

Kronou 8, Korydallos, GR-18122
Athens, Greece

Tel./Fax (work): 210 9872213 - 210 9872230
Tel. (home): 210 4975641 (mobile 0030-1-6932432629)
email(work): karakasi@broadcom.com
email(personal): anastasiskarak@yahoo.gr

Anastasios Karakasiliotis

Objective(s)

Collaboration with R&D group (academic or industrial) in one of the main fields of interest:

- Radar Signal & Image Processing
- Radar System Design & Analysis
- Algorithms & Architectures for Digital Wireless Communication Receivers
- DSP Programming for Radar/Wireless Applications

Experience

2001–2005	Intracom S.A.	Peania, Athens
2005–2007	Intracom Telecom S.A.	Peania, Athens
2007–2008	Broadcom Hellas S.A.	Alimos, Athens

DSP Staff Engineer

- Baseband Radio System Design: DSP Algorithms & Receiver Architectures
- RF System Design: DSP Algorithms for Transceiver Digital Functionality (Calibration, Filtering, Rate Conversion)
- Feasibility Studies on important subjects of company's all-digital technology (Equalization, PA Linearization, Channel Modeling, PDH Platform Performance Testing)
- Very good MATLAB/Simulink programming skills: Simulation of several baseband receivers (Offset-QPSK, 16-QAM, 64-QAM, 128-QAM, 128-TCM, OFDM, Maximal-Ratio Combining, MIMO Detection), RF digital subsystem simulation for 2G/3G/4G cellular standards (GSM, EDGE, WCDMA, LTE)
- DSP Programming experience on Texas Instruments DSPs & Code Composer Studio (C code optimization using intrinsics): IEEE 802.16d based OFDM modem design & Lower-MAC Processor implementation
- Familiarity with Visual C/C++ Studio (programming algorithms in C)
- Familiarity with ADS/Ptolemy (evaluation of DSP algorithms for RF digital subsystems)
- Model-based Design with Xilinx System Generator (for HDL code generation)
- Research interest on space diversity & MIMO systems: MATLAB implementation of Space-Time & Space-Frequency Coding/Decoding Techniques (IEEE 802.16e based)

Education

1996–2001	National Technical University of Athens	Zografou, Athens
-----------	---	------------------

- Diploma from School of Electrical & Computer Engineering, with grade 8,07 (very good)

- **Diploma Thesis:** OFDM System Design and Simulation Using MATLAB-Simulink
- **Knowledge Background:**
 - Mathematics (Linear Algebra – Differential Equations – Complex Analysis – Probability Theory & Statistics)
 - Communication Theory (Propagation - Antennas – Satellite Systems – Radar Systems – Transceiver Design – Multi-carrier Systems)
 - Electronics (Logic Circuits – Amplifier Design)
 - Analog/Digital VLSI Theory & Design
 - Programming Languages (MATLAB – C/C++ – Pascal – Assembly)

2001–2003 National Technical University of Athens Zografou, Athens

- Research on Radiowave Propagation below & above 10GHz (multipath phenomena – modeling attenuation from precipitation), Mitigation Techniques (Channel Equalization – Site/Frequency Diversity – Automatic Transmit Power Control), Interference in Terrestrial Systems (LMDS – Fixed Wireless Access), Satellite Systems & High-Altitude Platforms

2003(Nov.)–2008 National Technical University of Athens Zografou, Athens

- Pursuing a PhD degree at Division of Information Transmission Systems & Materials Technology
- **Scientific interests:**
 - Radar Digital Signal Processing
 - Modern Spectrum Estimation Methods (AR – MUSIC) for Superresolution ISAR Imaging
 - Non-Cooperative Target Classification Techniques (statistical – neural – correlation-based)
 - Decimative Spectrum Estimation Techniques for scattering center extraction
 - Motion Compensation for ISAR image focusing
 - Time-Frequency Transforms combined with spectral analysis

Languages

- Proficiency degree in English
- Excellent technical documentation skills
- Wide knowledge of technical terms in the field of signal processing, communication and radar systems

Interests

Music, Sports, Chess, Cinema, Theatre

Tips

Please find attached a list of publications/presentations on radar signal processing & ISAR imaging (written during PhD pursuit).

List of Publications & Presentations

- [1] A. Karakasiliotis and P. Frangos, "Parametric Spectral Estimation Methods for ISAR Processing: Overview and Simulation Results," *58th meeting on Non-Cooperative Air Target Identification by Radar*, Copenhagen, Denmark, 15-17 June 2004.
- [2] A. Karakasiliotis and P. Frangos, "Comparison of Several Spectral Estimation Methods for Application to ISAR Imaging," *RTO / SET 080 International Symposium on Target Identification and Recognition Using RF Systems*, Oslo, Norway, 11-13 October 2004.
- [3] K. Skrapas, G. Boultadakis, A. Karakasiliotis and P. Frangos, "Time-Frequency Analysis of Radar Signals for ISAR Applications," *International Conference RAST 2005*, Istanbul, Turkey, 9-11 June 2005.
- [4] I. Tseremoglu, A. Karakasiliotis and P. Frangos, "Classification of Aircraft Targets: First Simulation Results Using a Point Scatterer Model," *62nd meeting on Non – Cooperative Air Target Identification by Radar*, Malvern, United Kingdom, 7-9 June 2005.
- [5] G. Kalognomos, A. Karakasiliotis, G. Boultadakis, K. Skrapas, I. Tseremoglou and P. Frangos, "Some Superresolution Spectrum Estimation Techniques for Inverse Synthetic Aperture Radar (ISAR) Signal Processing," presentations in the framework of the Socrates – Erasmus Programme, V. Turnovo, Bulgaria (15/11/05), Plovdiv, Bulgaria (17/11/05), Burgas, Bulgaria (14/12/05).
- [6] A. Karakasiliotis and P. Frangos, "Decimative Spectrum Estimation Method for High-Resolution Radar Parameter Estimates," *63rd meeting on Non-Cooperative Air Target Identification by Radar*, Brussels, Belgium, 19-21 April 2006.
- [7] A. Karakasiliotis and P. Frangos, "Decimative Spectrum Estimation Method for High-Resolution Radar Parameter Estimates," *5th International Symposium on Communications, Networks and Digital Signal Processing (CSNDSP 2006)*, Patras, Greece, 19-21 July 2006.
- [8] A. Karakasiliotis and P. Frangos, "Decimative Spectrum Estimation Method for High-Resolution Radar Parameter Estimates," *1st International Conference on Communications, Electromagnetics and Medical Applications (CEMA 2006)*, Sofia, Bulgaria, 19-21 October 2006.
- [9] A. Karakasiliotis and P. Frangos, "Decimative Spectrum Estimation Method for High-Resolution Radar Parameter Estimates," *Journal of Applied Electromagnetics*, Vol. 9, No. 2, December 2007, pp. 88-97.
- [10] A. Karakasiliotis, G. Boultadakis, A. Lazarov and P. Frangos, "High-Resolution Stepped Frequency Inverse Synthetic Aperture Radar Imaging Using Time-Frequency Transforms," *2nd International Conference on Communications, Electromagnetics and Medical Applications (CEMA 2007)*, Sofia, Bulgaria, 25-27 October 2007.
- [11] A. Karakasiliotis, A. Lazarov and P. Frangos, "Two-Dimensional ISAR Model and Image Reconstruction with Stepped Frequency Modulated Signal," *submitted to IET Signal Processing, accepted under minor revisions (December 2007)*.