

# PROCEEDINGS OF SPIE

## ***Photonics Applications in Astronomy, Communications, Industry, and High-Energy Physics Experiments 2008***

**Ryszard S. Romaniuk  
Tomasz R. Woliński**  
*Editors*

**28 May–1 June 2008  
Wilga, Poland**

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SPIE

**Volume 7124**

Proceedings of SPIE, 0277-786X, v. 7124

SPIE is an international society advancing an interdisciplinary approach to the science and application of light.

Photonics Applications in Astronomy, Communications, Industry, and High-Energy Physics  
Experiments 2008, edited by Ryszard S. Romaniuk, Tomasz R. Wolinski, Proceedings of SPIE  
Vol. 7124 712401 · © 2008 SPIE · CCC code: 0277-786X/08/\$18 · doi: 10.1117/12.821497

Proc. of SPIE Vol. 7124 712401-1

The papers included in this volume were part of the technical conference cited on the cover and title page. Papers were selected and subject to review by the editors and conference program committee. Some conference presentations may not be available for publication. The papers published in these proceedings reflect the work and thoughts of the authors and are published herein as submitted. The publisher is not responsible for the validity of the information or for any outcomes resulting from reliance thereon.

Please use the following format to cite material from this book:

Author(s), "Title of Paper," in *Photonics Applications in Astronomy, Communications, Industry, and High-Energy Physics Experiments 2008*, edited by Ryszard S. Romaniuk, Tomasz R. Woliński, Proceedings of SPIE Vol. 7124 (SPIE, Bellingham, WA, 2008) Article CID Number.

ISSN 0277-786X  
ISBN 9780819473585

Published by

**SPIE**

P.O. Box 10, Bellingham, Washington 98227-0010 USA  
Telephone +1 360 676 3290 (Pacific Time) · Fax +1 360 647 1445  
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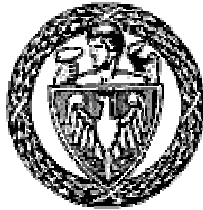
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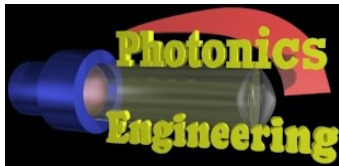
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## Introduction

# XXII Symposium WILGA 2008 Web Engineering and Advanced Applications of Photonic and Electronic Systems

During the days of 29th May till 1st June, in Wilga, near Warsaw, there was held the annual Symposium on Web Engineering and Advanced Applications of Photonic and Electronic Systems. The symposium was held this year for the first time under the auspices of a newly established Photonics Society of Poland (PSP) [[www.photonics.pl](http://www.photonics.pl)] and cooperating organizations – Polish Committee of Optoelectronics PKOpto, Association of Polish Electrical Engineers SEP [[www.sep.org.pl](http://www.sep.org.pl)], and Section of Optoelectronics, Committee of Electronics and Telecommunications KEiT, Polish Academy of Sciences PAN [[keit.pan.pl](http://keit.pan.pl)]. The symposium is held twice a year: during the last week of May in WILGA and during the next to the last weekend of January in Warsaw. This year's symposium is the eleventh meeting at the WILGA Resort owned by Warsaw University of Technology. The first symposium of this series was organized at the Faculty of Electronics and Information Technologies of WUT 11 years ago in January 1998. The second was held in WILGA in May 1998. The WILGA symposia were organized under the wings of IEEE Poland Section, IEEE Region 8 Student Activities, and SPIE Poland Chapter (transferred to Photonics Society of Poland in 2008). Since several years, the WILGA Symposia are international.



Friday 30 May 2008, WILGA, Warsaw University of Technology Resort; (l to r): Robert Nietubyć – IPJ Świerk; Grzegorz Kasprowicz – CERN and ISE PW; Tomasz Pławski – Thomas Jefferson Laboratory, Newport News, VA, USA; Michał Borecki (standing), IMiO PW; R.Romaniuk – ISE PW, WILGA Symposium Chair; T.Morawski – IR PW, palindromist; Katarzyna Rapacka, SPECTROPOL; J. Kalenik – IMiO PW; Dominik Rybka – ISE PW and IPJ Świerk, Chair of the Organization Committee of WILGA 2008 Symposium.

During these 11 years of WILGA Symposium continuity, the number of participants, mainly young researchers, reached over 3,500. There were published 12 volumes of the Proceedings of SPIE in the USA. These volumes contain around 1,000 research and technical papers. In parallel, there were published together a few hundred papers in the national and international journals, including the ones indexed by the ISI in Philadelphia. The more than a decade technical achievement of WILGA Symposium is probably one of the biggest in comparison with similar

international meetings of young researchers in this country. The WILGA Symposium is filling a few roles: It is a very current digest of the young science; it is an absolutely free debating and comparison platform for young researchers; it is a good pattern for these ones starting their research and/or academic career; it is a place where the form and contents of more advanced young researchers is friendly, politely but accurately polished; and it is equally a place of meeting for the tutors and mentors of young researchers, Ph.D. and M.Sc. students, etc.



Sunday 1 June 2008, WILGA, sitting (l to r): Andrzej W. Domański – Treasurer of the Photonics Society of Poland PSP [photonics.pl], Faculty of Physics WUT, SPIE Fellow; Brian Culshaw – SPIE President 2007, Univ. of Strathclyde, Glasgow; z R. Kossowski (standing) – WUT; Michał Ramotowski (standing) – ISE PW; Aneta Michalkiewicz (standing) – SPIE Student Chapter Coordinator; Allan Boardman – Univ. of Salford, SPIE&OSA Fellow; Ryszard S. Romaniuk – WUT, SPIE Fellow; Krisinda Plenkovich – SPIE Director of Education and Community Services; Tina Kidger, Kidger Optics Associates [www.kidger.com]; Emery L. Moore – SPIE President 1990 [elmonics.com]; Tomasz R. Woliński – President of the Photonics Society of Poland, SPIE Fellow; Faculty of Physics WUT, Tomasz Pławski – Jefferson Lab., USA.

The organizers of WILGA Symposium are M.Sc. and Ph.D. students of Warsaw University of Technology who realize their theses with the PERG/ELHEP Research Group in the Institute of Electronic Systems as well as students associated in SPIE Student Branch of WUT, OSA, IEEE and in particular IEEE-LEOS. A chair of WILGA 2008 Organization Committee was Mr Dominik Rybka, a Ph.D. student of ISE PW, and simultaneously an employee of the Soltan Institute for Nuclear Problems in Świerk (IPJ) [www.ipj.gov.pl].

The WILGA 2008 Symposium has gathered more than 150 participants out of a number of technical universities from around this country. More than 100 research and technical papers were presented. The participants were mainly M.Sc. and Ph.D. students, arriving to WILGA alone or with their tutors and mentors. In particular, WILGA is a kind of Ph.D. work digest realized by young researchers in the areas of web engineering, photonics, apparatus for high energy physics experiments. WILGA 2008 has gathered, among others, representatives of the following technical universities: Warsaw, Białystok, Lublin, Gdańsk, Poznań, Łódź, Lublin.

The topical sessions of WILGA 2008 Symposium concerned mainly the following subjects: computer simulations in electronics and electrical engineering, construction of photonics and electronics apparatus for high energy physics experiments, optical fiber optoelectronics, European program WARMER – water resources protection in Europe, coherent and non-coherent optical tomography, design and construction of optimal learning systems, design of free electron laser machine, European programs - CARE, EuCARD, European XFEL, ILC, photonic optical fibers filled with liquid crystals, optoelectronic sensors, web engineering, and in particular development of wiki standard, etc.

Symposium proceedings will be published traditionally as a volume of the Proceedings of SPIE. Some of the papers will be published in *Electronics and Telecommunications Quarterly* by PAS

and in Elektronika monthly journal by SEP. A group of selected papers is usually published in international journals indexed by ISI.

Certain changes in symposium organization and publication of the proceedings are forced by the changes in the research ministry regulations concerning the list of categorization points for particular publications and journals. For example, the SPIE Proceedings used to have four points on the previous list while now they have only two points. This is in spite of the fact that the Proceedings of SPIE are very broadly indexed, much broader in comparison to other similar publications. One can estimate that the Proceedings of SPIE are around several percent of the serious world publications in the field of photonics. Currently there are more than 7,000 volumes of the Proceedings of SPIE published and under preparations. Each volume contains an average of around 50 papers what gives together the biggest world publications database in photonics of around 300,000 papers. The national community of photonics, represented by the Photonics Society of Poland will apply to the ministry to reconsider the evaluation of Proceedings of SPIE for more categorization points. More than 200 SPIE proceedings volumes were published as a result of the initiatives of SPIE Poland Chapter, from 1986.

The symposium was opened complementarily by the person writing these words, because WILGA is a symposium organized by students for students. Faculty members present during the symposium are only guests and do only a topical supervision of student activities and review student papers. The opening presentation for WILGA Symposium usually concerns a summary of activities during the last academic year and plans for the next academic year of the young Research Group PERG/ELHEP ISE WUT. The Group consists of a few tens of young researchers active in web engineering and advanced applications of photonics and electronics systems.

A tradition of WILGA Symposium is that one of the keynote presentations is devoted to art, literature, or humanities. Prof. Tadeusz Morawski from the Institute of Radioelectronics WUT presented his research advances and literary work on palindromes. The presentation was triggered by the fifth book on palindromes written by this author. Finishing his very interesting presentation Prof. T. Morawski, who is the most famous Polish palindromist and one of the authors, and who wrote the biggest numbers of solid palindromes in the world, was dedicating and signing a couple of copies of his books presented to the public.





Sunday competitive session during WILGA 21008 Symposium with participation of SPIE Headquarters representatives. Professor Brian Culshaw from the Strathclyde University in Glasgow presents the SPIE awards for the best presenting students.

A special session was organized on Sunday, 1 June. The session was combined with a visit of the official delegation from SPIE headquarters. The visit in Wilga was a part of SPIE participation in the Inaugural Symposium of the Photonics Society of Poland after its transformation from the SPIE Poland Chapter. The symposium was held on 30–31 May at the Faculty of Physics, WUT, and the part of this inaugural symposium was this special students session in Wilga held on 1 June. The main part of the PSP Inauguration Symposium was held on Saturday 31 May and gathered more than 100 attendees, representatives of research, technical, academia, business, governmental and other communities related to the field of photonics from the whole country. A number of the WILGA Symposium participants took part in the PSP Inauguration Symposium and vice versa.

During the Sunday session of WILGA Symposium there was organized a competition for the best student paper presentation sponsored by SPIE. The results were as follows: Aleksandra Czaplą, Wydział Fizyki PW, "Long period fiber gratings with liquid crystals"; Andrzej Cichocki, PERG/ELHEP ISE PW, "Autonomous power supply controller for MXGS"; Krzysztof Iwaszczuk, Wydział Fizyki PW, "Plane wave method for photonic liquid crystal fibers modeling." Sincere congratulations to the winners.

After the best student paper award ceremony a business meeting between representatives of SPIE and PSP was organized. There were debated a number of items concerning cooperation, such as: functioning of SPIE Student Chapters, signing a Memorandum of Understanding between SPIE and PSP, organization of common meetings, common publications, building a new rapid internet publication under the title Photonics Letters [[www.photonics.pl/PL](http://www.photonics.pl/PL)].

The next XXIV Symposium WILGA 2009 is planned, as usual traditionally during the last week of May or on 25–31 May 2009. The January edition of WILGA 2009 Symposium is planned for 23–25 January 2009 at the Faculty of Electronics and Information Technology, WUT. Information about the WILGA Symposium is available at the following web page: <http://wilga.ise.pw.edu.pl>. All contacts with WILGA organizers are available through the email address: [photonics@ise.pw.edu.pl](mailto:photonics@ise.pw.edu.pl). The WILGA Symposium organizers heartily invite young researchers and their tutors/mentors, working in the area of internet engineering and advanced applications of photonics and electronics systems

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Warsaw University of Technology, Institute of Electronic Systems**

## Photonics Society of Poland established



Each bigger research and technical community in this country and elsewhere has its own representation inside the social space in a form of a professional society. Either the society has a broad topical extent covering the whole community activities or it is a number of narrow topical societies each active in their own fields. The subject of activity of a professional society is usually: expertise in the field, training, social, publishing, cooperation and integration, information, etc., as well the national research and technical community of optics, optical fiber communications, laser technology, optoelectronics and photonics. Some time ago, the research, technical, and industrial

communities in this country were organized in professional societies within a formal framework of the Chief Technical Organization (NOT). Since that time the NOT Federation has never regained its high administrative meaning. The president of NOT was at that time a deputy prime minister of the country. Today, such a strengthening of research, technical and high-tech communities and industries, through giving back this high role for a renewed Federation of Engineering Associations probably might have had other meaning, other influence and would have given other possibilities. There is a clear need in this country for strong consolidation and rebuilding of the self-organization of the technical professional communities. They have to accommodate themselves to the dynamic changes and evolutions of the contemporary society of knowledge. A clear reflection of these vivid processes is a formation of the Photonics Society of Poland (PSP).

### Transformation of SPIE Poland Chapter to PSP

Since the first half of 2007, there were carried out formal endeavors by the national research and technical communities of photonics to transform the SPIE Poland Chapter (SPIE-PL) [[www.spie.pl](http://www.spie.pl)], existing since 1988, into the Photonics Society of Poland (PSP) [[www.photonics.pl](http://www.photonics.pl)]. During the turn of the year 2007/2008 and in the beginning of 2008, the Administrative Court for Warsaw, after some changes and improvements in the bylaws and after two plenary meetings of the society members approved the change in the name and the new bylaws of the new (transformed) research and technical society. The first president of PSP was elected Prof. T. Woliński of WUT [[www.if.pw.edu.pl/~opto](http://www.if.pw.edu.pl/~opto)]. The headquarters of PSP is the Faculty of Physics, Warsaw University of Technology [[www.if.pw.edu.pl](http://www.if.pw.edu.pl)]. The PSP has applied to the court for the right to start and run business activities. It will soon apply to be elevated to the status of a society of a higher public service. PSP has now more than 200 members, mainly from the academia world and from governmental institutes, and still too small number of members from industrial, business and administration communities. The PSP members originate from the whole country but the majority comes from the following large academic centers: Warsaw, Wrocław, Poznań, Lublin, Białystok, Kraków, Gdańsk, High Silesia, Szczecin, Rzeszów, and Łódź. The PSP is open for international and corporate members. The aim of the PSP is integration of the national research and technical community of photonics and undertaking important actions, from the



point of research, technical, financial, organizational, business and political point of view, in the name and on behalf of the whole national professional photonics community in the relations to the industry, local and national administration, international partners, European programs, consortia and technological platforms, etc.

### **Integration Activities of the National Research and Technical Community of Optics and Optoelectronics**

Establishment of the Photonics Society of Poland is a crowning achievement in a long lasting organization, technical and research activity of the national community of optics, optoelectronics, and photonics in the direction to coordinate common endeavors in this country. At the beginning of the 1980s there were undertaken in this country some trials, by INOS – Institute of Applied Optics, PTF – Polish Physical Society and WUT – Warsaw University of Technology, to establish an Optical Society of Poland. These trials were at this time not successful enough. In the middle of 1970s, the Committee of Electronics and Communications [keit.pan.pl] of Polish Academy of Sciences has established a Section of Optoelectronics with Working Groups on Optical Fiber Technology, Integrated Optics and Optoelectronic Sensors. This body organized during the years of 1976, 1979, 1982 (shifted to 1983), and 1986 the first, second, third and the fourth National Symposia on Optical Fibers and Their Applications in Jabłonna. The section of optoelectronics organized also the National Symposia on Laser Technology in Szczecin/Świnoujście. SPIE was present during all of these conferences in a form of tabletop SPIE literature exhibits organized from the beginning by SPIE staff and members. The Polish Optoelectronics Committee (PKOpto) of SEP – Association of Polish Electrical Engineers was established in 1985 [ww.sep.com.pl]. There were only few members of international optical organizations, in this country, in the beginning of 1980s, like SPIE [spie.org], OSA -Optical Society of America [www.osa.org], LIA - Laser Institute of America [www.laserinstitute.org], IEEE - LEOS-Laser and Electro-Optics Society [www.ieee.org/portal/site/leos/], and later EOS - European Optical Society [www.europeanopticalsociety.org]. Very concrete results followed from the initial talks and technical, research, and organization activities between Polish researchers and SPIE. These difficult contacts were carried out done at conditions of incompatibility of the currencies.

Individual contacts with SPIE of persons from academia and governmental institutes in this country go back as far as to 1976. More official talks, between professional societies of SPIE and SEP started in 1982. During the years of 1982–1985 the talks resulted in formation in this country of a Polish Group of SPIE Members, gathering more than 10 persons. The activity of this Group resulted in participation of a number of persons from Poland in SPIE conferences in Los Angeles (1982), Stuttgart (1984), Boston, San Diego, Paris, Hague, Hamburg, organization of small exhibits during some of SPIE symposia, publishing of the first papers from Polish optical research community in the Proceedings of SPIE (Vols. 403–404 from 1983), publishing of the first “Polish” volume of Proceedings of SPIE (Vol. 670 from 1986), the first visit of SPIE representatives from the SPIE headquarters with executive secretary Joseph Yaver in Poland. The Polish Group of SPIE Members was officially affiliated with the PKOpto, SEP in 1985 and approved by the Boards of both societies SPIE and SEP. During this period, the Polish Group of SPIE Members, chaired by the late Professor Adam Smoliński, was reporting periodically, two times a year, about their activities at the plenary meetings of PKOpto SEP, then very frequently attended by the professional optics community.

### **Activity of SPIE Poland Chapter**

The Polish Group of SPIE Members was transformed into SPIE Poland Chapter in 1988 (SPIE-PL). A legal technical association under the name of SPIE Poland Chapter was registered then by the administrative court [www.spie.pl]. During the first period the SPIE-PL was chaired by

Prof. A. Smoliński and then by Prof. M. Pluta. The SPIE headquarters were situated in the Institute of Applied Optics, during the period of 1990–2002. During the period of 1986–2008, the Polish Group of SPIE Members, then SPIE-PL and now PSP published over 200 Proceedings of SPIE volumes. In 2005, the SPIE-PL in cooperation with SPIE headquarters organized at Warsaw University of Technology a large Middle-European Congress on Optics and Optoelectronics. The congress consisted of 14 combined topical conferences. It was well attended by more than 700 professionals from all over the world. Long lasting, very active, profitable for all sides and frank contacts of the Polish photonics community, since 1988 organized in SPIE-PL, with the SPIE headquarters, were one of the major foundations of nomination for Prof. Małgorzata Kujawinska of WUT in 2005 for the first woman and the first non-American president of the SPIE. During her presidency Prof. Kujawinska wrote her name down in golden letters in the history of this great engineering society of global extent

A number of professionals from Poland were awarded, during these years, the prestigious titles of the Fellow of SPIE. These important professional distinction titles stem definitely from the individual virtues of the awarded researchers but there was also a strong supporting factor caused by the unprecedented and incomparable activity of the SPIE-PL. Fellowship in the society is awarded for individual scientific achievements and the process goes through a few international reviewers. The Polish SPIE Fellows are, professors: Maksymilian Pluta-INOS (1992), Ryszard Romaniuk-WUT (1993), Antoni Rogalski-MUT (1995), Romuald Józwicki-WUT (1995), Małgorzata Kujawińska-WUT (1997), Krzysztof Patorski-WUT (1998), Tadeusz Kryszczyński-INOS (2001), Katarzyna Chałasińska-Macukow-WU (2003), Leszek Jaroszewicz-MUT (2003), Andrzej Domański-WUT (2004), Tomasz Woliński-WUT (2004), Tomasz Szoplik-WU (2006), Wacław Urbańczyk-WrUT (2007).

### **Activity Plans of Photonics Society of Poland for National and Regional Professional Community**

It seems the Photonics Society of Poland has to fulfill an important function for the integration, efficiency increase, and reconfiguration of the local research, technical, business and administration communities in photonics. In the framework of this policy the PSP has undertaken recently a number of initiatives. Some of them are a continuation of the activities of SPIE-PL and some of them are quite new. Some of these ideas are described below. They embrace endeavors on the field of European cooperation, industrial, academic, educational, conferences, continuous training, publishing, organizational and lobbying.

#### *National cooperation*

The most important foundation of PSP existence is domestic activity and cooperation. It seems that by gathering relevant representatives of all national communities, the PSP has a chance to work out a common platform for the constructive actions of such organizations in the similar fields (with their permission) like: Polish Committee of Optoelectronics of SEP (chair Prof. W. L. Wolinski-WUT), Section of Optoelectronics, Committee of Electronics and Telecommunications PAS (chair Prof. T. R. Wolinski-WUT), Section of Optics, Polish Physical Society (chair Prof. Henryk Kasprzak-WrUT), Section of Metrology (previously also Section of Optics) SIMP – Polish Association of Mechanical Engineers [[www.simp.pl](http://www.simp.pl)], Polish Association of Synchrotron Radiation [[www.synchrotron.org.pl/](http://www.synchrotron.org.pl/)], Polish Association of Sensor Technology [[www.ptts.pl](http://www.ptts.pl)], IEEE-LEOS Chapter Poland (chair. Prof. Sergiusz Patela-WrUT), OSA Member Group in Poland, Student Chapters of SPIE, OSA and IEEE in Poland, Polish Technological Platforms (Advanced Materials - IWC PAN, Opto and Nanoelectronics - NOT), Consortium of Polish Optoelectronics - ITME [[www.optoelektronika.com.pl](http://www.optoelektronika.com.pl)], NOT – Federation of Engineering Associations, and others. The proposed platform of cooperation concerns mainly building of a practical industrial coalition in this country in the frames of operational programs, structural, topical, ordered and other European ones.

### *International Cooperation*

The international cooperation of the Photonics Society of Poland embraces primarily SPIE. It is also directed toward other societies of global extent like: OSA, IEEE, LEOS, EOS, national associations of optics, optoelectronics and photonics like: DGaO – Deutsche Gesellschaft für angewandte Optik [[www.dgao.de](http://www.dgao.de)], analogous associations in the UK, France, Russia, and in all neighboring countries. The international cooperation includes also optics industry active in the European scale as European Technology Platform Photonics 21 [[www.photonics21.org](http://www.photonics21.org)], and others.

### *Cooperation with SPIE*

A special meaning for the Photonics Society of Poland has a close cooperation with SPIE. PSP extends its activities beyond the boundaries of its own country, especially to the neighboring regions. Despite of that it remains a local association representing the profession in this country and this geographical region. The Institutes like IEEE, SPIE, OSA have different duties to fulfill, but in a large degree complementary to the duties of local societies like PSP. Speaking of any competition between global and local societies, as it is put forward by some opponents of cooperation and globalization, is a complete misunderstanding. An important role of PSP may be to support SPIE in building a global network or federation of local professional societies in optics, optoelectronics, photonics and related fields. As for now there does not exist such a global federation. This is caused probably by various reasons, and among others, by misunderstanding the difference in the character of activity scales on the global and local levels. It is clearly seen that there are a lot chances for the global community integration. The closest to this global character is perhaps the IEEE, however, not due to its federation character but size. If the SPIE Institute is going to be brave enough to undertake this difficult, challenging and looking far into the future endeavor, to start building a global professional federation of photonics (because this is a duty for one of the global societies, which has to fill a role of a crystallization triggering center for the process), the PSP would be more than ready, with all its strength and devotion, to participate in this important process of reconfiguration of the professional intellectual resources of the world. In some foreseeable future, without this kind of consolidation, the progress may be slowed down or endangered.

### *Rapid Internet Publication – Photonics Letters*

One of the main intentions of the Photonics Society of Poland is to launch, in close cooperation with SPIE a rapid Internet publication: Photonics Letters (PL) – A publication of the PSP. The simplest way to start the journal would be by using the existing infrastructure like MySPIE paper management and publication web engine [<http://myspie.org>] and a large publication database such as the SPIE Digital Library [<http://spiedl.org>]. These systems are analogous to other interactive publication databases run by other societies like: OpticsInfoBase by OSA and Xplore by the IEEE, but also Versita Internet publications. An internet-based publication, without accompanying printed version, identified by on-line ISSN ID, would publish very fast, initially faster than a month, very short, four pages in the length, research and technical letters, of the internal structure of the full length paper. Photonics Letter would not compete with any international journal issued locally and indexed by the ISI Thomson Scientific like: Optica Applicata – published by Wroclaw Uni.Technology [[www.if.pwr.wroc.pl/~optappl](http://www.if.pwr.wroc.pl/~optappl)] and Opto-Electronics Review – published by MUT in cooperation with Versita and Springer [[www.versita.com/science/physics/oer/](http://www.versita.com/science/physics/oer/)], [[www.springerlink.com/content/120191/](http://www.springerlink.com/content/120191/)]. Photonics Letters would supplement these regular journals initially in the local scale and then perhaps more widely. Photonics Letters would be more similar to the kind of publication represented by global and very successful Optics Express run by OSA [[www.opticsexpress.org](http://www.opticsexpress.org)].

The PSP has nominated an Editorial Board of a new rapid internet publication. Each person in the EB of Photonics Letters is responsible for a narrow subject, coherent with the scientific expertise of a particular person. The EB of Photonics Letters consists of the following photonics experts, university professors: Krzysztof Abramski, WrUT, (laser photonics A); Rajmund Bacewicz, WUT (photovoltaice); Anna Cysewska-Sobusiak, PUT (photonics applications); Roman Dąbrowski, MUT (liquid crystal photonics); Andrzej Domański, WUT (polarization photonics); Jan Dorosz, BUT, (nontelecom photonics, lighting); Leszek Jaroszewicz, MUT, (photonic sensors); Zbigniew Jaroszewicz, INOS, (diffraction photonics); Mirosław Karpierz, WUT, (nonlinear and integrated photonics); Bogdan Kosmowski, GUT, (display photonics); Andrzej Kowalczyk, UMK, (biomedical and image photonics), Małgorzata Kujawińska, WUT, (interferometry and photonics metrology); Jan Rayss, UMCS, (photonic materials); Antoni Rogalski, MUT, (Fotonika podczeriwieni); Ryszard Romaniuk, WUT, editor-in-chief, (optical fiber photonics, high energy photonics); Tomasz Szoplik, WU, (metamaterial photonics); Andrzej Zajac, BUT and MUT, (laser photonics B). The International Advisory Board of Photonics Letters, is under establishment. It is chaired by Prof. T. R. Woliński. The aim of the IAB is to help the Photonics Letters in international field.

#### *Editorial Series "Proceedings of SPIE"*

Photonics Society of Poland would maintain the good and long lasting tradition (since 1986) to cooperate with SPIE publications. The editorial series of SPIE Proceedings embraces nearly 8000 volumes and nears fast to a magic number of 500000 papers. The annual rate of the increase in the number of volumes is 350-450 with an average contents of a volume reaching over 60. It is decisively one of the most frequently cited optics, optoelectronics and photonics publication series in the world. The Proceedings of SPIE are indexed by all major research and technical publication databases. During the last years, a few SPIE volumes annually were published from national and international photonics conferences, which originated from this country. During the most intense period of Prof. M. Pluta's activities as a chair of SPIE-PL, the number of volumes per year was well over ten. The Proceedings of SPIE is, however, not a journal, thus, it is not indexed by Master Journal List of ISI Thomson Scientific. A consequence in this country is that the Ministry of Science and Higher Education (MNiSW) values the papers published there only for two categorization points (previous edition of this list had four points for the Proceedings of SPIE). This evaluation is not adequate with the objective meaning and weight of this publication series in the world photonics literature. The PSP undertakes relevant activities on the ministerial level to try to change this situation. Keeping the official evaluation on this low level would mean a complete withdrawal of Proceedings of SPIE from the local market of conference paper publications. Withdrawal of the most popular, and of the widest extent and technical impact, photonics publication series in the world, from the local market, would mean a major intentional step back in the development of the whole local photonics community.

#### *Conferences*

A traditional area of SPIE-PL activity and its follower the Photonics Society of Poland is organization, co-organization and sponsoring of scientific and technical conferences in the fields of optics, optoelectronics and photonics and related fields like: physics, simulation and design of components, metrology, construction of equipment, sensors, materials research, applications, etc. Inside an area of interest for the PSP, there are the following traditional conferences of the local photonics community: Optical Fibers and Their Applications, organized on exchange basis by Białystok Univ. of Technology and Lublin Univ. of Technology as well as Optical Fiber Technology Lab. of Maria Curie-Skłodowska Univ. in Lublin; Laser Technology Symposium organized by Szczecin Univ. of Technology in Świnoujście; Optoelectronic and Electronic Sensors organized by the Polish Society of Sensor Technology [www.ptts.pl], Photonics Metrology Symposia series organized by the Institute of Applied Optics; traditional Polish-Czech-Slovak Symposium on Contemporary Optics; Photonics Symposium of Young Researchers WILGA

organized by WUT in WILGA. The PSP would try to continue to organize, in cooperation with SPIE and relevant photonics societies in the neighboring countries, the cyclic, large Middle and East European Congresses on Optics and Optoelectronics.

#### *Research programs*

One of the most important tasks for the Photonics Society of Poland is to initiate the executive consortia, technological platforms, industrial groups, and participation in the realization of research and industrial programs financed from the national and European funds in the area of photonics. There are undertaken initiatives concerning continuation of currently realized programs and new actions for future programs in the area of: optoelectronics for industry, environment protection, medicine, homeland security. The single aim is to look for concrete industrial results which stem from and then strongly rest on the local research efforts. The SPIE-PL and now PSP participates in a number of such programs of national, european and global extent, like: LEAP – Linking Europe and Asia in Photonics, NEMO – Network of Excellence in Micro-Optics, and other. The task of PSP is to trace the developments in the ERA – European Research Area of all initiatives concerning the field of photonics. The aim is to activate the community and actively participate in these programs.

#### *Cooperation with small and medium enterprises*

The area which cannot be omitted in the activity of the Photonics Society of Poland as an effective professional association which serves well its community is technical expertise, business activities, cooperation with industry, linking academia to industry, cooperation with administration on various levels. Together with the development of the PSP an establishment of the Chamber of Photonics Experts is considered, if there is a demand for such services. The main concern is cooperation with relevant chambers of commerce, industry and trade. The PSP continues a more in-depth recognition of the domestic market for photonics products and services. The PSP prepared a questionnaire concerning the status of national photonics and sent it to more than 200 institutions including academic, governmental, administration, business and industrial ones. Till now, more than 70 answers were gathered. It shows the status of community integration and reveals some reserve for taking common decisions and actions of a wider extent. Certain lack of faith to take common actions on behalf of the whole community is observed, which stems from the recent changes in the role of universities, governmental laboratories, and primarily from large changes in the industry. There is not yet observed in this country a strong and active process of formation of small and medium businesses in narrowly defined and highly advanced technologies. PSP, via observation and analysis of these photonics market changes would try to support the favorable components of these complex processes. PSP would try to be an active participant and a sort of intermediary between academia, where young photonics experts are generated and business and industry worlds, where they are to be efficiently and creatively employed. The aim is to provide innovative photonic products of need to the market.

#### *M.Sc. and Ph.D students sections*

Photonics Society of Poland is very close to all affairs combined with students and young researchers studying and developing photonics. PSP would always try to support students and young researchers by offering to them fellowships, research awards, creating employment possibilities, etc. There will be continued a fruitful cooperation with Student Chapters of SPIE, OSA, IEEE. There are ideas to built own students organization. PSP stands for extending of the university curricula in photonics and related fields of nanotechnologies. It seems to be necessary to increase the number of promoted Ph.D. students in photonics in this country. There are now practical possibilities to internationalize considerably the educational models for Ph.D. students in such an advanced branch as the photonics.

## Inauguration Symposium of Photonics Society of Poland

The ceremonial Inauguration Symposium of the Photonics Society of Poland was held on 30 May – 01 June 2008. On 30 May there was organized a working meeting between the representatives of both cooperating societies SPIE and PSP. A draft of the memorandum of understanding was discussed during this meeting. The main symposium sessions were held in the Faculty of Physics on 31 May. The scientific program of the symposium embraced a number of plenary presentations delivered by the key experts in some of the most current fields of photonics: Philip Russel, Max Planck Inst., "Nanoscale photonic structures in fibre form"; Brian Culshaw, Strathclyde Univ., "Fibre optic sensors: a perspective on science, technology and application"; Allan Boardman, Univ. of Salford, "Metamaterials: from concepts to applications"; Andrzej Kowalczyk, Nicolaus Copernicus Univ., "Optical coherence tomography in ophthalmology and art conservation."



Meeting of the Photonics Society of Poland (PSP) Board during the Conference on Optoelectronic and Electronic Sensors (COE-2008) in Poznań on 23.06. (L to R) prof. Małgorzata Kujawińska, Warsaw Univ. Technology, SPIE Fellow, SPIE President 2005; prof Leszek Jaroszeiwcz –Military Univ. Technology, SPIE Fellow, PSP Vice President; prof. Tomasz R.Woliński, Warsaw Univ. Technology, SPIE Fellow, PSP President; prof.Bogdan Kosmowski, Gdańsk Univ. Tecnology; prof.Ryszard S.Romaniuk, Warsaw Univ.Technology, SPIE Fellow; prof. Anna Cysewska-Sobusiak, Poznań Univ.Technology, COE2008 Conference General Chair, PSP Board Secretary; prof Jan Wójcik, Univ. Maria Curie Skłodowska at Lublin; prof Andrzej Domański, SPIE Fellow, Warsaw Univ.Technology; prof Tadeusz Pustelny, Silesian Univ. Technology;

The technical program of the symposium embraced a couple presentations on the photonics community organization in Europe and in Poland: Małgorzata Kujawińska, PW, Photonics 21 – Advocating for optics and photonics in Europe; Ryszard Romaniuk, PW, Photonics Letters: Publication of the Photonics Society of Poland; Tomasz Woliński, PW Photonics and optical technologies in Poland. After the plenary sessions, there was an award ceremony and a reception. PSP awarded a few key persons from SPIE for promoting the long lasting and fruitful cooperation. The following persons were awarded: Joseph Yaver, previous Executive Director of SPIE; dr Emery Moore, 1990 SPIE President, Prof. Brian Culshaw, 2007 SPIE President, Prof. Mieczysław Szustakowski, MUT, a member of the first Board of SPIE-PL in 1988. On 1 June, a delegation of both societies participated in a special student paper competition session in WILGA. The session was organized during the annual WILGA conference on Photonics and Web Engineering [wilga.ise.pw.edu.pl]. The awards for students were funded by SPIE.

### Cooperation offer

Photonics Society of Poland is ready to undertake cooperation with every organization of public benefit, including local and national administration, industrial, business and lobbying, which has an aim of science and high-tech industry development in Poland. The science development for the PSP means: chances for young, gifted people to fulfill successfully their own research career, creation of good working condition for the researchers, building of the modern research

infrastructure, timely renewing of this infrastructure, creation of real and strong mechanisms of industry development, this industry which uses actively the results of applied research. PSP encourages individual persons working or interested in optics, optoelectronics and photonics to enroll.

**Tomasz R. Woliński,  
Ryszard S. Romaniuk,  
on behalf of the PSP Board  
Warsaw University of Technology**





Ceremonial Inauguration Symposium of the Photonics Society of Poland. Faculty of Physics, Warsaw University of Technology, 31 May 2008; (L) there are standing (l to r) professors: A.Domański, L.Jaroszewicz, S.Kłosowicz, T.Kidger, E.Moore, M.Kujawińska, B.Culshaw, R.Romaniuk, T.Woliński; (P) Ms Krisinda Plenkovich from SPIE headquarters presents to prof. T.Woliński a commemorative plaque for the inauguration of PSP, in the presence of prof.B.Culshaw of Strathclyde Univ. in Glasgow.