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Summary

The i-MITEL 2018 conference is a continuation of the cycle conferences organized by the SEP Gorzów Branch since 2000, in cooperation with SEP Szczecin Branch and Faculty of Electrical Engineering West Pomeranian University of Technology, Szczecin. The other coorganizers of the conference are: Institute of Electrical Engineering University of Zielona Góra, Institute of Electrical Engineering, PTETiS Szczecin and Zielona Góra Branches, Department of Telecommunication, Information and Electrical Engineering University of Technology and Life Sciences in Bydgoszcz and Poland Chamber of Commerce of Electrical Engineering.

The conference covered all issues related to innovative electric materials and technologies, including power quality of electrical equipment, processing and transmission of electricity, smart grids, electromobility and efficient use of renewable energy sources in the context of environmental protection.

The conference was attended by scientists from the following universities and scientific institutes:

1. AGH University of Science and Technology, Cracow, Poland,
2. Czestochowa University of Technology, Czestochowa, Poland,
3. BaPTE of the Department of Power Converters, Electrotechnical Institute, Gdynia, Poland,
4. Gdańsk University of Technology, Poland,
5. ITMO University, Sankt Petersburg, Russia,
6. Poznan University of Technology, Poland,
7. Rzeszow University of Technology, Poland,
8. Silesian University of Technology, Gliwice, Poland,
9. Warsaw University of Technology, Poland,
10. Wroclaw University of Science and Technology, Poland,
11. UTP University of Science and Technology, Bydgoszcz, Poland,
12. University of Zielona Góra, Poland,
13. West Pomeranian University of Technology, Szczecin, Poland,

representatives of companies in the field of electrical engineering technologies:

14. Apator Elkomtech S.A.,
15. BEZPOL Sp. z o.o.,
16. Cellpack Polska Sp. z o.o.,
17. DEHN Polska Sp. z o.o.,
18. EFEN Sp. z o.o.,
19. ELEKTROBUDOWA S.A.,
20. Elko-Bis Systemy Odgromowe Wrocław,
21. Ensto Pol Sp. z o.o.,
22. ETI Polam Sp. z o.o.,
23. Fabryka Transformatorów w Żychlinie,
24. Gorlan Polska Sp. z o.o.,
25. Hauff-Technik GmbH & Co. KG,
26. Hubix Sp. z o.o.,
27. innogy Stoen Operator sp. z o. o.,
28. Instytut Energetyczny Zakład Doświadczalny w Białymstoku,
29. Magnetic Research Center Magneto Sp. z o. o.,
30. Nexans Power Accessories Poland Sp. z o.o.,
31. Pfisterer Sp. z o.o.,
32. Producent Rozdzielnic Elektrycznych PRE Edward Biel,
33. Protektel Sp. z o.o.,
34. SIBA Polska Sp. z o.o.,
35. Tavrida Electric Polska Sp. z o.o.,

36. Vimap Sp. z o. o.,
37. WSE AKTYWIZACJA SP,
38. ZPUE S.A., ZUP Emiter Sp. j.

and representatives of associations:

39. Institute of Electrical and Electronics Engineers (IEEE),
40. Association of Polish Electrical Engineers (SEP),
41. Polish Society of Theoretical and Applied Electrotechnics (PTETiS).

During conference opening speeches were held by:

1. prof. Ryszard Strzelecki – chairman of Scientific Committee, he officially opened the conference,
2. PhD. Marcin Wardach – conference secretary, led the opening ceremony,
3. Eugeniusz Kaczmarek – chairman of Organizing Committee, who thanked and congratulated Edward Cadler on his previous work as a chairman of the Organizing Committee of the seven previous editions of i-MITEL,
4. Edward Cadler – co-chairman of Organizing Committee, presented the history of the i-MITEL conference,
5. prof. Robert Smoleński, presented information about IEEE and the Polish Section of IEEE,
6. invited guests:
 - a. PhD. Piotr Szymczak – president of Association of Polish Electrical Engineers (SEP),
 - b. prof. Stefan Domek – ZUT vice-rector of West Pomeranian University of Technology, Szczecin,
 - c. Sebastian Pieńkowski – chairman of the City Council of Gorzów,
 - d. Grażyna Wojciechowska – Councilor of the City Council of Gorzów Wlkp.

They all in warm and cordial words gave the organizers and participants wishes for successful debates.

For the i-MITEL 2018 conference fifty three papers were submitted. After reviews finally thirty three were submitted for inclusion in the IEEE Xplore database. All papers were subjected to blind review by at least two reviewers and presented in six oral and one poster sessions. Oral sessions were led by: prof. Jan Mućko, prof. Michał Zeńczak, prof. Grzegorz Benysek, PhD. Piotr Biczal, PhD. Piotr Paplicki and PhD. Marcin Wardach. The poster session was conducted by prof. Marcin Hołub and prof. Marcin Jarnut.

Within the framework of the conference competitions in the categories of *The Publication of Young Scientist* and *The Best Innovative Electric Product or Technology* have been held.

In the category *The Publication of Young Scientist* awards received:

1. Katarzyna Cimander for the paper:
„Modified Polyolefins with Reduced Electrostatic Properties”,
2. Agnieszka Mirkowska for the paper:
„Contemporary Inhomogeneous Piezo-Active Dielectric Structures”,
3. Łukasz Przeniosło for the paper:
„Efficient Electronic Speed Controller Algorithm for Multicopter Flying Vehicles”.

During the conference, the special sessions of technical innovations led by prof. Ryszard Strzelecki and prof. Aleksandra Rakowska have taken place, wherein companies presented their technical solutions. Furthermore positions of companies that presented their technologies and solutions were open. In category *The Best Innovative Electric Product or Technology* awards received the following companies:

1. HUBIX Sp. z o.o.,
2. Producent Rozdzielnic Elektrycznych Edward Biel,
3. Nexans Power Accessories Poland Sp. z o. o.

4. Gorlan Polska Sp. z o.o.,
5. ELEKTROBUDOWA S.A.,
6. Wytwórnia Sprzętu Elektroenergetycznego AKTYWIZACJA SP.

As in previous editions the conference offered an open discussion forum combining scientific and research with technical problems, and integrating theorists and practitioners in a wide range of theoretical and applied areas of electrical engineering.

We would like to thank all Chairs who hold the oral and poster sessions and all conference participants who contributed to the active and substantive discussion during the conference. We also thank our reviewers for insightful and reliable reviews that have contributed to improve the quality of articles.

On behalf of the Organizing Committee

Marcin Wardach