

Miscellanea

I Congress of Polish Mechanics – 28–31 August, 2007

I Congress of Polish Mechanics was organized by the Warsaw University of Technology, the Institute of Fundamental Technological Research PAS, and the Polish Society of Theoretical and Applied Mechanics. 484 scientists participated in the Congress presenting 417 papers.

The aim of the Congress was to present:

- an actual state of investigations, widely understood, in the discipline of mechanics
- a review of issues connected with education of mechanics
- an analysis of problems connected with relations “scientific circle – economy” and introducing correlations, if needed
- technology transfer within the range of mechanics and disciplines related to it.

The Congress was under the honour patronage of the Minister of Education and Science-Michał Seweryński.

Co-chairmen of the Congress:

Włodzimierz Kurnik, the Warsaw University of Technology
Wojciech K. Nowacki, the Institute of Fundamental Technological Research PAS

Józef Kubik, Kazimierz Wielki University of Bydgoszcz

The Honour Committee:

Witold Gutkowski - Chairman

Maciej Grabski

Michał Kleiber

Krzysztof Kurzydłowski

Zenon Mróz

Władysław Włosiński

The Scientific Committee:

Andrzej Styczek – Chairman

Adolf Maciejny – Deputy

Chairman Józef Szala – Deputy Chairman

<http://KMP2007.ippt.gov.pl>

Actualities

With great pleasure we announce that two members of the Editorial Board of the Bulletin of the Polish Academy of Sciences: Technical Sciences, Professors W. Włosiński and W. Woliński, on 17 October 2007 were awarded the honour title of a Full Member of the Polish Academy of Sciences. We congratulate Professors and wish them further successes.



Professor Władysław K. Włosiński was born on 14 November 1931. He graduated from the Warsaw University of Technology, Mechanical Department in 1962; in 1970 he defended his doctoral dissertation at the Faculty of Mechanical and Technological Engineering at the Warsaw University of Technology, and in 1983 he received the degree of Professor. A few years later he was granted the degree of Full Professor of Technical Sciences by the President of the Polish Republic.

Professor's scientific career was recognized by the community of scientists, so in 1994 he was elected as the Corresponding Member of the Polish Academy of Sciences, and in 2002 Professor Włosiński was elected the Chairman of the Division of Technical Sciences at the Polish Academy of Sciences. In 2005 the Silesian University of Technology awarded him the title of the Doctor Honoris Causa, the next year the title of the Doctor Honoris Causa came from the Wrocław University of Technology.

Professor Włosiński's career is very rich in scientific events such as a scientific scholarship at the University of Sheffield (England), 4-month stay at the University of Osaka (Japan), one-month stay at the Max Planck Institute in Stuttgart and, and lectures at the University of Technology in Beijing (China).

Professor Włosiński started his professional career in the Plant of Cathode-Ray Tubes (the present Polkolor) as a head of the Central Research Laboratory, then he was associated with the following institutions where he fulfilled very responsible functions: the Institute for the Technology of Electronic Materials-Head of the Ceramic-to-Metal Joining Department and Head of Dielectrics Division, the Warsaw University of Technology-Head of the Department of Joining Engineering in the Institute of Materials Technologies, the Faculty of Production Engineering; 1988–1991 – Vice-Dean for Scientific Affairs at the Faculty of Mechanical and Technological Engi-

neering at the Warsaw University of Technology; 1993–1999 – Vice-Rector for Scientific Affairs at the Warsaw University of Technology, 2000–2002 – Director of the Centre of Technology Transfer at the Warsaw University of Technology.

Professor's major scientific achievements involve: determining the diffusion profiles and diffusion coefficients of Mn, Fe and Mo for the Al_2O_3 type ceramics as related to the conditions of joining alumina ceramics to metals; a thermodynamic description of a liquid state reaction during the joining process of alumina ceramics to metals, later to be experimentally confirmed and the related calculations verified; defining the distribution fields of internal stresses by the method of finite elements and proposing the optimal construction of ceramic-to-metal joints; defining the structures of intermediate layers at joining oxide and nitride ceramics to metals, and relating these structures to the strength of joints; reduction of internal stresses at the welding of materials of different thermal extension coefficients (e.g. $Cu-Al_2O_3$) by using functionally graded materials (FGM).

The results of the mentioned above and other research appeared in four monographs (two printed by the State Science Publishers – PWN and two – by the WUT Printing House – WPW), as well as in over 150 articles published at home and abroad (*Journal of Materials Science, Journal of Sintering, Translation of JWRL Advanced Composites Letters, Archives of Materials Science and Bulletin of the Polish Academy of Sciences: Technical Sciences*).

It is worth mentioning that Professor has an outstanding achievements in technology. The following list presents only some of them:

- the development of a special alloy for a glass pressing mould used by the industry,
- the development of technologies of dozen ceramic-metallic products, mass used by the Polish industry,
- the development of the plasma method of depositing homogenous composite layers Al_2O_3 (some of these achievements have been published)
- the elaboration of the new method of joining elastic materials with plastic materials (friction welding)
- the start-up of production of the elements from the composites made of plastic materials and carbon fibres.

Professor Włosiński is a creator of the scientific school, moreover, he is an author of a few non-conventional technologies of bonding modern (co-called advanced) materials such as: constructional ceramics, composites, special glass, semiconductor materials and intermetallic alloys. Among the worldwide scientific circles Professor is the most recognized specialist in joining advanced materials; beside it, he has considerable scientific achievements and is frequently invited to present his reports at the highly specialised conferences as well as to be a member of the international scientific committees.

Professor Włosiński created a group of his 29 PhD students who in cooperation with their tutor carry on investigations, on joining advanced materials, which are enriched by Professor's results of his own investigations.

Moreover, Professor Włosiński has very serious achievements on the organisation of investigations. Professor also introduced a system of investigations, at the Warsaw University of Technology, which takes into account, so-called, priority programmes, furthermore, he created the system of introducing innovative projects into practice and initiated the cooperation of Universities of Technology with concerns such as Siemens or Fiat.

For scientific achievements and service to the technical community Professor Włosiński was rewarded with many high rank national distinctions and awards such as the State Award 1st grade (collective), the Medal of National Education, the Officer's Cross of Polonia Restituta, the Officer's Cross from the Belgian Government for the scientific merits in the field of innovativeness, the Minister's of Education Award for the book entitled "The Joining of Advanced Materials", the Commander's Cross of Polonia Restituta.



Professor Wiesław L. Woliński is recognized by the scientific community as one of the leading authorities in Poland in the field of lasers and optoelectronics devices.

He received his MSc, PhD and DSc from Warsaw University of Technology (WUT) in 1955, 1964 and 1968, respectively. He was appointed Professor in 1975 and Full Professor in 1989. From 1978 to 1981 he headed the Institute of Microelectronics and Optoelectronics of the Faculty of Electronics and Information Technology of WUT. Until his retirement in 1999 he served as a head of the Optoelectronics Division of the same institute.

Professor Wiesław Leonard Woliński has been active in many government and academic committees, and has been a head or a principal investigator of several scientific projects involving academic – industry partnership and technology transfer. In 1991 he was elected Corresponding Member and in 2007 Full Member of the Polish Academy of Sciences (PAS-*ci*). From 1999 to 2007 he chaired the Committee on Electronics and Telecommunication of PAS. Since 1991 he has been a chairman of the Polish Optoelectronics Committee of the Association of Polish Electrical Engineers. In 1987, he

was co-initiator of the establishment of the Polish Chapter of the International Society for Optical Engineers (SPIE) and he has been its member since then.

In fifties his scientific activities resulted in the development and construction of the variety of the optoelectronic devices like infrared image converters, spectral sources of light for interferometers, etc. Since sixties his research interests have been directed toward the laser physics and laser technology. They have encompassed both fundamental and applied investigations concerning the physical processes responsible for the conditions of the laser radiation generation in the active volumes of the gases and in the doped solid-state media, and also the design, construction and development of the laser systems for industrial and medical applications. As the result of these activities, numerous unique laser devices were developed and introduced into the national industry and medicine. Currently he is involved in the research on the modelling and optimization of the waveguide solid-state lasers and up-conversion fibre lasers.

He has authored or co-authored over 200 scientific papers published in prestigious Polish and foreign scientific journals as well as numerous conference contributions – both national and international. He is also an author or co-author of 15 patents. His patent on gas lasers excitation using transverse electric discharge technique is perhaps the earliest (1967)

patent on this subject. He is co-editor of 13 volumes of *SPIE Proceedings* of the most important conference on *Laser Technology* in Poland. Since 1986 he has been Editor-in-Chief of the journal *Electronics and Telecommunications Quarterly*, and since 2005 – the Branch Editor of journal *Optoelectronics and Photonics – Bulletin of the Polish Academy of Sciences: Technical Sciences*. Up to 2006 he was a Chair of The International Editorial Advisory Board of the *Optoelectronics Review*.

Professor Woliński was actively involved in didactic activities for over 50 years. He has greatly contributed to the development of the Optoelectronics – Lasers specialization in WUT. In 1965 he organized in WUT the first laser laboratories, seminars and lectures. From the beginning of Professor's career, he was engaged in teaching undergraduate and graduate courses including Laser Physics, Integrated Optics, Fundamentals of Photonics and Laser Techniques and others. For over ten years, he was a head of Postgraduate Studies Department in WUT. He has supervised numerous master's theses and doctoral dissertations. Some of his students have become full or associate professors. Some of them became leaders in both industry and science.

For scientific achievements and service to the technical community Professor W. Woliński was rewarded with many high rank national distinctions and awards.