



**XXXII SYMPOSIUM  
ON HYDROACOUSTICS**

19-22 MAY 2015  
JURATA, POLAND

# **Symposium Program**

## Tuesday, May 19<sup>th</sup>

14.00

Lunch

15.00

Opening ceremony

15.30

### INVITED PAPER

**B. Nolte, A. Schäfke, I. Schäfer, J. Ehrlich, R. Burgschweiger**

**Numerical methods in underwater acoustics - sound propagation and backscattering**

16.20

M. Weryk

Underwater noise propagation of the NAVIGATOR XXI vessel

16.40

I. Gloza, K. Buszman

Multisensor aspects of marine observation

17.00

Coffee break

17.30

### INVITED PAPER

**I. Nissen**

**Burst communication - a solution for the underwater information management**

18.20

I. Kochańska

Adaptive identification of time-varying impulse response of underwater acoustic communication channel

18.40

J. Podhajecki

Estimation of layer thickness by the cost function optimization: phantom study

19.00

Supper

## Wednesday, May 20<sup>th</sup>

8.00

Breakfast

9.00

### INVITED PAPER

Z. Wesółowski

**Matematyczny opis fal w materiałach i konstrukcjach**

9.50

E. Kruglenko, B. Gambin

Relationship between thermal and ultrasound fields in breast tissue in vivo

10.10

M. Byra, B. Gambin

Temperature detection based on nonparametric statistics of ultrasound echoes

10.30

Coffee break

11.00

### INVITED PAPER

M. Moszyński

**Numerical solution of wave equation by nonstandard scheme**

11.50

J. Wojcik

Theoretical results and numerical study on the nonlinear reflection and transmission of plane sound waves

12.10

H. Lasota

Acoustic and electromagnetic time-domain fields in the vicinity of quasi-point sources

12.30

K. Czarnecki, W. Leśniak

The Synchrosqueezing method in the bearing estimation of stationary signals for a towed array passive sonar

12.50

Z. Song, H. Bian, A. Zielinski

Underwater terrain aided navigation based on acoustic imaging

13.10

M. Kulawiak, Z. Łubniewski

Reconstruction methods for 3D underwater objects using point cloud data

13.30	
Lunch	
15.00	
A. Chybicki, Ł. Markiewicz	Coastline monitoring using Sentinel-1 SAR data
15.20	
J. Demkowicz	Submerged objects modeling and storing in a global reference context using multiresolution spline technique
15.40	
K. Listewnik	Characteristics of underwater noise in traffic zone in the Gulf of Gdansk during the summer 2013
16.00	
K. Listewnik, J. Bielański	Comparison between measured and calculated underwater pressure of merchant ship
16.20	
I. Gloza, R. Józwiak, P. Pawlik, W. Batko	Analysis of the measuring uncertainty of the system determining the noise source direction in the aquatic environment
16.40	
Coffee break	
17.10	
W. Rachwalski ( <i>National Instruments</i> )	Using COTS hardware and flexible software for hydroacoustic systems
17.30	
B. Iwiński ( <i>Veritech</i> )	Trudne pomiary - na przykładzie systemu do pomiarów parametrów fizycznych środowiska podwodnego
17.50	
J. Prusak ( <i>Bruel &amp; Kjaer</i> )	Systemy do pomiarów hydroakustycznych firmy Bruel & Kjaer
18.10	
W. Paluch, B. Kukulski ( <i>EC TEST SYSTEMS</i> )	Prezentacja oferty handlowej EC Test Systems Sp. z o.o.
20.00	
Banquet	

**Thursday, May 21<sup>th</sup>**

8.00

Breakfast

9.00

Excursion

19.00

Supper

20.00

Sesja "Nowoczesne technologie w systemach wspomagania ochrony granicy morskiej"

<b>Friday, May 22<sup>th</sup></b>	
8.00	
Breakfast	
9.00	
A. Żak	Hydroacoustics signals modeling using Walsh Transform
9.20	
J. Schmidt	Reliable underwater communication system for shallow coastal waters
9.40	
Z. Ostrowski	Receiver of Doppler multistatic system for moving target detection and tracking
10.00	
Coffee break	
10.30	
K. Czarnecki, D. Dąbrowski	Usage of the Gstreamer framework for sonar software development
10.50	
A. Kurowski, P. Solarska, D. Dąbrowski, M. Loch	Implementation of chirp signal-based acoustic modem on the embedded platform
11.10	
D. Witos	Rozkład prędkości dźwięku w wodzie na przykładzie Morza Bałtyckiego
11.30	
Closing ceremony	
12.00	
Lunch	