

Selected papers presented at the
Tenth Symposium of Magnetic Measurements
Warsaw, September 17–19, 2011

Editor of the Proceedings:

J. Szczygłowski

WARSAW

POLISH ACADEMY OF SCIENCES
INSTITUTE OF PHYSICS

Scientific Committee:

Honorary Chairman:

Kazimierz Zakrzewski

Łódź University of Technology, Committee of Electrical Engineering, Polish Academy of Sciences

Chairman:

Sławomir Tumański, Warsaw University of Technology

Members:

Rostislav Andrievski, Russian Academy of Sciences, Chernogolovka, Russia

Jerzy Bajorek, Wrocław University of Technology

Adam Bienkowski, Warsaw University of Technology

Mikhail G. Brik, University of Tartu, Estonia

Ovidiu Caltun, Al. I. Cuza University, Iasi, Romania

Moshe Einat, Ariel University Center, Ariel, Israel

Józef Gromek, Tele & Radio Research Institute

Ivan Kityk, Częstochowa University of Technology

Tadeusz Kulik, Warsaw University of Technology

Zygmunt Kuśmierek, Łódź University of Technology

Marcin Leonowicz, Warsaw University of Technology

Andrzej Nowakowski, Tele & Radio Research Institute

Munetaka Oyama, Kyoto University, Kyoto, Japan

Yevgen Melikhov, Cardiff University, Cardiff, UK

Aminta Mendoza, Universidad Nacional de Colombia, Bogota, Colombia

Yosef Pinhasi, Ariel University Center, Ariel, Israel

Jacek Przygodzki, Warsaw University of Technology

Tadeusz Skubis, Silesian University of Technology

Krzysztof Sokalski, Częstochowa University of Technology

Jacek Sosnowski, Electrotechnical Institute

Jan Szczygłowski, Częstochowa University of Technology and Electrotechnical Institute

Barbara Ślusarek, Tele & Radio Research Institute

Asher Yahalom, Ariel University Center, Ariel, Israel

Romain Viennois, University of Montpellier, France

Wiesław Wilczyński, Electrotechnical Institute

Organising Committee:

Krzysztof Chwastek (*Head*), Mariusz Najgebauer (*Secretary*), Marcin Karbowski

Preface

The anniversary Tenth Symposium of Magnetic Measurements took place in Warsaw between 17th and 19th October 2011. The conference has been organized by Częstochowa Branch of Polish Society of Theoretical and Applied Electrical Engineering (PTETiS) in collaboration with the Faculty of Electrical Engineering, Częstochowa University of Technology, Electrotechnical Institute, Warsaw, Tele & Radio Research Institute, Warsaw, Ariel University Center, Ariel, Israel and Warsaw University of Technology.

Symposium of Magnetic Measurements is a regular scientific event, which provides a forum of exchange of ideas between practitioners and theoreticians interested in the issues related to magnetic measurements. Previous editions of the conference (since 1985) were domestic conferences, whereas the 10th edition, organized in the year of 50th celebration of founding the Polish Society of Theoretical and Applied Electrical Engineering has turned into an international meeting.

Despite a difficult financial situation in world economy, a number of participants from distinguished foreign and domestic universities took part in the Symposium, e.g. Kyoto University, Japan, Universidad Nacional de Bogota, Colombia, Ariel University Center, Israel, Czech Academy of Sciences, Czech Republic, University Montpellier, France, University of Geneva, Switzerland, Wolfson Centre for Magnetism, UK, Al. I. Cuza University, Iasi, Romania.

Thematic scope of the Symposium included theoretical and practical issues related to measurements of magnetic quantities:

- measurements of magnetic quantities,
- indirect measurements of physical quantities using magnetic measurements,
- nondestructive evaluation of materials,
- sensors and actuators,
- electromagnetic radiation,
- propagation of electromagnetic fields,
- measurement techniques in high frequency range,
- magnetic measurements in HTc superconductors,
- materials (polymers and composite materials; metals; chemicals; interaction of electromagnetic radiation with the matter),
- nanocrystalline and amorphous materials,
- scaling and renormalization in magnetic materials.

During seven thematic sessions forty papers have been presented. Eight papers have been selected by the members of the Scientific Committee to be published in a special issue of *Acta Physica Polonica A*. All of them present state-of-the-art research results, which are within the scope of the journal and hopefully will be of interest to the Readers.

J. Szczygłowski
K. Chwastek