



2017 IEEE 12th International Conference on Power Electronics and Drive Systems (IEEE PEDS 2017)

Hawaii Convention Center, Honolulu, Hawaii, USA
12 – 15 December 2017



Conference Advance Programme

IEEE PEDS 2017 Conference Programme Schedule

12 – 15 December 2017, Honolulu, Hawaii, USA

	12 December (Tue)	13 December (Wed)	14 December (Thu)	15 December (Fri)	
0830 - 0900	0900 – 1800 Tutorial Sessions and Conference Registration	Venue Setup			
0900 – 1040		0900 – 1230 Opening Ceremony and Plenary Session	Parallel Sessions S1 – S5	Parallel Sessions S16 – S20	
			Tea Break		
1100 – 1240		1230 – 1240 Conference Group Photo Taking	Parallel Sessions S6 – S10	Parallel Sessions S21 – S25	
		Bento Lunch			
1330 – 1510		Poster Session I	Parallel Sessions S11 – S15	Parallel Sessions S26 – S30	
		Tea Break		Tea Break	
1530 – 1710		Poster Session II	1515 – 1530	Parallel Sessions S31 – S33	
		1830 – 2000 Welcome Reception		Gathering for bus departure to Paradise Cove (Conference Dinner) https://www.paradisecove.com/	

Note: All presentation venue (room and location) will be indicated in the conference final programme.

Conference Venue

Hawaii Convention Center

1801 Kalakaua Ave, Honolulu, HI 96815, United States

Located within walking distance of Waikiki, the Hawaii Convention Center is like no other in the world. Open to the outdoors – with terraces, lanais, courtyards, waterfalls, and fishponds – this remarkable facility combines the latest in cutting edge technology with authentic Hawaiian ambience. Our cultural diversity and legendary spirit of aloha encourage attendees to see the world in a new light, so it's no surprise that people accomplish more when they meet here. Best of all, the warmth of Hawaii and its people continue to inspire, long after meetings have ended.



Getting to the Convention Center <http://www.meethawaii.com/Hawaii-Convention-Center/About-Hawaii-Convention-Center/Getting-to-the-Center.aspx>

Conference Social Events

Welcome Reception:	12 December 2017 @ 6:30pm – 8pm	Charlot Courtyard
Conference Dinner:	14 December 2017 (Bus leaves at 3:30pm)	Paradise Cove

Visa and Travel

Obtaining a visa:

Conference attendees from outside the United States are urged to begin their visa application early. The waiting time can be long and varies from country to country.

Correct timely information can be obtained at: <http://travel.state.gov/content/visas/en.html>

This information includes

- How and where to get a visa
- How to obtain estimates of the current waiting time on a country-by-country basis.
- News about special regional situations that may affect your visa application.

Those planning to travel on the Visa Waiver Program (VWP): Please read the Visa Waiver Program page. See above web-link.

Passports:

In isolated instances travellers with valid visas were denied boarding an aeroplane by the airline:

- Because their passport was damaged
- Because their passport would soon expire.

Standards may vary by country and airline. We recommend all travellers examine their passports to determine if they are undamaged and that the expiration date is safely beyond the planned travel dates.

Welcome Message from General Chairs

On behalf of the IEEE PEDS Conference Committee, it is our pleasure to welcome you to the 2017 IEEE 12th International Conference on Power Electronics and Drive Systems to be held from December 12th to 15th at the Hawaii Convention Center in Honolulu, Hawaii. Hawaii being centrally located in the Pacific Ocean attracts many IEEE technical conferences averaging more than 10 events a year for technologists from the Pacific Rim and rest of the World to gather and discuss various technical issues.

For the IEEE PEDS 2017, we are glad to arrange four tutorial sessions opened for all to attend. There are 2 conference poster presentation sessions and 33 oral presentation sessions scheduled to accommodate the technical discussion to occur in the conference period.

To coincide with IEEE PEDS 2017, the IEEE Hawaii section jointly with the University of Hawaii IEEE student branch will sponsor their monthly Distinguished Lecture Seminar on Wednesday evening Dec 13th and we welcome all IEEE PEDS 2017 attendees to attend.

While in Hawaii I encourage you to explore the natural beauty of Hawaii by enjoying the beach, snorkelling at Hanauma Bay or Shark's Cove or taking a hike up Diamond Head, Koko Head Crater or the many other tropical trails on Oahu.

Welcome to Hawaii!

John Borland
IEEE Hawaii Section

Sanjib Panda
IEEE Singapore Section

PEDS 2017 Conference Committee

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Norbert Cheung, *Hong Kong*

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Shaoying Huang, *Singapore University of Technology and Design, Singapore*

Local Arrangement

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Committee Member

Tee Hui Teo, *Singapore University of Technology and Design, Singapore*

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Boyong He, China
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List of IEEE PEDS Conference Organising Chairmen (1995 – 2017)

Year	Conference Venue	Organised by
1995	Singapore	Ramesh Oruganti <i>National University of Singapore</i>
1997	Singapore	Yung C. Liang <i>National University of Singapore</i>
1999	Hong Kong	Norbert C. Cheung <i>The Hong Kong Polytechnic University</i>
2001	Bali	Yanuarsyah Haroen <i>Bandung Institute of Technology</i>
2003	Singapore	Sanjib K. Panda <i>National University of Singapore</i>
2005	Kuala Lumpur	Zainal Salam <i>Universiti Teknologi Malaysia</i>
2007	Bangkok	Sukumvit Phoomvuthisarn <i>Chulalongkorn University</i>
2009	Taipei	Tian-Hua Liu <i>National Taiwan Univ. of Science and Technology</i>
2011	Singapore	Sanjib K. Panda <i>National University of Singapore</i>
2013	Kitakyushu	Tadashi Suetsugu <i>Fukuoka University</i>
2015	Sydney	Yung C. Liang <i>National University of Singapore</i> David Tien <i>Charles Sturt University</i>
2017	Honolulu	Yen Kheng Tan <i>Singapore University of Technology and Design</i> Song K. Choi <i>University of Hawaii, Hawaii, USA</i>



Celebrating 22 years of great IEEE PEDS conferences!

Tutorial Sessions

Date/Time: Tuesday, 12 December 2017/09:00 – 18:00 hrs

Venue: Rooms 304A and 304B

IEEE PEDS 2017 offers the following tutorial sessions free of charge, provided that you have already registered with the conference technical sessions. The tutorial sessions do not provide any tea breaks or lunch.

Date	Time	Speakers	Title
12 December 2017 Tuesday	09:00 AM – 01:00 PM	Prof. Ralph Kennel <i>Electrical Drive systems and Power Electronics, Technical University of Munich, Germany</i>	<u>Predictive Control – A Simple and Powerful Method to Control Power Converters and Drives</u>
	02:00 PM – 06:00 PM	Prof. Ralph Kennel <i>Electrical Drive systems and Power Electronics, Technical University of Munich, Germany</i>	<u>Encoderless Control of Synchronous Machines – State of the Art as well as Realistic and Unrealistic Expectations</u>
	09:00 AM – 01:00 PM	Prof. Huai Wang Prof. Frede Blaabjerg <i>Center of Reliable Power Electronics (CORPE), Aalborg University, Denmark</i>	<u>Capacitors in Power Electronics Applications — Reliability and Circuit Design</u>
	02:00 PM – 06:00 PM	Prof. Longya Xu Prof. Jin Wang Prof. Yi Huang <i>Center for High Performance Power Electronics, Ohio State University, USA</i>	<u>Electric Machines and Wide Bandgap Power Electronics for High Speed High Performance Electric Machine Drives</u>

For more details, please view the conference website: <http://www.rpsonline.com.sg/peds/tutor.html>

Technical Sessions

Plenary Session

Date/Time: Wednesday, 10 June 2015/09:30 – 12:30 hrs

Venue: Room 311

To be announced.

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- 109 A Constant Voltage frequency Control Strategy Based on Dividing Frequency Complex Virtual Impedance
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China
- 120 Reduced Order Model of VSC Based on Balanced Truncation
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United States
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- 175 An Easilyinstalled Hardwareintheloop Hil Inverter System for Power Electronics Teaching
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- 202 The Comparison about the Number of VDCs And Switching Devices Among Multileveldc/Three-phase AC Converter Using Several Split DC Voltage Sources With Inner Hbridge Or Cascade Hbridges With Separated DC Voltage Sources
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- 25 A Novel Multiport Converter With an Auxiliary Voltage-pumping Circuit for Fuel Cell/Battery Hybrid Energy Sources
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- 265 Robust Control Design Approach for Grid Connected Inverters
Nima Amouzegar Ashtiani, S. Mohsen Azizi, S. Ali Khajehoddin
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- 276 Performance Comparison of Cascode GaN HEMT and Si MOSFET Based Inverters for Motor Drive Applications
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- 279 Intelligent Driver Circuit with Robust Serial Interface
Niklas Langmaack, Günter Tareilus, Markus Henke
Germany
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- 308 Consideration on Primary Control Reserve Provision by Industrial Microgrids in Grid coupled Operation
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