

## OUTLINE OF THE POLISH ACOUSTICIANS HISTORY PART II (1970-1989)

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This study is the second part of a chronological complication of the most important events in the scientific life of Polish acousticians in the past 20 years, 1970-1989. The first part of the outline, covering the years before 1969, was published in the materials of 36th Open Seminar on Acoustics OSA'89, held in Szczyrk-Biła, September 1989 [1]. It was also published in Archives of Acoustics **15**, 1-2 (1990) [2]. The second part of the Outline was published in Polish in the materials of the 37 th Open Seminar on Acoustics held in Gdańsk, September 1990 [63].

Actually, the outline has been completed with new informations concerning the period which ended in 1969.

### Events of major importance in Polish acoustics

1970

a) "Ultrasound in Biology and Medicine" — UBIOMED 1. The first international conference on physics and technology of ultrasound in applications in biology and medicine, organized in Jabłonna by Ultrasonic Department of Institute of Fundamental Technological Research, Polish Academy of Sciences [IFTR PAS] (head: prof. L. FILIPCZYŃSKI) and by Acoustics Committee PAS [3, 4]. In the following years, organization of the conference was taken over in succession by the GDR, the Czechoslovakia, Hungary and the USSR. In 1983 UBIOMED VI was again organized in Poland [5].

b) Open Seminar on Acoustics OSA-XVII, organized in Jaszowiec by Upper-Silesian Section of Polish Acoustic Society in cooperation with Acoustics Committee [6]. Annual continuation of these in 1970-1989.

c) Creation of Noise Control League. The first president — prof. H. RYFFERT, and then T. MALINOWSKI 1979, Witold STRASZEWICZ 1983, J. MOTYLEWSKI 1987.

d) Creation of Section of Acoustics of Molecular Interactions in Liquids, at Institute of Physics, Gdańsk University (head: prof. A. ŚLIWIŃSKI).

e) Environmental Laboratory of Noise and Vibration at Academy of Mining

and Metallurgy in Kraków was organized (head: Z. ENGEL). Research on vibroacoustics, i.e. vibration and acoustic processes in machines, was started.

f) Piezomagnetism Lab. of Piezotronics Dept. at Institute of Electron Technology was transferred to Institute of Physics PAS. In 1984, in this Institute a Piezomagnetism Group of Magnetism Physics Dept. was created, headed by prof. Z. KACZKOWSKI.

g) Coordination Centre for Construction Acoustics, at the Council for Mutual Economic Aid, was organized with headquarters in Bucharest. Prof. J. Sadowski was elected the first president of the Scientific Technological Board. Members of the board were prof. S. CZARNECKI and prof. Z. ENGEL, as well [56].

h) 2-nd International Conference on Noise Control organized in Warsaw by prof. S. CZARNECKI [10]. Subsequent conferences were organized in 1973 and 1975 [58, 60].

#### 1971

a) Creation of Phoniatics Lab. in the State College of Music in Warsaw (head: doc. dr med. Z. PAWŁOWSKI), transformed in 1974 into Dept. of Voice Pathophysiology and in 1980 into Phoniatics Dept. The college was renamed to F. Chopin Academy of Music.

b) Intensification of research on semiconductor acoustics and solid state acoustooptics at Institute of Physics of Silesian Technical University (head: doc. A. OPILSKI), Department of Molecular Liquid Acoustics (head: doc. F. KUCZERA; mgr E. SOCZKIEWICZ — co-worker), Quantum Acoustics (head: doc. A. OPILSKI) and Solid State Acoustics (head: doc. Z. KLESZCZEWSKI) were created.

c) "Acoustics. Passive and Active Ultrasound Applications" Start of the first, 5-year research program PAN-20, worked out by Acoustics Committee and coordinated by IFTR PAS, prof. J. KACPROWSKI.

#### 1972

a) The first Winter School "Molecular and Quantum Acoustics and Sonochemistry" organized in Zakopane by Institute of Physics, Silesian Technical University (head: prof. A. OPILSKI) and PTA. The conferences are held annually in Jaszowiec or Wisła [7]. Since 1979, annals, containing materials of the conferences, have been published by IFTR PAS [59].

b) Local circle Acoustics and Spectroscopy Lab. at Gdańsk University was created (head: dr J. Sułocki).

c) Publication of bibliographical index of papers on acoustics by Polish authors, for 1966–1971. The previous index covered years 1945–1965 [8].

d) The first, one-year, post-graduate course "Design of Noise Protection in Construction" organized in Institute of Construction Technology for employers of Design Bureau, Architecture Depts., Construction Supervision etc. (Head: prof. J. SADOWSKI). Subsequent courses took place in 1973, 1974 [9].

#### 1973

a) The 2nd Congress of Polish Science. A synthetic report "Current condition and perspectives of development of scientific research on acoustics in Poland since 1985" prepared, based on 18 partial reports submitted by the acousticians community in Poland. The report includes Polish acoustic research centres, scope of their research and staff [10].

b) Start of publication of an English language quarterly "Archives of Acoustics". Chief editor: prof. S. CZARNECKI, then prof. I. MALECKI: 1983–1987 and doc. E. DANICKI: 1987.

c) The first Winter School "Noise and Vibroacoustic Hazard Control" organized in Jaszowiec by Institute of Physics, Silesian Technical University (head: prof. A. OPILSKI) and Upper-Silesian Branch of PTA. The school is annual.

d) Creation of Local Research Laboratory of Noise and Vibration head: doc. J. ZALEWSKI at Institute of Telecommunication and Acoustics Wrocław Technical University.

#### 1974

a) Creation of Institute of Mechanics and Vibroacoustics at Academy of Mining and Metallurgy in Kraków (head: prof. Z. Engel, team: doc. J. ADAMCZYK, doc. S. BEDNACZ, prof. J. GIERGIEL, doc. dr S. KASPRZYK, prof. K. TOMASZEWSKI, prof. M. ZABAWA. In 1976 specialization in Machine Vibro-acoustics was started.

b) Prof. L. FILIPCZYŃSKI elected member of ICA for two terms till 1980 [11].

c) Start of publication of Scientific Transactions of the Research Centre of Radio and Television. The publication ceased in mid-eighties. Transactions comprised of papers on acoustics, electronics and electric circuit theory scientific editor: prof. S. MISZCZAK.

#### 1975

Prof. L. FILIPCZYŃSKI elected vice-president of European Federation of Ultrasound in Medicine and Biology, for the term until 1979.

## 1976

a) "Acoustic Methods in Technology and Medicine". Start of research programme MR-I-24 for 1976–1980, worked out by Acoustics Committee and coordinated by prof. J. RANACHOWSKI (IFTR PAS).

b) "Noise control" conference in Warsaw organized by prof. S. CZARNECKI. Subsequent conferences were held in 1979, 1982, 1985 and 1988, under auspices of International Control Institute and were organized by prof. Z. ENGEL.

c) Organization of Polish Symposium on Vibration, Technology and Vibroacoustics in Kraków by prof. Z. ENGEL. Subsequent Symposia took place regularly in 1979, 1982, 1984, 1987. [12, 61, 62]

d) The first conference "Applications in Electronics and Electrical Engineering" took place in Jabłonna, organized by prof. J. RANACHOWSKI [13, 14, 15]. Subsequent conferences were held annually. In 1980 the conference was called "Electric and Acoustic Methods of Inspection of Materials, Biological Structures and Mechanical Systems" [16, 17, 18].

The conferences are also a meeting-place for Polish acousticians and permit overview of annual achievements of CPBP 02.03 research programme "Acoustics in Technology, Medicine and Culture" [19].

e) "Environment protection against noise in Poland". Report prepared by Institute of Construction Technology and Institute of Environment Formation head: prof. J. SADOWSKI for European Committee [20, 21, 22].

## 1978

a) FASE 78. The second International Congress of FASE in Warsaw (president — prof. S. CZARNECKI), organized by IFTR PAS under auspices of Acoustic Committee PAS and Polish Acoustical Society (PTA). The Congress was opened by a report by prof. I. MALECKI on quantum acoustics. During the congress, a meeting of FASE Council was held. Prof. F. FRANÇOIS (France) was elected new president, prof. MALECKI (Poland) — new vice-president and prof. F. KOLMER (Tchechoslovakia) — chancellor, all of them for the term 1979–1982 [23, 24].

b) The first Polish-French "Ultrasound colloque" organized in Paris by Ecole Pratique des Hautes Etudes, Groupement des Acousticiens de Langue Francaise and Polish Academy of Sciences [25, 26]. Subsequent colloques took place in Jabłonna and Paris, alternatively 1982, 1984, 1987, 1989 and were organized in cooperation with Acoustics Committee PAS and PTA [27, 28]. For the French part, the colloque was organized by prof. L. PIMONOV.

c) "Research on development of ultrasound methods and apparatus for medical diagnostics". State Prize of the 2nd degree for the team of prof. L. FILIPCZYŃSKI, dr J. ETIENNE, dr J. KOPEĆ, dr G. ŁYPACEWICZ, dr A. NOWICKI, dr T. POWAŁOWSKI.

d) Musical Acoustics Laboratory of State College of Music in Gdańsk later: St. Moniuszko Academy of Music, Dept. of Composition and Music Theory was



transformed into Section of Musical Acoustics, headed by doc. G. BUDZYŃSKI. The section organized courses on: Fundamentals of Acoustics and Electroacoustics, Technology of Experimental Music. Since 1981 the section has been headed by dr J. REGENT.

#### 1980

The first Spring School "Acoustooptics and Applications" with foreign participants, organized by Institute of Experimental Physics, Gdańsk University head: prof. A. ŚLIWIŃSKI in cooperation with PTA and IFTR PAS. Subsequent schools were held in 1983, 1986, 1989 [29–35].

#### 1981

"Acoustics in Technology and Medicine". Start of research MR-I-24 worked ot by Acoustics Committee and coordinated by prof. J. RANACHOWSKI, IFTR PAS.

b) Prof. A. ŚLIWIŃSKI elected a member of ICA, for two terms until 1987.

c) Prof. Z. JAGODZIŃSKI elected the president of Polish Acoustics Society. He held the position until 1987. [1]

#### 1982

a) Jubilee of 70th anniversary of prof. I. MALECKI, nestor of Polish acoustics [36, 37].

b) Prof. I. MALECKI elected honorary member of FASE.

c) Institute, and since 1986 Research Centre of Health and Work Environment Protection in Mining, was created, headed by doc. A. LIPOWCZAN. The institute consisted of two departments. Research in Health Protection Dept. included vibration decrease diagnostics. In Dept. of Technical Acoustics, design of apparatus for vibroacoustic diagnostics of mining machinery, in particular: design of vibration transducers and corresponding instrumentation, was started.

d) "Psychoacoustics of Music". International Summer School organized in Jabłonna by Acoustic Committee PAS and F. Chopin Academy of Music in Warsaw head: prof. A. RAKOWSKI.

#### 1984

a) "Noise and Vibration Hazard in Poland". An expertise prepared by a team of Acoustics Committee PAS, lead by prof. Z. ENGEL. The expertise was a matter of

dispute at the State Council for Environment Protection and met some response in plans of environment protection [38].

b) "Hydroacoustics". The first symposium organized in Jastrzębia Góra by the Naval Military Academy, Hydroacoustics Dept. of Gdańsk Technical University and Polish Acoustical Society PTA. Subsequent symposia are organized annually at the coast [39–41].

c) "Development of methods and systems for speech analysis and recognition". State Prize of the second degree for the team: prof. W. JASSEM, prof. J. KACPROWSKI, doc. P. Łobacz, doc. dr med. W. TŁUCHOWSKI, dr R. GUBRYNOWICZ, dr H. KUBZDELA, mgr W. MIKIEL for 1971–1982 [42].

#### 1985

a) "First Symposium on Sound Engineering" organized by doc. M. SANKIEWICZ of Dept. of Sound Engineering, Institute of Telecommunications, Gdańsk Technical University (head: doc. G. BUDZYŃSKI) [43]. Subsequent symposia were held biannually: 1987 in Warsaw organized by Dept. of Sound Direction (head: doc. H. CIOLKOSZ and Dept. of Musical Acoustics (head: prof. A. Rakowski, F. Chopin Academy of Music [44]). 1989 in Kraków organized by Institute of Mechanics and Vibroacoustics, Academy of Mining and Metallurgy and Acoustics Committee PAS; organizer: J. ADAMCZYK [45].

b) Department of Acoustics, A. Mickiewicz University, Poznań, transformed into Institute of Acoustics (headed: doc. E. Ozimek).

c) Change of organization structure of Institute of Telecommunications and Acoustics, Wrocław Technical University (head: prof. W. MAJEWSKI and Dept. of Acoustics (head: doc. J. RENOWSKI) were created; Local Noise and Vibration Research Laboratory (head: doc. J. ZALEWSKI) continued its former research.

#### 1986

a) Third Congress of Polish Science. Papers prepared, published in "Archiwum Akustyki" summarize an almost two-year discussion about most recent problems of acoustics development and specify forecast for Polish acoustics up to 2000 [46]. The declaration and Resolution of the Congress considering preferences in acoustics development and a list of Polish research plants doing in acoustics, their staff and programmes of research were published in "Archiwum Akustyki" as well [47].

b) Research programme CPBP 02.03 "Acoustics in Technology, Medicine and Culture". Its Applications in Device and Process Design, proposed for 1986–1990 by Acoustics Committee, was started, coordinated by prof. J. RANACHOWSKI (IFTR PAS).

c) First Winter School on Acoustic Intensometry in Karpacz 88 organized by Wrocław Branch of PTA and Institute of Telecommunications and Acoustics, Wrocław Technical University (head: dr H. IZOLCZUK). The Second School took place in 1988 in Karpacz. The school is held biannually.

d) Signing of 3-year research cooperation agreement between PTA Polish Acoustics Society and La Société Française d'Acoustique; default prolongation by subsequent 3-year period.

e) End of publication of "Archiwum Akustyki". Polish quarterly started in 1966. English language edition: "Archives of Acoustics" continued since 1987 chief editor is doc. E. DANICKI.

f) The third sub-programme "Environment Protection against Noise and Vibration" head: prof. J. SADOWSKI of the research programme CPBR II.4 was started.

g) The second sub-programme "Survey, estimation and reduction of noise and vibration hazards" of the research programme CPBR 11.1 "Human protection in work environment" was started coordinator Central Institute of Work Protection. Its aim is design of machines and tools with reduced noise and vibration level and methods of noise and vibration measurement as well as valuation of relevant national standards and guidelines for designers.

#### 1987

"Prospects in Modern Acoustics Education and Development" International ICA-IUPAP Conference in Jastrzębia Góra organized by prof. A. ŚLIWIŃSKI.

b) "Acoustic Emission Method in Science and Technology". International school organized under auspices of CISM Int. Centre of Mechanical Science in Jabłonna by prof. I. MAŁECKI and prof. J. RANACHOWSKI.

c) Prof. A. ŚLIWIŃSKI elected the president of PTA

#### 1988

a) The first map of Poland showing noise pollution in 1986 was made by the team of prof. J. SADOWSKI.

b) "Protection Against Noise and Vibration" Report prepared by experts of Acoustics Committee PAS, Institute of Construction Technology, Institute of Environment Protection, Institute of Mechanics and Vibroacoustics, and Noise Control League for Dept. of Environment and Natural Resources Protection, as a part of natural resources programme till 2010, head of the team: prof. J. SADOWSKI.

#### 1989

First Symposium on Electroacoustics organized in February 1989 in Czarniejew near Poznań by the Institute of Acoustics of the Adam Mickiewicz University in Poznań in cooperation with ZWG "TONSIL" in Września.

## Supplement to the period before 1989

1938

Witold JANKOWSKI, MDr, graduate of Faculty of Medicine, Lwów University published a paper "Powikłania wewnątrzczaszkowe zapalenia ucha środkowego", Pol. Gaz. Lek., 17, 25, 519–524 (1938) [57].

1946

a) After emigration from Lwów to Zabrze in 1950, doc. dr med. T. CEYPEK graduate of Faculty of Medicine, Lwów University, organized and led Otolaryngology Dept. and Clinic at Silesian Medical Academy, Zabrze.

b) Doc dr med. W. JANKOWSKI arrived in Wrocław and organized Otolaryngology Clinics.

1951

Prof. B. ZAPIÓR started research in sonochemistry at Dept. of General Chemistry Jagiellonian University, Kraków. In 1961 the team was joined by dr A. JUSZKIEWICZ, who led the team after retirement of prof. B. ZAPIÓR since 1978.

1953

a) Mgr Z. KACZKOWSKI started research on magnetostrictive materials in Magnetic Materials Laboratory, Dept. of Electronics, IFTR PAS head: prof. J. GROSZKOWSKI.

b) Prof. T. CEYPEK commenced research in industrial audiology, and especially an injuries inmining and metallurgy, and cooperated with other Polish research centres.

c) Prof. W. JANKOWSKI became head of Dept. and Clinic of Otolaryngology, continued cooperation with other acoustic research centres in Poland.

1956

a) W. JASSEM, Ph.D., English philology, head of Phonography Dept. Poznań University, started work for IFTR PAS by organizing in Poznań Acoustic Phonetics Laboratory.



b) Mgr R. PŁOWIEC, Dept. of Vibration Research IFTR PAS, started research on problems of ultrasound measurement.

1965

[1]. Prof. H. RYFFERT elected the president of PTA. She held the position till 1981

1966

Institute of Electron Technology PAS was created. In 1966–1967 doc. Z. KACZKOWSKI was organizing Piezomagnetism Laboratory at Dept. of Piezoelectronics.

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