

**PROFILE OF THE PERSON AUTHORIZED TO SUPERVISE  
THE INDIVIDUAL SCIENTIFIC WORK**

Title and name: **prof. Andrzej Sikorski**

E-mail address: **a.sikorski@pb.edu.pl**

Department: **Department of Power Electronics and Electric Drives**

Area of expertise:

- power electronics;
- power converters;
- advanced power control methods and algorithms;
- power converters for renewable energy systems.

Subject of the doctoral thesis (examples):

- advanced nonlinear control method of AC/DC/AC converter.

Required knowledge:

- power electronics,
- control of power electronics inverter applied in drives and power system.

Some scientific publications:

- A. Sikorski, M. Korzeniewski: Improved Algorithms of Direct Torque Control Method. - *Automatika*, Vol. 53, nr 2, 2013, pp. 188-198;
- A. Sikorski, K. Kulikowski, M. Korzeniewski: Modern Direct Torque and Flux Control methods of an induction machine supplied by three-level inverter. *Bulletin of the Polish Academy of Sciences Technical Sciences*, Vol. 61, No. 4, 2013;
- A. Sikorski, R. Grodzki: Predictive control of the AC/DC converter; *Power Electronics and Motion Control and Exposition: PEMC 2014: 16th International Conference, Antalya, September 21-24, 2014*;
- A. Sikorski, A. Godlewska: Predictive control of current source rectifier.; *WZEE, XII Konferencja Naukowa: WZEE'2015, Kielce, September 17-19, 2015*;
- A. Sikorski, K. Kulikowski: New DPC Look-Up Table Methods for Three-Level AC/DC Converter, *IEEE Transactions on Industrial Electronics*, Vol. 63, nr 12, 2016, s. 7930-7938;
- A. Sikorski, A. Godlewska: Predictive current control of back-to-back converter, (referat - Web of Science), *The 13th Conference on Selected Problems of Electrical Engineering and Electronics, WZEE'2016, Rzeszów, 4-8.05.2016 r., s. 1-6*;
- A. Sikorski, A. Godlewska, R. Grodzki, P. Falkowski, M. Korzeniewski, K. Kulikowski: Advanced Control Methods of DC/AC and AC/DC Power Converters - Look-Up Table and Predictive Algorithms" - chapter "Advanced Control of Electrical Drives and Power Electronic Converters", red. Jacek Kabziński, Springer International Publishing, Cham 2017, s. 221-302;
- A. Sikorski, K. Dmitruk, M. Korzeniewski: Frequency based islanding detection methods in power electronic converters. *Frequency based islanding detection methods in power electronic converters. Power Electronics and Drives*, Vol. 2, nr 1, 2017, s. 27-41;
- A. Sikorski, P. Falkowski: Finite Control Set Model Predictive Control for Grid-Connected AC-DC Converters with LCL Filter, *IEEE Transactions on Industrial Electronics*, Vol. 65, nr 4 (2018), pp. 2844-2852.