FIG 2 Prof. Ashok Jhunjhunwala conducting the panel session on solar–dc infrastructures. (From left) The panelists are Pawan Kumar (general manager technical, Energy Efficiency Services Limited); N.S. Ramanathan (head, Advanced Engineering, Lucas TVS); Krishna Shenai (distinguished professor, NMAM Institute of Technology, Nitte, India); Niranjan C. (senior general manager and head, product engineering, Amaraja); Pranay Jivrajka (chief operating officer, Ola Cabs); Apoorv Shaligram (Ather); and V.K. Pillai (director, Central Electrochemical Research Institute, Karaikudi, India).

and resulted in the formation of different groups and research proposals for further investigation. To promote vigorous interaction among participants on R&D activities in the field, a dinner was hosted. This event was enjoyed by all and resulted in focused groups of like-minded people sharing their expertise and integration of several new ideas.

Some important takeaways from this conference included efforts for making solar dc part of buildings, homes, and commercial complexes; deeper penetration of dc and load management concepts; the need for India to develop and manufacture advanced power semiconductors and power converters; and smart control of distributed clean energy resources. Grid stability issues, future requirements, and plausible solutions for green buildings and sustainability were also discussed. The next event is being planned in December 2018 at IITM. We expect SGBC to be the catalyst to rapidly electrify India and to promote sustainable infrastructure development.

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by Tom Keim

IEEE Energy Conversion Congress and Exposition 2017 Envisions Aerospace Electrification

Plans are well under way for the ninth annual IEEE Energy Conversion Congress and Exposition (ECCE), which will be held 1–5 October in Cincinnati, Ohio, at the Duke Energy Convention Center (Figure 1). This series is cosponsored by the IEEE Power Electronics Society (PELS) and the IEEE Industry Applications Society (IAS). On the conference website, General Chair Andy Knight, who is also a professor at the University of Calgary, Canada, says the

FIG 1 The Duke Energy Convention Center in Cincinnati, Ohio, is the venue for ECCE 2017. (Photo courtesy of ECCE.)

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following in his welcoming message: "ECCE is world's leading technical conference and exposition for energy conversion solutions. We provide opportunities for practicing industry engineers, researchers, students, and professionals from the broad spectrum of energy conversion to exchange technical knowledge, and develop their skills. ECCE is unique in our emphasis on integrated systems, presenting the best in applied integrated systems research together with innovations in individual energy conversion components."

The technical schedule indicates that the conference program offers peer-reviewed technical presentations, special panel sessions, interactive town-hall forums, and tutorials as well as plenary talks and the exposition. With the exhibitors presenting state-of-the-art technologies, products, and solutions and researchers demonstrating the latest work in poster sessions, along with student demos, the exhibit floor is expected to create a lively interactive networking environment for tackling issues and problems with practical engineering solutions. While it hasn't been featured, at least not as of this writing, on the conference website, Prof. Knight has also indicated that the conference this year will feature an aerospace electrification theme.

The ECCE 2017 exhibit floor is expected to create a lively interactive networking environment for tackling issues and problems with practical engineering solutions.

Readers should note that ECCE 2017 occurs roughly two weeks later in the year than has been customary for the past several conferences. This is a deliberate choice that both PELS and IAS leaderships have agreed upon. Two primary benefits are achieved. First, slightly greater time separates ECCE and the European Conference on Power Electronics and Applications, a major annual conference in Europe occurring in early September, which is also sponsored in part by the IEEE and PELS. Second, this timing allows ECCE to be colocated with the IAS Annual Meeting. As is appropriate for a well-established conference meeting the needs of its constituents, the organizers are largely following the pattern of the previous few conferences. Recent attendees can expect an experience very similar to the last. Sunday, 1 October, is given over to tutorials, with each tutorial running for half a day. The exact composition of the tutorial lineup is still being decided, but it is anticipated that there will be a number of offerings in the morning and the afternoon time slots. Interested parties can view the available offerings on the conference website, http://www.ieee-ecce.org, in adequate time to make appropriate plans. A welcome reception is scheduled for Sunday evening.

Monday morning will be a plenary session. Speakers are still being selected, but three plenary talks are planned. Consistent with the theme of the conference, the plenary speakers will be from aerospace institutions. Plenary Session Cochair Prof. Ian Brown, of the Illinois Institute of Technology, reports that Dr. Nateri Madavan, associate project manager for technology for the Advanced Air Transport Technology Project in NASA's Advanced Air Vehicles Program at NASA Ames Research Center, has agreed to offer one of the plenary talks. Prof. Brown says that another will be delivered by Bob Bayles of UTC Aerospace Systems, with a third speaker to be named.

The technical sessions begin on Monday afternoon. The tracks for the technical sessions are very similar to 2016:

- renewable and sustainable energy applications
- smart grid and utility applications
- transportation electrification applications
- power converter topologies
- the control, modeling, and optimization of power converters
- electrical machines
- electric drives
- power semiconductor devices, passive components, packaging, integration, and materials
- energy-efficiency systems and applications
- emerging technologies and applications
- data centers and telecommunication applications.

The number of abstracts submitted for consideration, just over 1,500, compares favorably to 2016. The organizers can apply a substantial degree of selectivity and still accept as many papers (982) as last year if they choose. Attendance is likewise projected to be comparable to 2016, at around 1,500. After a full afternoon of technical presentations, the exposition opens for the first time at 4 p.m. on Monday. About 20% more exposition booths are available in 2017 than were in 2016. A student demo and the first poster session (part of technical sessions and thus pertaining to the same list of topic tracks presented just above) occur in the same hall at the same time, giving rise to a vibrant, busy session.

Tuesday opens with more lecture-format technical sessions. The rest of the day is filled with two more poster sessions and a second student demo session, all of which will occur in the exposition hall. As Tuesday afternoon proceeds into Tuesday evening, several parallel town-hall forums will take place. These include a panel discussion and ample opportunity for participation from the floor. The subjects of the town-hall forums will be determined substantially in advance of the conference. The exposition closes on Tuesday.

Wednesday is the most intense day of the conference from the viewpoint of lecture-style technical sessions. Six hours of technical sessions are scheduled between 8:30 a.m. and 5:00 p.m. After such a day, the

conference banquet in the evening should be a pleasant diversion.

The conference closes on Thursday with a further four-and-a-half hours of technical sessions and the annual awards luncheon. The last event is scheduled to end at 3:30 p.m. The airport serving Cincinnati is actually across the river in Kentucky, but it is only 13 miles from downtown. The airport offers nonstop passenger service to 56 destinations with 195 peak daily flights.

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by I. Gerald Christopher Raj

Circuit Debugging, Power Plant, and Rural Visits from the PSNA College of Engineering and Technology

The IEEE Power Electronics Society Student Branch at the PSNA College of Engineering and Technology (PSNA CET), Dindigul, Tamilnadu, India, organized a competition called Circuit Debugging on 29 August 2016. The event was inaugurated by Dr. V. Rajasekaran, a professor and head of the Electrical and Electronics Engineering (EEE) program at PSNA CET. Approximately 83 teams participated in the preliminary round, which consisted of fundamental electrical engineering concepts, and roughly 21 teams qualified for the two-stage final round. Three teams were selected as prize winners based on their performance and were awarded by Dr. S. Muthukumaran, the Student Branch counselor and an EEE professor, and Dr. I. Gerald Christopher Raj, the Chapter faculty advisor and an EEE assistant professor. The prize winners were as follows (Figure 1):

FIG 1 The Circuit Debugging competition prize winners with the student organizers and faculty. (Photo courtesy of I. Gerald Christopher Raj, PSNA College of Engineering and Technology.)

- First prize:
  - J.B. Bavithra, EEE third year—A, IEEE Student Member
  - S. James Arline Jasmine, EEE third year—A, IEEE Student Member
- Second prize:
  - R. Rengaraj, EEE third year—C, IEEE Student Member
  - P. Shyam Ragavendar, EEE third year—C, IEEE Student Member
- Third prize:
  - P. Veera Vairam, EEE second year—C, IEEE Student Member
  - V. Thakshana Moorthy, EEE second year—C, IEEE Student Member.

Energy Lectures and a Solar Power Plant Visit

On 30 September 2016, the PSNA CET Student Branch Chapter visited a solar power plant in Vedasandur, a small town located 25 km away from Dindigul in India. This town has numerous spinning mills that require huge amounts of power consumption; however, for one such mill, Gamesa

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