

SIGNAL PROCESSING SYMPOSIUM, 28–30 MAY 2009 JACHRANKA, POLAND

May 27rd 2009 Wednesday	
18:00 - 20:00	REGISTRATION

May 28th 2009 Thursday	
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08:30 - 10:30	REGISTRATION
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10:30 - 11:50	SESSION A0 - OPENING SESSION Chairman: Krzysztof Kulpa, Maj Mordzonek	
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A0_1 (#080) Overview of Civilian Applications of Airborne SAR systems *Maciej Smolarczyk, Piotr Samczynski, Andrzej Gados, Maj Mordzonek*
A0_2 (#066) Doppler-Polarimetric Meteorological Radar Design Concept - *Felix Yanovsky, Yuliya Averyanova,*

11:50 - 12:10	COFFEE BREAK	
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12:10 - 13:30	SESSION A1 – PASSIVE RADARS Chairman: Joachim Schiller Jerzy Goca	SESSION B1 – SIGNAL PROCESSING I Chairman: Anna Dzvonnovskaya, Wojciech Komorniczak
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A1_1 (#061) Passive Bistatic Radar Analysis - *D. W. O'Hagan, H. Kushel, J. Shiller*
A1_2 (#040) Bistatic Passive Radar Simulator with spatial filtering subsystem - *Robert Hossa, Bogusław Szlachetko, Andrzej Lewandowski, Maksymilian Górski,*
A1_3 (#068) An Algorithm for 3D Target Localization from Passive Radar Measurements - *Mateusz Malanowski,*
A1_4 (#039) Beamforming strategy of ULA and UCA sensor configuration in Multistatic Passive Radar - *Robert Hossa,*
A1_5 (#084) Fixed WiMAX (IEEE 802.16d) Base Station Signal Analysis for Passive Radar Applications - *Mateusz Malanowski, Krzysztof Kulpa, Sławomir Pietrzyk, Marcin Dryjański,*

B1_1 (#044) Robust Adaptive Detection with Angle Rejection - Antonio De Maio, *Silvio De Nicola, Alfonso Farina*
B1_2 (#031) Computation of continuous wavelet transform of discrete signals with adapted mother functions - *Anton Popov, Mykhailo Zhukov,*
B1_3 (#053) An algorithm for parametric modeling of a series of time intervals - *Krzysztof Kudrynski, Pawel Strumillo,*
B1_4 (#029) Gain deficit effect in the fractional delay filter design by the window method - *Maciej Sac, Marek Blok,*
B1_5 (#076) An Approach to Fuzzy Filters description - *Bohdan S. Butkiewicz*

13:30 - 15:00	LUNCH	
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15:00 - 16:30	SESSION P – POSTER Chairman: Mikheil Chikhradze, Piotr Samczynski	
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P_1 (#006) HIGH Q-FACTOR WIDEBAND RESONATORS FOR MILLIMETER AND SUBMILLIMETER RADARS: PHYSICAL PRINCIPLES, THEORY AND EXPERIMENT - *Rodionova Valentina, G.Ya.Slepyan, V.A.Karpovich, O.V.Tanana,*
P_2 (#011) Comparison of hybrid adaptive blind equalizers for QAM signals - *A. Labed, A. Belouchrani, A. Aissa-El-Bey, T. Chonavel,*
P_3 (#014) Waveform Design to Suppress Range Sidelobe in Random Phase Modulated Radar - *Hamed Haghsheenas, Mohammad M. Nayebi,*
P_4 (#019) Automatic Text Classification using Modified Centroid Classifier - *Mahmoud Elmarhoumy, Mohamed Abdel Fattah, Fuji Ren*
P_5 (#038) Application of the GNU Radio platform in the multistatic radar - *Boguslaw Szlachetko, Andrzej Lewandowski,*
P_6 (#047) Reflected Signal Depolarization Estimate with Single Transceiving Airborne Antenna - *Yu. Averyanova, A. Averyanov, F. Yanovsky*
P_7 (#062) EFFECT OF DOPPLER SHIFT ON THE PERFORMANCE OF DIFFERENT CODING SIGNALS IN RANGING APPLICATIONS - *Aamir Hussain,*
P_8 (#064) Time - frequency analysis using NVIDIA CUDA architecture - *Janusz Kulpa,*
P_9 (#071) Cell Broadband Engine architecture as a DSP platform - *Karol Szumski, Mateusz Malanowski*
P_10 (#078) H.264/MPEG4 - Advanced Video Coding - *Artur Gromek,*
P_11 (#052) Nonlinear filtration of the spoken language signals - *Lilia V. Kolchenko, Rustem B. Sinitsyn,*
P_12 (#070) HDR Algorithm for SAR Image Processing - *Maciej Smolarczyk*

16:30 - 18:00	SESSION A2 – RADAR I Chairman: <i>Felix Yanovsky,</i> <i>Jacek Misiurewicz</i>	SESSION B2 – IMAGE PROCESSING / SIGNAL PROCESSING II Chairman: <i>Abdel-Rahman Al-Qawasmi,</i> <i>Robert Hossa</i>
	A2_1 (#030) NCTI of aircraft using Radar: Development of a classification scheme with a „pre-classifier stage“ (“Broad Class Classification”) - <i>Karlhans Rosenbach, Joachim Schiller,</i> A2_2 (#025) ANALYSIS OF SAFE, MINIMUM DISTANCE BETWEEN DIFFERENT BAND OPERATING RADARS - <i>Jacek Cholewa, Andrzej Mędrzak,</i> A2_3 (#023) An adaptive target tracking algorithm for fluctuating signals - <i>Dariusz Janczak, Yury P. Grishin, Adam Nikolajew,</i> A2_4 (#009) Radar Waveform Diversity for Tracking - <i>Yury Grishin,</i> A2_5 (#049) RANDOM SIGNAL SODAR FOR METEOROLOGY - <i>Bokal Zh.M., Sinitsyn R.B.,</i>	B2_1 (#054) Image Processing Methods for Determination of Downy Mildews from Light Microscopy Images – <i>Jiri Sedlar, Michaela Sedlarov, Jan Flusser</i> B2_2 (#027) Teaching Image Processing and Pattern Recognition with Intel OpenCV Library - <i>Adam Kozłowski, Aleksandra Królak,</i> B2_3 (#041) Steering angle prediction using neural networks and look-up table for different drivers - <i>A. Viduqirienė, A. Demčenko, M. Tamošiūnaitė,</i> B2_4 (#042) Detection of Markov signals in the mixture with Markov interferences – <i>I. G. Prokopenko, I. P. Omelchuk, J.D. Chirka, F. Yanovsky</i>
19:00 – 22:00	SYMPOSIUM BARBECUE	

May 29th 2009
Friday

07:30 – 08:50		BREAKFAST	
09:00 – 10:30	SESSION A3 – RADAR II Chairman: <i>Yuliya Averyanova, Mateusz Malanowski</i>	SESSION B3 – MEDICAL SIGNAL PROCESSING Chairman: <i>Pavlo Vyplavin, Bohdan Butkiewicz</i>	
	A3_1 (#026) Classifying air targets using a selection of robust classification features – <i>Theresa Haumtratz, Joachim Schiller</i> A3_2 (#008) Designing complex pulse radar signal with nonlinear frequency modulation by Zak transform – <i>Mariusz Łuszczczyk</i> , A3_3 (#028) Synthetic Range Profiling in Ground Penetrating Radar – <i>Paweł Kaczmarek, Marian Łapiński, Dariusz Silko</i> A3_4 (#036) Multilateration Surveillance System Arrangement by means Crameo-Rao Lower Bound Analysis- <i>Inna Konchenko, Felix Yanovsky</i> A3_5 (#063) Multiple Assignment as a Robust Method of Matching Detections with Tracks – <i>Jacek Karwatka</i>	B3_1 (#045) Detection of blood vessels in human brain 3D magnetic resonance images with the use of mathematical morphology and region growing algorithms – <i>Adam Sankowski</i> , B3_2 (#046) Low-order modeling of the Head Related Transfer Functions based on spectral smoothing and Principal Component Analysis- <i>Michał Pec, Paweł Strumiłło</i> , B3_3 (#075) Speech Compression Using Zero position method – <i>Abdel-Rahman Al-Qawasmī, Aiman Al-Lawama, Nada Al-Khatib</i> B3_4 (#035) Nonlinear dynamics approach to speech detection in noisy signals – <i>Łukasz J. Bronakowski</i> ,	
10:30 – 11:00		COFFEE BREAK	
11:00 – 13:00	SESSION A4 – SAR / NOISE RADARS Chairman: <i>Daniel O'Hagan, Jerzy Pietrasieński</i>	SESSION B4 – RADAR PHENOMENOLOGY / RADAR POLARYMETRY Chairman: <i>Jaroslav Cechak, Zbigniew Czekala</i>	
	A4_1 (#043) Processing of Sliding Spotlight Mode Data with Consideration of Orbit Geometry – <i>Alicja Ossowska, Rainer Speck</i> , A4_2 (#069) Non Iterative Autofocus Algorithm For GMTI Sigma-Delta STAP Processing – <i>Piotr Samczynski, Grzegorz Pietrzyk, Krzysztof Kulpa</i> , A4_3 (#065) Phase Errors Introduced by Synthetic Aperture Antenna Pattern Distortions of Noise Waveform d-InSAR – <i>Pavlo Vyplavin</i> A4_4 (#077) Preliminary results of noise radar experiments – <i>Mateusz Malanowski, Clara Contartese, Łukasz Maślowski, Marcin Bączyk, Krzysztof Kulpa</i> , A4_5 (#072) FPGA-based Correlator for Random Signal Processing in Noise Radar – <i>Konstantin Lukin, Olena Melnykova, Pavlo Vyplavin, Sergey Lukin</i> A4_6 (#073) 3D Imaging using Noise Radar and 2D Aperture Synthesis – <i>Konstantin A. Lukin, Pavlo L. Vyplavin, Sergey Yarovoy</i>	B4_1 (#007) Study of Amplitude Fluctuation Spectrum of Geostationary Satellite Signals at Different Atmospheric Conditions – <i>I.M. Mytsenko, D.D. Khalameyda</i> , B4_2 (#024) Application of double frequency radar for the remote sensing of the atmosphere – <i>A. Linkova</i> , B4_3 (#033) Mean Velocity of Hydrometeors at Orthogonal Polarization – <i>Dmitry Glushko, Felix Yanovsky</i> , B4_4 (#021) Simulation of Wind Shear Detection by Radar System – <i>Jane Pristavka</i> B4_5 (#083) Fuzzy Detection and Classification of Dangerous Hydrometeorological Phenomena Using Dual-polarimetric Radar Measurements – <i>Dang Van Tho, Felix Yanovsky</i>	
13:00 – 14:30		LUNCH	
14:30 – 16:00	SESSION A5 – NAVIGATION TECHNOLOGY Chairman: <i>Nathalie Kasperovych, Maciej Smolarczyk</i>	SESSION B5 – RADIO-FREQUENCY TECHNOLOGY / TELECOMMUNICATIONS Chairman: <i>Ibrahim N. Abu-Isbeih, Krzysztof Kurek</i>	
	A5_1 (#051) Dead reckoning navigation – supplementing pedestrian GPS with an accelerometer-based pedometer and an electronic compass – <i>P. Baranski, M. Bujacz, P. Strumiłło</i> , A5_2 (#058) Software Defined Navigation Receiver VOR, ILS – <i>Petr BOJDA</i> , A5_3 (#059) Digital Navigation System for Miniature Quadcopter UAV- <i>Wojciech Komorniczak, Tomasz Górski, Marcin Maciejewski</i> ,	B5_1 (#002) Developing Wireless Meteorological Station – <i>Yahya S. H. Khraisat</i> , B5_2 (#017) Optimum Pulse Shaping Application of Walsh-Functions used in MSK – <i>Ibrahim N. Abu-Isbeih, Mohamed Maqusi</i> B5_3 (#037) Transmission over UWB Channels with OFDM System using LDPC Coding – <i>Grzegorz Dziwoki, Marcin Kucharczyk, Wojciech Sufek</i> ,	

	<p><i>Aleksandra Wrońska, Cezary Zych</i> A5_4 (#060) Sensor Set Stabilization System for Miniature UAV – <i>Wojciech Komorniczak, Tomasz Górski, Adam Kawalec, Jerzy Pietrasiński</i> A5_5 (#081) Models of Interference Signals for Global Positioning Systems – <i>Nathalie Kasperovych, Valerian Shvets,</i></p>	<p>B5_4 (#022) EDUCATIONAL MODEL OF THE OFDM MODULATOR AND DEMODULATOR – <i>Łukasz Ćwikowski, Marek Blok,</i> B5_5 (#067) An effective CFO estimation method for OFDM transmission – <i>Magdalena Purchla-Malanowska,</i></p>
16:00 – 16:30	COFFEE BREAK	
16:30 – 18:00	<p>SESSION A6 – SECURITY / GROUND PENETRATION Chairman: <i>Konstantin Lukin, Adam Kawalec</i></p> <p>A6_1 (#003) Wireless System for Explosion Detection in Underground Structures – <i>M. Chikhradze, N. Bochorishvili, I. Akhvlediani, D. Kukhalashvili, I. Kalichava</i> A6_2 (#015) Low-Flying Target Position Finding With a Seismic System – <i>Jaroslav Cechak, Petr Hubacek, Jiri Vesely,</i> A6_3 (#016) Low-Flying Target Detection: A Surface Seismic Waves Application – <i>Jaroslav Cechak, Petr Bojda,</i> A6_4 (#018) Polarization characteristics of underlying covers in millimeter-wave band – <i>Anton Yamanov,</i> A6_5 (#074) Determination of the soil structure and moisture under the area of “Kirilov” Church of the National Sanctuary “Sophia of Kiev” by georadar sensing – <i>Evgeniy Kozan, Oleksandr Sugak, Vladimir Sugak,</i></p>	<p>SESSION B6 – COMMUNICATIONS / SPACE TECHNOLOGY Chairman: <i>Alicja Ossowska, Tomasz Gorski</i></p> <p>B6_1 (#048) The Communication Subsystem of Masat-1, the First HUNGARIAN Satellite – <i>Levente DUDÁS, Lajos VARGA,</i> B6_2 (#055) Space platform for student cubesat pico-satellite – <i>Marcin Stolarski, Marcin Dobrowolski, Rafał Graczyk, Krzysztof Kurek,</i> B6_3 (#080) PW-Sat on-board flight computer, hardware and software design – <i>Michał Mosdorf, Michał Kurowski, Andrzej Cichocki, Łukasz Mosdorf, Marcin Kocoń,</i></p>
19:00 -	CLOSING REMARKS & SYMPOSIUM BARBECUE	

May 30th 2009	
Saturday	
07:30 – 08:50	BREAKFAST
9:00 – 10:30	<p>“Theory and Principles of Bistatic and Passive Bistatic Radar” – short lecture conducted by Daniel O’Hagan</p>
10:45 – 11:30	<p>“Possibility of Tsunami Detection Using HF Radar” – short lecture conducted by Anna Dzvonnkovskaya</p>
12:30 - 13:30	LUNCH