

## IEEE IAS Industrial Drives Committee Minutes of the 2019 Annual Committee Meeting

Baltimore Convention Center, Room 338  
Baltimore, MD, USA  
Tuesday, October 1, 2019, 6:00 pm – 7:00 pm

**Prof. Bob Lorenz's commemorating photos were presented before meeting.  
IDC Chair Fernando Briz called the meeting to order at 6:00 PM.**

The following committee officers were present:  
Fernando Briz, Chair of the IAS Industrial Drives Committee (IDC)  
Mahesh Swamy, IDC Vice-chair Papers  
Luca Zarri, IDC Vice-chair Programs  
Jul-Ki Seok, IDC Secretary  
Michael Harke, Past Chair IDC

### 1. Introduction of members and recognition of IEEE fellows

- a. Firstly, the present IDC members were introduced. IEEE fellows were recognized.
- b. Three IDC rosters were circulated and the members were encouraged to sign up.

The number of attendance was about 104. Thirty-three (33) new members signed up this year (15 from academia and 18 from industry). The total number of IDC members, including the new members, is currently 482.

### 2. Old business/reports

a. Approval of the 2018 meeting minutes.

The approval of the meeting minutes was moved by Prof. Fabio Giulii Capponi, seconded by Prof. Po-Tai Cheng, and unanimously approved.

b. Review Report by the Vice Chair for Papers

■ Papers Submitted based on Conference

Mahesh Swamy presented the vice-chair papers report summarizing the statistics of the papers submitted to the IDC for publication in IEEE Transactions on Industry Applications. About 101 papers had been submitted for review during the past 12 months. Most papers are from ECCE2018 (45 papers).

■ Papers Received based on Country of Origin

According to the submission statistics, the submitting countries were USA (21 papers), India (20 papers), China (13 papers), Korea and Italy (10 papers each), followed by many others (in total, 21 countries from all over the world).

■ Accept/Reject Ratio

The acceptance ratio is nearly 51.2% during the past 12 months and the average time taken from submission to the first decision is 75 days during the past 12 months.

- Papers Accepted based on Country of Origin

One thing to note is that the papers submitted from Korea had 100% acceptance ratio. He mentioned that he did not understand the fact that some reviewers ask many questions to the authors but they recommended the “Accept” decision.

c. Review Report by the Vice-Chair for Programs

Luca Zarri presented the vice-chair programs report on the results of Track-H at ECCE 2019.

- Topic Chairs

18 Topic Chairs, who had managed the review process, were Di Pan, Michele Mengoni, Prerit Pramod, Xu Wei, David Reigosa, Zhe Zhang, Juan M. Guerrero, Giacomo Scelba, Shafiq Ahmed Odhano, Shih-Chin Yang, Lei Hao, Lijun He, Roberto Petrella, Michael Harke, Alberto Bellini, Pinjia Zhang, Arijit Banerjee, and Gabriele Rizzoli.

- Session Chairs

Alberto Bellini, Antonio J. Marques Cardoso, Arijit Banerjee, Bulent Sarlioglu, David Diaz Reigosa, Di Pan, Fernando Briz, Giacomo Scelba, Giulio de Donato, Iustin Radu Bojoi, Jiangbiao He, Juan Manuel Guerrero, Lei Hao, Lijun He, Luca Zarri, Mahesh Swamy, Mario Pacas, Marko Hinkkanen, Michael Harke, Milijana Odavic, Shih-Chin Yang, Shafiq Ahmed Odano, Thomas Jahns, Thomas Wolbank, Pinjia Zhang, Prerit Pramod, Ranga Tallam, Roberto Petrella, Volker Staudt, Wei Xu, Wu Lijian, Xuechao Wang, Yukai Wang, and Zhe Zhang (34 persons) are served as a Session Chair in ECCE2019.

Luca Zarri thanked to Topic Chairs and Session Chairs for their contribution.

- Track H Statistics

A total of 171 papers had been received to Track H: Electric Drives (15 sub-tracks) and the number of submissions is nearly constant from 2015, although there was a peak at 2018.

The acceptance ratio is 59.8% and a total of 56 papers were distributed into 13 oral sessions. The average number of reviews per paper was around 4.5. Two memorial sessions were open for Prof. Bob Lorenz (Mon.-Tue.) and Prof. Manfred Depenbrock (Wed.).

The distribution of the papers based on the country of the authors placed China (66 digests) and USA first (43 digests) among the submitting countries, followed by Korea (16 digests) and Italy (13 digests), and other 20 countries.

About 55 percent of the accepted papers come from United States (33) and China (22), followed by Italy (12), UK (13), Japan and Korea (6).

The papers with a student as the first author were 80 (107 in 2018 and 50 in 2017). The number of papers form written in collaboration between industrial and academia were 24 (32 in 2018 and 13 in 2017).

d. Standard Subcommittee by the Vice Chair for Papers

Kevin Lee presented IEEE structure vs. Standards development activity and Subcommittee members (66% from industry) as:

Chair: Kevin Lee - Eaton

Joseba Arza – Ingeteam Power Technology  
Jiangang Hu – Rockwell  
Stephen Hu - MDS BU Delta Electronics  
Henri Kinnunen - ABB  
Fang Luo - University of Arkansas  
Di Pan - GE Global Research  
Mahesh Swamy - Yaskawa  
Pinjia Zhang – Tsinghua University  
Yue Zhao – University of Arkansas  
James Crook - Schneider Electric

The Subcommittee has a monthly conference call to discuss raised issues since 2018.

- Mission Statement of IDC Standards Sub-Committee
  - The goal of the Standards Sub-committee of the IEEE Industrial Drives group is to participate in the development of Standards and/or Practices pertaining to electric drive systems. Electric drive systems include but are not limited to all types of electrical motors and drives that are used for controlling torque and speed of said electrical motors.
  - Participation is not limited to co-operating with other Standards groups or organizations within the IEEE and/or other technical bodies of the world but also includes taking a leading role in formulating new standards to facilitate meaningful applications of said standards in the industrial and commercial workplace.
- Proposed Strategies for Standards Development
  - Anticipate industry needs;
  - Achieve leadership in standards development;
  - Collaborate with peers and others;
  - Promote adoption of IEEE standards in industry;
  - Promote international use of IEEE standards
  -

The outcome of IDC Standards Subcommittee monthly calls is “Energy Efficiency Standards”. He also explained the overview of Energy Efficiency Standards, gaps of existing Energy Efficiency Standards, and example of the proposed energy efficiency test method. He requested a call for other new project proposals on standards development.

e. Report on SLED 2019

The report was presented by Gianmario (Jimmy) Pellegrino, Politecnico di Torino, Italy. The 10th IEEE International Symposium on Sensorless Control for Electrical Drives was held in Torino, Italy, from 9 to 10 of September 2019. The General Co-Chairs were Gianmario Pellegrino and Radu Bojoi.

During the symposium, 36 papers were presented and there were 81 attendees from 16 countries. The 3 keynote speakers were Seung-Ki Sul, Silverio Bolognani, and Marko Hinkkanen. There was one dedicated special session for Prof. Bob Lorenz.

f. Report on ACEMP-OPTIM 2019

The report was presented by Bulent Sarlioglu, UW-Madison, USA. The ACEMP-OPTIM 2019 was held in Istanbul, Turkey, from 26 to 29 of August 2019. Total number of submitted papers was 150 and 110 papers were accepted. 94 papers were presented from 16 countries.

g. Report on SDEMPED 2019

The report was presented by Luca Zarri, University of Bologna, Italy. The International Symposium was held in Toulouse, France, from 27 to 30 of August 2019. During the symposium, 74 papers were presented and there were 112 attendees from 25 countries.

### 3. Awards and Recognitions

a. Conference awards

Prof. Fabio Giulii Capponi, University of Rome “La Sapienza”, presented the ECCE’19 conference awards. The papers considered were those presented at ECCE’18, submitted to IEEE Transactions on Industry Applications upon IDC invitation, which received a non-negative review by the end of March. A total of 12 papers were qualified.

Evaluation criteria were as follows:

- a. Readability
- b. Use of Figures and Graphics
- c. Education
- d. Broad Interest
- e. Significance
- f. Impact

The review was conducted as follows:

- 1) Each criterion is scored from 0 to 5.
- 2) According to the above criteria, each reviewer was requested to define his preferred ranking list of the 12 papers.
- 3) A score was given to each paper according to its position in each ranking list.
- 4) The scores resulting from the reviewers' opinions were summed to find the final score of each paper.

The members of the Awards Subcommittee were:

- Chair : Prof. Fabio Giulii Capponi (University of Rome “La Sapienza”)  
Dr. Richard Lukaszewski (Allen-Bradley)  
Prof. Ion Boldea (University Politechnica Timisoara)  
Dr. Jun Koo Kang (LG Electronics).

The three best papers were

- 1) “Three-phase Inverter Control for AC Motor Drives with Small DC-Link Capacitor fed by Single-phase Diode Rectifier,” by ByungGil Kwak, Jul-Ki Seok
- 2) “Restart Strategy for Synchronous Reluctance Machine driving a High Inertia Load,” by Kibok Lee, Sara Ahmed, Srdjan M. Lukic
- 3) “Torque Ripple Minimization in Six-Step Modulated PMSM Drives via Fast DC Bus Dynamics,” by Hung-Yen, Ou Yang, Robert D. Lorenz

IDC Past Chair Michael Harke paid a tribute to the memory of Prof. Bob Lorenz who is an author of the third place prize paper.

The awards certificates were given to the authors who were present at the meeting.

For the Prize Paper Awards 2019, it was announced that the papers submitted to IEEE Trans. on Industry Applications by the end of November will be considered for the prize paper awards. The IDC Committee congratulated the members of the Awards Subcommittee on their excellent work.

b. Associate editors

The Associate Editors of IEEE Trans. on Industry Applications for IDC in 2019 were recognized. Mahesh Swamy thanked to Associate Editors for their contribution.

Giacomo Scelba, University of Catania,	Italy
Davide Barater, University of Parma,	Italy
Roberto Petrella, University of Udine,	Italy
David Diaz, University of Oviedo,	Spain
Long Wu, John Deere,	USA
Pinjia Zhang, Tsinghua University,	China
Marcello Pucci, INM-CNR,	Italy
Yue Zhao, University of Arkansas,	USA
Ramakrishnan Raja, Halla Mechatronics,	USA
Kevin Lee, Eaton Corporation,	USA

#### 4. New Business

a. IDC Slate of Officers

The Past IDC Chair, Dr. Michael Harke, presented the nomination of 2020 IDC slate of officers:

Chair: Mahesh Swamy, Yaskawa America Inc., USA  
Vice Chair - Papers: Luca Zarri, University of Bologna, Italy  
Vice Chair - Programs: Jul-Ki Seok, Yeungnam University, Korea  
Secretary: Kevin Lee, Eaton Corporation, USA  
Past Chair: Fernando Briz, University of Oviedo, Spain

Dr. Uday Deshpande moved the motion first, which was then seconded by Prof. Fabio Giulii Capponi. The motion was unanimously approved.

The incoming secretary was Dr. Kevin Lee, Eaton Corporation, USA. He received Bachelor of Science from Tsinghua University, Beijing, China, in 1986, M.S. from Rensselaer Polytechnic Institute, Troy, NY, in 1990, and Ph.D. from WEMPEC, University of Wisconsin, Madison, USA in 2008, all in electrical engineering. In 1998, he joined Eaton Corporation, where he is a Chief Engineer in Industrial Control Division, responsible for technology and product development in the fields of power quality, energy efficiency, adjustable speed drives, power distribution system architecture and control systems. Prior to joining Eaton, he was Engineering Manager at Sola/Hevi-Duty Electric, a Unit of General Signal, now Emerson Industrial Automation between 1990 and 1998. Dr. Lee received Eaton Engineer of the Year Award in 2013 and the IEEE Industry Applications Magazine First Prize Paper Award in 2009. He is a Registered Professional Engineer

in the State of Wisconsin since 1995, a certified Design for Six Sigma Black Belt, a holder of 51 U.S. and international patents, with 63 IEEE conference and Transaction papers. Currently, he serves as IDC Standards Sub-Committee Chair and IDC Associate Editor.

b. Submission to papers to Transactions on Industry Applications

Fernando Briz informed that the authors should ask the IDC Publications Chair for an invitation email within one year after conference. The IDC Publications Chair is Mahesh Swamy (mswamy@ieee.org) until the end of 2019. From January 1 2020, Prof. Luca Zarri (luca.zarri@ieee.org) takes over the role.

c. New IEEE Open Access Journal of Industry Applications

Pericle Zanchetta presented the information about the new Open Journal on Industrial Applications. It will be a Web Only Journal without conference requirements.

Website: <https://ias.ieee.org/publications/open-journal-of-industry-applications.html>

d. ECCE2020

The details of ECCE 2020 were presented, which would take place in Detroit, Michigan, USA, from Sep. 11 to Oct. 15 2020.

General Chair: Prof. Yunwei (Ryan) Li

Website: <http://www.ieee-ecce.org/2019/>

e. Volunteers for ECCE 2020

The members were encouraged to get involved and to volunteer as topic chairs and session chairs for IAS-sponsored conferences. Business cards were collected by Jul-Ki Seok.

f. ICEM 2020

Luca Zarri presented ICEM 2020, which will be held in Gothenburg, Sweden, August 23-26 2020. The conference website is linked at <https://icem2020.se/>.

g. SLED 2020

Bulent Sarlioglu presented information about 11<sup>th</sup> SLED 2020, to be held in Madison, WI, USA on Oct. 16-17, 2020. (The date is tentative.)

## 5. Adjournment

A call to adjourn the meeting was moved by Prof. Fabio Giulii Capponi, seconded by Dr. Michael Harke, and unanimously approved.

Submitted by Jul-Ki Seok

November 01, 2019