Tamás István KRÉBESZ

M.Sc. in Electrical Engineering
Ph.D. student
April, 2010

1 Personal information

Family name:	Krébesz
First name:	Tamás
Middle name:	István
Sex:	male
Nationality:	Hungarian
Citizenship:	Hungarian
Date and place of birth:	June 19, 1982, Nagykanizsa, Hungary
Present employer:	Department of Measurement and Information Systems
	Budapest University of Technology and Economics
Position held:	Ph.D. student
Address:	Magyar tudósok krt. 2.
	Building I, Wing E, Room IE-425
	H-1111 Budapest
	Hungary
Postal address:	Pf. 91
	H-1521 Budapest
	Hungary
Phone numbers:	+36-1-4632057 (secretariat)
	+36-1-4634116 (direct)
	+36-20-4175764 (mobile)
Fax:	+36-1-4634112
E-mail:	krebesz@mit.bme.hu
URL address:	http://www.mit.bme.hu/∼krebesz

2 Education

Date	Qualification gained	Institution
2007-	pursuing Ph.D. studies	Budapest University of Technology and Economics
2002-2007	M.Sc. degree in Electrical Engineering	Budapest University of Technology and Economics
2001-2002	Technician degree in Computer Engineering. A middle-level pre-university degree awarded by special high schools in Hungary after one year extra studies	Cserháti Sándor High School
1997-2001	High school degree	Cserháti Sándor High School

3 Knowledge of languages

Proficiency exam in English: written and spoken
Proficiency exam in French: written and spoken

4 Awards

Date	Award
2009	Josef Heim Award for outstanding developement activity
2008	Schnell László Award for the publication of a book chapter
2008	Scholarship offered by Schnell László Foundation for outstanding research activity during Ph.D. studies
2008	Competition of M.Sc. theses called by the Scientific Association of Measurement, Automation and Information Technology, I. prize, Budapest, Hungary
2008	IEEE student membership for outstanding presentation at Ph.D. Minisymposium by IEEE Hungary Section, Budapest, Hungary
2007	Second prize won at the competition in Virtual Instrumentation called by National Instruments Europe Ltd., Debrecen, Hungary
2007	Ph.D. scholarship offered by The Hungarian Republic, Hungary
2007	Developer's scholarship offerd by Continental Automotive Systems, Budapest, Hungary
2007	University Scholarship of the Budapest University of Technology and Economics, Budapest, Hungary
2007	Special prize won at the National Scientific Conference of Students awarded by Ericsson Hungary, Miskolc, Hungary
2007	First prize won at the National Scientific Conference of Students, Miskolc, Hungary
2007	Scholarship offered by Budapest University of Technology and Economics (excellent result), Budapest, Hungary
2006	First prize won at the annual Scientific Conference of Students, Budapest, Hungary
2006	Scholarship offered by the Hungarian Department of Education for the most outstanding Hungarian university students, Hungary

5 Role in scientific community

Date (from - until)	Activity, membership
2009-	Member of IEEE-CAS
2008-	Member of the Scientific Association of Measurement, Automation and Information Technology
2008-	Student member of IEEE
2007-	Student member of IEICE

6 Skills gathered

Date	Skill
2009	Virtual instrumentation (Development of complex SW test system for GSM repeaters)
2008-2009	Automated measuring test system for GSM repeaters providing traceability
2008	Developing of embedded, automated measuring systems on LabVIEW platform
2007	Implementing of different measurement setups using the National Instruments PCI-GPIB, PXI-4070 FlexDMM and PCI-6036E platforms
2006	Implementation of embedded applications using the LabVIEW graphical development environment
2005-2006	System level study and simulation of ZigBee low-data rate WPAN systems using the complex envelope approach
2005	Simulation of ultra-wideband (UWB) radio signal detection in Matlab environment, System level design of Holter-monitor

7 Longer time periods spent abroad

Date	Location	Purpose
2009 jan-aug	The Hong Kong Polytechnic University Dept. of Electronic and Inf. Eng. Hong Kong SAR / China	Research Assistant

8 Shorter time periods spent abroad

Date	Location	Purpose
2009 nov	LATTIS - University of Toulouse Dept. of Electronic and Inf. Eng. Toulouse, France	Visiting Researcher

9 Courses supported in English

University/Department	Subject
The Hong Kong Polytechnic University Dept. of Electronic and Inf. Eng.	Advanced Telecommunication Systems

10 Courses supported in Hungarian

University/Department	Subject
Budapest Univ. of Technology and Economics Dept. of Measurement and Information Systems	Theory and Design of Embedded Systems
Budapest Univ. of Technology and Economics Dept. of Measurement and Information Systems	Networking Devices of Embedded Systems
Budapest Univ. of Technology and Economics Dept. of Measurement and Information Systems	System Level Design of Telecommunication

11 Tutor of laboratory experiments in Hungarian

University/Department	Subject
Budapest Univ. of Technology and Economics Dept. of Measurement and Information Systems	Radio transceiver measurements
Budapest Univ. of Technology and Economics Dept. of Measurement and Information Systems	A/D and D/A measurements
Budapest Univ. of Technology and Economics Dept. of Measurement and Information Systems	Phase-locked loop measurements

12 Industrial research

Date	Company	Topic
2008-2009	National Instruments Hungary	Automated testing of GSM repeaters devices and their automated testing
2007-2008	National Instruments Hungary	New networking data communications devices and their automated testing
2006-2007	Continental Automotive Systems	Automated production lines Embedded systems

13　List of publications

- international conference proceedings: [1] [2] [3] [4] [5] [6] [7] [8] [9] [10] [11] [12] [13] [14] [15] [16]

- invited talks: [17] [18]

- bookchapters: [19]

- international referred journal papers: [20]

- international electronic publications: [21]

References

[1] T. Krébesz, G. Kolumbán, C. K. Tse, and F. C. M. Lau. FCC-compliant operation of low-rate uwb impulse radio applying multiple pulses per bit. In *Proc. NOLTA'10*, page under review, Krakow, Poland, Sep 05–08 2010.

[2] G. Kolumbán, T. Krébes, F. C. M. Lau, and C. K. Tse. Radio coverage extension of the FCC-compliant low-rate uwb networking devices. In *Proc. NOLTA'10*, page under review, Krakow, Poland, Sep 05–08 2010.

[3] G. Kolumbán, T. Krébesz, and F. C. M. Lau. Feasibility of UWB radio: Impulse radio versus chaos-based approach. In *Proc. ISCAS'10*, Paris, France, May 30–June 02 2010.

[4] G. Kolumbán, T. Krébesz, C. K. Tse, and F. C. M. Lau. Derivation of circuit specification for the uwb impulse radio transceivers. In *Proc. ISCAS'10*, Paris, France, May 30–June 02 2010.

[5] T. Krébesz, G. Kolumbán, F. C. M. Lau, and C. K. Tse. Performance improvement of autocorrelation detector used in uwb impulse radio. In *Proc. ISCAS'10*, Paris, France, May 30–June 02 2010.

[6] T. Krébesz, G. Kolumbán, F. C. M. Lau, and C. K. Tse. Gated threshold compensated noncoherent ppm receiver for uwb impulse radio. In *Proc. ISCAS'10*, Paris, France, May 30–June 02 2010.

[7] T. Krébesz. Uwb impulse radio with gated treshold compensated ppm receiver. In *Proc. 17th PhD Mini-Symposium*, pages 8–11, Budapest, Hungary, February 1 2010.

[8] T. Krébesz, G. Kolumbán, F. C. M. Lau, and C. K. Tse. Performance improvement of UWB autocorrelation receivers by minimizing the energy capture time. In *Proc. ICECS'09*, Hammamet, Tunisia, December 13–16 2009.

[9] T. Krébesz, G. Kolumbán, F. C. M. Lau, and C. K. Tse. Improving the noise performance of energy detector based UWB systems by optimizing the receiver parameters. In *Proc. ISCIT'09*, Inscheon, Korea, September 28–30 2009.

[10] T. Krébesz. Quasi coherent detection algorithm for uwb impulse radio. In *Proc. 16th PhD Mini-Symposium*, pages 36–39, Budapest, Hungary, February 2 2009.

[11] T. Krébesz. Ultra wideband low rate communications in embedded applications: A chaos based approach. In *Proc. 15th PhD Mini-Symposium*, pages 70–71, Budapest, Hungary, February 4–5 2008.

[12] T. Krébesz and G. Kolumbán. A new, near-coherent detector configuration for UWB impulse radio. In *Proc. NOLTA'08*, pages 636–639, Budapest, Hungary, September 7–10 2008.

[13] G. Kolumbán, T. Krébesz, F. C. M. Lau, and C. K. Tse. A mathematical approach to derive optimum detector configurations for UWB radio applications. In *Proc. NOLTA'08*, pages 716–719, Budapest, Hungary, September 7–10 2008.

[14] G. Kolumbán and T. Krébesz. Digital communication with chaotic and impulse wavelets. In *Proc. SEFI-IGIP'07*, pages 403–404, Miskolc, Hungary, July 1–4 2007.

[15] G. Kolumbán and T. Krébesz. UWB radio: A real chance for application of chaotic communications. In *Proc. NOLTA'06*, pages 475–478, Bologna, Italy, September 11–14 2006.

[16] G. Kolumbán, T. Krébesz, and M. Bálint. Noncoherent UWB impulse radio and FM-DCSK: What makes them different. In *Proc. NDES'06*, pages 93–96, Dijon, France, June 6–9 2006.

[17] T. Krébesz. Application of gaussian impulses and chaotic signals in ultra wideband communications. Invited talk at *Seminar Series on Chaos, Control and Complex Networks*, The Hong Kong Polytechnic University and City University of Hong Kong, Hong Kong / China, March 13 2009.

[18] G. Kolumbán and T. Krébesz. LR-WPAN and UWB data communication systems: A new possible application for chaotic carriers. In *Proc. NOMA'07*, pages 32–35, invited talk, University de Toulouse, LATTIS–INSA Toulouse, France, December 13–14 2007.

[19] G. Kolumbán and T. Krébesz. Chaotic communications with autocorrelation receiver: Modeling, theory and performance limits. In L. Kocarev, Z. Galias, and S. Lian, editors, *Intelligent Computing Based on Chaos*, volume 184, pages 121–142. Springer, Berlin, 2009.

[20] G. Kolumbán and T. Krébesz. UWB radio: Digital communication with chaotic and impulse wavelets. *IEICE Trans. on Fundamentals of Electronics, Communications and Computer Sciences*, E90-A(10):2248–2249, October 2007.

[21] G. Kolumbán and T. Krébesz. Optimum carrier for uwb radio: Impulse radio versus chaotic carrier. *IEEE CAS Society Newsletter*, 1(4), August 2007.