Seminar on
Ultrasound in Biomeasurements, Diagnostics and Therapy

2–5 September 1998, Warsaw

The International Seminar on Ultrasound in Biomeasurements, Diagnostics and Therapy was the third seminar organised in the period between 1992 and 1998 by the International Center of Biocybernetics (ICB) in Warsaw.

The presented papers covered the following topics: sonography, tissue characterization, signal processing, transducers, Doppler, physics of diagnostic ultrasound, and physics of high intensity ultrasound.

In the opening ceremony Prof. M. NAŁĘCZ, the Director of the International Center of Biocybernetics in Warsaw, welcomed the participants of the seminar describing shortly the organization of the ICB and the seminars on several subjects of biomedical engineering organized regularly.

Next Prof. A. NOWICKI, the Chairman of the Seminar welcomed the participants and opened the Seminar.

The following papers were presented during the Symposium:

W. JAKUBOWSKI (Warsaw, Poland), *The activity of Polish Ultrasound Society.*

M. THIJSSEN, A.P. BERKHOFF (Nijmegen, The Netherlands), *Ultrasonic imaging in aberrating media.*

K. BOM (Rotterdam, The Netherlands), *Aspects of intravascular imaging.*

K. BOM (Rotterdam, The Netherlands), *3D imaging: principles, limitations and results.*

K. CHIHARA (Nara, Japan), *Three-dimensional ultrasound imaging system.*

W. BICZ, Z. GUMIENNY, D. KOSZ, S. GOMULIŃSKI (Wrocław, Poland), *Ultrasonic equipment for fingerprint recognition applied to tomographical testing of materials and biological objects.*

E. SZYMAŃSKA, A. NOWICKI, K. MLOSEK, J. LITNIEWSKI, M. LEWANDOWSKI, W. SECOMSKI (Warszawa, Poland), *Skin imaging with high frequency ultrasound.*

J.M. THIJSSEN, H.J. HUISMAN (Nijmegen, The Netherlands), *In vivo ultrasonic tissue characterization of liver metastases.*

P. LAUGIER, G. BERGER (Paris, France), *Quantitative ultrasonic imaging of bone for the diagnosis of osteoporosis: fundamental and clinical aspects.*

J. LITNIEWSKI, A. NOWICKI (Warszawa, Poland), *Bones characterization with high and low frequency ultrasounds.*

M. SCHUBERT, O. LENKEIT, W. GRILL (Leipzig, Germany), *Volume imaging by three dimensional scanning acoustic microscopy.*

T. JĘDRZEJEWICZ (Mountain View, USA), *Ultrasound speckle.*

R. OLSZEWSKI, A. NOWICKI, J. ETIENNE, P. KARŁOWICZ, W. MARCINIAK, J. ADAMUS (Warsaw, Poland), *Echogen and harmonic imaging in assessment of left ventricular function.*

P.A. LEWIN (Philadelphia, USA), *Pulse shaping and deconvolution processing in ultrasound image optimization.*

M. MOSZYŃSKI (Gdańsk, Poland), *Wavelet techniques in fish target strength estimation.*

Z. ŁUBNIEWSKI, A. STEPNOWSKI (Gdańsk, Poland), *Fractal analysis in sea bottom identification and monitoring.*

W. LIS, R. SALAMON J. ZIENKIEWICZ (Gdańsk, Poland), *Application of processed acoustic emission data for investigation of the temporomandibular joint pathology.*

T. GUDRA, K. OPIELIŃSKI (Wrocław, Poland), *Some problems of ultrasonic transmission tomography.*

K.K. SHUNG, T. RITTER, P. LOPATH (University Park, USA), *Recent advances in ultrasonic transducer engineering.*

T. JĘDRZEJEWICZ (Mountain View, USA), *Broadband phased array transducer design with frequency- controlled two-dimensional capability.*

K. KYCIA, A. NOWICKI, G. ŁYPACEWICZ (Warszawa, Poland), *FEM modelling of composite transducers.*

G. GUIDI, C. LICCIARDELLO (Firenze, Italy), *Acoustic field mapping by means of Doppler detection.*

P. TORTOLI, F. CURRADI, E. MAIONE (Firenze, Italy), *Behaviour of contrast agents in high-intensity beams.*

T. POWAŁOWSKI, Z TRAWIŃSKI, L. BOROWSKA (Warszawa, Poland), *Non-invasive ultrasonic examination of the forward and reflected pressure wave in human arteries.*

P. TORTOLI, F. GUIDI, G. GUIDI, C. MENICUCCI, C. ATZENI (Firenze, Italy), *Real-time detection of velocity profiles in human arteries.*

J. IHNATOWICZ, Z. KALINA (Katowice, Poland), *The computer aided quantitative analysis of the colour flow mapped (CFM) ultrasound Doppler images.*

K. KAŁUŻYŃSKI, D. LIEPSCH, B. LEŚNIAK (Warszawa, Poland), *Laser and ultrasonic Doppler flow studies in carotid bifurcation models with irregular wall surface.*

L. HILGERTNER, T. POWAŁOWSKI, Z. TRAWIŃSKI (Warszawa, Poland), *Common carotid artery wall elasticity in patients with unilateral carotid occlusive disease.*

Z. TRAWIŃSKI, T. POWAŁOWSKI, L. HILGERTNER (Warszawa, Poland), *Influence of atherosclerosis risk factors on the common carotid artery wall elasticity.*

R. OLSZEWSKI, A. NOWICKI, J. ETIENNE, P. KARŁOWICZ, W. MARCINIAK, J. ADAMUS (Warszawa, Poland), *The value of TDI in the estimation of myocardial velocity gradients and early detection of thrombi.*

J. WÓJCIK (Warszawa, Poland), *A new theory of absorption for finite amplitude disturbances.*

L. FILIPCZYŃSKI, J. ETIENNE, T. KUJAWSKA, R. TYMKIEWICZ, J. WÓJCIK (Warszawa, Poland), *Measurements of linearity of a PVDF hydrophone for ultrasonic high pressures*

L. FILIPCZYŃSKI, J. ETIENNE, T. KUJAWSKA, R. TYMKIEWICZ, J. WÓJCIK (Warszawa, Poland), *Nonlinear effects of ultrasonic focused beams of high intensity measured by means of PVDF and electromagnetic hydrophones.*

J. WÓJCIK (Warszawa, Poland), *Numerical results of temperature elevations computed on the basis of a new absorption theory.*

A. KOCHAŃSKI, J. MEJNAROWICZ, A. LATOS-BIELEŃSKA, J. ETIENNE, L. FILIPCZYŃSKI (Poznań, Warszawa, Poland), *The damage of genomic DNA by shock waves generated by the lithotripter.*
G. GRELOWSKA, E. KOZACZKA (Gdynia, Poland), *Investigation of nonlinear focused acoustic fields.*

All speakers were accommodated in the at the ICB Hotel next to the Seminar place. This gave the opportunity for further afternoon and evening discussions and comments on scientific papers which number equalled to 37.

Apart from the technical programme several social; events like ice-breaking party, a concert and excursions to interesting Warsaw historical places were organized.

The chairmen of the Symposium Prof. Prof. L. FILIPCZYŃSKI, A. NOWICKI and P. TORTOLI hope to welcome all the researches, interested in the subjects presented during this meeting, in the next Seminar, which will be organized probably in the year 2001.