

## Program overview

		(JST, Tokyo)			
March 10 Mon	9:00	12:30	PT600 Open-door meeting - Plenary session		Online (Hybrid) by each organization
	12:30	14:00	Lunch and discussion (by own)		
	14:00	18:00	Closed-door meetings (PT600, Task-17) with coffee by separate rooms		
March 11 Tue	9:00	12:30	Task-17 Open-door meeting		Exhibition
	12:30	14:00	Lunch and discussion (by own)		
	14:00	17:00	Closed-door meetings (PT600, Task-17) with coffee by separate rooms		
	17:00	18:00	PT600 open-door meetings - Summary session		
	18:00	20:00	Welcome reception		
March 12 Wed	8:45	10:00	Preparation: Poster preview rehearsal and file upload		Online (Hybrid) by PVinMotion conference
	10:00	11:15	Opening		
	11:15	11:45	Coffee break		
	11:45	13:05	Yield Prediction		
	13:05	14:30	Lunch and discussion (Supported by sponsors)		
	14:30	15:50	Yield Prediction		
	15:50	16:20	Coffee break		
	16:20	17:35	Industry		
	17:35	17:40	Short intermission (no coffee) for session arrangement		
17:40	19:00	Poster preview (Short presentation / QA, 16 posters)			
March 13 Thu	6:30	7:15	Sun Run - Beach run with sunrise from Pacific Ocean		Exhibition
	8:50	9:00	Preparation: file upload		
	9:00	10:00	Poster presentation		
	10:00	11:20	VIPV cell and module		
	11:20	11:50	Coffee break		
	11:50	13:10	BoS and System		
	13:10	14:30	Lunch and Discussion (Supported by sponsors)		
	14:30	18:25	Technical Tour (Registration required, free of charges)		
19:00	21:00	Conference Dinner (Registration required)			
March 14 Fri	9:50	10:00	Preparation: file upload		Online (Hybrid) by PVinMotion conference
	10:00	10:30	Special Session: High-efficiency PV devices		
	10:30	11:30	Report session - Task-17, PT600, Cell/module		
	11:30	12:00	Coffee break		
	12:00	13:00	Panel discussion - Terms in PV in Motion		
	13:00	14:30	Lunch and Discussion (Supported by sponsors)		
	14:30	15:10	Closing (conference summary and announcement: the next conference)		
	15:30	17:30	WG7 Closed-door meeting		Online (Hybrid) by each organization
17:40	18:20	Sun Run - Evening mountain village with sunset			

Conference organizers print and display posters at no cost, but prior registration and file transfer are required.

Online participants are encouraged to ask questions during the Poster Preview session on Wednesday evening.

Conference onsite participants can attend PT600 (VIPV standardization) and Task-17 (VIPV international research collaboration) open-door meetings on Monday and Tuesday.

## Poster presentations

Title	Presentor	Authors	Affiliations
Multi-Time Scale PV Power Forecast for Solar Charging Stations Using Wavelet Packet Decomposition and Long Short-Term Memory	Amirhossein Heydarian Ardakani	Amirhasan Sardarabadi, Amirhossein Heydarian Ardakani, Silvana Matrone, Emanuele Ogliari, and Elham Shirazi	Uni Twente, Polytechnic Uni Milan
Comparison of Photovoltaic Yield from Four Modules Attached on Solar-powered Electric Vehicle	Jangwon Suh	Jangwon Suh	Kangwon National Uni
Fabrication of Near-infrared Light Trapping Structure by Nanoimprinting Technique for Si Heterojunction Solar Cells	Yasuyoshi Kurokawa	Yasuyoshi Kurokawa, Yoshiko Iseki, Kazuhiro Gotoh, Satoru Miyamoto, Ryo Ozaki, Kyotaro Nakamura, Yoshio Ohshita, and Noritaka Usami	Nagoya Uni, Niigata Uni, TTI
Enhancing Operational Efficiency of Solar-Powered Vehicles Through Shading Analysis and Route Optimization	Jiyeon Ku	Jiyeon Ku, Sung-Min Kim, Hyeong-Dong Park	Seoul National Uni, Kanguan Uni,
Development of solar irradiance prediction technology using fisheye image for vehicle-integrated photovoltaic power generation	Nobuteru Takeshita	Nobuteru Takeshita, Naoki Mukai, Kenji Araki, Kensuke Nishioka, Yasuyuki Ota	Uni Miyazaki
Review of the environmental conditions and testing related to vehicle-integrated photovoltaics: Towards standardization of reliability assessment tests	Daisuke Sato	Daisuke Sato and Noboru Yamada	Nagaoka Uni Tech
Bending and torsion tests of TOPCon solar cells cut by TLS technology: Advantages for vehicle-integrated photovoltaics	Shunto Honda	Shunto Honda, Tomoya Tanimoto, Benjamin Lee, Steffen Geißler, Daisuke Sato, Yukio Miyashita, and Noboru Yamada	Nagaoka Uni Tech, Hanhwa Q-cell
Design of Broadband Anti-Reflective Coatings for III-V/Si Tandem Solar Modules in Vehicle- Integrated Photovoltaic Applications	Kentaro Watanabe	Kentaroh Watanabe, Hassanet Sodabanlu, Yoshiaki Nakano, and Masakazu Sugiyama	Tokyo Uni
Thermal characteristics of glass- and polymer-based 3D curved PV modules	Kyosuke Shimada	Kyosuke Shimada, Shunto Honda, Shuto Tsuchida, Yoshitaka Hayakawa, Daisuke Sato, and Noboru Yamada	Nagaoka Uni Tech, Nagaoka College
Effect of GeH <sub>4</sub> -CVD conditions on the Ge composition of SiGe films on Si(111) substrate	Yuki Imai	Yuki Imai, Kohei Ito, Ryoji Katsube, Satoru Miyamoto, Shota Suzuki, Hideaki Minamiyama, Marwan Dhamrin, and Noritaka Usami	Nagoya Uni, Toyo Aluminum, Osaka Uni
Prediction and Validation of Solar Electric Vehicle Power Generation Through Shadow Statistics Analysis on Urban Roads	Minji Kim	Minji Kim and Jieun Baek	Pukyong National Uni
Vibration and mechanical shock tests of polymer- and glass-based PV modules based on test standards for automobile components	Daisuke Sato	Daisuke Sato, Tomoya Tanimoto, Haruto Watanabe, Shunto Honda, Noboru Yamada	Nagaoka Uni Tech
Thermal shock tests and analyses of PV modules with different layer materials and geometries based on test standards for automobile components	Tomoya Tanimoto	Tomoya Tanimoto, Shunto Honda, Daisuke Sato, and Noboru Yamada	Nagaoka Uni Tech
PV on Heavy Duty Vehicles (HDVS): Validation of the fuel-saving merits	Kensuke Nishoka	Kensuke Nishioka, Kenji Araki, Taiyou Niina, Takumi Konuma, Makoto Tanaka, Yasuyuki Ota, and Shiro Sakamoto	Uni Miyazaki, Systec, PVTEC
Direct detection technique of vibration and resonance of the solar cells inside the VIPV modules	Yasuyuki Ota	Yasuyuki Ota, Kenji Araki, Shota Matsushita, Ryota Tsuji, Yuhi Honda, and Kensuke Nishioka	Uni Miyazaki
Steel-ball drop tests on polymer-based Si solar cell submodules directly retrofitted to vehicle body	Daisuke Sato	Daisuke Sato, Shunto Honda, Tomoya Tanimoto, and Noboru Yamada	Nagaoka Uni Tech
New frontier for electrically conductive adhesives	Giuseppe Galbiati	Giuseppe Galbiati, Daniel Buckland, Tobias Nitsche, and Fabio Smaniotto	Henkel AG & Co. KgaA

## Program of Wednesday

Time (JST, Tokyo)	Session	Title	Presentor	Authors	Affiliations	Online	
8:45	8:50	<b>Poster preview files uploading</b>					
8:50	9:50	<b>Rehearsal: Poster Preview Session</b>					
9:50	9:55	<b>Oral presentation files uploading (today's presentations)</b>					
10:00	10:10	Opening declaration, Introduction to PV in Motion	Martin Heinrich and Kenji Araki	--	--		
10:10	10:25	Si Tandem Solar Cell Modules for Solar-powered Vehicles	Masafumi Yamaguchi	Masafumi Yamaguchi , Tsutomu Tanimoto , Hiroyuki Juso , Kyotaro Nakamura , Ryo Ozaki , Nobuaki Kojima and Yoshio Ohshita	TTI, Sharp		
10:25	10:40	The Road to VIPV in the United States	Scott McCalmont	Scott McCalmont, Jennifer DiStefano, George Stefopoulos, Matt Klug, Caria Evans, and Markus Beck	Boston Government Services, Oak Ridge Institute for Science and Education, U.S. Department of Energy		
10:40	10:55	Validation of energy usage and PV generation model for a passenger car	Bart Kramer	Bart Kramer, Anna Carr, Lenneke Slooff-Hoek, Ashish Binani, Christian Braun, Alexander Kleinhans, Jan Kroon, Bonna Newman, and Phillip Nivelles	Lightyear, TNO, Fraunhofer ISE		
10:55	11:10	Possibilities for Emergency power for Japan by SolarOnTop trailers	Ruud Derks	Ruud Derks, Ramakrishnan Kalyanasundaram, and Utku Derin	Im Efficiency		
11:10	11:15	Conference info.	Kenji Araki	--	--		
11:15	11:45	<b>Coffee break</b>					
11:45	12:05	Vehicle Archetype Weighted Solar Energy Potential On Vehicle Rooftops In Europe	Alexander Kleinhans	Alexander Kleinhans, Christian Braun, William Grimes, Elke Lorenz, Anna Carr, and Lenneke Slooff-Hoek	Fraunhofer ISE, TNO		
12:05	12:20	Impact of shading model on the contribution of PV to the energy demand of a vehicle	Anna Carr	Anna Carr, Lenneke Slooff-Hoek, Ashish Binani, Christian Braun, Alexander Kleinhans, Jan Kroon, Ruud Derks, and Ramakrishnan Kalyanasundaram	TNO, Fraunhofer ISE, Im Efficiency		
12:20	12:35	Principal Component Analysis for Solar Radiation on Vehicle Roof	Kaiki Matsubayashi	Kaiki Matsubayashi, Kenji Araki, Yasuyuki Ota, Shinya Iwasaki, Yohei Hosokawa, and Kensuke Nishioka	Uni Miyazaki, Toyota		
12:35	12:50	Optimizing angular performance of curved VIPV modules	Francisco Martín	Francisco Martín, Rebeca Herrero, and Ignacio Antón	UPM, SAV		
12:50	13:05	Development and Evaluation of an EV with a 1.12 kW PV System	Hidenori Mizuno	Hidenori Mizuno, Katsuto Tanahashi, Takumi Takashima, Takashi Oozeki, and Toshio Hirota	AIST, Waseda Uni		
13:05	14:30	<b>Lunch break (Supported by sponsors)</b>					
14:30	14:50	Modelling and Assessing the VIPV solar potential of parked vehicles – A case study in southern India	Nitin Ralph Pochont	Nitin Ralph Pochont, Raja Sekhar Y, and Miguel C. Brito	Vellore Institute of Technology, Uni de Lisboa		
14:50	15:05	Enhancing Operational Efficiency of Solar-Powered Vehicles Through Shading Analysis and Route Optimization	Jiyoou Ku	Jiyoou Ku, Sung-Min Kim, and Hyeong-Dong Park	Seoul National Uni, Kangwon National Uni		
15:05	15:20	Solar Mobile Irradiance Measurements in Europe	Christian Braun	Christian Braun, Alexander Kleinhans, Anna Carr, and Lenneke Slooff-Hoek	Fraunhofer ISE, TNO		
15:20	15:35	Optimizing Solar EV Parking Using GIS-Based Shading Database and Real-Time Solar Forecasting	Jimin Hong	Jimin Hong a and Yosoon Choi	Pukyong National Uni		
15:35	15:50	Outlook on the cost effectiveness of VIPV based on mass production for Passenger cars	Lenneke Slooff	Oscar van de Water, Lenneke Slooff-Hoek, Ashish Binani, and Anna Carr	TNO		
15:50	16:20	<b>Coffee break</b>					
16:20	16:35	Challenges of VIPV market entry and the long way to the mass market	Urs Muntwyle	Urs Muntwyle	Dr. Schüpbach & Muntwylser GmbH		
16:35	16:50	Results of using solar panel systems on trailers	Ruud Derks	Ruud Derks and Martijn Ildiz	Im Efficiency		
16:50	17:05	The Journey of a VIPV Startup in Europe: SolarWing's Perspective on Rapid	Felix Lohmann	Felix Lohmann, Valentin Jakober, and Johannes Ratzinger	SolarWing FlexCo		
17:05	17:20	Optimising Vertical PV performance for VIPV	Katie Shanks	Katie Shanks	Uni Exter		
17:20	17:35	Development of Total Energy Simulator for High Altitude Platform Station Operation	Naoki Mukai	Naoki Mukai, Kenji Araki , Kensuke Nishioka, Kohei Okada, and Yasuyuki Ota	Uni Miyazaki, Softbank		
17:35	17:40	<b>Short break for sheets arrangement (No Coffee)</b>					
17:40	19:00	<b>Poster Preview Session with Chat (Questions) from online people</b> Chair: TBD					

## Program of Thursday

Time (JST, Tokyo)		Session	Title	Presenter	Authors	Affiliations	Online	
6:30	7:15	Sun Run (1)	<b>Beach Run</b> (with sun rise from ocean approx. 5 km, 7-8 min/km pace with scientific discussion) Sunrise: 06:28			PVTEC and Uni Miyazaki running team		
8:50	8:55	<b>Oral presentation files uploading (today's presentations)</b>						
9:00	10:00	<b>Poster presentation</b>						
10:00	10:20	VIPV cell and module	Curved glass-free PV module characterization and fabrication for Electric Vehicles	Mert Turan	Mert Turan, Leonardo Panattoni, Kléber Nicolet-dit-Félix, Umang Desai, Gianluca Cattaneo, Martin Perez Chuecos, Bénédicte Bonnet-Eymard, Andreas Huter, Antonin Faes, and Christophe Ballif	EPFL, CSEM		
10:20	10:35		Validation of Solar Power Generation and Incident Light Intensity in Prius PHEV with Integrated Photovoltaic Panels	Shota Matsushita	Shota Matsushita, Kenji Araki, Yasuyuki Ota, Shinya Iwasaki, Yohei Hosokawa, and Kensuke Nishioka	Uni Miyazaki, Toyota		
10:35	10:50		Measurement of curved photovoltaic modules for vehicle integration: Science to Standards	Takeshi Tayagaki	Takeshi Tayagaki, Kengo Yamagoe, Munefumi Komori, and Masahiro Yoshita	AIST		
10:50	11:05		Approaches on Module Technologies for the Different Integration Levels of Vehicle Integrated Photovoltaics (VIPV)	Martin Heinrich	Martin Heinrich, Luis Eduardo Alanis, Nishant Jajoo, Andreas Velte-Schäfer, Marc-Andre Schüller, Li Carlo Randler, Cornelius Herr, and Sebastian Neven-du Mont	Fraunhofer ISE		
11:05	11:20		Characterization procedures for Vehicle Integrated Photovoltaics	Rebeca Herrero	R. Herrero, R. Moruno, F. Martín, L. J. San José, J.M. Redondo, J. Malo, R. Núñez, S. Askins, and I. Antón	UPM		
11:20	11:50	<b>Coffee break</b>						
11:50	12:10	BoS and System	ASSESSING SELF-CONSUMPTION AND SELF-SUFFICIENCY RATES IN VARIOUS ESS OPERATION SENARIOS: IMPLICATIONS FOR SOLAR ELECTRIC VEHICLES AND V2X	Dawon Kim	Dawon Kim and Yosoon Choi	Pukyong National Uni		
12:10	12:25		Experimental Setup for Analyzing VIPV System Dynamics and Preliminary Comparative Results of a High-Performance MPPT Algorithm	Edoardo Celi	Edoardo Celi, Alessandro Minuto, Stefano Rizzi, Gianluca Timò, Alberto Dolara, and Antonello Avella	RSE, Politecnico di Milano		
12:25	12:40		Optimized EV Charging under Dynamic Conditions in PV Charging Stations	Amirhossein Heydarian Ardakani	Amirhossein Heydarian Ardakani, Bart Nijenhuis, Johann Hurink, Ian Gibson, and Elham Shirazi	Uni Twente		
12:40	12:55		Evaluating MPPT Algorithms and Electrical Configurations under Dynamic Shading in VIPV modules	Ricardo Moruno	Ricardo Moruno, Luis J. San José, Rubén Núñez, Rebeca Herrero, and Ignacio Antón	UPM		
12:55	13:10		Image Processing Technique for Accurate I-V Curve Estimation in Partial Shaded PV Modules for VIPV application	Alessandro Minuto	Alessandro Minuto, Edoardo Celi, Stefano Rizzi, Stefano Valiani and Gianluca Timò	RSE		
13:10	14:30	<b>Lunch (Supported by sponsors)</b>						
14:40	19:00	<b>Technical Tour (Registration required, free of charges)</b>						
19:00	21:00	<b>Conference dinner (Registration required)</b>						

## Program of Friday

Time (JST, Tokyo)		Session	Title	Presenter	Authors	Affiliations	Online		
9:50	9:55	<b>Oral presentation files uploading (today's presentations)</b>							
10:00	10:15	Special Session High-efficiency cell and modules	Perovskite-silicon tandem cells and their potential for vehicle-integrated photovoltaic applications	Daniel Kirk	Daniel Kirk, Stewart Hooper, Thomas Sebastien, Beth Allum and Fionnuala Grifoni	Oxford PV			
10:15	10:30		Screen-Printing High-Efficiency SiGe Layers for III-V/Si Tandem Photovoltaic Applications	Marwan Dhamrin	Marwan Dhamrin, Shota Suzuki, Taruna Teja Jupalli, Yuqing Li, Sarah Alamri, Kaito Kitaura, Moeko Matsubara, Hideaki Minamiyama, Noritaka Usami, and Takeyoshi Sugaya	Osaka Uni, Toyo Aluminum, Nagoya Uni, AIST			
10:30	10:50	Report Session	PV news (Cell and module)	Antonin Faes					
10:50	11:10		IEA Task-17	Keiichi Komoto					
11:10	11:30		IEC PT600	Kenji Araki					
11:30	12:00	<b>Coffee break</b>							
12:00	13:00	Panel Session	Technical terms and symbols in this field as Open-discussion	Lenneke Slooff					
13:00	14:30	<b>Lunch (Supported by sponsors)</b>							
14:30	14:50	Closing Session	Conference summary	Martin Heinrich					
14:50	15:05		Next PVinMotion conference invitation	Secret					
15:05	15:10		Closing remark	Kenji Araki					
15:30	17:30	<b>IEC TC82 WG7 meeting (closed door)</b>							
17:40	18:20	Sun Run (2)	<b>Evening run</b> (mountain villege, approx. 5 km, 7-8 min/km pace with scientific discussion) Sunset at 18:22			PVTEC and Uni Miyazaki running team			

## Program and timetable of technical tour

Time (JST, Tokyo)			
14:30	14:40	<b>Bus getting on</b>	
14:40	15:25	<b>Trip to Miyazaki Techno Center</b>	
15:25	15:30	<b>Bus getting off</b>	
15:30	16:10	<b>Visit and advanced measurement experiences</b>	1. Vibration measurement (shaker and laser measurement) 2. Cell-deformation inside curved modules (non-destructive measurement)
			Two groups
16:10	16:15	<b>Bus getting on</b>	
16:15	16:55	<b>Trip to Uni Miyazaki</b>	
16:55	17:00	<b>Bus getting off</b>	
17:00	18:00	<b>Visit and advanced measurement experiences</b>	1. Vibration analysis (cell resonance vibration animation by laser measurement) 2. Real-time VIPV simulations (Virtual drive affected by shading, partial shading, curve-loss) 3. Outdoor facilities with Ota-go, PV-trucks and PV garage
			Three groups
18:00	18:05	<b>Bus getting on</b>	
18:05	18:20	<b>Trip to conference venue</b>	
18:20	18:25	<b>Bus getting off</b>	

Sunset on March 13: 18:21