CURRICULUM VITAE

Name	**COSTAS CHAIKALIS**
Qualifications	BSc in Electrical Engineering, MSc in Radio Frequency Communications Engineering, PhD in Mobile Communications
Educational Background	09/91 to 09/95 BSc from TEI of Lamia, Lamia, Greece. 09/97 to 09/98 MSc from School of Engineering Design & Technology, Dept. of Electronics & Telecommunications, University of Bradford, Bradford, UK. 10/98 to 03/03 PhD from School of Engineering Design & Technology, Dept. of Electronics & Telecommunications, University of Bradford, Bradford, UK.
Level of English	Fluent (studied in UK)
Teaching Experience	**A. Undergraduate courses:** • **2011-2012:** Lecturer at the Department of Informatics & Telecommunications, TEI of Larissa. <u>Modules</u>: Communications Fundamentals, Probability Theory & Statistics, Information theory & coding, Telecommunication Systems I. • **2010-2011:** Lecturer at the Department of Informatics & Telecommunications, TEI of Larissa. <u>Modules</u>: Communications Fundamentals, Probability Theory & Statistics, Information theory & coding. • **2009-2010:** Lecturer at the Department of Informatics & Telecommunications, TEI of Larissa. <u>Modules</u>: Telecommunications Fundamentals, Probability Theory & Statistics, Advanced Topics Of Optical Communications, Wireless Communications. • **2008-2009:** Lecturer at the Department of Informatics & Telecommunications, TEI of Larissa. <u>Modules</u>: Telecommunications Fundamentals, Probability Theory & Statistics, Advanced Topics Of Optical Communications, Wireless Communications. • **2007-2008:** Lecturer at the Department of Informatics & Telecommunications, TEI of Larissa. <u>Modules</u>: Telecommunications Fundamentals, Probability Theory & Statistics, Informatics Security, Satellite Communications. • **2006-2007:** Lecturer at the Department of Informatics & Telecommunications, TEI of Larissa. <u>Modules</u>: Telecommunications Fundamentals, Probability Theory & Statistics, Informatics Security, Satellite Communications. • **2005-2006:** Lecturer at the Department of Electrical Engineering, TEI of Lamia. <u>Modules</u>: Electronics I, Electronics II, Signals Theory, Introduction to Telecommunications, Digital Systems. • **2004-2005:** Lecturer in Department of Electrical Engineering, TEI of Lamia. <u>Modules</u>: Digital Systems, Electronics I, Electronics II, Signals Theory, Metrology. • **2003-2004:** Lecturer in Department of Electrical Engineering, TEI of Lamia. <u>Modules</u>: Digital Systems, Electronics I, Electronics II. • **Oct 1998 - Mar 2003 (PhD period):** Part-time contracted teaching assistant and demonstrator in laboratory sessions for undergraduate and postgraduate

modules at the Dept. of Electronics & Telecommunications, University of Bradford, UK.

<u>Total number of hours involved:</u> 316.

<u>Modules:</u> Networks and protocols (MSc), Mobile Terminals Technology (MSc), Morphing signals (2nd Year), C++ programming (2nd Year), Control systems (2nd Year), Devices & Device Modelling (2nd Year), Digital Electronics (1st Year), Telecommunications (1st and 2nd Year), Physics (Foundation Year).

B. Postgraduate courses:

- **2011-2012**: Teaching of Mobile Computer Communication Systems – MCCS and Mobile Applications and Systems – MAS modules for the postgraduate course "MSc in Computer Science" from TEI of Larissa & Staffordshire University, UK.
- **2010-2011**: Teaching of MCCS and MAS modules for the postgraduate course "MSc in Computer Science" from TEI of Larissa & Staffordshire University.
- **2009-2010**: Teaching of MCCS and MAS modules for the postgraduate course "MSc in Computer Science" from TEI of Larissa & Staffordshire University.
- **2008-2009:** Teaching of MCCS module for the postgraduate course "MSc in Computer Science" from TEI of Larissa & Staffordshire University.
- **2007-2008**: Teaching of MCCS and MAS modules for the postgraduate course "MSc in Computer Science" from TEI of Larissa & Staffordshire University.

Employment History	**May 2007 – Aug 2008**: Participation in the research project "Improvement of Informatics Studies" of TEI of Lamia. Teaching of the following modules using distance learning methods (LAMS and Blackboard software): *Computer Architecture*, *Coding: Check, Error Correction and Data Compression*. Salary 12320 €. **Jul. 2006 – Sept. 2006, Jul. 2007 – Sept. 2007 και Jul. 2008 – Sept. 2008:** Working for Darbin Consulting Company, Thessaloniki, Greece. **Apr 2005 – Dec 2006**: Participation in the research project "ARCHIMEDES II" of TEI of Lamia. Salary 12690 €. **Jan 2002 – Mar 2002**: Research Assistant contract working under the directions of Dr O. J. Downing at the Dept. of Electronics & Telecommunications, University of Bradford, UK. The research project was entitled "Reconfigurable turbo decoder scenarios for UMTS mobile communications system". Salary 4921,61 £. **Oct 1998 – Oct 2000:** Research Assistant contract working under the directions of Professor J. G. Gardiner at the Dept. of Electronics & Telecommunications, University of Bradford, UK. The research project was entitled "Reconfigurable signal processing elements for mobile communication systems" and was funded by Mobile Virtual Centre of Excellence (MobileVCE), UK. Salary 18724 £.
Personal Development	**ACADEMIC REPUTATION** - Reviewer in *Wireless Personal Communications* Journal published by Springer Academic Publishers. - Reviewer in *5th International Symposium on Communication Systems Networks and Digital Signal Processing (CSNDSP '06)*, Electrical & Computer Engineering Department, University of Patras, Greece, July 2006.

List of publications

A. International Journals:

1. C. Chaikalis and J. M. Noras, "Reconfigurable turbo decoding for 3G applications", *Elsevier Science Signal Processing Journal*, DOI 10.1016/j.sigpro.2004.07.005, Volume 84, Issue 10, pp. 1957-1972, October 2004.
2. C. Chaikalis, "SOVA/log-MAP: analysis and 3G implementation for uncorrelated Rayleigh fading", *The Mediterranean Journal of Electronics and Communications*, Volume 3, Number 1, pp. 7-16, January 2007, ISSN 1744-2400.
3. C. Chaikalis, "Reconfiguration aspects and a reconfigurable outer block interleaver for 3G applications", *Springer Academic Publishers Wireless Personal Communications Journal*, DOI 10.1007/s11277-006-9129-3, Volume 41, Number 1, pp. 77-97, April 2007, ISSN 0929-6212.
4. C. Chaikalis, "Efficient TTI for 3G multimedia applications", *Hindawi Academic Publishers Advances in Multimedia Journal*, DOI 10.1155/2007/95474, Vol. 2007.
5. C. Chaikalis, "Implementation of a reconfigurable turbo decoder in 3GPP for flat Rayleigh fading", *Elsevier Science Digital Signal Processing Journal*, DOI 10.1016/j.dsp.2007.04.002, Volume 18/2, pp. 189 – 208, March 2008.
6. C. Chaikalis and C. Liolios, "Investigating the effect of frame length on reconfigurable 3G outer block interleaving for turbo codes", *The Mediterranean Journal of Electronics and Communications*, Vol. 5, No. 1, pp. 24 – 37, January 2009, ISSN 1744-2400.
7. C. Chaikalis and N. S. Samaras, "Service adaptable 3G turbo decoder for indoor/low range outdoor environment", *International Journal of Communications, Network and System Sciences*, Vol. 2, No. 8, pp. 704 – 713, November 2009, DOI 10.4236/ijcns.2009.28081.
8. C. Chaikalis and N. S. Samaras, "Novel results on 3G reconfigurable outer block interleaving based on FER", *Springer Academic Publishers Wireless Personal Communications Journal* (published online), 2010, DOI 10.1007/s11277-009-9859-0.
9. C. Chaikalis, N. S. Samaras and C. Kokkinos, "A SCCC turbo decoder for DVB-T", *Cyber Journals: Multidisciplinary Journals in Science and Technology, Journal of Selected Areas in Telecommunications (JSAT)*, pp. 13-20, January 2012 (published online).
10. C. Liolios and C. Chaikalis, "A GaAs class AB power amplifier for DECT applications", *The Mediterranean Journal of Electronics and Communications*, Vol. , No. , pp. , January 2013, ISSN 1744-2400 (accepted for publication).

B. International Conferences:

1. C. Chaikalis, J. M. Noras and F. Riera-Palou, "Reconfigurable outer block interleaving over correlated Rayleigh fading for 3GPP turbo coding", in *Proceedings of IEEE Wireless Communications and Networking Conference (WCNC 2003)*, New Orleans, USA, pp. 294-299, March 2003, DOI 10.1109/WCNC.2003.1200363.
2. C. Chaikalis, F. Riera-Palou and J. M. Noras, "Effect of outer block interleaving in turbo codes performance over Rayleigh fading channels for 3GPP", in *Proceedings of IEEE 13th International Symposium on Personal, Indoor and Mobile Radio Communications (PIMRC 2002)*, Lisbon, Portugal, pp. 374-379, Vol. 1, September 2002.
3. C. Chaikalis, J. M. Noras and F. Riera-Palou, "Improving the reconfigurable SOVA/log-MAP turbo decoder for 3GPP", in *Proceedings of 3rd International Symposium on Communication Systems Networks and DSP (CSNDSP 2002)*, Stafford, UK, pp. 105-108, July 2002.
4. C. Chaikalis and J. M. Noras, "Implementation of an improved reconfigurable SOVA/log-MAP turbo decoder in 3GPP", in *Proceedings of IEE 3rd International Conference on 3G Mobile Communication Technologies (3G 2002)*, London, UK, pp. 146-150, May 2002.

5. C. Chaikalis, M. Salimi-Khaligh, N. Panayotopoulos and J. M. Noras, "Reconfiguration between Soft Output Viterbi and log maximum a posteriori decoding algorithms", in *Proceedings of IEE 1st International Conference on 3G Mobile Communication Technologies (3G 2000)*, London, UK, pp. 316-320, March 2000.

6. F. Riera-Palou, C. Chaikalis and J. M. Noras, "Reconfigurable Mobile Terminal Requirements for Third Generation Applications", in *Proceedings of IEE Colloquium on UMTS Terminals and Software Radio*, Glasgow, UK, pp. 9/1-9/6, April 1999.

7. P. Avlakiotis, T. Latsos, K. E. Anagnostou, C. Chaikalis, G.D. Verros, C. Liolios, D. Antoniou and S. Kotsopoulos, "Wireless sensor network techniques for usage in measuring the physicochemical characteristics of Thermopylae natural hot spring waters in central Greece: I. Experimental part", in *Proceedings of TRANSCOM 2007*, University of Žilina, Žilina, Slovakia, pp. 11-14, 25-27 June 2007.

8. T. Latsos, P. Avlakiotis, K. E. Anagnostou, C. Chaikalis, G.D. Verros, C. Liolios, D. Antoniou and S. Kotsopoulos, "Wireless sensor network techniques for usage in measuring the physicochemical characteristics of Thermopylae natural hot spring waters in central Greece: II. Early results and analysis", in *Proceedings of TRANSCOM 2007*, University of Žilina, Žilina, Slovakia, pp. 149-152, 25-27 June 2007.

9. C. Chaikalis and C. Liolios, "UMTS Turbo Decoder Dynamic Reconfiguration for Rural Outdoor Operating Environment", MOBIMEDIA 2007, 27-29 August 2007, Nafpaktos, Greece.

10. C. Chaikalis, "Turbo decoder dynamic reconfiguration in urban/suburban outdoor operating environment for 3GPP", in *Proceedings of IEEE International Symposium on Personal, Indoor and Mobile Radio Communications (PIMRC 2007)*, Athens, Greece, pp. 1-5, 3-7 Sept. 2007, DOI 10.1109/PIMRC.2007.4394494.

11. G. D. Verros, T. Latsos, K. E. Anagnostou, P. Avlakiotis, C. Chaikalis, C. Liolios, D. Antoniou, S. Kotsopoulos, and P. Arsenos, "Physico-chemical Characteristics of Thermopylae Natural Hot Water Springs in Central Greece: Chemical Geothermometry", *American Institute of Physics Conf. Proc. Computation in modern science and Engineering: Proc. of the International Conference on Computational Methods in Science and Engineering 2007 (ICCMSE 2007)*, Vol. 2, Part A, Volume 963, pp. 412-415, December 2007, DOI:10.1063/1.2836100.

12. C. Chaikalis and N. S. Samaras, "UMTS Dynamic Outer Interleaver Reconfiguration for Indoor Environment Using SOVA Turbo Decoder", in *Proceedings of IEEE 5th International Conference on Wireless and Mobile Communications (ICWMC '09)*, Cannes, France, pp. 205-210, 23-29 August 2009, DOI 10.1109/ICWMC.2009.42, ISBN 978-0-7695-3750-4.

13. C. Chaikalis and N. S. Samaras, "Novel Results on Adaptive UMTS Outer Block Interleaving Using SOVA Turbo Decoder", in *Proceedings of IEEE 6th International Symposium on Wireless Communication Systems 2009 (ISWCS'09)*, Siena, Italy, pp. 363-367, 7-10 Sept. 2009, ISBN 978-1-4244-3584-5.

14. C. Chaikalis, N. Samaras, O. Iatrellis and C. Kokkinos, "An improved 3GPP reconfigurable turbo decoder for flat Rayleigh fading channels", in *International Conference on Telecommunications and Multimedia 2010 (TEMU 2010)*, Chania, Greece, 14-16 July 2010.

15. C. Kokkinos, E. Papadopoulos, N. S. Samaras, C. Chaikalis, "An Integrated Modeling Framework for Routing of Hazardous Material*s*", in *21st IEEE International Conference on Collaboration Technologies and Infrastructures,* June 25 - 27, 2012, Toulouse, France, (accepted for publication).

C. Greek Conferences:

1. C. Liolios and C. Chaikalis, "Power amplifier design for DECT applications", 1st Panhellenic Conference on Electronics & Telecommunications, University of Patras, Patras, Greece, 20 – 22 March 2009.

D. Book Chapters:

1. C. Chaikalis and F. Riera-Palou, "Efficient 3G receiver implementation for various operating environments", Chapter in book entitled: "Handbook of Research on Heterogeneous Next Generation Networking: Innovations and Platforms", Editors: Prof. Stavros Kotsopoulos and Dr K. Ioannou, 608 pp, IGI Global Publishers, October 2008, ISBN 978-1-60566-108-7.

2. C. Chaikalis, "UMTS implementation issues", Chapter in book entitled: "Progress in Wireless Communications Research", Editor: Alfred P. Martinhoff, Nova Science Publishers, New York, 2007, Invited, ISBN 1-60021-675-7.
3. N. S. Samaras, C. Chaikalis and G. Siafakas, "Healthcare oriented smart house for elderly or disabled people: A case study", Chapter in book entitled: "Wireless Technologies for Ambient Assisted Living and Health Care: Systems and Applications", Editors: Dr A. Lazakidou, Dr K. Siassiakos and Dr K. Ioannou, IGI Global Publishers, 2010.

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3. S. Chronopoulos, G. Tatsis, V. Raptis, P. Kostarakis, "A parallel turbo encoder-decoder scheme", 2nd Panhellenic Conference on Electronics & Telecommunications, Thessaloniki, Greece, 16 – 18 March 2012, referred to [B3].
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12. T. Gnanasekeran, "Performance enhancement of modified log-MAP decoding algorithm for turbo codes", in IEEE International Conference in Communication and Computational Intelligence, December 2010, pp. 368-373, referred to [B4].
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14. Yang Sun, "Parallel VLSI architectures for multi-Gbps MIMO communication systems", PhD thesis, Rice University, Houston, Texas, December 2010, referred to [A1].
15. C. Liolios, C. Doukas, G. Fourlas and I. Maglogiannis, "An overview of body sensor networks in enabling pervasive healthcare and assistive environments", in Proceedings of the 3rd International Conference on PErvasive Technologies Related to Assistive Environments, 2010, No. 43, referred to [D3].

16. A. Corneliussen, E. Poulsen, P.Silpakar, T. Osteraa, Technical Report, "Evaluation of FPGA-based turbo coding implementations on a soft-core processor with hardware acceleration", Applied Signal Processing and Implementation Group, Faculties of Engineering, Science and Medicine, Department of Electronic Systems, Aalborg University, Denmark, Spring 2009, referred to [B3].

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21. T. Gnanasekaran and K. Duraiswamy, "Modified Soft Output Viterbi Error Correcting Algorithm", in IJCSNS International Journal of Computer Science and Network Security, VOL. 8, No.9, September 2008, referred to [B3].

22. T. Udomsripaiboon, K. Sieangjen, T. Kungwanchai, N. Sanpote and C. Benjangkaprasert, "The variable step-size algorithm for decision feedback equalizer turbo code DS/CDMA system using SOVA algorithm", in *Proceedings of IEEE 10th International Conference on Advanced Communication Technology ICACT'08*, Phoenix Park, Korea, pp. 598-601, February 2008, referred to [B5].

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26. COERSMEIER Edmund, XU Yuhuan, KOSAKOWSKI Martin, HOFFMANN Marc, "METHOD FOR OPERATING A SOFTWARE RADIO RECEIVER AND SOFTWARE RADIO RECEIVER", Patent number WO2007107805 (A1), Nokia Corp., September 2007, referred to [B5].

27. I. Andriyanova, J. P. Tillich and J. C. Carlach "A New family of Codes with High iterative Decoding Performances", IEEE ICC 2006, Istanbul, Turkey, referred to [A1].

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29. W. Tranter, B. Woerner, J. Reed, T. Rappaport and M. Robert, "Downlink Capacity Enhancement in GSM System Using Multiple Beam Smart Antenna and SWR Implementation", Book Chapter in Book entitled "Wireless Personal Communications Bluetooth and other technologies", Springer Academic Publishers, 2006, referred to [B6].

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