Model for Urban Major Arterial using Log Time Data of Probe Vehicle   | Eom Jeong Eun, Bae Sang Hoon, Jung Hee Jin                               |
| 2                                  | Estimate of Traffic Condition of An Urban Major Arterial through Link Travel Speed Pattern Analysis Based on Global Positioning System (GPS) Data of Prove Vehicles   | Jung Heejin, Bae Sanghoon, Choi Jieun                                    |
| 3                                  | Development of Advanced Lane-Change Assist System (ALCAS) Based on Cooperative Intelligent Transportation System in Merging Section : Optimal Lane Change Start Point Positioning & Optimal Lane Change Path Tracking | Jinsoo Kim, Kyung-young Jhang  |
| 4                                  | Analysis of Public Transit HUD Information Preference for Enhancing Transit Running Safety  | Jisoo Kim, Bumjin Park, Ju Yeon Lee                                      |
| 5                                  | A Study on the Method of Matching the Spatial Information of the Obstacle using the Radar and Night-vision sensors for Obstacle Recognition when Nighttime or Bad Weather.  | Kwangmo. Sung, Sungjin. Kim, Junguck. Lee                                |
| 6                                  | Estimating transportation demand of unmanned aerial vehicle(UAV, Drone) logistics   | Sangjin Byun, Seungjin Shin, Hyunseung Kim, Dongjoo Park, Hyeongjun Park |
| 7                                  | OBD data based road condition monitoring system - by friction coefficient and slip ratio analysis -   | Shin Seong Wook, Kang Young Kyun, Park Jun Seo, Kim Ji Hoon              |

**SESSION I - C - Rm. 704**

Chairman:

**Title : Communication and Application I**

| No. | Title   | Speaker   |
|-----|---|---|
| 1   | 5.8 GHz Rectenna with Wireless Power Transmission Using Harmonics Suppressed Narrow Short Stub Band-Pass Filter | Jung-Tae Kim, Hyun-Wook Lee, Jae-Gook Lee, Min-Jae Lee, Jong-Chul Lee, Hae-Soo Jeong, Ki-Chul Yoon, Tae-Ui Hong |
| 2   | Radome Design for 77GHz Vehicle Radar   | Kim Woo Young, Ham Hyung Suk, Kim Su Han, Park Yong Jai   |
| 3   | Design of Beamforming System for Focused Ultrasound   | Minkyung Kim, Hi Yuen Song, Inn-Yeal Oh, Chul Soon. Park  |
| 4   | Miniaturization of microstrip antenna suitable for LTCC   | Jun-Won Kim, Yoon-Seon Choi, Jong-Myung Woo and Dong-Kook Lee   |

**■ Session 2: (13:30-15:00)****SESSION II - A - Rm. 705**

Chairman:

**Title : ITS Application Services II**

| No. | Title  | Speaker  |
|-----|--|--|
| 1   | The Necessity of Vehicle Relocation Strategy for Car Sharing Services  | Kwon. Ohyeon, Jo. Mijeong, Kho. Seung-Young, Lee. Chungwon                           |
| 2   | Development of a security locking system for the korean standard traffic signal cabinets                     | Kwang-Yong Ko, Min-Sung Kim, Young-gje Jeong   |
| 3   | A Study on the new structure design for Traffic Local Controller   | Han. Seunghee, Jeon. Hyesein, Park. Kwangho, Jang. Jisu                              |
| 4   | Improvement Effectiveness Assesment of Bus vacant seat information accuracy using transportation card system | Lim. Seung-kook, Kim. myoung-gyu   |
| 5   | Internet of Cars through Commodity V2V and V2X Mobile Routes   | Hoe Kyoung Kim, Kanchana Kanchanasut, Apinun Tunpan, Saroch Boonsiripant, Yun-Pyo Oh |
| 6   | Evaluation and Development of the Weigh-In-Motion for Overweight Enforcement in Expressway                   | Jaisung Choi, Sungkyu Kim, Hohyuk Na   |
| 7   | A study on Quad-rotor Auto Control using Multi-Sensor  | Ki-Hoon Byun, In-Hwan Ryu, Dong-Jin Park, Jang-Woo Kwon                              |

**SESSION II - B - Rm. 706**

Chairman:

**Title :** Others I

| No. | Title   | Speaker                                      |
|-----|---|--|
| 1   | Algorithm for passing through the intersection without stopping the TRAM  | Park Su Jin, Lee In Kyu, Kim Young Chan      |
| 2   | Study on classification of the highway with traffic flow characteristics (A Study on cases of Yeongdong Highway)          | Lee. Dong-Youn, Yoon. Jae-Yong, Lee. Eui-Eun |
| 3   | Validation of 3 Phase theory -especially on Wide moving jam of each lane-   | Heejeong Jung, Minhyoung Lee, Youngchan Kim  |
| 4   | A VISSIM Simulation Study on Practicality of Speed Change Lanes at Driveways Along Suburban Arterials                     | Dae-San Lim, Chi-Hyun Shin                   |
| 5   | A Comparative Analysis of 'Hook Turns' & 'No-Left-Turn' to Solve the Left-Turning Traffic Problems at Urban Intersections | Hoyoung Lee, Dong-Kyu Kim, Seung Young Kho   |
| 6   | Feasibility of adopting unprotected straight  | Junhyung Lee, Yeseul Moon, Bongsoo Son       |
| 7   | Improvement of Downstream traffic condition by changing signal phase sequence   | Junhyung Lee, Yeseul Moon, Bongsoo Son       |

**SESSION II - C - Rm. 704**

Chairman:

**Title :** Communication and Application II

| No. | Title  | Speaker  |
|-----|--|--|
| 1   | Evaluation of IVC system based on IEEE802.11p under various transmission conditions          | Yoo S Song, Hyun S Oh  |
| 2   | Broadband Antenna Design at 60 GHz for High Data Rate Short-Range Communication Applications | Yonghee Han, Yonghyun Yoon, Byungje Lee                              |
| 3   | W-Band High Gain Wide Band Vivaldi Antenna for Chip to Chip Communication                    | Tae Hwan Jang, Hong Yi Kim, Inn Yeal Oh, Chul Soon Park              |
| 4   | 80GHz OOK Transmitter For The Data Communication Between Mobile Display Panels               | Joonggeun Lee, Haejin Lee, Chae Jun Lee, Taehwan Jang, Chulsoon Park |
| 5   | Performance evaluation for Intra-vehicle wireless sensor network                             | Yongnu Jin, Kyung Sup Kwak   |

**SESSION II - D - Rm. 101**

Chairman:

**Title :** Communication Systems and Rfmaterial

| No. | Title   | Speaker   |
|-----|---|---|
| 1   | Performance Comparison of th Training Signal in MIMO-OFDM System  | Lee Hyeong-Woo, Hwang Chan-Ho, Kim K-Man, Cho Hyung-Rae                             |
| 2   | Performance Enhancement of the Equalizer under Wireless Communication Environment   | Ji-Hong Son, Chan-Ho Hwang, Ki-Man Kim  |
| 3   | The low-power Viterbi decoder for RFID  | Baek Chang uk, Kwon Hae chan, Kim Tae hun, Ahn Tae seok, Jung Ji won, Cho Hyung-rae |
| 4   | Adaptive Demodulation System using Decision Directed Method I wireless communication  | Hae Chan-Kwon, Chang Uk-Baek, Tae Hun-Kim, Gun Woong-Park, Ji Won-Jung              |
| 5   | A Study on Q-Factor of Thin-film Open Stub Employing ML/CPW Composite Structure for Application to Wireless Communication System Matching Components on Si RFIC                                     | Jang-Hyeon Jeong, Ki-Jun Son, Jeong-Hoon Kim and Young Yun                          |
| 6   | A Study on Loss Characteristic of Voltage-controlled Artificial Transmission Line Employing Periodically Loaded Diodes for Application to Highly Miniaturized Wireless Communication System on MMIC | Jeong-Hoon Kim, Jang-Hyeon Jeong, Ki-Jun Son, Young Yun                             |

**■ Session 3: (15:30-17:00)****SESSION III - A - Rm. 101**

Chairman:

**Title :** Others II

| No. | Title  | Speaker  |
|-----|--|--|
| 1   | Optimal Air-Ambulance Locationfor Medically Underserved Areas  | Sehyun Park, Dong Kyu Kim, Seung Young Kho             |
| 2   | InvestigationalAnalysisofRoadDisasterInforma tiononSocialNetworkService  | Lee Hwanpil, Kim Soohee, Lee Seunghwan, Lee Sanghyun   |
| 3   | Study on New material Pavement for Implementing the next Generation Functional Road                                | Sungpil Shin, Inchul Yang                              |
| 4   | A Study on Public Transport Characteristics Considering Subway Influence Areas                                     | Seungu Choi, Sangwoo Jeon, Jeongwoo Lee, Chulmin Jun   |
| 5   | The impact of regional transportation culture in pedestrian accident severity                                      | Jimin Chae, Junhyung Lee, Bongsoo Son                  |
| 6   | Analysis of Accident Characteristics and Improvement Strategies of Flash Signal-operated Intersections in Seoul    | Jin-Hak Lee,Byung-Jung Park, Seung-Jun Kim, Ok-San Kim |
| 7   | Preliminary Study on the surface temperature prediction model developed by the Meteorological Information Literacy | Jinwoo Hyun, Youngtae Son                              |

**SESSION III - B - Rm. 102**

Chairman:

**Title : Policies and Evaluation I**

| No. | Title   | Speaker   |
|-----|---|---|
| 1   | Study on the High-Pass Lanes Travel Speed by Tollgate Type And Lane Width                                   | Yoon-Hyuk, Choi, Yoon-Seok, Lee , Han-Geom, Ko                      |
| 2   | Study on the Comparison of Point Detector Reliability In Expressway   | Yoon-Hyuk, Choi, Yoon-Seok, Lee                                     |
| 3   | Estimating catchment area of intermodal rail freight terminals: focusing on Korean container transportation | Hyunseung Kim, Sangjin Byun, Dongjoo Park, Ikhee Kim, Jinhyeong Joo |
| 4   | Potential for Transferring Short Car Trips to Active Transportation   | Jeongwoo Lee, Chulmin Jun   |
| 5   | Analysis of Trip behavior during Korean Thanksgiving Day  | Jeong. Soyoung, Kim. Soohye, Baek. Seungkirl                        |
| 6   | Analysis of Trip Characteristics on Expressway Lane Designation   | Jeong. Soyoung, Baek. Seungkirl                                     |

**SESSION III - C - Rm. 704**

Chairman:

**Title : Policies and Evaluation II**

| No. | Title  | Speaker  |
|-----|--|--|
| 1   | Analysis of Intercity Travel Time during National Holidays                                   | Jeong. Soyoung, kim. Soohye                    |
| 2   | A study on Estimation of Market`s Demanding using System Dynamics : A Case for DongBu-Market | Oh Chanhee, Lee SeungJae, Na SungYong          |
| 3   | Analysis of transit transfer in Seoul metropolitan area based on smart card data             | Jae-Hyun Kil, Yong-Gwan Lee, Seung-Young Kho   |
| 4   | Improving predictive study that rail-transport demand analysis using CUBE                    | Kim, Yong Jin, Lee, Seung Jae, Kim, Joo Young  |
| 5   | Development of VKT reflected Mobility for estimating regional GHG Emission                   | Ahn. Seok Beom, Lee, Seung Jae, Kim, Joo Young |
| 6   | Accuracy Improvement Study of Transit Assignment Results                                     | Kim, Yong Jin, Lee, Seung Jae, Kim, Joo Young  |