

## Loukas V. Hadellis CV

Dr Electrical & Computer Engineer, M. Eng.  
Professor, Electrical & Computer Engineering Dept. University of Peloponnese  
Field “Hardware Engineering with emphasis on communications and networks  
In industrial environments”

Microcomputer Systems Laboratory <http://microlab.uop.gr/index.php/en/>

Microelectronics & Communication Lab <http://microcom.uop.gr/>

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**Ph.D.**, University of Patras, School of Engineering, Department of Electrical Engineering and Computer Technology, 2002, Patras. PhD Thesis: “Development and Implementation of an interoperability networking architecture for heterogeneous fieldbuses”.

<https://nemertes.library.upatras.gr/jspui/handle/10889/3233>

**Master of Engineering, Electrical**, Carleton University, School of Electrical Engineering, Electronics Dept, December 1983, Ottawa, Canada. Master Thesis: “An Optical Time Domain Reflectometer (OTDR) operating at 1,3  $\mu\text{m}$  wavelength”.

<https://curve.carleton.ca/7fe52407-2980-4ebf-b4e5-dcc717a49117>

**Dipl. Electrical Engineer**, University of Patras, School of Engineering, Department of Electrical Engineering and Computer Technology, 1981 Patras. Final (5<sup>th</sup>) Year Project: «Design and Implementation of a double loop PLL 100MHz Frequency Synthesizer in 10kHz step”.

### R&D Fields of Interest

- Fieldbuses, Industrial Communication, Microcontrollers, M2M, Industrial IoT
- Industry 4.0, Smart Factory, Interoperability, Distributed Process Control, Middleware
- Energy & Resources Management & Control
  - Central Heating System Smart Monitoring & Certification*
  - Smart Grid: Demand Side Management (DSM)/ Automated Demand Response (ADR)*
  - Water Smart Metering*
- Industrial / Building / Home / Utilities / Transportation Automation Systems
- Fiber Optic Communication & Networks
- Sound Engineering
  - Audio / Music Electronics & Technology*
  - Audio Recording, Mixing & Processing*

### Employment History & Professional Experience

- **2019-today. University of Peloponnese.** Professor in Electrical & Computer Engineering Dept. <https://www.ece.uop.gr/staff/chadellis-loukas/>
- **2020-today. Hellenic Open University.** Professor / Cooperating Teaching Staff in Master of Arts Graduate Program “Acoustic Design and Digital Sound (ADDS)” (<https://www.eap.gr/education/postgraduate/annual/acoustic-design-and-digital-sound/>)
- **2020-today. University of Peloponnese.** Professor in Postgraduate Master’s Program “Technologies and Services of Smart Information Systems and Communications” offered by the Department of Electrical and Computer Engineering (<https://smart-ict.ece.uop.gr/>).

- **2021. Committee of Experts of the Ministry of Development & Investment.** Deputy Chairman of the Committee of Experts for the evaluation of proposals submitted to the Important Projects of Common European Interest (IPCEI) in the industrial value chain "Microelectronics II".
- **2019-today. University of Peloponnese.** Director of Microelectronics & Communication Laboratory (microcomlab) at Electrical & Computer Engineering Dept. <http://microcom.uop.gr/>
- **2015-2019. TEI of Western Greece.** Director of Microelectronics & Communication Laboratory (microcomlab) at Electrical Engineering Dept.
- **2008–2019. TEI of Patras / TEI of Western Greece.** Professor at Electrical Engineering Dept.
- **2003-2008. TEI of Patras.** Associate Professor at Electrical Engineering Dept.
- **1995-2003. TEI of Patras.** Assistant Professor at Electrical Engineering Dept.
- **1995-today. University of Peloponnese / TEI of Patras.** Head of Microcomputer Systems Laboratory <http://microlab.uop.gr/>
- **2009-today. Corallia mi-cluster.** Microcomputer Systems Laboratory is an academic member of Corallia mi-cluster.
- **2009-2019. HSIA/Hetia.** Microcomputer Systems Laboratory is an associate member of HSIA / HETIA.
- **2003-2019. TEI of Patras.** Head of Automation & Electronics Systems Sector of the Electrical Engineering Dept.
- **1996-2008. TEI of Patras.** Technical Manager at Network Operating Center (NOC) at TEI of Patras.
- **1991–1995. Institute of Biomedical Technology – INBIT.** <http://www.inbit.gr> Patras Science Park (PSP). Technical Management in Research projects. Research & Development. Computer networks for clinical engineers. INBIT inter-networking infrastructure development.
- **1987–1990. EGL Western Greece Paper Mills.** Technical Management / Production Engineer. Automation Control Systems Dept. Automation systems Start-up. Accuray Paper Quality Control Systems, Simatic S5 PLC Systems, Reliance AC/DC Drives. Consulting in EGL automation systems evaluation funded by Integrated Mediterranean Programmes (IMPs).
- **1984–1987. University of Patras. Electrical & Computer Engineering Dept.** Research Project Engineer. Computer & Fiber Optic Networks. Laboratory of Electromagnetics.
- **1984–1995. Self-employed.** Dipl. Electrical Engineer in Industrial Automation Systems, Computer Networks and Sound Engineering.
- **1982–1984. Bell-Northern Research (BNR) absorbed into Nortel Networks Co (Nortel).** R&D Research Engineer. OTDR Project. BNR Report TL-IR-2-015, Fiber Optic Communications Dept. Ottawa, Ontario, Canada
- **1981–1982. Carleton University, Electrical Engineering, Electronics Dept.,** Teaching & Research Assistant. Electronics, Fiber Optics, Microwave Engineering. Ottawa, Ontario, Canada.

**Military Service:** 1990-1991, Hellenic Army Technical Corps / Telecommunications.

#### **R&D**

- 2009-2013 “Distributed intelligence innovative sensor systems development - MEMSENSE” [http://www.memsense.org/index\\_en.html](http://www.memsense.org/index_en.html) research project within MICRO2-SE-A/E-II, OPCE II, NSRF, Corallia mi-Cluster: HTCI in Microelectronics – Phase2 framework. Head of TEI of Patras research team.
- 2010-2014 “Automated Demand Response Management System for rationalized use of Electrical Energy [DAMAZO]” research project within OPCE II, NSRF, GSRT SYNERGASIA PRAXI 1 framework.

- 2010-2011. “A proactive maintenance system for automated garage / industrial doors” Innovation Voucher 56534388-01-000025 (OPCE II, NSRF, GSRT) for SME enterprise V. Roumeliotis. <http://www.vroumeliotis.gr/>.
- 2010-2011. “Upgrading a conventional domestic water-meter device to a fully-electronic one with AMR & wireless communication capabilities for measurement transfer to a back-end system” Innovation Voucher 67161197-01-000017 (OPCE II, NSRF, GSRT) for SME enterprise Afoi Koutsoukou Zeus Meters <http://www.zeusmeters.com/company>.
- 2006-2008. “An intelligent system of interactive telecommunication and telematic management of a vehicle fleet carrying petrol products – SIMA (ΣΗΜΑ)», Attiki Regional Operational Program framework, GSRT funding and European Commission (ERDF), Cyclon Hellas & Industrial Systems Institute (ISI)
- 2005-2006. “Non-invasive mechanical ventilation supply management – DEMA (ΔΕΜΑ)”, International Cooperation in Industrial Research and Development Activities at a pre-competitive stage, GSRT funding & European Commission (ERDF), SANTAIR, Respironics & Industrial Systems Institute (ISI).
- 2001-2007. Infosociety: Advanced Telematics Services at TEI of Patras and TEI of Patras Communication Network II.
- 1996-2000. 2<sup>nd</sup> Framework - Operational Program for Education and Initial Vocational Training (OPEIVT): TEINET - TEI of Patras Communication Network, Technical Manager
- 1996-1999. 2<sup>nd</sup> Framework - OPEIVT: TEINET - TEI of Patras, GUNET (Greek Universities Network).
- 1997-2000. 2<sup>nd</sup> Framework - OPEIVT: Electrical Engineering Dept., TEI of Patras, Reformation of Program of Studies.
- 1991-1995. AIM/BEAM/FINE (Advanced Informatics in Medicine / Biomedical Equipment Assessment and Management / Facility for Information Exchange) & TELEMATIQUE (Development of a telematics service for use in training programs in the field of health) Institute of Biomedical Technology (INBIT).
- 1984-1988. ESPRIT, “Local Integrated Optical Network – Project LION169” University of Patras, Laboratory of Electrotechnics.
- 1986. RACE. Hellenic Aerospace Industry “Network Interconnections and Subscribers Interfaces” University of Patras, Laboratory of Electrotechnics.
- 1984-1986. GSRT, “Local communication Network for Personal Computers and Subscribers with the use of fiber optics”, University of Patras, Laboratory of Electrotechnics.
- 1983-1984. Bell Northern Research: OTDR Project, BNR Report TL-IR-2-015, Jan. 1984, Ottawa, Canada

## **Publications**

1. Hadellis, L., S. Koubias, V. Makios “An Integrated Approach for an Interoperable Industrial Networking Architecture consisting of Heterogeneous Fieldbuses”, Computers in Industry, An International Application Oriented Research Journal, Elsevier, Vol. 49, Issue 3, December 2002, pages 283-298.
2. Kapsalis V, Safouri G, Hadellis L., “Cost/comfort-oriented optimization algorithm for operation scheduling of electric water heaters under dynamic pricing”, Journal of Cleaner Production 198, 1053-1065, Elsevier 2018.
3. Hadellis, L. and V. Kapsalis, “Distributed Control Network for Agricultural Applications”, Control Applications and Ergonomics in Agriculture IFAC - CAEA 98 Workshop, 14-17 June 1998, Athens.

4. Kapsalis V. and Hadellis L., "Optimal operation scheduling of electric water heaters under dynamic pricing", *Sustainable Cities and Society* 31, 2017, pages 109-121, Elsevier Journal 2017.
5. Ch. P. Antonopoulos, Vassilis Kapsalis, Loukas Hadellis: Optimal scheduling of smart homes appliances for the minimization of energy cost under dynamic pricing. *ETFA 2012*: 1-4
6. Hadellis, L. and S. Koubias, "An Approach to Interoperability in a Heterogeneous Control Network Environment" *IFAC Conference on Manufacturing, Modeling, Management and Control – MIM 2000*, 12-14 July 2000, Patras.
7. S. Soursos, V. Kapsalis, G. Petropoulos, Y. Karras, L. Hadellis, "A Demand Response System for Hierarchically Organized Aggregators in Smart Grids", 2013, 1st International Workshop on Simulation for Energy, Sustainable Development & Environment.
8. R. Maciejko and L. Hadellis, "Two Signal Processing Enhancements for Optical Time Domain Reflectometry", *IEEE Journal of Lightwave Technology - Optical Society of America*, Vol. LT-4, No 5, May 1986 pages 538 - 546.
9. V. Kapsalis, C. Fidas, L. Hadellis, C. Karavasilis, M. Galetakis, C. Katsenos "A networking platform for real-time monitoring and rule-based control of transport fleets and transferred goods" *Intelligent Transportation Systems (ITSC)*, 2010 13th International IEEE Conference on; 10, 2010.
10. Vassilis Kapsalis, Loukas Hadellis, Dimitris Karelis, Stavros Koubias, "A dynamic context-aware access control architecture for e-services", *Computers & Security, Elsevier Science B.V.*, Vol. 25, Issue 7, pp. 507-521, October 2006.
11. V. Kapsalis, D. Karelis, L. Hadellis, and G. Papadopoulos. A context-aware access control framework for e-service provision. In *Proceedings of (ICIT 2005) IEEE International Conference on Industrial Technology*, 2005.
12. Vassilis Kapsalis, Christos Fidas, Loukas Hadellis. Towards a Domain-Specific Context Acquisition, Presentation and Rule-Based Control Platform. *Int. J. Pervasive Computing and Communications* 9(1), 2013.
13. L. Hadellis. A Physical Layer Unit Implementation at 100Mbps for a high speed fiber optic LAN. *Panhellenic Conference with international participation "Applications of microcomputer systems in Industry, Research and Technology"* 3-5/10/1988, L. Hadellis, Laboratory of Electromagnetic Applications, University of Patras.
14. P. Balaouras, C. Bouras, L. Chadelis, D. Fotakis, V. Kapoulas, N. Palikarakis, R. Sandalatzopoulos, P. Spirakis, A. Tatakis, *Facility for Information Exchange - FINE: Implementation of a Distributed Telematics Environment for Clinical Engineers*. 1996 *Concurrent Engineering Europe*, 10-12 April 1996, Cambridge, UK, pp. 56-60
15. L. Hadellis, V.Kapsalis, P. Vlachopoulos, *Data and Control Network Systems Convergence – A new concept in System Integration*. *New Horizons in Industry and Education – NHIE, Socrates / Erasmus Pilot Project "The European Engineer Management"*, 9-10 September 1999, Santorini.
16. R. Maciejko and L. Hadellis, "An Experimental Digital Parallel-Processing OTDR System at 1.3 mm", *BNR Report TL-IR-2-015*, Jan. 1984, 54p.

## Publication Citations

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## Patent Citations

1. Internet based access point management system 7181507 B1 [3]
2. Switchgear assembly system and method for installation of withdrawable units in switchgear assemblies 7881306 B2 [1]
3. Method for monitoring an optical data line, and optical transmission module EP2219018 A1 [2]

4. High dynamic range OTDR data acquisition circuit WO 1995016902 A1 [2]
5. Method for operation of a data storage unit for process automation European Patent EP1899772 B1 [1]
6. Systems and methods for application server self-service console US 8843647 B1 [5]

### **Deliverables & Technical Reports**

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### **Book (in Greek language)**

“Sound Technology: Principles of Acoustics & Psychoacoustics, Sound & Analog Electronics, Digital Audio”, Loukas Hadellis, Editor ARAKYNTHOS Panepistimiakes Ekdoseis (University Publications), 392pages, ISBN 978-960-9474-00-9, March 2010

<https://nereus.lis.upatras.gr/cgi-bin/koha/opac-ISBDdetail.pl?biblionumber=116786>

### **Member in Organizations**

- Hellenic Technical Chamber (TEE)
- Hellenic Institute of Acoustics (HELINA)
- European Acoustics Association (EAA)
- Hellenic Association of Dipl. Mechanical & Electrical Engineers
- Hellenic Association of Technical Scientists in Industry (STEB)
- <https://gr.linkedin.com/in/loukas-hadellis-a468a642>
- <https://scholar.google.gr/citations?user=EsXFIZ0AAAAJ&hl=el&oi=ao>

### **Activities**

Jazz Guitarist. Musician, Guitar Instructor, Composer, Member “All About Jazz” community  
<https://musicians.allaboutjazz.com/loukashadellis>