



**National Science Technology and Innovation Policy Office (STI) and
Electric Vehicle Association of Thailand (EVAT) and
Thailand Board of Investment (BOI)**

Organize workshop and site visit on the topics of:

**“Next-Generation Automotive: System Integration” and
“Thai-Korea Business Networking” at Seoul, Ulsan, Gwangju, South Korea
Workshop on 29 April -2 May 2019
(arrive on the 28th April and leave on the 2nd May)**

Objectives:

- Electric Vehicles (EVs) are increasingly being seen as innovation and a sustainable mode of transportation for combating pollutions and are of interest to auto, energy, IT, transport and environmental sectors.
- To learn from Korean auto industry the success of new industrial policy, which can be one of the key success for the development of Thai EV industry.
- To understand Korea industrial cluster experience to accomplish the technology development, bottom line profits and market penetrations.
- Bring some of the Korea EV companies, relevant government authorities and research organizations to share and discuss some of the latest trends and developments of EVs, System Integration (SI), and Thai-Korea business networking.
- Facilitate the process of building capacity for Large Enterprise and SME to develop EV and to identify potential EV research topics, and collaborations.
- We encourage you to bring in to the workshop your encountered complex and tough issues. We will direct you an insight and smart way to understand, experience, get consultation and coaching.

South Korea Next-Generation Automotive

- Government strong support on new technology development, and green policy.
- One of the world top leading on electric vehicle, system integration research.
- Strong automotive research institute on core technology and policy sandbox.
- Joint collaboration between industry, government, research institute, and SME.
- Product and market strategy, new energy infrastructure, and gov. procurement.

Lecture & Workshop & Site Visit Benefits

- EV Market Trend and Korean EV Policy and Technology Development
- EV Platform, Vehicle Powertrain Systems and Safety
- Implementation of Systems Integration Testing
- ESS Tech+Solar, EV Charging Station, Smart Home, Autonomous Car Market
- EV Projects in Korea from EV manufacturer and EV Battery R&D Center.
- EV-Trend Korea 2019 – International EXPO of E-Mobility: Electric Vehicle,...

Arrival 28 April

- Seoul: DAY 1_29 Apr. | Technology Matching (Seminar, Business Networking, Lecture & Workshop)
- Ulsan: DAY 2_30 Apr. | Techno Park (Site Visit)
- Gwangju: DAY 3_1 May | KATECH, Honam University (Site Visit)
- Seoul: DAY 4_2 May | EV-Trend Korea 2019 Expo

Departure 2 May

Language: English

Date	28-April (Sun)	29- April (Mon)	30- April (Tue)	1-May (Wed)	2-May (Thu)
Flight	(1) Thai Airways (TG 654) BKK 12:45- ICN 20:10 (2) Korean Air (KE 660) BKK 9:50 - ICN 17:35				(1) Thai Airways (TG 655) ICN 21:20- BKK 1:10 (2) Korean Air (KE 659) ICN 19:45- BKK 23:50
Day	(On arrival)	Day1: Lecture & WS, Technology Matching	Day2: Lecture & WS & Ulsan Techno Park Site Visit	Day3: Site Visit KATECH, Honam University	Day4: Visit International EV Expo
TOPICS (Morning Session)		1. Lotte Hotel Seoul, EV Workshop : Thai Presentations	4. Workshop at Ulsan Techno Park - Thai Presentations	Heading to >>> KATECH, Gwangju	10. EV-Trend Korea 2019
		2. Korea Presentations: KOTRA, Ulsan Univ., KEVA, KT	5.Visit battery R&D center		
		Lunch			
TOPICS (Afternoon Session)		3. Korea Presentations: EV Market Trend, Policy, ESS Tech+Solar, Charging Station, Autonomous Car, Safety	6. Thai Presentations: EV Development of Thai Companies	8. Korea Automotive Technology Institute (KATECH)	EV-Trend Korea 2019 Con't
			7. Korea Presentations: TMM, TOP-IND EV manufacturer, HMG Battery manufacturer	9. Honam University, WS: Edison Motor	
		Dinner			
TOPICS (Evening Session)		(Heading to >>> Ulsan)	(Ulsan)	(Heading to >>> Seoul)	Heading to >>> Seoul (ICN)
Accomoda tion (Korea\$)	(1) Lotte Seoul Hotel (254,100 KRW) (2) Lotte City Seoul Hotel (127,000 KRW) (Myeongdong)	(1) Lotte Ulsan Hotel (150,000 KRW) (2) Lotte City Ulsan Hotel (83,000 KRW)	(1) Lotte Ulsan Hotel (150,000 KRW) (2) Lotte City Ulsan Hotel (83,000 KRW)	(1) Lotte Seoul Hotel (254,100 KRW) (2) Lotte City Seoul Hotel (127,000 KRW) (Myeongdong)	

Flights (Recommended)

Go to Korea, Apr.28(Sun)

- (1) Thai Airways (TG 654), BKK 12:45- ICN 20:10
- (2) Korean Air (KE 660), BKK 9:50 - ICN 17:35

Return back to Thailand, May.2(Thu)

- (1) Thai Airways (TG 655), ICN 21:20- BKK 1:10 (3 May)
- (2) Korean Air (KE 659), ICN 19:45- BKK 23:50

Hotels (Recommended)

Apr.28(Sun)

- (1) Lottle Seoul Hotel - 254,100 KRW (Breakfast Included) /Person
- (2) Lotte City Seoul Hotel (Myeongdong) - 127,000 KRW (Breakfast Included) /Person

Apr.29(Mon)

- (1) Lotte Ulsan Hotel - 150,000 KRW (Breakfast Included) /Person
- (2) Lotte City Ulsan Hotel - 83,000 KRW (Breakfast Included) /Person

Apr.30(Tue)

- (1) Lotte Ulsan Hotel - 150,000 KRW (Breakfast Included) /Person
- (2) Lotte City Ulsan Hotel - 83,000 KRW (Breakfast Included) /Person

May.1(Thu)

- (1) Lottle Seoul Hotel - 254,100 KRW (Breakfast Included) /Person
- (2) Lotte City Seoul Hotel (Myeongdong) - 127,000 KRW (Breakfast Included) /Person

Accommodations Information

1. Lottle Seoul Hotel

30, Eulji-ro, Jung-gu, Seoul, Korea

Lotte Hotel Seoul, Korea's 5 star best luxury hotel, is conveniently located in the heart of Seoul's central business district near Myeongdong and features two hotels-Main Building and New Wing-boasting 1,015 guest rooms combined. Lotte Hotel Seoul is a perfect hotel of 5 star hotels in Seoul for your tourism providing luxurious accommodation options designed by 4 world's leading design firms.

<https://www.lottehotel.com/seoul-hotel/en.html>

2. Lotte City Hotel Myeongdong

362 Samil-daero, Myeong-dong, Jung-gu, Seoul, South Korea

Lotte City Hotel Myeongdong is located between Myeongdong, the business and shopping center of Seoul, and Cheonggyecheon, an oasis in the downtown area. The 27-storey building boasts a spectacular view of the Seoul city. The premium business hotel offers 430 guest rooms, a stylish buffet restaurant, meeting rooms and fitness facilities. LOTTE City Hotel Myeongdong's highly practical and differentiated services ensure the success of your business and a satisfying trip.

<https://www.lottehotel.com/myeongdong-city/en.html>

3. Lotte Ulsan Hotel

282, Samsan-ro, Nam-gu, Ulsan, Korea

Lotte Hotel Ulsan, located in the new downtown of South Korea's premier industrial city Ulsan, offers the best satisfaction for any travel purposes including business or sightseeing, as we have 200 rooms with convenient access to the airport, bus terminals, shopping centers and financial districts. Lotte Hotel Ulsan commands a beautiful landscape view of the Taehwa River crossing Ulsan with modern and classy atmosphere, and has created a new culture of Ulsan with our elegant services.

<https://www.lottehotel.com/ulsan-hotel/en.html>

4. Lotte City Ulsan Hotel

204, Samsan-ro, Nam-gu, Ulsan, Korea

LOTTE City Hotel Ulsan opened in June 2015 in the new district of Ulsan, the largest industrial city in Korea. The hotel offers 354 guest rooms which is the largest in Ulsan. It is a business hotel catering to both business travelers and tourists thanks to its vicinity of the financial district, shopping town, airport and bus terminal. The high level of services is sure to satisfy each and every guest.

<https://www.lottehotel.com/ulsan-city/en.html>

Lecture & Workshop (Topics – Speakers) – in Preparation

1. Partnering Opportunities with Korea

Speaker: Pilsong Kim, Director, Materials & Components Industry Team, KOTRA

2. The State of Art on ZEV

Speaker: Prof. Ocktaeck, Lim, University of Ulsan

2. Korea EV Market Trend, Policy on EV - Market Technology

Speaker: Dr. Sang kyu, HWANG, Emeritus Senior Research Fellow, The Korea Transport Institute(KOTI), Co-Founder of KEVA, KEVA

3. Korea EV, EV Charging Station and Supply Chain

Speaker:, Position, KT (Korea-Telecom) (TBC)

4. Presentation Topic:

Speaker:, Position, POSCO ICT (TBC)

5. EV System Integration

Speaker: Yunyong Choi, CEO, Drivetech

6. ESS Tech+Solar

Speaker: Andrew Kwon, Head of Global Business Development Div., Destin Power

7. EV Charging Station

Speaker: Doyang Jung, CEO, PNE Systems

8. Smart Home, IoT, Home Charging

Speaker: John Choe, CEO, Encored Technologies

9. Autonomous Car Market

Speaker: Yosub Hong, Supervisor, Easymile

10. EV Safety

Speaker: Hookyung Lee, CEO, EVALL

11. Presentation Topic:on EV projects in Korea

Speaker:, Position, TMM (EV manufacturer)

12. Presentation Topic:on EV projects in Korea

Speaker:, Position, TOP-IND (EV manufacturer)

13. Presentation Topic:on EV projects in Korea

Speaker:, Position, HMG (EV Battery manufacturer)

14. Presentation Topic:on EV projects in Korea

Speaker:, Position, Edison Motor

List of Korean Speakers Confirmed.

No	Group1	Group2	Name	Nationality	Main	Comment			Webpage
1	EV	EV	Drivetech	Korea	Powertrain (Motor, Reduction Gear, etc)	EV powertrain expert such as motor and reduction gear system.	Yunyong Choi	CEO	http://drivetech.kr/
2	ESS	PCS	Destin	Korea	PCS, ESS, SOLAR	Global No.1 PCS Provider and have many ESS and Solar projects include Thai Project	Andrew Kwon	Head of Global Business Development Div.	http://www.destin.co.kr/
3	EVSE	EVSE	PNE Systems	Korea	EVSE (7~100Kw), BMS	Child company of PNE Solutions, EVSE provide from 7Kw to 100Kw. Hyundai, KIA and other OEM	Doyang Jung	CEO	http://www.pnesolution.com/en/html/00_common/main.html
4	IoT	IoT	Encored Technologies	Korea	IoT device base Energy Management System	Power Measure solution based on Big Data manage system and 1second interval data transfer system	John Choe	CEO	https://www.enertalk.com/
5	Autonomous	Autonomous	Easymile	Korea, France	Easymile	Easymile APAC leader originally related to Aero Vironment and good relationship with EVALL	Yosep Hong	Sales Manager	http://www.easymile.com/
6	EV	Training	EVALL	Korea	EV Safety Training	Former Bosch, TUV Rheinland approved EV High Voltage Safety Trainer, PPE development, NFPA emergency response trainer	Hookyung Lee	CEO	www.evall.xyz

List of Korean Participants Confirmed to Join EV System Integration Workshops.

No	Group1	Group2	Name	Nationality	Main	Comment	Webpage
1	EV	Training	EVALL	Korea	EV Safety Training	Former Bosch, TUV Rheinland approved EV High Voltage Safety Trainer, PPE development, NFPA emergency response trainer	www.evall.xyz (Under developing)
2	EV	Training	Youngil Tech	Korea	EV Repair Training	Car Repair Expert, Former CT&T, Electronic Device Development, EV Service Technician Expert	http://youngiltech.com/
3	EV	Inverter / PTC Heater HVAC Controller	Dong-Ah Group	Korea	PTC Heater, HVAC	Dong-Ah is big group provide HVAC controller and other devices, they recently got big EV Inverter project	http://www.dongah21.co.kr/
4	EV	Powertrain	Drivetech	Korea	Motor, Powertrain	Korean based EV powertrain(Motor, Gear, etc..) platform provider	http://www.drivetech.kr/gnuboard4/bbs/board.php?bo_table=eng_company01
5	EV	Small EV	Hyungje Motors	Korea	Small EV Platform	Hyunje have small EV platform baed on Korean teehnnology and have many variances from commercial to agricultural.	http://www.hjp.kr/
6	EV	Materials	Iljin Materials	Korea	Elecfoil, LMO(Lithium manganese oxide)	Battery material (Anode)	http://www.iljinm.co.kr/index_eng.html
7	EV	Batt Related Tech	Segi-Hitech	Korea	Heat Cooling Plate	Global Patented Heating-Cooling heat plate system	http://www.sekihitech.co.kr/home/eng/index.php
8	EV	VR	Z-Storm	Korea	VR Repair Training, Etc	Z-Storm has world top level of 2D to 3D converting technology and automotive VR/AR/MR solutions	http://www.z-storm.co.kr/index.do
9	EV	VR	Qtelsoft	Korea	VR Contents, Simulator, Education	Culture, Educational VR contents	http://qtel.kr/kor/About/Greetings/
10	EV	Cleaning Service	Duon	Korea	Building Management, Cleaning Solution	Duon group provide whole are building management system, Fire/Gas/Elec/Water and Safety. Even provide Solar and cleaning solution	http://duon.kr/eng/index.html
11	EV	Wiring Harness	Vision Digitech	Korea	EV/HEV High Voltage Wiring Harness	Work wth Renault Samsung	http://visiondgt.co.kr/
12	EV	Wiring Harness	Samgwang System	Korea	EV/HEV High Voltage Wiring Harness	Work with GM	http://www.g-samkwang.com/

No	Group1	Group2	Name	Nationality	Main	Comment	Webpage
13	ESS	ESS	LG	Korea	ESS. Solar	Home, Building, Solar, Total Solution	https://www.lge.co.kr/kr/business/contents/energy/ess-guide.do
14	ESS	PCS	Destin	Korea	PCS, ESS, SOLAR	Global No.1 PCS Provider and have many ESS and Solar projects include Thai Project	http://www.destin.co.kr/
15	ESS	ESS	KCSG	Korea	ESS	Intelligent Power grid and other services based on ESS system	http://sateng.co.kr/
16	ESS	Solar	Shinsung ENG	Korea	SOLAR Panel	Global No.1 Efficiency Solar Panel Provider Korean Solar Association Leader	https://www.shinsungeng.com/eng
17	ESS	Wind	Mirae-Tech	Korea	Smart-Wind	Different type of wind power generator.Can be installed to the non-powered area with Env.Sensing, ESS, Solar, Ads, etc.	http://www.mrtkorea.com/html_en/main.html
18	EVSE	Batt	PNE Solutions	Korea	BATT Cycler, BMS, INV	Battery related expert from Cycler, Tester and others. Child Company PNE Systems provide EVSE, BMS and Inverter as well	http://www.pnesolution.com/en/html/00_common/main.html
19	EVSE	EVSE	PNE Systems	Korea	EVSE (7~100Kw), BMS	Child company of PNE Solutions, EVSE provide from 7Kw to 100Kw. Hyundai, KIA and other OEM	http://www.pnesolution.com/en/html/00_common/main.html
20	EVSE	EVSE	Signet	Korea	EVSE (7~300Kw)	Famous EVSE supplier with high tech up to 300Kw, Work with Marubeni	http://www.signetev.com/en/
21	EVSE	EVSE	Klinelex	Korea	EVSE (7Kw, IoT)	Work with NBIIot(Narrow Band IoT), Gigbee, NFC, etc and smart-phone control	http://www.klinelex.com/index.php?Mn=&Sn=1&Pn=&Lang=2
22	EVSE	EVSE	sTraffic	Korea	EVSE (7Kw~100Kw) Transportation System Smart City Light	Samsung child company. Traffic and Rail business and IoT based EVSE infra	http://www.traffic.co.kr/en/index.php/main

No	Group1	Group2	Name	Nationality	Main	Comment	Webpage
23	EVSE	EVSE	ModernTech	Korea	EVSE (7Kw~100Kw) Robot Arm Charging	Master-Slave type EVSE	https://www.moderntec.kr/home-1
24	EVSE	EVSE	cUS	Korea	EVSE Manufacturer, Sub Parts, Accessories	OEM production of EVSE, Low price, high quality product	http://www.cus21.co.kr/
25	EVSE	EVSE	Powercube	Korea	EVSE (3.3Kw, Mobile)	Powercube has unique solution to separate EV charging tariff and general Elec. Tariff by using parking lot power concent in public building.	https://www.ev-line.co.kr/Default_eng.asp
26	EVSE	EVSE Modem	Gloquad	Korea	PLC Modem	Korean base EVSE PLC Modem provider. Global over 50% market share.	http://www.gloquadtech.com/indc_html/index.html
27	EVSE	EVSE Modem	Gridwiz	Korea	DR,ESS,EVSE Modem, Solar..	Gridwiz has many various EMS area from DR(Demand Response), Solar, ESS, EVSE, etc. They provide EVSE modem 70% globally	http://gridwiz.com/gw/?lang=en
28	EVSE	Wireless Charge	Wise Automotive	Korea	EV internal communication, Vision and embeded system	Vehicle Operation, ADAS, Wireless EV charging, etc, Authorized Test Facility	http://www.wise-automotive.kr/bizdemo46504/index.php
29	EVSE	DC Fast	PSN	Korea	EVSE (50Kw) AC/DC Converter, PCS..	Own manufacturing, Self R/D ability	http://www.psnetwork.co.kr/index/
30	EVSE	Trans	A-Co	Korea	Transformer, Reactor	Renault-Samsung motors approved sole transformer vendor	http://www.a-co.co.kr/

No	Group1	Group2	Name	Nationality	Main	Comment	Webpage
31	EVSE	Smart City, Commercial EV, EVSE	Pumpkin	Korea	Security, EVSE(Bus), Parking..	Korean based Smart city company and recently started from commercial EV bus charging system	http://epumpkin.co.kr/
32	EVSE	EVSE Infra	Jeju EV Service	Korea	Korean 1st EV Infra Service Provider	Located in World most EV density area, Jeju Island and operating EVSE infra monitoring and Call center	http://www.jejuvservice.com/
33	EVSE	Autonomous Portable EV Charger	EVAR	Korea	Samsung Venture, Autonomous EV charging Machine	Now on Pilot Stage	https://youtu.be/5on--fx-mjw
34	Autonomous	Autonomous	SpringCloud	Korea, France	Navya	SpringCloud is the Korean company who develop Auto driving and relationship with NAVYA	http://www.aspringcloud.com/en
35	Autonomous	Autonomous	Easymile	Korea, France	Easymile	Easymile APAC leader originally related to Aero Vironment and good relationship with EVALL	http://www.easymile.com/
36	IoT	IoT	Telwave	Korea	Commuication/ City Network/ Home Solution..	Various area network and smart home application	http://telwave.koreasme.com/eng/index.html
37	IoT	IoT	Efel	Korea	Smart Light	Korean Smart Light System. Product price is not expensive but takes time to evaluate, gathering data, analysis and calibrate.	http://epelkorea.co.kr/
38	IoT	IoT	Encord Technologies	Korea	IoT device base Energy Management System	Power Measure solution based on Big Data manage system and 1second interval data transfer system	https://www.enertalk.com/
39	IoT	IoT	Allocation	Korea	Smart Parking	Korean IoT base parking management system. App Control, Parking machine with EVSE and Parking Robot, etc.	http://eng.allocation.co.kr/
40	IoT	IoT	Qisens	Korea	Vehicle No Recognition	AI base Korean KAIST company. They have special solution to recognize the number and characters in vehicle No. Pad	http://kor.ciss.re.kr/content.php?db=m9_1_view&no=4

No	Group1	Group2	Name	Nationality	Main	Comment	Webpage
41	IoT	IoT	DSPOne	Korea	DSP/ICT, IoT/IoE, Smart Energy	2-Wheel IoT device, Battery Swap 2-wheel e-mobility	http://dspone.co.kr/
42	IoT	IoT	Hutron	Korea	IoT Device/Solution/Embedded Development	Work with ETRI and Korean tele-communication companies, H/W, S/W Expert group	Under construction



1. Ulsan Technopark

The technopark project is a government project whose goals are to consolidate the personnel and material resources that are currently scattered in different businesses, universities, or research institutes; to promote the joint development of technologies and the commercialization of research results and ultimately, to activate the local economy and to boost the nation's competitiveness. To respond to the challenges of our times, Ulsan Technopark, established in December 2002, has been helping in the creation of new technologies and business support programs with the cooperation of industries, academic or research institutes, and the government, and has performed the role of a local innovation agent in carrying out planning, R&D evaluation, and post-management to promote local businesses and core strategic industries. In the future, Ulsan Technopark will concentrate on local-specialty production centers and will attract various national policy research institutes, which will make Ulsan a representative R&D cluster in South Korea.

<http://www.utp.or.kr/newenglish/>



2. KATECH : Korea Automotive Technology Institute

KATECH has been supporting automotive components companies technically and practically by executing joint research or offering testing facilities, technical education, component performance test and reliability assessment & certification since its establishment in 1990. Its target mission is developing and upgrading knowledge or technology related with the automotive field and supplying those for strengthening competitiveness. KATECH is Korea's only R&D institute specializing in auto parts providing comprehensive and systematic technical support and playing a leading role in technology development. More than 300 members of KATECH are ready to cope with paradigm change in automotive field, from traditional car to electrical vehicle, environmentally friendly vehicle and clean diesel vehicle.

<http://www.katech.re.kr/english/index.asp>

3. Honam University

Honam University is a university located in Gwangsan-gu, South Korea. In this workshop we will visit the university and have a workshop overthere.

<https://www.4icu.org/reviews/3020.htm>



4. EV-Trend Korea 2019 EXPO, Seoul

International EXPO of E-Mobility: Electric Vehicle, Hybrid Car, Plug-in Hybrid Electric Vehicle, Self-Driving Car, Electric Motorcycle, Electric Bus, Electric Bicycle, Electric Commercial Vehicle, Fuel Cell Vehicle, etc. E-Mobility IT: Self-Driving Technology, Connected Service, AI Technology, Car Audio, etc. Charging Infra: ESS, UPS, BMS, Quick Charging, Wireless Charging, Portable Charging, etc. Electronic Units: Motor, Driving System, Transmission, Drive Train, Geer Box, HVAC, Inverter, Converter, Vehicle Weight Reduction Components, LED Lightings, etc. Materials/Components: Eco-friendly Tire, Management Components, Fuel Economizer, Emission Reduction Device, etc. Infrastructure/Service: Related Standards, Production Facilities Measurement Equipment, R&D Research Institutes, Car Sharing, Service, Maintenance and Repair, etc. EV Lifestyle: Insurance, Loan, Credit Card Companies, etc. Brand-new car Showcase. Various EV related display items such as complete vehicle, charging infrastructure, electrical equipment, related infrastructure and services. Korean government grant, promotion hall, and briefing sessions

<http://www.evtrendkorea.co.kr/>

Areas of Future Cooperation shall include:

- a. Sharing of knowledge and information on technology management and commercialization practices and related services to industries.
- b. Promotion of collaborative research and development between Korea Research Institute, University, and STI as well as between companies in Korea and Thailand.
- c. Facilitation of transfer of advanced and/or appropriated technologies to industries in Korea and in Thailand.
- d. Other areas that are of mutually benefit to the missions of both parties.

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