

C H R O N I C L E

**International Symposium on Hydroacoustics and Ultrasonics,
12-16 May 1997, Jurata**

The International Symposium on Hydroacoustics and Ultrasonics was organized by the Underwater Acoustics Department of the Naval Academy in Gdynia and the Acoustics Department of the Technical University of Gdańsk as an EAA Symposium (formerly 13th FASE Symposium). It was held under the scheme of celebrating the Millennium of the City of Gdańsk (997-1997). The Symposium has evolved from domestic Symposia on Hydroacoustics that have been held annually since 1984.

The following well known scientists have accepted an invitation to be a member of the Scientific Committee of the Symposium:

Chairman: Prof. IGNACY MALECKI - Poland

Prof. Leif Bjorno - Denmark, Prof. Mack A. Breazeale - USA, Prof. Giovanni Bosco Cannelli - Italy, Dr Robert Chivers - U.K., Prof. Bengt Enflo - Sweden, Prof. Leszek Filipczyński - Poland, Prof. Juan Antonio Gallego-Juarez - Spain, Prof. Halvor Hobaek - Norway, Prof. Zenon Jagodziński - Poland, Prof. Hugh Jones - Canada, Prof. Eugeniusz Kozaczka - Poland, Prof. Werner Lauterborn - Germany, Prof. John S. Papadakis - Greece, Prof. Jerzy Ranachowski - Poland, Prof. Roman Salamon - Poland, Dr. Jean-Pierre Sessarego - France, Prof. Andrzej Stepnowski - Poland, Prof. Alexander Sutin - Russia, Prof. Antoni Śliwiński - Poland, Prof. Jan Thoen - Belgium.

All participants were accommodated in the same holiday centre in Jurata where the symposium took place. This gave the opportunity for further discussion of scientific problems. The programme consisted of 8 invited papers and 54 contributed ones. The invited papers were as follows:

C. BJERRUM-NIESE - Denmark — Simulated performance of an acoustic modem in a multipath channel,

Prof. M.A. BREAZEALE - USA — Overview of the development of nonlinear acoustics,

Dr. P.A. JOHNSON - USA — Earth solids and dynamic nonlinear elasticity,

Prof. E. KOZACZKA - Poland — Fifty years of Polish Hydroacoustics,

Dr. K. KREMER - Germany — Advanced underwater technology with emphasis on acoustic modeling and systems,

Prof. L.M. LYAMSHEV – Russia — Fractals in underwater acoustics,

Prof. A. STEPNOWSKI – Poland — Analysis of fish target strength estimation methods,

Prof. B. WOODWARD – UK — Progress in developing sonar systems for sea bed surveys.

The presented papers covered the following topics: nonlinear acoustics, scattering, sea bed surveying, ship noise and cavitation, signal processing and imaging, fisheries acoustics, sonar systems, sound propagation and modelling, underwater communication, ultrasonics and biomedical diagnostics. Apart from oral presentations a poster session on Ultrasonics was organized. The symposium was attended by 80 participants from 12 countries. The working language for the symposium was English.

The Opening Ceremony included both an introduction by the Chairman of the Board of the EAA Prof. JENS BLAUERT and a letter from the President of FASE Dr ROBERT CHIVERS which marked the continuity between these two organisations.

Apart from the technical programme the social events were organized every day. They started with an ice breaking party. An excursion to Gdańsk was organized on the second day of the symposium. After the cruise to Gdańsk by a sailing ship the participants saw the Old City of Gdańsk, were welcomed by the President of the Programming Council of the Gdańsk Millennium Committee at the Town Hall in Gdańsk and listened to the organ concert in the cathedral in Oliwa. A bonfire and a banquet were included in the social programme too.

The next Symposium on Hydroacoustics will take place in Jurata in May 1998.

XLIV Open Seminar on Acoustics,**Jastrzębia Góra, 15–18.09.1997**

XLIV Open Seminar on Acoustics was organized under the sponsorship of the Gdańsk Division of the Polish Acoustical Society. The Seminar was organized by the scientists from the following institutions: Naval Academy (Akademia Marynarki Wojennej), University of Gdańsk (Uniwersytet Gdański), Technical University of Gdańsk (Politechnika Gdańska) and Musical Academy in Gdańsk (Akademia Muzyczna w Gdańsku). 183 participants took part in the event, including 4 guests from abroad. Two volumes of the proceedings contain 110 papers: 7 invited and 103 contributed. During the Seminar 106 papers were presented in 3 parallel sessions. The invited papers were as follows:

Prof. JENS BLAUERT (Germany, Ruhr-Universität Bochum): Product-Sound Quality: A New Aspect of Machinery Noise,

Prof. LEIF BJØRNØ (Denmark, Technical University of Denmark): Sources of ambient noise in shallow waters,

Prof. ANDRZEJ DOBRUCKI (Politechnika Wrocławska – Technical University of Wrocław): Technological progress and electroacoustic transducers,

Dr GRAŻYNA GRELOWSKA (Akademia Marynarki Wojennej – Naval Academy): Nearfield of high intensity wave sources,

Prof. ADAM LIPOWCZAN (Główny Instytut Górnictwa – Main Institute of Mining): Advisory system to assist localization decisions of road investments regarding sustainable development of the region,

Prof. ANDRZEJ RAKOWSKI (Akademia Muzyczna w Warszawie – Musical Academy in Warsaw): Pitch and pitch scale in music,

Prof. ROMAN SALAMON (Politechnika Gdańska – Technical University of Gdańsk): Detection and positioning of targets in passive sonars.

Other papers were divided into the following sections: Architectural Acoustics (2), Physical Acoustics (9), Medical Acoustics (7), Molecular Acoustics (4), Technical Acoustics (7), Electroacoustics (12), Photoacoustics (4), Noise Control (13), Hydroacoustics (11), Psychoacoustics (10) and Vibroacoustics (5).

The Scientific Committee of the Seminar was composed of the following well known Polish acousticians:

Prof. ANTONI ŚLIWIŃSKI – chairman

Doc. Danuta Augustyńska, Doc. Gustaw Budzyński, Prof. Zbigniew Engel, Prof. Stefan Ernst, Prof. Leszek Filipczyński, Prof. Edward Hojan, Prof. Zenon Jagodziński, Prof. Zbigniew Kaczkowski, Prof. Adam Lipowczan, Prof. Mikołaj Łabowski, Prof. Wojciech Majewski, Prof. Ignacy Malecki, Prof. Andrzej Milewski, Prof. Andrzej Nowicki,

Prof. Aleksander Opilski, Prof. Andrzej Rakowski, Prof. Jerzy Ranachowski, Doc. Jerzy Regent, Prof. Witold Rdzanek, Prof. Jerzy Sadowski, Doc. Marianna Sankiewicz, Prof. Roman Salamon, Prof. Andrzej Stepnowski, Prof. Zbigniew Wesolowski.

A few social events such as a bonfire, a banquet or an excursion were added to the interesting technical programme to enrich the programme of the conference.

The next Open Seminar on Acoustics will be organized by the Poznań Division of the Polish Acoustical Society in Kiekrz in September 1998.

Calendar of Meetings and Congresses

Compiled for the International Commission on Acoustics – May 1997

1997

- 03–05 June, Gothenburg, Sweden. **8th International Meeting on Low Frequency Noise and Vibration.**
- 04–06 June, Terni (Umbria), Italy. **International Conference on Computational Acoustics and its Environmental Applications.**
- 05–07 June, Bath, United Kingdom. **Conference on ICP and Inner Ear Pressure.**
- 15–17 June, State College, PA, USA. **NOISE-CON 97.**
- 15–20 June, Boulder, CO, USA. **8th International Symposium on Nondestructive Characterization of Materials.**
- 16–20 June, State College, PA, USA. **133rd Meeting of the Acoustical Society of America.**
- 18–20 June, Marseille, France. **Larynx 97.**
- 18–21 June, Prague, Czech Republic. **3rd European Conference on Audiology.**
- 24–27 June, Prague, Czech Republic. **1st European Conference on Signal Analysis and Prediction.**
- 25–27 June, Rotterdam, The Netherlands. **12th Symposium on Echocardiology and 9th Meeting of the International Cardiac Doppler Society.**
- 25–27 June, Porto, Portugal. **5th International Congress of the International Society of Applied Psycholinguistics.**
- 25–27 June, Kraków, Poland. **7th Symposium on Sound Engineering.**
- 02–04 July, Delft, The Netherlands. **Ultrasonics International '97.**
- 14–17 July, Southampton, United Kingdom. **6th International Conference on Recent Advances in Structural Dynamics.**
- 20–23 July, Toronto, Canada. **Conference on Transportation Related Noise and Vibration.**
- 21–25 July, Chilworth Manor, Hampshire, United Kingdom. **4th International Conference on Natural Physical Processes Related to Sea Surface Sound.**
- 01–05 August, Nottingham, UK. **11th International Symposium on Hearing.**

- 14–18 August, Newark, NJ, USA. **3rd International Conference on Theoretical and Computational Acoustics.**
- 16–19 August, Poznań, Poland. **Fechner Day'97: 13th Meeting of the International Society for Psychophysics (ISP).**
- 18–22 August, Stockholm, Sweden. **3rd EUROMECH Solid Mechanics Conference.**
- 19–22 August, Edinburgh, Scotland. **International Symposium on Musical Acoustics.**
- 21–23 August, Budapest, Hungary. **International Symposium on Active Control of Sound and Vibration (Active 97).**
- 24–27 August, Yokohama, Japan. **World Congress on Ultrasonics.**
- 25–27 August, Budapest, Hungary. **Inter-Noise 97.**
- 29–31 August, Regensburg, Germany. **Pan-European Voice Conference.**
- 01–04 September, Tokyo, Japan. **Modal Analysis Conference – IMAC-XV Japan.**
- 09–12 September, High Tatra, Slovakia. **31st International Acoustical Conference "Acoustics 97".**
- 10–12 September, Christchurch, New Zealand. **New Zealand Acoustical Society Biennial Conference.**
- 10–12 September, Stuttgart, Germany. **Biomechanics of Hearing.**
- 10–12 September, Cardiff, UK. **British Society of Audiology Annual Conference.**
- 12–13 September, Chicago, IL, USA. **Symposium on Sonoluminescence.**
- 15–18 September, Göttingen, Germany. **3rd Fluid Mechanics Conference.**
- 16–19 September, Jastrzębia Góra, Poland. **44th Open Seminar on Acoustics.**
- 17–19 September, Hokkaido, Japan. **Autumn Meeting of the Acoustical Society of Japan.**
- 18–19 September, Guanajuato, Mexico. **4th Mexican Congress on Acoustics.**
- 18–20 September, Athens, Greece. **Intonation: Theory, Models and Applications.**
- 21–23 September, Cape Cod, MA, USA. **Product Sound Quality 1997.**
- 22–24 September, Bethesda, MD, USA. **2nd Biennial Hearing Aid Research and Development Conference.**
- 22–25 September, Patras, Greece. **5th European Conference on Speech Communication and Technology (Eurospeech'97).**
- 23–26 September, Delft, The Netherlands. **Fluid-structure interaction in acoustics.**
- 27–28 September, Rhodes, Greece. **Audio-Visual Speech Processing.**
- 07–10 October, Toronto, Canada. **1997 IEEE Ultrasonics Symposium.**
- 08–10 October, Windsor, Ont. Canada. **Acoustics Week in Canada 1997.**

- 23–26 October, Windermere, United Kingdom. **Reproduced Sound 13.**
- 30–31 October, Bern, Switzerland. **Swiss Acoustical Society Meeting.**
- 19–21 November, Hong Kong. **WESTPRAC '97.**
- 27–30 November, Windermere, United Kingdom, **Autum Conference: Environmental Noise.**
- 01–05 December, San Diego, CA, USA. 134th Meeting of the Acoustical Society of America.
- 15–18 December, Adelaide, Australia. **5th International Congress on Sound and Vibration.**

1998

- 02–06 February, Moscow, Russia. **Ultrasonic Technological Processes - 98.**
(Secretariat UsTP-98, 64 Leningradski prosp., MADI-TU, Moscow, Russia.
Fax: + 7 095 151 7911; e-mail: utp@madi.msk.su)
- 23–27 March, Zurich, Switzerland. **DAGA 98.**
- 05–09 April, Ypsilanti, MI, USA. **NOISE-CON 98.**
(INCE, P.O. Box 3206, Arlington Branch, Poughkeepsie, NY 12603, USA;
Fax: +1 914 462 4006; e-mail: inceusa@aol.com)
- 12–15 May, Seattle, WA, USA. **1998 IEEE International Conference on Acoustics, Speech and Signal Processing.**
- 18–22 May, Gdańsk, Poland. **7th Spring School on Acoustooptics and Applications.**
(B. Linde, Institute of Experimental Physics, University of Gdańsk,
ul. Wita Stwosza 57, 80-952 Gdańsk, Poland;
Fax: + 48 58 41 31 75; e-mail: school@univ.gda.pl)
- 20–27 May, Naples, Italy. **Noise and Planning 98.**
- 08–10 June, Tallin, Estonia. **EAA/EEAA Symposium Transport Noise and Vibration.**
- 09–12 June, Umeå, Sweden. **8th Internatioinal Conference on Hand-Arm Vibration.**
(National Institute for Working Life, Conference Secretariat HAV98,
P.O.Box 7654. 90713 Umeå, Sweden;
Fax: + 46 90 16 50 27; e-mail: hav98@niwl.se)
- 20–28 June, Seattle, WA, USA. **Joint Meeting: 16th International Congress on Acoustics (ICA) and 135th Meeting of the Acoustical Society of America.**
- 21–26 June, Gainesville, FL, USA. **13th U.S. National Congress of Theoretical & Applied Mechanics.**

16–18 September, Leuven, Belgium. **International Conference on Noise and Vibration Engineering.**

(Ms. L. Notré, K.U. Leuven, Division PMA,

Celestijnenlaan 300B, 3001 Leuven. Belgium;

Fax: + 32 16 32 29 87; e-mail: lieve.notre@mech.kuleuven.ac.be;

Web: <http://www.mech.kuleuven.ac.be/pma/events/isma/isma.html>)

12–16 October, Norfolk, VA, USA. **136th Meeting of the Acoustical Society of America.**

16–18 November, Christchurch, New Zealand. **Inter-Noise 98.**

22–26 November, Sydney, Australia. **Biological Effects of Noise (ICBEN 98.)**

30 November – 04 December, Sydney, Australia. **5th International Conference on Spoken Language Processing.**

(Tour Hosts, GPO Box 128, Sydney NSW 2001, Australia;

Fax: + 61 2 9262 3135; e-mail: tourhosts@tourhosts.com.au;

Web: <http://cslab.anu.edu.au/icslp98>)

1999

5–9 March, Berlin, Germany. **Forum Acusticum and 137th Meeting of the Acoustical Society of America.**

01–05 November, Columbus, OH, USA. **138th Meeting of the Acoustical Society of America.**

OSA 97

Lectures presented during the Seminar divided into section:

Invited lectures

- L. Bjorno, Sources of ambient noise in shallow waters,
- J. Blauert, Product-Sound Quality: A New Aspect of Machinery Noise,
- A. Dobrucki, Technological progress and electro-acoustic transducers,
- G. Grelowska, Nearfield of high intensity wave sources,
- J. Kompala, I. Kubik, A. Lipowczan, Advisory system to assist localization decisions of road investments regarding sustainable development of the region,
- A. Rakowski, Pitch and pitch scale in music,
- R. Salamon, Detection and positioning of targets in passive sonars.

Acoustics of architecture

- R. Bolejko, H. Idczak, Numerical model of acoustic plane wave scattering from surface irregularities and irregularities in surface acoustic admittance,
- A. Flaga, G. Kubinyi, Acoustic analysis of a church with a crystal ceiling using a ray tracing technique,

Physical acoustics

- A. Baranowska, Finite amplitude wave shape for different pressure distributions on an axial-symmetric source,
- A. Brański, The different degrees multi-elements models of the acoustical source,
- H. Czyż, Spatial distribution of the aerosol particles around the equilibrium points in the standing wave field,
- J. Etienne, L. Filipczyński, T. Kujawska, B. Zienkiewicz, Measurements of shock waves by means of the electromagnetic hydrophone,
- Z. Kaczkowski, Piezomagnetic parameters,
- Z. Kaczkowski, E. Milewska, M. Muller, Ultrasound velocities in $\text{Fe}_{86}\text{Zr}_7\text{B}_6\text{Cu}_1$ metallic glass,
- K. Opieliński, The influence of measurement errors on the ultrasound tomographic imaging,
- J. Rzeszotarska, F. Rejmund, Acoustic emission of the Briggs-Rauscher oscillatory reaction: Effect of stirring,
- T. Zamorski, Propagation of sound waves of finite amplitude in a horn at frequencies below the cut-off frequency,

Medical acoustics

J. Cieniawa, H. Gawda, In vitro comparison of acoustic and mechanical characteristics of gallstones,

A. Czyżewski, A. Kaczmarek, Investigation of fluency disorders based on vocal tract parameter analysis,

A. Dobrucki, K. Pres, P. Pruchnicki, The influence of the mechanical vibration on isolated skull bones,

H. Gawda, Hydrocortisone induced changes of acoustical parameters of long bones – the animal model,

K. Kycia, G. Łypacewicz, A. Nowicki, Ultrasonic composite probes for medical diagnostics,

W. Lis, J. Zienkiewicz, The wavelet transform analysis of the temporomandibular joint acoustic emission,

A. Lorens, A. Czyżewski, H. Skarżyński, A. Szady, B. Kostek, R. Królikowski, Multimedia catalog of hearing impairments,

W. Michalski, L. Pośpiech, W. Dziewiszek, M. Bochnia, Amplitude-phase distribution pattern of cochlear microphonics at guinea pigs,

T. Powalowski, L. Hilgertner, Z. Trawiński, Noninvasive ultrasonic examination of the input vascular impedance in the common carotid artery for persons with the atherosclerotic changes in the internal carotid artery,

K. Wojtowicz, H. Gawda, W.I. Gruszecki, Ultrasound absorption study on organization of amphotericin B in lecithin membranes.

Acoustics of speech

Cz. Basztura, P. Staroniewicz, The diphones statistics of English and Polish speech with relationships to ASR,

K. Baściuk, Speech enhancement by the spectral subtraction method – theoretical model,

K. Baściuk, Speech enhancement by the spectral subtraction method – practical implementation,

S. Brachmański, K. Baściuk, W. Majewski, W. Myślecki, A relation between the logatom intelligibility measured by means of classical and forced choice method in delta CVSD telecommunication channels,

S. Brachmański, J. Żuk, Application of RASTI system for quality evaluation of Polish speech transmission in analog communication system,

A. Olaczek, S. Brachmański, An objective measure for quality evaluation of speech coding,

R. Pazuchin, Floating formants and invariance in speech signal,

T. Przeorek, E. Łukasik, Sound signals coding using wavelet transform,

P. Staroniewicz, P. Lisiak, The structure of hybrid ANN/HMM system of short utterances recognition for Polish language,

Musical acoustics

- J. Fyk, A. Rakowski, I. Kiula, Intonation zones of melodic intervals played on the violin with piano accompaniment and without it,
M. Kaczmarek, C. Szmal, R. Tomczyk, Application of samplers and processors for sound spectrum shaping,
B. Kostek, Analysis of subjective testing results by means of intelligent decision algorithms,
J. Regent, Influence of the environment on the human voice intonation,
M. Szczerba, Fundamental frequency tracking methods applicable for wind instrument sounds,
G. Szwoch, S.K. Zieliński, The influence of the upper lip offset on the spectrum of the sound in the digital waveguide model of the organ flue pipe,
A. Wieczorkowska, Evaluation of usefulness of musical instrument sound parameters for the need of automatic classification,

Molecular acoustics

- B. Linde, E. Rosenfeld, A. Christ, Acoustical investigation of mixtures water and 1,3-dioxane,
S. Pogorzelski, A. Śliwiński, J. Szurkowski, An evaluation of the PAS signal in a water – oil layered system,
D. Samatowicz, Influence of organic covering on elastic properties of metals,
A. Sikorska, M. Grus, Photoacoustic investigation of the absorption edge in the CdS:Cu polycrystalline powder.

Technical acoustics

- T. Gudra, K. Opieliński, Sources of the measurement errors in the ultrasonic flowmeters applied to measurement of gas flow velocity,
A. Jarocho, M. Rabiega, Input sound power in determination of pseudo transmission loss in acoustical ducts,
A. Jarocho, M. Rabiega, Pseudo transmission loss in acoustical ducts – laboratory investigations,
R.A. Makowski, A method of seismic signal analysis,
A. Pawełek, A. Piątkowski, Z. Jasiński, A. Litwora, H. Paul, Dislocation mechanisms of acoustic emission in metal monocrystals subjected to channel-die compression,
S. Weyna, The new measurement techniques applied 'in-situ' in research of acoustics insulation properties of partitions,
E. Zielewicz-Madej, The influence of ultrasonic field on fatty acids production and phosphorus discharge in hydrolysis of sewage sludge,

Electroacoustics

- M. Baszun, L. Książek, J. Narkiewicz-Jodko, W. Roguski, Ultrasonic transducers array for application at industrial robots,

D. Czekał, Z. Surowiak, A.A. Bakirov, Properties of the piezoelectric thin PZT film sensors,

J. Dudek, Z. Surowiak, A.E. Punich, The creation of piezoelectric executive-command devices for automatically regulated systems,

M. Głowacki, I. Czarnecki, A multitone method of the transient intermodulation distortion measurement in power amplifiers,

A. Gołas, W. Ciesielka, Adaptive system for active noise attenuation in an enclosed room,

T. Hanzlik, A full-bridge power audio amplifier of class BD having low distortion,

A. Lisińska-Czekał, J. Dudek, Z. Surowiak, M.G. Aminodov, V.K. Dolia, Influence of the polarization process on stability of parameters of piezoelectric ceramics,

M. Niewiarowicz, H. Łopacz, Impulse characteristics of loudspeakers system,

P. Pruchnicki, The use of NARMAX method for dynamic loudspeaker modelling,

J. Stanclik, OpAmp macromodel for audio power amplifiers,

Z. Surowiak, R. Skulski, J. Dudek, The properties of the elektromechanical transducers on the basis of electrostrictive ceramic,

B. Żółtogórski, Optimizing of loudspeaker magnetic circuit dimensions,

Photoacoustics

M. Maliński, L. Bychto, Low frequency photoacoustic amplitude method of determination of the thermal parameters of solids and liquids,

Z. Suszyński, Photoacoustic diagnostic of the power transistors encapsulation,

Z. Suszyński, The optimisation of the fluid's thermal effusivity changes registration,

Z. Suszyński, Thermal wave visualisation of the semiconductor chip quality adhesion to the lead frame,

Noise

D. Augustyńska, Assessment of occupational risk resulting from exposure to noise,

B. Bogusz, The influence of the arrangement of the pressure equalization on the phase characteristic of pressure microphone,

A. Chyła, T. Wszolek, W. Wszolek, Proposal of choice criteria for airport noise monitoring systems by example of airport Kraków Balice,

Z. Engel, J. Piechowicz, The propositions of indices of the acoustic assessment of industrial halls,

Z. Engel, T. Wszolek, Discussion of the project of the standard Pr PN-N-01339 Noise. Method for the measurement and evaluation of audible noise from over-head transmission lines,

J. Figwer, Z. Ogonowski, The choice of disturbance transfer function in pole/zero placement for active noise control,

H. Idczak, A. Snakowska, Sound power of the sum of a random number of independent acoustical events,

W. Mikulski, Method to calculate SPL of noise emitted by industrial buildings taking into consideration the uneven distribution of SPL on the shop floor,

- M. Mirowska, Subjective and objective methods of noise assessment in dwellings,
D. Pleban, Indicatory acoustic assessment of machines,
J. Rak, M. Macko, G. Domek, Influence of geometrical shape on noise of toothed belt drives,
B. Rudno-Rudzińska, K. Rudno-Rudziński, Traffic noise level – measurements and calculations for different heights,
J. Żera, E. Kotarbińska, Danger signals for workplaces,

Hydroacoustics

- P. Bittner, Determination of the acoustics field of a vibrating ship's hull by means of the superposition method,
Z. Dolny, Synchronous detection methods for the measurement of small signals,
J. Gawrysiak, Analysis of active hydroacoustic systems range versus conditions of sound propagation,
I. Gloza, E. Kozaczka, Determination of transmission losses of low frequency waves in shallow water,
E. Kozaczka, A. Makar, Determination of the delay between underwater acoustic signals,
Z. Łubniewski, A. Stepnowski, Fractal dimension as a significant parameter in sea bottom typing,
J. Maciowska, A. Stepnowski, Fuzzy expert system for pelagic fish schools identification,
M. Moszyński, A. Stepnowski, Determining of transducer beam pattern PDF's,
A. Partyka, M. Moszyński, A. Stepnowski, Portable System for Bottom Typing and Mapping in Geographical Information System (GIS),
W. Pogribny, Z. Drzycimski, A. Milewski, I. Rozankowski, The processing of short time series for location opportunity,
A. Stepnowski, M. Moszyński, Newly developed indirect methods of solving inverse problem in fish target-strength estimation,

Psychoacoustics

- E. Aranowska, T. Rogala, The utility of Cluster Analysis in psychoacoustics,
A. Czyżewski, H. Skarżyński, B. Kostek, Z. Furman, A. Lorens, R. Królikowski, Preprocessing of audio signals in cochlear implants,
A. Jaroszewski, T. Fidecki, P. Rogowski, Hearing loss and its effects on pitch and loudness perception,
A. Jaroszewski, T. Fidecki, P. Rogowski, Exposures and thresholds in music students due to training sessions,
U. Jorasz, Modeling of auditory perception,
M.J. Kin, Perception of mixed modulation in harmonic complex for low modulating frequencies,
M. J. Kin, J. Renowski, Pitch perception of frequency-modulated tones,

R. Królikowski, Application of intelligent decision systems to the method of perceptual noise reduction,

A. Sęk, E. Skrodzka, Masking in the modulation domain. Modulation tuning curves,
A. Wicher, E. Ozimek, Pitch perception for beating sinusoids,

Vibroacoustics

J. Cieślik, Distribution of surface structure intensity along the beam with notch,

A. Gołas, P. Malcharek, R. Olszewski, Application FEM for analysis acoustical field in unlimited space,

A. Kobyłecki, Classification of vehicles based on ground vibration emitted during their motion,

L. Leniowska, Active attenuation of circular plate vibration by using LQR controller,

J. Wiciak, M. Iwaniec, R. Panuszka, Vibrational flow distribution of the parts of the car muffler.

Organizing Committee:

Prof. dr hab. eng. Eugeniusz Kozaczka – president,

Prof. dr hab. eng. Roman Salamon & dr Bogumił Linde – vice-chairmen,

Dr eng. Grażyna Grelowska – scientific secretary,

Dr eng. Jerzy Dobrzeński – organizing secretary,

Dr eng. Wiesław Kiciński – in charge of M. Kwiek competition,

Members – prof. dr hab. Andrzej Kulowski, Prof. dr hab. ing. Andrzej Stepnowski,
Doc. dr Jerzy Regent, Dr eng. Lech Kilian, Dr Danuta Lewandowska, Mgr Anna Baranowska, Mgr eng. Paulina Bittner, Mgr eng. Andrzej Partyka.