

Program

Oct. 24, 2019 (Thursday)

15:00 ~	Registration
16:00 ~ 18:30	Special Lecture <ul style="list-style-type: none"> Bong-Hyun Lee, Director of KATECH Daegu-Gyeongbuk R&D Division "Research Fields of KATECH Daegu-Gyeongbuk R&D Division" Prof. Seoksu Moon, Inha University "Formation Mechanism and Reduction Methods of GDI Injector Nozzle Tip Wetting"
18:30 ~ 19:00	Division and Research Group Meeting & Board of Directors' Meeting

Oct. 25, 2019 (Friday)

08:30 ~	Registration	
	Room 1 (Camellia Hall)	Room 2 (Azalea Hall)
09:00 ~ 10:40	Session 1-1 Special Session for "Atomization and Environment"	Session 2-1 Fuel Spray
10:40 ~ 10:50	Coffee Break	
10:50 ~ 11:50	Invited Lecture (Prof. Masato Tsuru, Kyushu Univ., Japan) "Comparison of spray and combustion characteristics between volatile fuel and diesel oil"	
11:50 ~ 12:00	Coffee Break	
12:00 ~ 12:30	2019 Annual General Meeting (Camellia Hall)	
12:30 ~ 13:40	Lunch	
13:40 ~ 14:20	Poster Session (Camellia Hall)	
14:20 ~ 16:00	Session 1-2 Special Session for "Gasoline Injector"	Session 2-2 Spray Atomization and Application Technique
16:00 ~ 16:10	Coffee Break	
16:10 ~ 17:50	Session 1-3 Special Session for "IEA Activity Report and Spray-Annex Expert Session"	Session 2-3 Combustion Applications
18:00 ~ 20:00	Banquet (Canola Hall and Cherry Hall)	

Oct. 26, 2019 (Saturday)

09:00 ~ 12:00	Regional Group Meeting
---------------	------------------------

Room 1 (Camellia)

Session 1-1 Special Session for “Atomization and Environment” (Chair : Prof. Mun Soo Chon, Korea Nat’l Univ. of Transportation)		
09:00 ~ 09:20	A Study on the Characteristics of Pollutant Emission when Real Driving of a Heavy Duty Truck with Difference Distance	Ji Hoon Keel, Gun Woo Kang, Jong Ming Kim, Jong Tae Lee (National Institute of Environmental Research)
09:20 ~ 09:40	A Study on the Emission Characteristics of Euro-6 Diesel and GDI Engines by Test Mode	Sang-Hyun Lee, Sang Il Kwon, Seung Tak Oh, Jong Tae Lee (National Institute of Environmental Research)
09:40 ~ 10:00	A Study on the Operation Characteristics of the NOx Reduction Device for Diesel Vehicle	Jong Chul Lee, Jun Hong Pack, Bo Seop Yun, Jong Tae Lee, Ju Won Kim (National Institute of Environmental Research)
10:00 ~ 10:20	An Investigation on Test Mode Emission and RDE Characteristics of Diesel Passenger Cars with Euro-VI Standard according to the Emission Reduction Technologies	Hyung Jun Kim, Yun Sung Lim, Sang Ki Park, Hwan Su Jung, Eun Hee Kim, Jong Tae Lee (National Institute of Environmental Research)
10:20 ~ 10:40	A Study on the Real Working Emissions of Construction Equipment Corresponding to Stage V Standard	Sang Il Kwon, Young Jin Kim, Sang Chul Ko, Jung Hwan Kim, Jong Tae Lee (National Institute of Environmental Research)
Invited Lecture (Chair: Prof. Seoksu Moon, Inha Univ.)		
10:50 ~ 11:50	“Comparison of spray and combustion characteristics between volatile fuel and diesel oil” Prof. Masato Tsuru (Kyushu Univ., Japan)	
12:00 ~ 12:30	2019 Annual General Meeting (Room 1, Camellia Hall)	
13:40 ~ 14:20	Poster Session (Chair: Dr. Kiho Kim, K-Petro)	
Session 1-2 Special Session for “Gasoline Injector” (Chair : Prof. Sungwook Park, Hanyang Univ.)		
14:20 ~ 14:40	A Study on the Characteristics of Internal Flow by Injector Stephole Shapes	Si Won Yang, Young Jun Cho, Yeon Hwa Cho, Jeong Hwan Park, WoonHwan Baek, Dong Ryul Lee (Hyundai-Kefico)
14:40 ~ 15:00	A Study on the Characteristics of Cavitating Nozzle Flow using LES-VOF Method	Yeon Hwa Cho, Young Jun Cho, Sangmin Kim, Si Won Yang, Woon Hwan Baek, Dong Ryul Lee (Hyundai-Kefico)
15:00 ~ 15:20	A Study on Internal Nozzle Flow Characteristics for GDI Injector according to Pitch Circle Diameter	Young Jun Cho, Sangmin Kim, Hyunjick Lee, Si Won Yang, WoonHwan Baek, Dong Ryul Lee (Hyundai-Kefico)
15:20 ~ 15:40	Study on Internal Flow Characteristics of Low-Pressure Gasoline Injector according to Pitch Circle Diameter	Sangmin Kim, Yeonhwa Cho, Youngjun Cho, Sehun Kim, Woon-Hwan Baek, Dong-Ryul Lee (Hyundai-Kefico)
15:40 ~ 16:00	A Study on the Control Optimization of GDI Injector for Reducing Opening Delay Time Deviation	Jae-Ho Jung, Jae-Cheon Song, In-Ho Kang, Min-Woo Kang, Young-II Kang (Hyundai-Kefico)
Session 1-3 IEA Activity Report and Spray-Annex Expert Session (Chair : Dr. Seungmook Oh, KIMM)		
16:10 ~ 16:30	Spray Annex Report and Introduction of IEA Combustion TCP	Choongsik Bae (KAIST)
16:30 ~ 16:50	Spray and Combustion of Bio-diesel	Choongsik Bae (KAIST)
16:50 ~ 17:10	Characteristics of Particle Number (PN) Emission and	Sungwook Park, Ziyoung Lee (Hanyang

	Combustion in Gasoline Direct Injection (GDI) Engine Fueled with Bio-Ethanol Blended Fuel	Univ.)
17:10 ~ 17:30	Spray Interference and Flame Characteristics in Diesel Sprays for NOx/PM Reduction	Dongwoo Hong, Seungwoo Kang, Choongsik Bae (KAIST)

Room 2 (Azalea)

Session 2-1 Fuel Spray (Chair : Prof. Joonho Jeon, Pukyung Nat'l Univ.)		
09:00 ~ 09:15	Spray Uniformity Measurement Method for GDI Injector using Spray Pattern Image	Jeonghyun Park, Suhan Park (Chonnam Nat'l Univ.)
09:15 ~ 09:30	Flash Boiling Spray Characteristics of GDI Injector according to Changes of L/D	Mengzhao Chang (Chonnam Nat'l Univ.), Jeong Hwan Park (Hyundai-Kefico), Suhan Park (Chonnam Nat'l Univ.)
09:30 ~ 09:45	Effects of Nozzle Hole Layout on Spray Characteristics in Gasoline Direct Injection Injector	Sungwook Park, Donghwan Kim (Hanyang Univ.)
09:45 ~ 10:00	Spray Collapse of Multi-Hole Gasoline Direct Injection Injector at High Injection Pressure	Huijun Kim, Donghwan Kim, Sungwook Park (Hanyang Univ.)
10:00 ~ 10:15	An Insight on the Effect of Superheated Index on Flash Boiling Spray Characteristics of 6-Hole GDI Injector	Omer Faruk Atac, Seoksu Moon (Inha Univ.)
10:15 ~ 10:30	The Effect of Spray-to-Spray Interaction of GDI Injector on Local Droplet Size and Velocity Distribution	Gyuhan Bae, Seoksu Moon (Inha Univ.)
Invited Lecture (Chair: Prof. Seoksu Moon, Inha Univ.)		
10:50 ~ 11:50	"Comparison of spray and combustion characteristics between volatile fuel and diesel oil"	Prof. Masato Tsuru (Kyushu Univ., Japan)
13:40 ~ 14:20 Poster Session (Chair: Dr. Kiho Kim, K-Petro)		
Session 2-2 Spray Atomization and Application Technique (Chair: Prof. Mingi Choi, Hanyang Cyber Univ.)		
14:20 ~ 14:35	Experimental Study on the Atomization of Aerated Impinging Jets	Keunseok Lee, Kyubok Ahn (Chungbuk Nat'l Univ.)
14:35 ~ 14:50	Experimental Study on Impinging Jet Spray and Atomization Characteristics of Viscoelastic Fluids	Mun Hee Lee, Han Min Lee, Jae Geun Yun, Jung Goo Hong (Kyungbuk Nat'l Univ.)
14:50 ~ 15:05	Spray Instability Characteristics of Gas-Centered Swirl Coaxial Injector using SLIPI Laser Diagnostics	Hyeontaek Jo, Younbin Yoon (Seoul Nat'l Univ.)
15:05 ~ 15:20	Diffusion Flame by Injection Pressure of Gasoline Direct Injection	Sangjae Park, Jiyong Shin, Choongsik Bae (KAIST)
15:20 ~ 15:35	Acoustics Analysis of Combustor Combined with CFD and FEM	Daesik Kim, Hyunjung Ju, Hanjung Jeon (Gangneung-Wonju Nat'l Univ.)
15:35 ~ 15:50	The Characteristics of Initial Flame Speed and Knocking Direction in a Spark Ignition Gasoline Engine with High Compression Ratio	Junsun Lee (UST), Junghwan Kim (Jungang Univ.), Changup Kim, Seungmook Oh, Younggyu Lee (KIMM)
Session 2-3 Combustion Application (Chair : Prof. Junepyo Cha, Korea Nat'l Univ. of Transportation)		
16:10 ~ 16:25	Effect of Injector Hole Number on Particle Number Emissions in a Light Duty Diesel Engine	Khawar Mohiuddin, Heesun Kwon, Sungwook Park (Hanyang Univ.)
16:25 ~ 16:40	Effects of Closely-Coupled Multiple Injection on Emissions and Efficiency in a Light-Duty Diesel Engine	Seungwoo Kang, Dongwoo Hong, Choongsik Bae (KAIST)
16:40 ~ 16:55	Effect of Mixture Preparation on Combustion and Emissions in a Diesel-Natural Gas Dual-Fuel Engine	Hyunwook Park, Junsun Lee, Seungmook Oh, Changup Kim, Yongkyu Lee (KIMM),

16:55 ~ 17:10	A Study on the Measurement of Smoke Emissions from Old Diesel Vehicles using Remote Sensing Device	Choongsik Bae (KAIST)
		Hyungu Roh (Induk Univ.), Kibong Choi (Wabotech), Ilwoong Yang, Kwangwook Lee, Sangwoo Han (Korea Environment Corporation), Seungryul Kim (Korea Testing Laboratory)
		Jun Woo Jeong, Young Soo Yu, Junepyo Cha, Mun Soo Chon (Korea Nat'l Univ. of Transportation)
17:10 ~ 17:25	Analysis of RDE-LDV on Massive Data Measured with PEMS and SEMS Equipment	Kiho Kim, Sungwoo Kim, Jeonghwan Kim, Jin-Sung Park, Hyun-Jin Kim (K-Petro)
17:25 ~ 17:40	A Study on the Effect of Fake Fuel on Vehicle	

Poster Session

Poster Session (Chair : Dr. Kiho Kim, K-Petro)		
1	Experimental Study on Asymmetric Spray Characteristics of Y-Jet Nozzle	Sang Ji Lee, Ji Yeop Kim, Gwang Yeol Baik, Jung Goo Hong (Kyungbuk Nat'l Univ.)
2	1-D Model for Dynamic Behavior Simulation of Diesel Injector based on AMESim	Jinwoo Lee (Ulsan College), Jaeheun Kim (Hyundai Motors), Kihyun Kim (Silla Univ.), Seoksu Moon (Inha Univ.), Jinsuk Kang (Hyundai Motors)
3	A Numerical Study on Combustion and Emission Characteristics of Low Calorific Syngas-Fueled HCCI Engine	Kabbir Ali (Chonnam Nat'l Univ.), Changup Kim, Yonggyu Lee, Seungmook Oh (KIMM), Kiseong Kim (Chonnam Nat'l Univ.)
4	Comparison of Measurement Methods of Individual Spray Angle for Multi-Hole Gasoline Direct Injection Injectors	Jeonghyun Park, Hanbin Cho, Suhan Park (Chonnam Nat'l Univ.)
5	A Study on Characteristics of Carbon Dioxide Emission for Load Weight and Driving Factor with Light-Duty Diesel Vehicle over Real-Driving Emission	Seung Lee Kim, Inhan Sim, Mun Soo Chon, Junepyo Cha (Korea Nat'l Univ. of Transportation)
6	An Experimental Study on the Liquid Electrostatic Spraying	Youngmin Woo, Jinyoung Jang, Yongjin Jung, Ahyun Ko, Jong Won Choi (KIER)
7	Numerical Study of Mixture Formation and Combustion Characteristics in CNG Direct Injection Engine using Gaseous Sphere Injection Model	Mingi Choi (Hanyang Cyber Univ.)
8	A Study on the Development of Engine Components for a 3L School Bus for Reducing the Fine Dust	Seokjoo Kwon (KATECH), Wanjae Jeon (Motonic), Sedoo Oh, Youngho Seo (KATECH)
9	Homogeneous Combustion Analysis by Biodiesel Fuel Mechanism	Young Chan Lim, Jun Woo Jung, Hyun Kyu Suh (Kongju Nat'l Univ.)
10	Variation of Diffusion Flame Shapes with an Electric Field Induction	Jun Young Choi, Ki Hoon Ko, Hey Min Kim (Korea Nat'l Univ. of Transportation)