

Editorial: Launching Into 2018

THE power electronics field and IEEE TRANSACTIONS ON POWER ELECTRONICS (TPEL) continue to grow at astonishing rates. In 2017, we published 9472 pages (738 papers and 50 letters), and in 2018, we will increase the page budget to 11 000 pages in order to keep up with the unrelenting growth in submissions. We have become one of the largest engineering journals published in any society, yet all indications are that the quality, readability, and popularity are also improving. Our cycle review times and submission-to-online publication are among the shortest in IEEE. Our impact factor keeps climbing and last year reached our record: 7.15. Maybe even more impressive is that more TPEL papers are downloaded each year from IEEE Xplore than any other IEEE journal. We hope this is an indication not only of TPEL's increased quantity, but its increased quality.

With this issue, TPEL is forging ahead to new territory! We are pleased to announce a brand new section in our journal: *Highlighted Papers*. Created by our editorial board to help spotlight many of the outstanding papers we receive each year, this section will feature one or two papers per issue. Each "Highlighted Paper" stood out to our editors during the review process, receiving the highest reviewers' scores or a nomination from the Associate Editor who handled the paper. As part of the feature, each highlighted paper will include a multimedia or PowerPoint presentation, downloadable on IEEE Xplore, which helps to further outline the importance of the paper's research contribution. This supplement is part of an effort to make these papers more attractive and accessible for a general audience, students, and busy researchers. While each issue we publish is brimming with excellent, high-quality papers, the Highlighted Papers we choose to feature will demonstrate even higher interdisciplinary potentials and wider impacts on the field of power electronics, making them truly extraordinary. Have a look at our inaugural Highlighted Papers in this issue, particularly noticing the power point presentations linked to them on IEEE Xplore.

- 1) A. Kumar, S. Sinha, A. Sepahvand, and K. Afridi, "Improved design optimization for high-efficiency matching networks."
- 2) H. Du Toit Mouton, S. Cox, B. McGrath, L. Risbo, and B. Putzeys, "Small-signal analysis of naturally-sampled single-edge PWM control loops."

The Highlighted Paper section will appear at the beginning of each issue, after the Letters and alongside our Active Content papers. Since publishing our first four papers with multimedia in the January 2016 issue, the Active Content section has become a regular feature of our journal. We are kicking off 2018 with three more active content papers. TPEL now receives submissions with active content on a weekly basis, and we continue to encourage authors to include multimedia, such as video, with their paper submissions whenever appropriate. As an added incentive, active content papers receive precedence in publication, so they do not need to wait in the normal backlog queue. Soon, we hope we will have too many active content papers each issue to give them their own section!

In 2017, we were pleased to select three First Prize Paper Awards, five Second Prize Paper Awards, and a Prize Letter Award from the papers published in our journal in 2016. Our Prize Paper and Letter Award winners are nominated by the Associate Editors, and the winners are selected by an impartial and independent committee.

First Prize Paper Awards in 2016.

- 1) M. Chen, M. Araghchini, K. Afridi, J. Lang, C. Sullivan, and D. Perreault, "A systemic approach to modeling impedances and current distribution in planar magnetics," vol. 31, no. 1, pp. 560–580, Jan. 2016.
- 2) M. Sato, G. Yamamoto, D. Gunji, T. Imura, and Hiroshi Fujimoto, "Development of wireless in-wheel motor using magnetic resonance coupling," vol. 31, no. 7, pp. 5270–5278, Jul. 2016.
- 3) W. i Zhang, X. Huang, Z. Liu, F. C. Lee, S. She, W. Du, and Q. Li, "A new package of high-voltage cascode gallium nitride device for megahertz operation," vol. 31, no. 2, pp. 1344–1353, Feb. 2016.

Second Prize Paper Awards in 2016.

- 1) B. Wen, D. Dong, D. Boroyevich, R. Burgos, P. Mattavelli, and Z. Shen, "Impedance-based analysis of grid-synchronization stability for three-phase paralleled converters," vol. 31, no. 1, pp. 26–38, Jan. 2016.
- 2) F. Lu, H. Zhang, H. Hofmann, and C. Mi, "An inductive and capacitive combined wireless power transfer system with LC-compensated topology," vol. 31, no. 12, pp. 8471–8482, Dec. 2016.
- 3) U.-M. Choi, S. Jørgensen, and F. Blaabjerg, "Advanced accelerated power-cycling test for reliability investigation of power device modules," vol. 31, no. 12, pp. 8371–8386, Dec. 2016.
- 4) T. Xu and F. Gao, "Global synchronous pulse width modulation of distributed inverters," vol. 31, no. 9, pp. 6237–6253, Sep. 2016.
- 5) S. Hazra, A. De, L. Cheng, J. Palmour, M. Schupbach, B. Hull, S. Allen, and S. Bhattacharya, "High switching performance of 1700-V, 50-A sic power MOSFET over SI IGBT/bimosfet for advanced power conversion applications," vol. 31, no. 7, pp. 4742–4754, Jul. 2016.

Prize Letter Award in 2016.

- 1) W. Huang and B. Lehman, "A compact coupled inductor for interleaved multiphase DC–DC converters," vol. 31, no. 10, pp. 6770–6775, Oct. 2016.

In summary, 2017 was another remarkable year for TPEL and we believe 2018 will be even better!

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