

Ing. Michal Aftanas, PhD.

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EDUCATION

2001-2009	TECHNICAL UNIVERSITY OF KOŠICE	Košice, SK
2006-2009	<i>Doctor of Philosophy</i> <ul style="list-style-type: none">Faculty of Electrical Engineering and InformaticsDepartment of Electronics and Multimedia CommunicationsThesis topic: Through Wall Imaging of the Objects with UWB Radar System	
2001-2006	<i>Master degree</i> <ul style="list-style-type: none">Faculty of Electrical Engineering and InformaticsDepartment of Electronics and Multimedia CommunicationsField of study: Electronics and Telecommunication Technique	
1997-2001	SECONDARY ELECTROTECHNICAL SCHOOL IN PREŠOV <ul style="list-style-type: none">Telecommunication Technique	Prešov, SK

WORK EXPERIENCES

2012-present	Siemens - ANF DATA spol. s r.o. Position: Hardware Designer of electronics for Siemens.	Prague, CZ
2010-2012	Computer Associates CZ, s.r.o. Position: Software Engineer - Assembler developer for Mainframes.	Prague, CZ
2009-2011	CMMS s.r.o. Position: Hardware designer / Software developer. The main task was to design the complex hardware and software measurement system required for condition monitoring and maintenance systems of motors. The DSP from Analog Devices and microcontroller from STMicroelectronics were used. The assembler and ANSI C software resources were used.	Prague, CZ

PROJECT EXPERIENCE

2006-2009	RADIOTECH <i>Ultra wideband radio application for localisation of hidden people and detection of unauthorized objects. COOP-CT-2006 co-funded by the European Commission within the sixth framework programme.</i> Position in Project: Signal processing specialist-researcher for through wall radar imaging applications.	Europe Union
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SKILLS AND CERTIFICATIONS

PERSONAL SKILLS

- Responsibility, high working morale, ability for team work or team-leading, organizational skills, flexibility compliancy for life-educating

LANGUAGE SKILLS

- Mother tongue – Slovak

Self-assessment	Understanding				Speaking				Writing	
<i>European level(*)</i>	Listening		Reading		Spoken interaction		Spoken production			
English	B1	Independent user	B2	Independent user	B1	Independent user	B2	Independent user	B2	Independent user
German	A1	Basic User	A2	Basic User	A1	Basic User	A1	Basic User	A1	Basic User

(*) Common European Framework of Reference (CEF) level

COMPUTER SKILLS

- **MATLAB** – expert – 6 years of practical experiences
- **Digital Signal Processors (DSP) assembler** – expert – 5 years of practical experiences
- **ANSI C for microcontroller (CORTEX series)** – advanced – 1 year of practical experiences
- **Mainframe assembler** – expert – 1 year of practical experiences
- **OML / NCL mainframe languages** – expert – 1 year of practical experiences
- **8051 microcontroller Assembler** – advanced – 1 year of practical experiences
- **C#, C++** – basic – half year of practical experiences
- **PLC pseudo language** – basic – 1 year of practical experiences
- **HTML, CSS** – medium – 2 years of practical experiences
- **LaTeX** – expert – 3 years of practical experiences
- **Linux, Debian, Ubuntu** – basic in administration – 3 years of practical experiences
- Windows OS, Microsoft Office, Corel – advanced

CERTIFICATIONS

- **CISCO CCNA 1-4** – 4 semesters on Technical University of Košice
- **CISCO CCNA 640-802** – Cisco Certified Network Associate Exam – valid till Dec. 2011
- Valid driver license class B

RESEARCH STAY AND PRESENTATIONS

June 2008	TECHNISCHE UNIVERSITÄT ILMENAU Research on: Estimation of wall parameters using UWB radar system. Duration: 1 month Presentation: Algorithm for wall parameter estimation using UWB radar system.	Ilmenau, DE
Nov. 2007	VRJIE UNIVERSITEIT BRUSSEL Research on: Detection of objects behind the wall with MUSIC algorithm. Duration: 2 weeks Presentation: Results and special issues on through the wall radar imaging.	Brussels, BE
May 2007	TECHNISCHE UNIVERSITÄT ILMENAU Research on: Comparison of basic inversion techniques for UWB radar imaging. Duration: 3 months Presentation: Results and special issues on through the wall radar imaging.	Ilmenau, DE
Feb. 2006	UNIVERSITÉ JEAN MONNET DE SAINT ETIENNE Research on: Frequency shift keying digital modulation transmitter on software defined radio platform. Duration: 3 months	Saint Etienne, FR

AWARDS

Oct. 2008	INTERACTIVE POSTER SESSION PRIZE <i>Detection and Tracking of Moving or Trapped People Hidden by Obstacles using Ultra-Wideband Pseudo-Noise Radar.</i> European Radar Conference 2008	Amsterdam, NL
Apr. 2008	RADIOELEKTRONIKA STUDENT PRIZE – 3RD PRIZE <i>Through Wall Imaging of the Objects Scanned by M-sequence UWB Radar System.</i> Conference Radioelektronika 2008	Prague, CZ
Apr. 2007	STUDENT'S BEST PAPER AWARD <i>An Analysis of 2D Target Positioning Accuracy for M-sequence UWB Radar System under Ideal Conditions.</i> Conference Radioelektronika 2007	Brno, CZ

PUBLICATIONS

Nov. 2009	M. Aftanas, J. Sachs, M. Drutarovsky, D. Kocur, " Efficient and Fast Method of Wall Parameter Estimation by Using UWB Radar System ", <i>Frequenz Journal</i> , pages 231 - 235, Vol. 63, Issue 11-12, Germany, Nov. 2009.
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- Sep. 2009 M. Aftanas, M. Drutarovsky, "**Imaging of the Building Contours with Through the Wall UWB Radar System**", *Radioengineering Journal*, pages 258-264, Vol. 18, No. 3, Brno, Czech Republic, Sep. 2009.
- May 2009 M. Aftanas, "**Signal Processing Steps for Objects Imaging Through the Wall with UWB Radar**", *9th Scientific Conference of Young Researchers, SCYR 2009, Faculty of Electrical Engineering and Informatics, Technical University of Košice*, pages 14-17, Slovak Republic, May 2009.
- Oct. 2008 J. Sachs, M. Aftanas, S. Crabbe, M. Drutarovský, R. Klukas, D. Kocur, T.T. Nguyen, P. Peyerl, J. Rovňáková, E. Zaikov, "**Detection and Tracking of Moving or Trapped People Hidden by Obstacles using Ultra-Wideband Pseudo-Noise Radar**", *5th European Radar Conference, EuRAD 2008*, pages 408-411, Amsterdam, The Netherlands, Oct. 2008.
- Oct. 2008 N.T. Thanh, L. van Kempen, T.G. Savelyev, X. Zhuge, M. Aftanas, E. Zaikov, M. Drutarovsky, H. Sahli, "**Comparison of Basic Inversion Techniques for Through-Wall Imaging Using UWB Radar**", *5th European Radar Conference, EuRAD 2008*, pages 140-143, Amsterdam, The Netherlands, Oct. 2008.
- Sep. 2008 S. Crabbe, M. Aftanas, P. A. Berthlin, M. Drutarovsky, R. Klukas, D. Kocur, T. T. Nguyen, P. Peyerl, J. Rovnakova, J. Sachs, E. Zaikov, "**Ultra wideband radar for through wall detection from the RADIOTECH project**", *3rd Security Research Conference, Future Security*, pages 299-304, Karlsruhe, Germany, Sep. 2008.
- Sep. 2008 M. Aftanas, J. Rovňáková, M. Drutarovský, D. Kocur, "**Efficient Method of TOA Estimation for Through Wall Imaging by UWB Radar**", *International Conference on Ultra-Wideband, ICUWB 2008*, pages 101-104, Hannover, Germany, Sep. 2008.
- Apr. 2008 M. Aftanas, E. Zaikov, M. Drutarovsky, J. Sachs, "**Through Wall Imaging of the Objects Scanned by M-sequence UWB Radar System**" *18th International Conference Radioelektronika*, pages 33-36, Prague, Czech Republic, Apr. 2008.
- Mar. 2008 E. Zaikov, J. Sachs, M. Aftanas, J. Rovnakova, "**Detection of trapped people by UWB radar**", *German Microwave Conference, GeMiC 2008*, pages 240-243, Hamburg, Germany, Mar. 2008.
- May 2007 M. Riskova, J. Rovnakova, M. Aftanas, "**M-Sequence UWB Radar Architecture for Throughwall Detection and Localisation**", *7th PhD Student Conference and Scientific and Technical Competition of Students of Faculty of Electrical Engineering and Informatics, Technical University of Košice*, pages 29-30, Slovakia, May 2007.
- Apr. 2007 M. Aftanas, J. Rovnakova, M. Riskova, D. Kocur, and M. Drutarovsky, "**An Analysis of 2D Target Positioning Accuracy for M-sequence UWB Radar System under Ideal Conditions**", *Proceedings of 17th International Conference Radioelektronika*, pages 189-194, Brno, Czech Republic, Apr. 2007.

THESES

- Aug. 2009 **DISSERTATION THESIS** Košice, SK
M. Aftanas, "**Through-Wall Imaging With UWB Radar System**", *Dissertation thesis*, Department of Electronics and Multimedia Communications, Faculty of Electrical Engineering, Technical University of Kosice, Aug. 2009.
Supervisor: doc. Ing. Miloš Drutarovský, CSc.
Available also as a book on [amazon.com](http://www.amazon.com)
- Jan. 2008 **THESIS TO THE DISSERTATION EXAMINATION** Košice, SK
M. Aftanas, "**State of the Art - Through Wall Imaging Using M-sequence UWB Radar System**", *Thesis to the dissertation examination*, Department of Electronics and Multimedia Communications, Faculty of Electrical Engineering, Technical University of Kosice, January 2008.
Supervisor: doc. Ing. Miloš Drutarovský, CSc.
- Mar. 2006 **MASTER THESIS** Saint Etienne, FR
M. Aftanas, "**FSK Signal Processing Based on Software Defined Radio**", *Master Thesis*, Department of Electronics and Multimedia Communications, Faculty of Electrical Engineering, Technical University of Kosice, March 2006.
Supervisor: doc. Ing. Miloš Drutarovský, CSc.

* All publications are available for download at <http://www.aftanas.sk/>

TEACHING EXPERIENCES

2006-2009 **TECHNICAL UNIVERSITY OF KOŠICE** Košice, SK
Department of Electronics and Multimedia Communications

- Radio-electronic measurement
- Digital Signal Processors
- Programming environments for electronics and telecommunications
- Electrical engineering practices (In English language)

REFERENCES AVAILABLE UPON REQUEST

TECHNICAL UNIVERSITY OF KOŠICE Košice, SK
My supervisor for Doctor of Philosophy study and master thesis
doc. Ing. Miloš Drutarovský, CSc. | Milos.Drutarovsky@tuke.sk | 00421-55-602-4169

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