

IEEE Industry Applications Society

Industrial Power Converters Committee (IPCC)

2018 Annual Meeting Minutes

Oregon Convention Center, Portland (OR), USA

September 25th, 2018

INTRODUCTION OF MEMBERS

Dr. Grant Pitel, in the role of IPCC Chair, called the meeting to order at 7:00 PM. He introduced the committee officers (i.e., himself as the Chair, Luca Solero as the Vice Chair and Xiaonan Lu as the Secretary). Members were asked to introduce themselves, update their records and write down their contact details in the sign-up sheet in order to be included in the committee roster. Forty-one people were in the audience of which seventeen were new members. The members in attendance are include at the end of the minutes. The new members for 2018 are denoted using an asterisk. Including new members, the total strength of IPCC stands at 374 at the time of the committee meeting in 2018.

APPROVAL OF 2017 MEETING MINUTES AND 2018 COMMITTEE MEETING AGENDA

The 2017 meeting minutes and 2018 committee meeting agenda were moved by Dr. Pericle Zanchetta for approval and seconded by Dr. Yongsug Suh. The 2017 meeting minutes and 2018 committee meeting agenda got approved.

OFFICERS REPORT

Role of IPCC within IPCC

Dr. Grant Pitel introduced that IAS sponsored over 120 graduate and/or undergraduate chapter members and award winners to attend the annual meeting. He also briefly introduced the objective and goal of IPCC to new members. He indicated that the committee specializes in power converters and provides an opportunity and a network for active volunteers. The volunteers are used for forming committees, reviewing papers in TIA and conferences, and also helping with standards.

Membership

The membership roster is at 374 at the time of this committee meeting. The detailed records of members have been collected and maintained since 2014. The committee roster is a vital source for forming committees.

Statics of ECCE 2018

Chairs and Vice Chairs of ECCE were participating in the technical phase of ECCE 2018, and in the year of 2018, ECCE was celebrating the 10-Year anniversary. The digest submission of ECCE has generally kept increasing over the past ten years.

IPCC tracks usually have the largest number of submission among all the tracks in ECCE, and in the year of 2018, IPCC was handling one-third of the total conference submission, which indicates the important role of IPCC in this conference. The detailed statics on the review process were summarized as:

- 1788 Total Submissions
- TRACK E, 292 Submissions, 94 Oral Sessions, 76 Poster Sessions
- TRACK F, 311 Submissions, 110 Oral Sessions, 93 Poster Sessions

Normally three reviews were needed for each digest while the ECCE conference committee pushed it to five to ensure quality. The workflow during the digest review process was evenly shared between IAS and PELS.

As common feedback from the exhibition, more industrial participation was needed. The members are recommended to participate in the exhibition activities in ECCE, such as the one in the year of 2019 in Baltimore, MD, USA.

REPORTS FROM SUBCOMMITTEES

IAS Transactions

Dr. Pericle Zanchetta, IPCC Transaction Chair, introduced the activities of IPCC in IAS Transactions. He recognized the efforts of Associate Editors working with regularly submitted Transactions papers for the IPCC. The current AEs are:

Mahshid Amirabadi, USA	Xiongfei Wang, Denmark
Vivek Agarwal, India	Zhiqiang Wang, USA
Stefano Bifaretti, Italy	Junming Zhang, China
Huang-Jen Chiu, Taiwan	Maurizio Cirrincione, Fiji
Dong Jiang, China	Andrea Formentini, UK
Surin Khomfoi, Thailand	Vito Giuseppe Monopoli, Italy
Xiaonan Lu, USA	Babak Parkhideh, USA
Ke Ma, China	Jiangbiao He, USA
Santanu Mishra, India	Liang Du, USA
Marcello Pucci, Italy	Xibo Yuan, UK
Luca Solero, Italy	Dong Dong, USA
Xue She, USA	Zheyu Zhang, USA

Yongsug Suh, Korea

Dr. Pericle Zanchetta introduced that papers submitted to IAS Transactions must be accepted and presented in an IAS-sponsored conference within the last 12 months first. Prospective authors should send an email request to him with: 1) paper title, 2) list of authors and corresponding author's email and institution, and 3) conference and date when the paper is presented. A slot will then be opened and submission instruction will be sent to the author typically within 1-2 weeks. He emphasized that the corresponding conference paper must be cited in the journal version; otherwise, the journal admin will send back the submission to the authors and request the authors to do so. New materials are needed in the journal paper, although no specific amount of difference between journal and conference versions is required by IEEE. It was suggested the authors cite relevant TIA papers in their submission.

For the first time, IPCC had the largest number of TIA paper submission among all the committees within IAS. As per the statics, IPCC had 244 initial submissions in the last 12 months and there were 49 manuscripts under review at the time of the committee meeting. Meanwhile, all the committees in IAS experienced reduced volume of submission just except IPCC. The decision time for 1st submission was 65 days for IPCC, which was far below the required standard of IEEE journals (90 days). For the acceptance rate, IPCC has an acceptance rate of 53%, which was among the lowest in all the IAS committees. In terms of geographical distribution of IPCC journal submission, India and China had the largest number of submission (27% and 16% respectively within the submissions all over the world), and the total submissions were well distributed among multiple countries throughout the world.

There were two special issues organized by IPCC in TIA, as summarized below:

- Special Issue on *Grid-Connected Power Electronics Systems: Stability, Power Quality, and Protection*. Submitted 104, accepted 50 (Sep/Oct 2018)
- Special Issue on *High Performance Power Electronic Converters: Topologies, Control, and Devices*. Submitted 7 at the time of the committee meeting

Submissions to special issues are not included in the statics of 244 initial submissions above.

Submission of special issue proposals in TIA were in discussion. Further discussions about number of special issues and number of special issue papers were ongoing, while IPCC still welcomed special issue proposals and any suggestions.

Fellow and Awards Nominations

Dr. Po-tai Cheng introduced the activities of IPCC Fellow and Awards Committee. The award details along with deadlines were introduced and summarized below:

- Andrew W. Smith Outstanding Young Member Achievement Award (March 15)
- Outstanding Young Member Service Award (March 15)

- Distinguished Service Award (March 15)
- Outstanding Achievement Award (March 15)
- Kliman Award (June 1)

Meanwhile, Dr. Po-Tai Cheng also introduced the IAS Distinguished Lectures and IEEE Fellows, which are summarized below. He recommended the committee members to nominate candidates who were suitable for these awards and recognition.

- IAS Distinguished Lecturers (March 31)
- IEEE Fellow (March 1)

The information of the above awards and recognition were introduced in detail during the conference and can be also found online at:

<https://ias.ieee.org/awards/society-level-awards.html>

Standards Committee

Dr. Yuri Khersonsky, as the Standards Chair, were not able to present in the committee meeting. The IPCC Chair Dr. Grant Pitel introduced the activities of standard subcommittee on behalf of him. The standard subcommittee was working on P1709, focusing on Recommended Practice for 1 to 35 kV Medium Voltage DC Power Systems on Ships.

Special Activities

Dr. Yongsug Suh, as the Special Activities Chair, introduced the status of special activities of IPCC. The main purpose of the special activities in IPCC is to enhance the collaboration between IPCC and regional power electronics societies all over the world. The strategy is to boost the participation of IPCC members in ECCE Asia and ECCE Europe. As the existing activities, IAS IPCSD and IEEJ-IAS (Japan) collaboration meeting was held during ECCE Asia 2018 at Niigata, Japan. Meanwhile, IPCC members were nominated for technical programs of ECCE Asia (Korea). It was planned to continue the participation of IPCC members in ECCE Asia and ECCE Europe.

NEW BUSINESS

Dr. Grant Pitel introduced the new business planned in IPCC. He proposed to category IPCC members and add ties of IPCC membership (e.g., active, inactive and honorary) to better help identify members who can take a bigger role in IPCC. The motion was moved by Dr. Ira Pitel for approval and seconded by Dr. Po-Tai Cheng. The motion was approved, and a modification of operational manual will be made accordingly.

IAS is co-sponsoring APEC. IPCC members were asked to provide support in the organization of the APEC technical program. Dr. Grant Pitel proposed to recommend IPCC members as track chairs to APEC. The motion was moved by Dr. Po-Tai Cheng for approval and seconded by Dr. Pericle Zanchetta. The motion was approved. Potential candidates for

track chairs in APEC were asked to contact the IPCC Chair Dr. Grant Pitel at the email gpitel@magna-power.com or leave their business cards during the committee meeting.

IPCC PRIZE PAPER AWARDS

Dr. Pericle Zanchetta introduced the status of IPCC prize paper awards. For the year of 2018, the prize paper selection was managed by the IPCC Paper Award Committee with the members below:

Stefano Bifaretti, Transaction co-Chair, University of Rome Tor Vergata, Italy

Andrea Formentini, University of Nottingham , UK

Babak Parkhideh, University of North Carolina , USA

Dong Dong, GE Global Research, USA

Huang-Jen Chiu, NTUST, Taiwan

Jiangbiao He, GE Global Research, USA

Luca Solero, University Roma Tre, Italy

Liang Du, Temple University, USA

Santanu Mishra, IIT-Kanpur, India

Vivek Agarwal, IIT-Bombay, India

Xiaonan Lu, Temple University, USA

Xiongfei Wang, Aalborg University, Denmark

Zheyu Zhang, The University of Tennessee, USA

The top 6 papers presented at ECCE 2017 and accepted to IAS Transactions were taken into consideration for the IPCC prize paper ballot. The list was done based on the reviewers' score during the transaction review process. Only the papers submitted to IAS Trans. before November 15, 2017 were included in the ballot.

First IPCC Prize Paper Award

Low-Voltage-Ride-Through Control of a Modular Multilevel SDBC Inverter for Utility-Scale Photovoltaic Systems

Authors: Paul Sochor, Hirofumi Akagi, and Nadia M. L. Tan

Second IPCC Prize Paper Award

Improved Resonant Current Controller for Grid-Tied Converters

Authors: Diego Pérez-Estévez, Jesús Doval-Gandoy, Alejandro G. Yepes, Óscar López, and Fernando Baneira

Third IPCC Prize Paper Award

Differential-Mode and Zero Sequence Circulating Current Reduction for Paralleled Inverters with Modified Zero-CM PWM Algorithm

Authors: Zewei Shen, Dong Jiang, Jianan Chen, and Ronghai Qu

Dr. Pericle Zanchetta presented the selection procedure for the IPCC prize papers awards 2018 and presented the awards to the authors. He reminded the prospective authors of submitting their ECCE 2018 papers to TIA before November 15th 2018 to be included in the award evaluation, which will be announced at ECCE 2019 in Baltimore, MD. The 6-9 papers with the highest score from the first IAS Transaction review will go into the final ballot, and the Co-Chair will select an award committee and each member will score each paper. The score from the committee members will be averaged to obtain the final list.

OPEN DISCUSSION

Dr. Ira Pitel initialized an open discussion about the acceptance rate of ECCE papers and industry participation. As a follow-up discussion, the audience mentioned that the current acceptance rate of ECCE was about 61%, which could be higher than expected if we could not ensure the quality of the papers, and this could be the reason that industry interests and participation was still not enough. Furthermore, the potential relationship between the conference revenue and the paper acceptance rate was pointed out, as the major revenue was from registration. Meanwhile, as further comments, the conference attendance may not be directly related to the number of papers accepted. Therefore, ECCE should target at attracting attendance (e.g., from industry) other than attracting number of papers. There was also a concern from the digest review process, since the review scores were given by the reviewers, which served as the sole basis of deciding if a digest should be accepted or rejected. Hence, it could be a bit hard to easily adjust the acceptance rate. As an opposite view, it was mentioned that we could raise the bar of review score to cut off some papers so that the acceptance rate could be adjusted. It was also recommended that criteria should be detailed first before discussing about adjusting acceptance rate. The potential overlapping between sessions and tracks in ECCE could be a concern as well, which was related to acceptance rate and attendance. Therefore, reorganizing tracks and sessions was required to better balance number of accepted papers and number of attendees. Meanwhile, as the research activities on power electronics keep increasing, it could be normal that increasing numbers of publications appear in leading conferences, such as ECCE.

As a summary of the open discussion, Dr. Grant Pitel asked the audience whether there was a motion regarding paper acceptance rate of future ECCE. A motion of 'restricting ECCE paper acceptance rate' was made and moved for a vote by the audience. With comments from Dr. Ira Pitel, it was recommended to add a specific acceptance rate into the motion. As a follow-up discussion among the audience, other than confirming a specific acceptance rate, it was agreed by the audience that the motion was amended as 'restricting the acceptance rate of ECCE to 50% or less'. Dr. Ira Pitel moved this motion and Dr. Bill Peterson seconded it. The motion was put into a vote and then approved by the audience, which will be sent to the conference steering committee for further discussion. As an ending

note of the open discussion, the audience mentioned that the increasing numbers of student reviewers could be another concern and it could be a potential barrier of ensuring paper review quality and restricting acceptance rate. More reviewers from industry were suggested in future ECCE.

IAS - PELS SPONSORED 2019 CONFERENCES

The committee was informed about upcoming IAS-PELS joint-sponsored conferences by the Chair Dr. Grant Pitel:

- APEC 2019, Anaheim, CA (USA), March 17-21, 2019
- ICPE 2019, Busan (Korea), May 27-31, 2019
- EPE 2019, Genova (Italy), September 2-5, 2019
- IEMDC 2019, San Diego, CA (USA), May 12-15, 2019
- SDEMPED 2019, Toulouse (France), August 27-30, 2019
- ECCE 2019, Baltimore, MD (USA), September 29–October 3, 2019

IPCC OFFICERS AND SUBCOMMITTEE CHAIRS

Active Officers

The slate of officers of the Committee for 2018 is:

- Dr. Grant Pitel as Chairman
- Dr. Luca Solero as Vice-Chairman
- Dr. Xiaonan Lu as Secretary
- Dr. Pericle Zanchetta as Past-Chair

Special Activity Chair

The special activity Chair for 2018 is Dr. Yongsug Suh.

Liaison Officers for 2018

The Liaison Officers for 2018 are

- Prof. Junichi Itoh (Japan) - Asian Liaison
- Vacant – Asian Liaison
- Dr. Petar Grbovic (Germany) – European Liaison
- Vacant – European Liaison

There are still two vacant positions, one as Asian Liaison Officer and one as European Liaison Officer, nominations for the vacant positions can be submitted to the Committee Chair by November 15th, 2018 – gpitel@magna-power.com

Editorial Officers for 2018

The officers for 2018 are:

- Dr. Pericle Zanchetta as Transactions Review Chair
- Dr. Stefano Bifaretti as Transactions Review Co-Chair

Fellow and Awards Subcommittee Chair for 2018

The Fellow and Awards Subcommittee Chair for 2018 is Dr. Po-Tai Cheng.

Standards Subcommittee Chair for 2018

The Standards Subcommittee Chair for 2018 is Dr. Yuri Khersonsky.

PLANNING OF ECCE 2019

Dr. Grant Pitel asked the audience to submit their business cards for candidate topic chairs and session chairs. Candidates' names and emails will be collected for ECCE 2019. Meanwhile, tutorial and special session suggestions and proposals for ECCE 2019 were asked to be submitted to the committee chair by November 15th, 2018 – gpitel@magna-power.com.

ADJOURN

The meeting was adjourned.

Grant Pitel, Chair

Luca Solero, Vice-Chair

Xiaonan Lu, Secretary

Pericle Zanchetta, Past-Chair

MEMBERS IN ATTENDANCE

*Amerise, Albine

*Banerjee, Arijit

Bifaretti, Stefano

Cao, Dong

Cheng, Po-Tai

*Damiano, Alfonso

*De Freitas, Nayara

di Benedetto,

*Kusaka, Keisuke

*Lee, Tzung-Lin

Lidozzi, Alessandro

Lu, Xiaonan

*Mannen, Tomoyuki

*Michele, Mengoni

*Monge, Mauro

Monopoli, Vito G.

*Pulvirenti, Mario

*Raciti, Angelo

*Rizzoli, Gabriele

*Rosso, Roberto

Scelba, Giacomo

Skorek, Adam

Solero, Luca

Su, Gui-Jia



*Fernandez, Pablo Garcia
Grbovic, Petar
Guenther, Robert N.
Itoh, Junichi
Jiang, Dong
Krein, Philip

*Obara, Hidemine
Odhano, Shafiq
Peterson, Bill
Pitel, Grant
Pitel, Ira J.
Prasad, Rashmi

Tolbert, Leon M.
*Yang, Xiaofeng
Zanchetta, Pericle
Zarri, Luca
*Zheng, Sheng

Note: New members for 2018 who attended this committee meeting are denoted using an asterisk.