



Europass Curriculum Vitae

Personal information

First name(s) / Surname(s)

Address(es)

Telephone(s)

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Nationality

Date of birth

Gender

Dimitrios BOURAS

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GREEK

3 January 1966

Male

Occupational field

**Advanced Telecommunication Systems,
IT Computer Systems & Networks**

Overview of skills and competences

Professional
organizational / management
skills and competences

- Experience in management of engineering group designing/implementing hardware and developing firmware for telecommunication systems; also in systems engineering and project management for microwave RFICs, with particular emphasis in broadband wireless (MIMO) and microwave back-haul (SISO) systems. Serving as customer interface, managing interaction and chairing all face-to-face meetings. Principal System Engineer; Manager, Systems & Applications.
Please see section Work experience for details.
- Experience in technical coordination of both R&D and commercial projects, including small to medium scale records management for reference and deliverable materials, both in printed and electronic form. Senior Engineer – EU-IST R&D Project METAMORP; Consultant-subcontractor – research projects (feasibility studies) for CAL (Canadian Astronautics Ltd.), Canada, and MPR (Microtel Pacific Research), Vancouver, Canada; Senior IT Consultant – HEPOS (HEllenic POsitioning Service) IT network analysis and design.
Please see section Work experience for details.
- Experience in technical and organizational/financial evaluation of projects submitted for funding under the EU 6th & 7th Framework Program (FP6 & FP7), in the Information & Communication Technologies (ICT) research program. Being regularly contracted by the European Commission in recent years, I currently maintain an active presence as member of project review teams.
- During my service as President of the Amateur Radio Society at the University of British Columbia, Vancouver, Canada, student membership was greatly increased, ambitious infrastructure projects were successfully completed, and two text-books (of which I am a co-author) were published for generating proceeds to fund society activities.
Please see section Personal skills and competences for details.

Other successful
organisational engagements

Work experience

Dates

Occupation or position held

Main activities and responsibilities

December 2010 onwards

R&D Projects Engineer

RESPONSIBILITIES

Fulfilling a dual role: a) support/maintenance of all things electronic automation, ICT, telecommunications and telemetry, and b) planning, management and tracking of in-house development projects. Acting as in-house consultant to superintendent fleet managers and reporting directly to the Technical Department Director.

Name and address of employer	THENAMARIS Ships Management Inc. Athens, GREECE (www.thenamaris.com)
Type of business or sector	Maritime – Ships Management
Dates	September 2006 – July 2010
Occupation or position held	Manager, Systems & Applications
Main activities and responsibilities	<p>RESPONSIBILITIES</p> <p>Planning, management and tracking of development projects; reporting directly to the company board of directors.</p> <p>Lead the Systems & Applications Group, serving as interface between "external" technical requirements/specifications and/or established/emerging standards, and "internal" R&D / implementation effort, guiding design decisions based on capabilities/trade-offs.</p> <p>Successfully executed projects: RFICs for broadband wireless (MIMO) distribution of HDTV signals in the home; fully integrated RFIC transceivers for microwave back-haul networks.</p> <p>During these years I also served as the company interface to our customers, managing interaction and chairing all face-to-face meetings.</p>
Name and address of employer	THETA Microelectronics S.A. Athens, GREECE (subsidiary, THETA Microelectronics Inc. www.thetamicro.com)
Type of business or sector	Advanced RFIC IP & Design Services for Mobile and Fixed Broadband Wireless Applications.
Dates	November 1998 – August 2006
Occupation or position held	Principal System Engineer, Data Transmission / IT Manager, Administrator
Main activities and responsibilities	<p>RESPONSIBILITIES</p> <ul style="list-style-type: none"> • Support of wireless LAN / VoIP (voice-over-IP) products manufactured by ATMEL by: a) developing enhancements to existing designs for improving system performance, and b) assisting system and hardware designers in matching interfaces to products offered by potential partners. In this capacity I have been exposed to all system layers between physical medium interface as delivered by a radio frequency transceiver, and OS / DSP firmware running on the embedded CPU. • Supervision of engineering group responsible for designing and implementing digital signal processing (DSP) algorithms for wireless communication systems used in system-on-a-chip (SoC) ASIC designs (major project standards: BlueTooth/IEEE-802.15, IEEE-802.11a/b/g, DOCSIS); preparation of weekly progress reports to project/division managers. Gain of hands-on experience, understanding and appreciation of the complexity, power and integration trade-offs involved in SoC systems by being exposed to all phases of the design, as well as the simulation/verification cycles. • Research, development and modeling of DSP algorithms for digital wireless communication systems; generation of test-benches for validation of hardware implementation; languages used include C and Matlab, but also Verilog and VHDL for later stages in the design cycle; preparation of internal reports analyzing algorithmic theory as well as implementation specifics. • Management of all networking and computing infrastructure (a LAN of heterogeneous workstation / server computing facilities) at ATMEL's design center in Athens, Greece, as well as administration of e-mail and intranet web services, and coordination of intranet operations with system administrators at other ATMEL locations worldwide.
Name and address of employer	ATMEL Hellas S.A. Athens, GREECE (subsidiary, Atmel Corp. www.atmel.com)
Type of business or sector	Design & Manufacturing of ICs for Telecommunication & Multimedia Systems
Dates	January 1997 – December 1999
Occupation or position held	Senior Engineer
Main activities and responsibilities	<p>RESPONSIBILITIES</p> <ul style="list-style-type: none"> • Research and development of algorithms for processing channel sounder data in the 2.4, 5 and 60 GHz bands under European Union funded research project METAMORP (Measurements Testing and Calibration of Advanced Mobile Radio-Channel Test Equipment). • Technical management of the company involvement in the project, in addition to my purely scientific contribution. Preparation and submission of monthly progress reports to consortium

	<p>partners, as well as reports on final project deliverables submitted to the European Commission's monitoring authority.</p> <p>METAMORP, budgeted at € 2,000,000 for a time span of 3 years, aimed a) to facilitate comparison of existing radio-channel measurements by providing a new common data file format, b) to propose calibration procedures and further detailed comparative measurements for different mobile radio-channel sounder equipment which use the 2.4, 5 and 60 GHz bands, and c) to produce models for the classification of the various mobile propagation environments. It also provided appropriate test parameters for the accurate characterization of the various mobile radio-channels, including non-stationary and directional channels, and produced specifications for the performance of channel sounder equipment, together with guidelines for their accurate calibration.</p>
<p>Name and address of employer Type of business or sector</p>	<p>ERICSSON Hellas S.A. Athens, Greece (subsidiary, Ericsson Radio Syst. AB www.ericsson.se) Telecommunications equipment manufacturing</p>
<p>Dates</p>	<p>July 1994 – December 1999</p>
<p>Occupation or position held</p>	<p>Telecom Consultant, Subcontractor</p>
<p>Main activities and responsibilities</p>	<p>AREAS</p> <ul style="list-style-type: none"> • Communication system impairment modeling and design of digital simulations for a wide variety of channel environments, including EHF mobile satellite, cellular land mobile radio, indoor PCS and aeronautical systems. Authoring of an extensive C-language source library, implementing communication system blocks to be used parametrically for recreating virtually any type of communication environment. • Development of modulation / demodulation and coding / detection schemes for wireless digital communications in the aforementioned channel environments, yielding novel transceiver structures which incorporate channel impairment mitigation techniques, improving the digital link quality and robustness. • Prototype hardware design, implementation and testing of novel transceiver structures for interference environments, employing techniques developed for land-mobile VHF / UHF and mobile-satellite EHF fading channels. Activities included discrete component prototype implementation, custom LSI ASIC design and testing of fabricated samples, and DSP algorithm development and evaluation, all in a laboratory hardware simulation testbed. • Coding / compression and decoding / synchronization algorithms for audio, data and images (still picture and video) over wireless channels, including terrestrial and satellite based systems, in conjunction with HDTV signal transmission / reception. • Developing techniques supporting steerable antenna systems for satellite tracking, and system analysis for mobile terminals using EHF satellite systems. <p>MAJOR PAST ASSIGNMENTS</p> <ul style="list-style-type: none"> • CAL (Canadian Astronautics Ltd.), Canada: Application of novel receiving techniques in subsystem design for an aircraft-satellite communication terminal in the Ka (20/30 GHz) band. My contribution covered part of the theoretical analysis, the computer-aided system simulation and the hardware/ software implementation of optimal and asymptotically optimal receiving techniques, for mitigating the effects of system phase noise as well as received signal fading. • MPR (Microtel Pacific Research), Vancouver, Canada: Feasibility analysis, design and evaluation of satellite tracking antenna pointing algorithms for terrestrial personal communication systems (PCS) terminals. Terminal types included portable briefcase sized units, as well as systems installed in automobiles. Communication system impairment modeling and design of digital simulations for a wide variety of channel environments, including EHF mobile satellite, cellular land mobile radio, indoor PCS <p>Name and address of employer Type of business or sector</p> <p>Self employed Design & Evaluation of Advanced Communication Systems</p> <p>Dates March 1996 onwards</p> <p>Occupation or position held IT Consultant</p> <p>COMPUTER SKILLS</p> <ul style="list-style-type: none"> • Programming languages: C/C++, Pascal, Fortran

- Processors (assembly programming): Intel ix86, Ceva DSP cores, Texas Instruments TMS320x, Motorola 68k, Sperry/Univac 1100 (mainframe)
- Operating systems: UN*X [Solaris (SysV), Linux, SunOS (BSD) , HP-UX, IRIX], Microsoft Windows variants
- Scripting languages: perl, sh (and variants), csh (and variants), awk, php, javascript
- Simulation environments: Matlab, Ptolemy, BloSim, SPW, NC-Verilog, Modelsim
- Hardware description languages: Verilog, VHDL
- Windowing environments: X-Windows [X11R5-X11R6.x, HP-UX & Solaris CDE, IRIX DE, OpenWindows], Microsoft Windows variants
- Networking environments: TCP/IP (development/administration of client/server applications, Internet e-mail and web services, Intranets, VPN firewalls / gateways, dial-in terminal servers, routers), SMB/ CIFS (MS Windows network), NetWare

Even though my formal engagement as consultant in this area begins in 1996, my accumulated experience in Unix systems and TCP/IP based networks stretches further back in the past, to the end of 1990 and the birth of the Internet and the World Wide Web as we know it today. From 1991 to mid 1995 I was responsible for system administration of the Communications Laboratory computing and networking facilities, at the UBC Department of Electrical & Computer Engineering. During that same period I also served as volunteer system operator providing trouble-shooting and recovery for the Departmental networking and file-server facilities, during weekends and week-day after-hours.

I have been active in the Open Source movement since end of 1990, contributing to GNU/ Linux – its flag-ship operating system – and to core components such as the X-Windows system pioneered by MIT, as well as writing stand-alone applications and utilities.

RECENTLY COMPLETED CONTRACT ASSIGNMENTS

Trimble Navigation Ltd. / Geotech S.A.: HEPOS (HElIenic POSitioning Service) IT network analysis (application throughput / security requirements) and design (net backbone / access / IT infrastructure).

Name and address of employer	Self employed
Type of business or sector	Development & Administration of Computer Networks
Dates	September 1989 – July 1993
Occupation or position held	Research Assistant
Main activities and responsibilities	Responsible for building and testing simulation testbeds for digital wireless communication links and evaluating the performance of novel transceiver structures.
Name and address of employer	Communications Laboratory, Department of Electrical & Computer Engineering, The University of British Columbia Vancouver, B.C, Canada
Type of business or sector	University
Dates	1985 – 1987
Occupation or position held	Consultant
Main activities and responsibilities	Member of software-house technical staff responsible for the development and maintenance of accounting/ inventory software. Computer languages used: Pascal, C.
Name and address of employer	Self employed
Type of business or sector	Software programming

Education and training

Dates	August 1991 – August 1995
Title of qualification awarded	<i>Ph.D.</i> in Telecommunications
Principal subjects/Occupational skills covered	Thesis Title: “Advanced Noncoherent Receivers for Mobile Fading Channels” (2 years Research Assistantship, 2 years University Graduate Fellowship)
Name and type of organization providing education and training	The University of British Columbia, Vancouver B.C., Canada, Faculty of Applied Science, Department of Electrical & Computing Engineering

Dates	August 1989 – July 1991
Title of qualification awarded	M.A.Sc. in Telecommunications
Principal subjects/Occupational skills covered	Thesis Title: "Optimal Decoding of PSK and QAM Signals in Frequency Nonselective Fading Channels" (1.5 years Research Assistantship)
Name and type of organization providing education and training	The University of British Columbia, Vancouver B.C., Canada, Faculty of Applied Science, Department of Electrical & Computer Engineering
Dates	September 1983 – July 1989
Title of qualification awarded	<i>Diploma</i> in Electrical Engineering
Principal subjects/Occupational skills covered	5-year study including thesis, specialization field: telecommunications
Name and type of organization providing education and training	University of Patras, Patras, Greece
Dates	September 1977 – June 1983
Title of qualification awarded	Apolitirio (high school graduation diploma)
Principal subjects/Occupational skills covered	Greek high school, 6-year study
Name and type of organization providing education and training	Lycée Léonin Franco-Hellénique, Néa Smyrni, Athens, Greece

Personal skills and competences

Mother tongue(s)

Other language(s)

Self-assessment

European level ()*

English

French

Greek

Understanding				Speaking				Writing	
Listening		Reading		Spoken interaction		Spoken production			
C2	Proficient user	C2	Proficient user	C2	Proficient user	C2	Proficient user	C2	Proficient user
B2	Independent user	B2	Independent user	B2	Independent user	B2	Independent user	B2	Independent user

(*) *Common European Framework of Reference (CEF) level (see attached European Language Passport)*

Organizational skills and competences

Between 1991 and mid 1994 I served as President of the Amateur Radio Society (ARS) at the University of British Columbia. The UBC ARS is a non-profit, student organization governed by UBC's Alma Mater Society, with a mission to divulge Amateur Radio as a hobby to students, faculty, staff and the community.

During these four years we greatly increased student membership, successfully completed ambitious infrastructure projects (radio repeaters in the 144/440 MHz bands, auto-tracking 144/440 MHz satellite station, experimental high-speed wireless digital links in the 220/440 MHz bands), and published two preparatory course books on obtaining an Amateur Radio Operator certificate, while augmenting the already very successful weekend courses offered for those planning to take certification exams. Exam tests are administered by ARS members who are certified Industry Canada examiners. The two text-books ("*Amateur Radio Basic Qualification Manual*" & "*Amateur Radio Advanced Qualification Manual*" – of which I am a co-author) together with the weekend courses have since been the major source of income for the society.

Artistic skills and competences

I started learning the guitar at age 6 and continued classical music lessons until age 10. During high school and even more so throughout my University years, the guitar proved to be an invaluable companion both in joyful and in trying times, and the shared interest which sparked lasting friendships.

Driving license(s)

Land vehicles: EU type A (motorcycle), EU type B (passenger car)
Sea vessels: Motor boats & cruisers of max length up to 30m.

PROFESSIONAL ACTIVITIES

MEMBERSHIP IN SCIENTIFIC / PROFESSIONAL SOCIETIES

The Institute of Electrical and Electronics Engineers (IEEE), Grade: Member
– IEEE Communication Society
– IEEE Vehicular Technology Society
Technical Chamber of Greece (Professional Engineers' Licensing Authority)

MEMBERSHIP IN SCIENTIFIC / EXPERT PANELS

– Expert Evaluator, 6th & 7th Framework Programme (FP6 & FP7), Commission of the European Communities.
– Project Review Team Member, 6th & 7th Framework Programme (FP6 & FP7), Commission of the European Communities.
– Technical Program Committee, IEEE Wireless Rural & Emergency Communications Conference (WRECOM) 2007.

SCIENTIFIC INTERESTS

- Wireless Telecommunications Systems
- Mobile Satellite Communication Systems
- Design/Implementation of “System on a Chip” (SoC) ASICs for telecommunications
- Mobile Radio Channel Measurements and Modeling
- Computer Modeling/Simulation of Telecommunication Systems

TEACHING INTERESTS

- Telecommunications
- Electronics (Analog / Digital / RF)
- Micro-Controller/Computer Programming

DISTINCTIONS

1993 – 1995

University Graduate Fellowship (UGF Fellow), Department of Electrical & Computer Engineering, The University of British Columbia (UBC), Vancouver, B.C. Canada.

1995

University-wide “Best *Ph.D.* Thesis” nomination for the Natural Sciences and Engineering Research Council of Canada (NSERC) award for 1995.

2005

Publication [R-2] which I coauthored during the course of my *Ph.D.*, is referenced by the editors of the September 2005 issue of the *IEEE Journal on Selected Areas on Communications* [B-1] as one of the four most important – among several hundred other – scientific publications of the last two decades, which consist “... a real breakthrough ...” and are regarded as “... seminal contributions ...” spawning “... a plethora of technical papers ...” in the field of Differential and Noncoherent Digital Communications.

PUBLICATIONS / REPORTS

REFEREED JOURNAL PAPERS

- [R-6] D. P. Bouras, P. T. Mathiopoulos and D. Makrakis, “Neural-Net Based Receiver Structures for Single- and Multi-Amplitude Signals in CCI and ACI Channels,” *IEEE Transactions on Vehicular Technology*, vol. VT-46, pp. 791-798, August 1997.
- [R-5] D. Makrakis, P. T. Mathiopoulos and D. P. Bouras, “Comment on Maximum Likelihood Decoding of Uncoded and Coded PSK Signal Sequences Transmitted over Rayleigh Flat-Fading Channels,” *IEEE Transactions on Communications*, p. 269, March 1997.
- [R-4] P. Nasiopoulos, R. Ward, D. P. Bouras and P. T. Mathiopoulos, “HDTV Picture Quality Performance in the Presence of Random Errors: Analysis and measures of improvement,” *Journal of Signal Processing: Image Communications*, pp. 79-98, June 1996.

- [R-3] D. Makrakis, D. P. Bouras and P. T. Mathiopoulos, "Performance Analysis of Asymptotically Optimal Noncoherent Detection of Trellis-Coded Multi-Amplitude/Phase Modulation Signals in Gaussian Noise and ISI Channels," *IEEE Journal on Selected Areas on Communications*, vol. SAC-13, pp. 354-370, February 1995
- [R-2] D. Makrakis, P. T. Mathiopoulos and D. P. Bouras, "Optimal Decoding of Coded PSK and QAM Signals in Correlated Fast Fading Channels: A Combined Envelope, Multiple Differential and Coherent Detection Approach," *IEEE Transactions on Communications*, vol. COM-42, pp. 63-75, January 1994
- [R-1] D. P. Bouras, P. T. Mathiopoulos and D. Makrakis, "Optimal Detection of Coded Differentially Encoded QAM and PSK Signals with Diversity Reception in Correlated Fast Rician Fading Channels," *IEEE Transactions on Vehicular Technology*, vol. VT-42, pp. 245-258, August 1993

REFEREED CONFERENCE PAPERS

- [C-8] P. T. Mathiopoulos (Editor), M. Grigat, I. Gaspard, U. Martin, D. P. Bouras, E. Dimopoulos, J.-C. Bic, P. Pajusco, E. Bonek, M. Steinbauer, G. Pospischil, P. Lehne, F. Aanvik, "METAMORP: Measurements, Testing and Calibration of Advanced mobile radio-channel test equipment," in the *Proceedings of COST 250 TD(97)*, Lisbon, September 1997.
- [C-7] D. Makrakis, D. P. Bouras and P. T. Mathiopoulos, "Non-Coherent Diversity Receivers for Mobile and Personal Satellite Communications," in the *Proceedings of the 1996 Workshop on Multiaccess, Mobility and Teletraffic for PCS*, Paris, France, May 1996.
- [C-6] D. P. Bouras, P. T. Mathiopoulos and D. Makrakis, "Maximum Likelihood Receivers for Coded Wideband Personal Communication Systems," in the *Proceedings of the IEEE International Conference on Electronics, Circuits and Systems*, Cairo, Egypt, December 1994.
- [C-5] D. P. Bouras, P. T. Mathiopoulos and D. Makrakis, "Neural-Net Based Receiver Structures for Single- and Multi-Amplitude Signals in Interference Channels," in the *Proceedings of the 4th IEEE Workshop on Neural Networks for Signal Processing*, Ermioni, Greece, pp. 535-544, September 1994
- [C-4] D. P. Bouras, P. T. Mathiopoulos and D. Makrakis, "Maximum Likelihood Decoding of Coded Digital Signals in Frequency Selective Fast Fading Channels," in the *Proceedings of the 1993 Pacific Rim Conference on Communications, Computers and Signal Processing*, Victoria, B.C., Canada, pp. 565-568, May 1993
- [C-3] D. Makrakis, P. T. Mathiopoulos and D. P. Bouras, "A New Limiter/Discriminator Receiver for Mobile and Cellular Telecommunication Systems Employing MSK-type Signals", in the *Proceedings of SUPERCOMM/ICC '92*, Chicago, USA, pp. 855-859, June 1992
- [C-2] D. P. Bouras, P. T. Mathiopoulos and D. Makrakis, "Noncoherent Trellis Coded $\pi/4$ -shift DQAM With Diversity Reception for Future Digital Mobile/Cellular Communication Systems," in the *Proceedings of the 1991 IEEE Pacific Rim Conference on Communications, Computers and Signal Processing*, Victoria, B.C, Canada, pp. 425-428, May 1991
- [C-1] P. T. Mathiopoulos, D. P. Bouras and D. Makrakis, "Near Optimal Noncoherent Detection of Multi-Amplitude $\pi/4$ -QPSK Schemes," in the *Proceedings of the 4th Nordic Seminar on Digital Mobile Radio Communications (DMR IV)*, Oslo, Norway, Paper 1.1, June 1990

TECHNICAL REPORTS (REPRESENTATIVE SAMPLE)

- [T-11] D. P. Bouras, "Processing Gain Measurement Procedure for an 802.11b Baseband Processor," ATMEL Hellas S.A., 2002 (includes analytical bounds of BER performance for all 802.11b transmission rates).
- [T-10] D. P. Bouras, "Effects of Amplitude and Phase Imbalance in Quadrature Modulators," ATMEL Hellas S.A., 2001 (includes calculation of nomograph for balanced modulator phase & amplitude imbalance versus allowed constellation error for an 802.11a transmitter).
- [T-9] D. P. Bouras and F. Karoubalis, "Parametric Reed-Solomon Forward Error Correction Module for a DOCSIS-1.1 compliant Uplink Burst Modulator: Design & HDL Implementation," ATMEL Hellas S.A., 2000.
- [T-8] D. P. Bouras and F. Karoubalis, "CORDIC-based Numerically Controlled Oscillator for a DOCSIS-1.1 compliant Uplink Burst Modulator: Design & HDL Implementation," ATMEL Hellas S.A., 2000.

- [T-7] D. P. Bouras, "PLL Clock Jitter Requirements for a DOCSIS Burst Modulator Employing Direct Digital Synthesis (DDS)," ATMEL Hellas S.A., 2000.
- [T-6] D. P. Bouras and F. Karoubalis, "All-Digital Zero IF Quadrature Receiver for CPFSK Signals with Emphasis on GMSK / GFSK: Design & HDL Implementation", ATMEL Hellas S.A., 1999.
- [T-5] D. P. Bouras, "All-Digital Baseband Quadrature Modulator for CPFSK Signals with Emphasis on GMSK / GFSK: Design & HDL Implementation", ATMEL Hellas S.A., 1999.
- [T-4] D. P. Bouras, "FM Discriminator DC-Offset Estimator/Canceler for a BlueTooth Baseband Controller: Design & HDL Implementation", ATMEL Hellas S.A., 1999.
- [T-3] D. P. Bouras, "Hangup-free Non Data Aided (NDA) Clock and Data Recovery for a BlueTooth Baseband Controller: Design & HDL Implementation", ATMEL Hellas S.A., 1999.
- [T-2] D. P. Bouras and P. T. Mathiopoulos, "Processing of Measured Channel Impulse Response Data: Noise Reduction", deliverable no. META/EH/B-3/a1, METAMORP (SMT4-CT96-20093), ERICSSON Hellas S.A., 1998.
- [T-1] D. P. Bouras and P. T. Mathiopoulos, "Channel Impulse Response Data Reduction via Averaging", Data Processing Algorithms, deliverable no. META/TUW/B-2/1/b1, METAMORP (SMT4-CT96-20093), ERICSSON Hellas S.A., 1998.

BIBLIOGRAPHY

- [B-1] R. Raheli, R. Schober and H. Leib, "Guest Editorial: Differential and Noncoherent Wireless Communications," *IEEE Journal on Selected Areas on Communications*, vol. SAC-23, pp. 1693-1695, September 2005.