UNIVERSITY OF PATRAS
SCHOOL OF ENGINEERING
DEPARTMENT OF ELECTRICAL AND COMPUTER ENGINEERS

CURRICULUM VITAE

STAVROS A. KOUBIAS
Professor
Former Rector of the University of Patras

Patras, December 17

CONTENTS

CURRICULUM VITAE

1. GENERAL INFORMATION

1.1 PERSONAL INFORMATION

Date of Birth: April 22, 1953
Place of Birth: Chios (island)
Family Status: Married, one son
Home Address: Tilou 17, 26442 Patras, Greece
Phones: +30 2610 996437/994434/6978188890
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1.2 EDUCATION

Diploma of Electrical Engineering (1976)
University of Patras, School of Engineering, Department of Electrical Engineers
PhD (1982)
University of Patras, School of Engineering, Department of Electrical Engineers

1.3 ACADEMIC EXPERIENCE

1.3.1 University of Patras

Professor, (2004-today)
School of Engineering, Department of Electrical and Computer Engineers
Associate Professor, (1999-2004)
School of Engineering, Department of Electrical and Computer Engineers
Assistant Professor, (1987- 1999)
School of Engineering, Department of Electrical and Computer Engineers
Lecturer (1983-1987)
School of Engineering, Department of Electrical Engineers
Research Fellow (1976-1982)
School of Engineering, Department of Electrical Engineers

1.3.2 Technological & Educational Institute (TEI) of Patras

Professor (1985-1990)
School of Technological Applications, Department of Electrical Engineers

1.3.3 Industrial Systems Institute (ISI) of Patras

Senior Researcher (1998-today)

1.4 RECENT ACADEMIC/ADMINISTRATIVE EXPERIENCE

- **Rector of the University of Patras(2006 - 2010)**
- **Chairman of the Department of Electrical and Computer Engineering (2015 - 2019) and Deputy Chairman of the Department of Electrical and Computer Engineering (2001 - 2003) and**

- **Chairman of the Department of Materials Science, University of Patras (2009-2010)**
- **Deputy Chairman of the Department of Cultural Heritage Management and New Technologies (2019-2010)**
- **Director of the Applied Electronics Laboratory, Department of Electrical and Computer Engineering School of Engineering, University of Patras (2008-today)**

  The Applied Electronics Laboratory (APEL) is one of the main laboratories in the Department of Electrical and Computer Engineering. It was founded in 1976 and it is responsible for courses in the area of electronics, microelectronics, microprocessor-based systems design, embedded systems, FPGAs, real-time protocols and systems, industrial communication networks and telecommunication electronics. Over 200 Masters and a large number of PhDs theses have been completed or are currently in the stage of execution. The general research activities include among others High Speed Networking Architectures, Protocol Software, Internetworking Architectures, Real-Time Protocols, Fieldbuses (Industrial Networks), Communication Electronics, Wireless LANs, Advanced Microprocessor Based Architectures, Embedded Controllers, Industrial Real-Time Networks and Industrial Automation Systems, Home Information Systems, Microelectronics (FPGA and ASIC Design), Co-Design and Co-Simulation of Hardware/Software Systems, Digital Signal Processing and Computer Vision for Industrial Product Inspection

- **Chairman of the Scientific Committee of the Network Centre of the Patras University Computer Network (2001-2003) and member of this Committee (2003-2006)**

  Prof. Koubias from March 2001 to August 2003 served as Chairman of the Scientific Committee of the Network Centre of the Patras University Computer Network, which was set up in order to manage, support and expand the data and voice network of the University of Patras. The scientific and technical target of this Network Center is the continuous and substantial upgrade of the network infrastructure and telematic services provided to the entire university community (approximately 25.000 users). In this context major scientific and development activities took place in the Network Center, which were designed to enhance the quality of the networking services offered to the users in the University of Patras, making this center one of the most organized and efficient academic computer networks.

- **Member of the Western Greece Region Advisory Council of Research and Innovation (2012-today)**

  The Council provides inputs, field studies, records and assessments of existing infrastructures or available human resources and comparative assessments of regional clusters of research organizations, technology agencies, businesses, other bodies and regional authorities to promote encouraging the development of public-private partnerships and the creation of conditions and prospects for the successful participation of regional national and European research projects.

- **Member of the National Quality Council (NQC) for Growth (2003-2005).**

  The NQC was established in 2003 in order to edit issues, formulate positions/politics and advice on policy and setting targets for the Quality issues in Greek industries/enterprises. The operation of the National Quality Council for the Development is supported by the General Secretariat of Industry. This council is the official technical advisor of the state in matters of Quality Management and its members represent the main stakeholders (from academia, production) related to quality issues in Greece.

2. RESEARCH WORK

2.1 PhD Thesis

'Study and Development of Self-adaptive Multiple Access Protocols for Local Computer Networks'.

2.2 SCIENTIFIC ACTIVITY

- ✓ ***Real-Time Distributed Systems***
  - Design and development of local wired / wireless hybrid industrial computer networks (fieldbuses) and real-time control networks.
  - Design and development of communication software, Data Link, Application, User Management layers, according to the OSI Reference Model.
  - Design and development of advanced network interoperability architectures (system, device) for the interconnection of heterogeneous control systems (networks) and/or network devices.
  - Design and development of advanced industrial communications structures for C2V, B2B applications (Ontologies, Web-services, Industrial GRIDs, etc.)
  - Design and development of reliable systems for advanced distributed control applications of real-time building processes of industrial and non-industrial - type - Connecting to the Internet.
  - Design and development of compact, programmable industrial controllers with advanced networking capabilities, based on embedded systems.

- ✓ ***Real-Time Communication Protocols***
  - Design and development of integrated real-time protocol architectures for wired and wireless networks.
  - Development of cross-layer approach to develop communication protocols stack for wireless sensor networks.
  - Methods, techniques and protocols for packet routing for wireless sensor networks
  - Methods and techniques for managing power consumption of wireless sensor networks nodes (integration into the protocol stack)
  - Development and implementation of high-performance, real-time, reliable protocols for local area networks with bus topology (one or more busses) and loop topology (single / double rings).
  - Performance analysis of MAC sublayer communication protocols (queuing theory, Markov chains, etc.).
  - Development of simulation tools for the analysis and evaluation 0f MAC sublayer communication protocols
  - Design and development of new protocols architectures (for the high layers of the OSI Reference Model) to support real-time applications (QoS)
  - Development of interworking architectures for the interconnection of high-speed heterogeneous communication networks (ISDN, ATM), providing end-to-end real-time response

- ✓ ***Advanced Industrial Control Systems***
  - Design and implementation of industrial control applications by developing specific industrial software and hardware (embedded systems)
  - Machine computer vision for automatic inspection (recognition of faults-errors) of moving bi-dimensional surfaces (e.g. roles of fabric, wood etc.) in real application conditions.

- Application of neural network techniques for automatic categorization of faults-errors arising from the inspection of moving bi-dimensional surfaces.

✓ ***Design and Development of Dynamic Systems for Industrial/Business Excellence – Total Quality***
- Total Quality, Systems Theory, Dynamic Systems
- National Industrial/Business Excellence (focused on Telecommunications Systems)

3. SCIENTIFIC PUBLICATIONS AND CITATIONS

3.1 PUBLICATIONS AND CITATIONS IN SCIENTIFIC PUBLICATIONS

✓ In Scopus

Publications:
https://www.scopus.com/results/results.uri?sort=plf-f&src=s&st1=koubias&st2=&nlo=1&nlr=20&nls=&sid=97CB886600BA52D466BA76E58377FA5C.WlW7NKKC52nnQNxjqAQrlA%3a52&sot=anl&sdt=aut&sl=39&s=AU-ID%28%22Koubias%2c+Stavros+A.%22+7004306665%29&partialQuery=&txGid=0

citations:
https://www.scopus.com/cto2/main.uri?origin=resultslist&stateKey=CTOF_803185474

In Google Scholar

Publications:
http://scholar.google.gr/scholar?hl=el&q=koubias&btnG= In

citations:
http://scholar.google.gr/citations?user=jfpHh_UAAAAJ&hl=el

✓ In IEEE

Publications and citations:
http://ieeexplore.ieee.org/search/searchresult.jsp?queryText=(koubias)&sortType=desc_p_Publication_Year&matchBoolean=true&searchField=Search_All_Text

3.2 Indicative citations in Patents

http://patft.uspto.gov/netacgi/nph-Parser?Sect1=PTO2&Sect2=HITOFF&p=1&u=%2Fnetahtml%2FPTO%2Fsearch-bool.html&r=0&f=S&l=50&TERM1=koubias&FIELD1=&co1=AND&TERM2=&FIELD2=&d=PTXT

Indicative citations:

Transfer of Messages in a Multiplexed System
No. RE37,494, USA PATENT OFFICE,

Transfer of messages in a multiplexed system
No. RE39,454 , USA PATENT OFFICE

Access Scheme for a Data Communications Network
No. 5,267,243, USA PATENT OFFICE

Protocol for Communicating Data Between Packet Forwarding Devices Via an Intermediate Network Interconnect Device
No. 5,974,467, USA PATENT OFFICE

Method, Means and System for Communicating on A Shared Transmission Medium,
No. 6,108,344, USA PATENT OFFICE, EP 0788257 A1

Communication network
No. 6,320,871, USA PATENT OFFICE

Method and Apparatus for Controlling Communication Links Between Network Nodes to Reduce Communication Protocol Overhead Traffic,
No. 6,349,091, USA PATENT OFFICE

Method and Apparatus for Broadcasting Messages in Channel Reservation Communication Systems,
No. 6,349,210, USA PATENT OFFICE

Method and Apparatus for Transmission of Node Link Status Messages Throughout a Network with Reduced Communication Protocol Overhead Traffic,
No. 6,385,174, USA PATENT OFFICE

Multiparty conferencing and collaboration system utilizing a per-host model command, control and communication structure
No. 6,584,493, USA PATENT OFFICE

Object access mechanism that dynamically switches between multiple distributed access models
No. 6,633,922, USA PATENT OFFICE

Software, systems and methods for managing a distributed network
No. 6,671,724, USA PATENT OFFICE

Data transmitting apparatus, network interface apparatus, and data transmitting system
No. 6,711,131, USA PATENT OFFICE

Security and support for flexible conferencing topologies spanning proxies, firewalls and gateways
No. 6,850,985, USA PATENT OFFICE

Multiparty conference authentication
No. 6,851,053, USA PATENT OFFICE

Method and apparatus for communication network cluster formation and transmission of node link status messages with reduced protocol overhead traffic
No. 6,980,537, USA PATENT OFFICE

Information processing apparatus, information distribution apparatus, information processing system, network monitoring apparatus and network monitoring program
No. 7,162,516, USA PATENT OFFICE

Electronic system and method for display using a decoder and arbiter to selectively allow access to a shared memory
No. 7,321,368, USA PATENT OFFICE

Security and support for flexible conferencing topologies spanning proxies, firewalls and gateways monitoring program
No. 7,409,455, USA PATENT OFFICE

Event manager for a control management system,
No. 7,185,078, US PATENT OFFICE

Methods and systems for mobile device messaging
No. 8,112,103 US PATENT OFFICE

Systems and methods for application server self-service console
No. 8,843,647 US PATENT OFFICE

High speed multimedia data network
EP0859495, Pogue Jr., Russell Wilbur, August 1998, http://www.freepatentsonline.com/EP0859495.html

Scalable multiparty conferencing and collaboration system and method of dynamically allocating system resources
WO 2000052886 A1, US7167182, US20040221010
https://encrypted.google.com/patents/WO2000052886A1?cl=fi

4. PATENTS

System for acquiring and surveying data following catastrophic events, with the aim of facilitating eventual aid or intervention
Kind Code: A1
Application Number: EP20030425667
Publication Date: 04/20/2005
Filing Date: 10/15/2003
Domestic Patent Reference: EP1304672

Abstract: A system for collecting and surveying data following accidental events and/or catastrophes, in particular to support eventual aid intervention, characterised in that it comprises a monitoring device and a control station, said monitoring device comprising at least one catastrophic event detecting device, at least one surveying device of surrounding environment, at least one memory unit, at least one transmission unit of said data and or and/or locating information, a central processing unit and electrical feeding means, characterised in that said monitoring device only after said catastrophic event activates itself and than transmit the surveyed data and/or memorised to said control station, and said control station comprising at least one receiving unit of said transmitted data from said monitoring device.

Inventors:
Katevas, Nikos (GR)
Andritsos, Fivos (BE)
Theofili, Chara (GR)
Chrysagis, Kostas (GR)
Dandoulaki, Miranda (GR)
Delprato, Uberto (IT)
Eck, Laurent (FR)
Efstathiou, Konstantinos (GR)
Karvelas, Efstratios (GR)
Ferrucci, Fabrizio (IT)
Kalivas, Grigorios (GR)
Karastergios, Georgios (GR)
Koubias, Stravros (GR)
Letelier, Laurent (FR)
Moreau, Vincent (FR)
Papadopoulos, Georgios (GR)
Pogas, Nikolaos (GR)
Thoma, Thekla (GR)
Vakalis, Ioannis (BE)
Vasilakopoulou, Efrosini (GR)

5. ACADEMIC AND EDUCATIONAL ACTIVITIES

5.1 TEACHING

Prof. Koubias occasionally taught the following undergraduate and postgraduate courses in the Departments of Electrical and Computer Engineers, Computer Engineering and Informatics, Physics:

- Analog Integrated Circuits
- Advanced Microprocessor and Microsystem Systems
- Advanced Microprocessors
- Distributed Real-Time Embedded Systems
- Industrial Computer Networks (postgraduate)
- Design of Special Hardware/Software Systems (postgraduate)

5.2 Diploma and PhD Theses

Prof. Koubias has supervised many diploma theses (equivalent to Master Theses) and PhDs (V. Kapsalis, L. Mandalos, I. Salem, A. Prayati, C. Antonopoulos, M. Georgoudakis, S. Giannoulis, V. Mavroidis, S-M. Dima and others) in the Department of Electrical and Computer Engineers, the Department of Computer Engineering and Informatics and the Department of Physics mainly in the following areas:

- Analysis of MAC-sublayer protocols for standard and special LAN structures (analytical methods, simulation)
- Study and design of advanced MAC-layer and routing protocols for wireless real-time local area networks
- Development of new methods for cross-layer protocol stack design for wireless sensor networks
- Event recognition real-time algorithms based on fuzzy logic techniques for Wireless sensor and actor networks
- Security in wireless sensor networks
- Development of methods and techniques for managing power consumption of wireless sensor networks nodes
- Implementation of network nodes for industrial-type computer networks using the latest technology of the network controllers
- Industrial Computer Networks (wired, wireless) for real-time applications
- Design and development of communication software for the implementation of the MAC sublayer, Application layer and User layer (according to the OSI Reference Model)
- Design and development of advanced interoperability networking architectures (system, device) for the interconnection of heterogeneous control systems (networks) and / or network devices
- Design and development of advanced industrial communications structures C2B, B2B applications (Ontologies, Web-services, Industrial GRID, etc.)
- Development of communication systems for building automation processes
- Development of special software for network management
- Development of interoperability architectures for the interconnection of heterogeneous high-speed computer networks
- Design and implementation of advanced systems based on popular microprocessors / microcontrollers / embedded systems
- Machine-computer vision for advanced industrial applications

5.3 BOOKS

- S. Koubias etal, **"Programming of the INTEL 8080-8085 microprocessors**", Patras University Press, 1984.
- S. Koubias etal, **"The Intel Microprocessors 8086/8088, 80186/80188, 80286, 80386, 80486, Pentium and Pentium Pro Processor**", Official Greek Translation of the book: Brey, The Intel Microprocessors: The INTEL Microprocessors: 8086/8088, 80186/80188, 80286, 80386, 80486, Pentium, Pentium Pro Processor, 1999 (4^{η} Edition)
- S. Koubias, **"Industrial Computer Networks– Protocols and Systems"**, Patras University Press, 1999.
- R.- E. King, **'Industrial Informatics'**, One Chapter, 2003.

5.4 PARTICIPATION (INDICATIVE) IN IMPORTANT IEEE CONFERENCES

5.4.1 General Chair

1. "2007 IEEE International Workshop on Emerging Technologies and Factory Automation (**ETFA**'**2007**)", **General Chair**, Patras, Greece, 25-28 Sept.2007.
2. "2009 IEEE 9th International Symposium on Autonomous Decentralized Systems (**ISADS'2009)**", **General Chair,** Athens, Greece, March 23-25, 2009
3. "2012 IEEE International Conference on Industrial Technology **(ICIT'2012), General Chair,** Athens, March 2012

5.4.2 Committee Member

4. "IEEE International Workshop on Factory Communication Systems (**WFCS 2000**)", Μέλος της Program Committee, Porto, Portugal, Sept. 6-8, 2000.
5. "International Workshop on Assurance in Distributed Systems and Networks 2002, (**ADSN02**)", Member of the Program Committee, Vienna, Austria, July 2, 2002.
6. "International Workshop on Assurance in Distributed Systems and Networks 2003 (**ADSN03**)", Member of the Program Committee, Providence, Rhode Island, USA, May 19, 2003.
7. "2003 IEEE International Symposium on Signal Processing and Information Technology (**ISSPIT03**)", Member of the Program Committee, Darmstadt, Germany, December 14-17, 2003.
8. "2003 IEEE International Workshop on Emerging Technologies and Factory Automation (**ETFA**'**2003**)", Member of the Program Committee, Lisbon, Portugal, Sept., 2003.
9. "IEEE International Workshop on Factory Communication Systems (**WFCS 2004**)", Member of the Program Committee, Vienna, Austria, 22-24 Sept. 2004.
10. "2008 IEEE International Workshop on Emerging Technologies and Factory Automation (**ETFA**'**2008**)", Member of the Steering Committee, Hamburg, Germany, 15-18 Sept. 2008.
11. "2009 IEEE International Workshop on Emerging Technologies and Factory Automation (**ETFA**'**2009**)", Member of the Steering Committee, Mallorca, Spain, 22-26 Sept. 2009.
12. "2010 IEEE International Workshop on Emerging Technologies and Factory Automation (**ETFA**'**2010**)", Member of the Steering Committee, Bilbao, Spain, 13-16 Sept. 2010.
13. "2011 IEEE International Workshop on Emerging Technologies and Factory Automation (**ETFA**'**2011**)", Member of the Steering Committee, Toulouse, France, 5-9 Sept. 2011.
14. "2012 IEEE International Workshop on Emerging Technologies and Factory Automation (**ETFA**'**2012**)", Member of the Steering Committee, Crakov, Poland, 17-21 Sept. 2012.
15. "2010 IEEE International Workshop on Emerging Technologies and Factory Automation (**ETFA**'**2010**)", Member of the Steering Committee, Cagliari, Italy, 10-13 Sept. 2013.

5.4.3 Permanent Steering Committee Member

Prof. S. Koubias acts as a permanent Steering Committee Member of the annual international IEEE ETFA (Emerging Technologies and Factory Automation) conferences, 2008-today.

5.5 R&D PROGRAMMES

5.5.1 Indicative R&D Programmes

1. *Programme:* **GSRT STRIDE/LIGHT Pr. 315 (Greek)**
   Participants: University of Patras/Department of Electrical & Computer Engineers/ Greek Industries
   Role: Member of the Project Technical Committee
   Subject: Advanced CIME methods in big Greek industries
   Result: The programme completed succesfully

2. *Programme:* **AIM/BEAM**
   Participants: Greek and European Institutes and Enterprises
   Role: Scientific coordinator for the European FINE network
   Subject: Development of a European Computer Network for biomedical applications (FINE)
   Result: The programme completed succesfully

3. *Programme:* **PatreasNet (Greek)**
   Participants: University of Patras
   Role: Project Coordinator
   Subject: Development of the new Computer Network Center of the University of Patras
   Result: The programme completed succesfully

4. *Programme:* **IST R-FIELDBUS (11316)**
   Participants: ISI, SIEMENS, IFAK, SOFTING, ST2E, ISEP, LPC
   Role: ISI Technical Coordinator
   Subject: Development of an advanced high-speed wireless industrial hybrid (wired/wires)
   Result: The programme completed succesfully

5. *Programme α:* **IST LOCCATEC (29401)**
   Participants: TCI, JRC-ISIS, ISI, CEA, ZENON, NOEMON, UNIVERSITA DELLA CALABRIA
   Role: WP Leader
   Subject: Development of an autonomous device for monitoring, storing and transmission of seismic data (rescue of trapped people)
   Result: The programme completed succesfully

6. *Programme:* **IST 6-HOP**
   Participants: INTRACOM, Univ. of Oulu, Philips (Italy), Allianve Qualite Logiciel, Univ. of Cantabria, ISI
   Role: ISI Technical Coordinator
   Subject: Development of protocols for heterogeneous wireless multi-hop IPv6 networks
   Result: The programme completed succesfully

7. *Programme:* **IST PAPADIS PROMISE**
   Participants: SAP AG, Siemens AG, Austrian Academy of Sciences, Identec Solutions AG, Politecnico di Milano, Machining Centers

Manufacturing S.p.A., CR Fiat, Business Information Technologies, ARMINES Ecole des Mines d'Ales, Defi Systemes, ISI, ACE Advanced Concepts Enterprises S.A.

Role: ISI Scientific Coordinator

Subject: Future manufacturing will require high flexibility/adaptability and speed with respect to organization of production and supply-chain management and require an increasing amount of services and inter-company collaboration. The PABADIS'PROMISE project extends the idea of distributed control to an innovative architecture which incorporates both resource and product. With the project's new paradigm "The Order is the Application" which stipulates a correspondingly innovative control and networking architecture across all levels, PABADIS'PROMISE will combine European and international forces to provide this architecture allowing European companies to cope with the mentioned future needs.

Result: The programme completed succesfully

8. *Programme:* **IST INTERMEDIA (Network of Excellence)**

Participants: LANCASTER UNIVERSITY, INTRACOM S.A. HELLENIC TELECOMMUNICATIONS AND ELECTRONICS INDUSTRY, FRAUENHOFER GESELSCHAFT ZUR FOERDERUNG DER ANGEWANDTEN FORSCHUNG E.V., CARLETON UNIVERSITY, REINISCH-WESTFAELISCHE TECHNISCHE HOCHSCHULE AACHEN, TELEFONICA INVESTIGACION Y DESARROLLO SA UNIPERSONAL, UNIVERSITA DEGLI STUDI DI GENOVA, INFORMATION AND COMMUNICATIONS UNIVERSITY, UNIVERSITE DE GENEVE, KURATORIUM OFFIS E.V. , INDUSTRIAL SYSTEMS INSTITUTE (ISI) etc.

Role: Senior Researcher

Subject: Interactive media using personal networked devices

Result: The programme completed succesfully

9. *Programme:* **ADVENT (Greek) http://www.theadventproject.eu/index.php**

Participants: Hellenic Open University, Educational Content, Methodology and Technology Laboratory (e-CoMeT), University of Patras (UoP)/Applied Electronics Laboratory (APEL), Frontida Zois, Zelitron, Besecure

Role: UoP Team Coordinator

Subject: The main target of ADVENT is the provision of a comfortable, safe and secure environment, supporting daily living of elders, while retaining their mobility and independency. This will be achieved through advanced sensorial networking, data fusion and processing, secure information handling, and knowledge-based technologies that will be integrated in a specially designed platform, in order to facilitate the provision of a coherent set of personalized services.

Result: The programme is in progress

10. *Programme:* **KATHODIGOS (Greek)**

Participants: University of Patras (Coordinator), Research Center Athena/ Institute of Industrial Systems, ALGOSYSTEMS S.A., Municipal Development Company of Patras S.A., Data and Control Systems Ltd.

Role: Project Coordinator

Subject: City Parking Guide is an ITS application developed by a R&D consortium of Greek academia, industry and public authorities. It uses wireless sensor networks and web technology in order to monitor, control and manage roadside parking in large cities.
The system uses the capabilities offered by distributed collaborative wireless sensor nodes for detecting free parking spaces along road axes and monitoring their use in the context of a parking service with or without fees. Thus, the parking administrator is provided with real-time information regarding the availability of parking spaces in the controlled area and can accordingly inform drivers looking to park their cars. The information can be sent to road screens or can be accessed through a proper mobile application. The system can guide the driver to a free place, monitor the time that the place is used (paid or managed otherwise) and inform the manager or the driver for time limit violations. The system combines information from wired sensor networks (traffic cameras) interrelating traffic in adjacent roads with parking demand. System data can support decision taking processes and the redesign of the management of local parking spaces in a rational and safe manner.

Result: The programme is in progress

11. *Programme:* **ARTEMIS WSN DPCM (ART Call 2010 269389) www.wsn-dpcm.eu**

Participants: Ingeniería de Sistemas Intensivos en Software S.L Spain , Metodos y Tecnologia de Sistemas y Procesos Spain , Universidad Politécnica, Madrid Spain, Baltec CNC Technologies Lithuania, INTECS S.p.A Italy, Minteos s.r.l. Italy, Politecnico di Torino Italy, Universita di Napoli Federico II Italy, Industrial Systems Institute Greece, University Of Patras (UoP) Applied Electronics Laboratory Greece

Role: UoP Team Coordinator

Subject: WSN-DPCM is a cooperation project of several technical universities and companies from Spain, Italy, Lithuania and Greece. The project is funded by the ARTEMIS Joint Undertaking (the European technology platform representing the field of advanced research and technology for embedded intelligence and systems), national authorities and European partner companies. The total volumen of the project is 3.4 million euros.
WSN-DPCM will address large-scale application of Wireless Sensor Networks (WSN) by developing an integrated platform for smart environments comprising a middleware for heterogeneous wireless technologies, an integrated engineering tool for quick system development, a planning tool and a commissioning & maintenance tool. Two demonstrators will be built to evaluate the impact of the middleware and tools.

Result: The programme is in progress

12. *Programme:* **FORSEE (INTERREG) http://www.forsee.eu/**

Participants: University of Patras, Applied Electronics Laboratory (UoP-ApEL), Greece, University of Macedonia Greece, Industrial Systems Institute/RC Athena (ISI), Research Committee (UOM), Greece, National Institute for Research and Development in Informatics

(ICI), Romania, Ministry of Education, Youth and Science (MOMH), Bulgaria, Centre for Social Innovation (ZSI), Austria, Ministry of Education, Science, Culture and Sports (MIZKS) /former Ministry of Higher Education, Science and Technology/, Slovenia, University of Ljubljana (UL), Faculty of Economics, Slovenia, Bulgarian Association of Software Companies (BASSCOM), Bulgaria, General Secretariat for Research and Technology (GSRT), Greece, Institute for Sociology, Center for Social Sciences, Hungarian Academy of Sciences (IS CSS HAS), Hungary, "Mihajlo Pupin" Institute (MPI), Serbia, Ministry of Science and Technological Development (MSTD), Serbia, University of Montenegro (UoME), Montenegro

Role: Project Coordinator

Subject: The 'FORSEE - Regional ICT Foresight exercise for Southeast European countries' project targets ICT RTD policy reform in the South-eastern Europe (SEE) region, proposing a focused effort on introducing a Foresight culture in the region, which is necessary in order to accelerate socioeconomic growth in participating countries', striving to meet the challenges of the global networked economy and to participate on equal footing in the European Research Area. The FORSEE initiative aims to introduce a sustainable mechanism for ICT Foresight in the region, attempting to tackle the absence of a regular process applied for technological future orientation and research policy review

Result: The programme is in progress

13. *Programme:* **I3E (INTERREG) http://www.i3e.eu/**

Participants: ISI (Lead Partner), OEAW, ECOPLUS, BICT, ARIES, UOM, JSI, RDF-RWG, IEA, TUS, UOK, ONPU, TUCN, FNBU, UOP

Role: UoP (APEL) Team Coordinator

Subject: I3E project is a project funded under the South East Europe (SEE) initiative with an aim to help towards the transformation of the SEE area into a knowledge-based innovation-driven economy. The project places emphasis on two leading edge knowledge-intensive and export-oriented technology sectors that may create a competitive advantage for the area, namely industrial informatics and embedded systems. The main project outcomes include a Strategic Research Agenda in the aforementioned sectors making possible the alignment of research efforts in the area and a Methodology Guide on Innovation stemming from best practices relevant to the transformation of research into innovation. The project will seek the active involvement of all associated stakeholders in the participating countries as well as the building of consensus with reference to its major outcomes.

Result: The programme completed succesfully

5.5.2 Indicative Educational Programs

14. *Programme:* **COMETT PROGRAM (C.I.M. PLANET) AUEF LORRAINE**

Participants: Tertiary European Institutions (UK, France, Spain, Luxemburg, Portugal, Greece)

Role:	Scientific Coordinator for the Greek Institutions – Member of the Steering Committee
Subject:	Production of educational tool in the field of "Computer Integrated Manufacturing (C.I.M.).

15. Programme :	**COMETT PROGRAME**
Participants:	Tertiary European Institutions and Enterprises
Role:	Scientific Coordinator for the Greek Institutions – Member of the Steering Committee
Subject:	Organization of the International Educational Workshop in the field of "Applications of Microcomputer Systems and Robotics in Industry"

16. Programme:	**Community Action in Science and Technology with Central and Eastern Europe**
Participants:	Commission of the European Communities (DGXIII-F-5), University of Patras, Bulgarian Academy of Sciences
Role:	Scientific Coordinator
Subject:	Scholarship (No.5881) for Dr. L. MANASIEV, member of the Bulgarian Academy of Sciences

17. Programme:	**European Commission, Directorate-General for Education and Culture**
Participants:	University of Patras, University of Montenegro
Role:	Scientific Coordinator
Subject:	University cooperation through a scholarship for Dr. L. MANASIEV Assistant Professor, University of Montenegro

18. Programme:	**European Commission, Directorate-General for Education and Culture (**CD JEP_40017_2005)
Participants:	University of West Bohemia, Pilzen, CZ, University of Novi Sad, Faculty of Engineering, CS, University of Montenegro, EMI, Podgorica, CS, University of Patras
Role:	Grand holder
Subject:	Development of a new curriculum in the field of Applied Electronics for the University of Montenegro

6. THE COMPUTER CENTER OF THE UNIVERSITY OF PATRAS

Prof. Koubias from March 2001 to August 2003 served as the first head of the Scientific Committee of the newly founded Computer Center of the University of Patras, which was established in order to manage, support and expand the data, voice and tele-control network of the University of Patras. From December 2001 this center, having already staffed with high level scientific/technical personnel, undertook fully managed the mentioned network, under Prof. Koubias 's guidance and scientific supervision. Since then, the scientific and technical work in the center aims (in a continuous way) to substantially upgrade the network infrastructure and tele-control services provided to the entire academic community, supporting in principle the basic services and subsequently develops new advanced services. In this context, important scientific and development activities took place, which were designed to highlight the center as an

institutional center of technological and scientific support of high-level ICT issues for the benefit of the University of Patras.

7. AN AMBITIOUS PROJECT: "THE DIGITAL LEAP OF THE UNIVERSITY OF PATRAS: ONE-STOP ELECTRONIC SERVICES"

Prof. S. Koubias, during his rectorship, envisioned an ambitious institutional project focused on the integrated digital organization of the University of Patras. This project entitled "The Digital Leap of the University of Patras: One-Stop Electronic Services" (No. 215822, duration: 30 months, budget: about EUR 3 million) was finally approved and funded (through the Greek National Operational Programme titled "Digital Convergence") on August 2010 and began at January 2011.

The project aims to develop one-stop electronic services in the University of Patras for all the members of the academic community (students, faculty members, employees), external operators (e.g. suppliers) and other external national bodies (e.g. example Ministry of Education, Ministry of Economy, Greek Statistics Authority etc.), but also the general public, that is any citizen. The services that will result from the proposed project should cover the full range of activities of a higher education institution in the framework of the educational and research work in general, operating support of the Foundation, and its connection with society. The members of the academic community, external suppliers, partner organizations and any ordinary citizen will have a contact point with the University of Patras, from which secure services and information will be offered. It is decided that first priority will be given to the provision of advanced services to students who are enrolled in undergraduate and postgraduate programs, while second priority will be assigned to advanced services to staff and external partners/collaborators/suppliers.

This institutional project, therefore, targeted to support the overall educational, research and administrative operations of the University of Patras, through an advanced Integrated System Supporting the Overall Academic Administration.

This action has a strong innovative character in the field of administration, since a non-flexible fragmented, hard-to-maintain computerized system is replaced by a transparent, reliable, technology-friendly (easy-to-maintain) to support in the long run the overall (educational, research, administrative) function of a large tertiary institution, such as the University of Patras, as well as a reference solution for other fields of application.

8. OTHER SELECTIVE SCIENTIFIC AND ACADEMIC ACTIVITIES

1. Reviewer in several prestigious journals and international conferences
    - IEEE Transactions on Communications
    - IEEE Transactions on Industrial Informatics
    - IEEE Transactions on Industrial Electronics
    - IEE Proceedings on Computers and Digital Techniques
    - IEE Proceedings on Communications
    - IEE Electronics Letters
    - ACM Transactions on Embedded Computing Systems
    - Computers in Industry
    - Intenational Journal of Engineering
    - Intenational Journal of Sensors
    - International Journal of Distributed Sensor Networks, Hindawi Publishing Corporation (Lead Guest Editor)
    - International Workshop on Factory Communication Systems
    - IEEE International Workshop on Emerging Technologies and Factory Automation
    - International Workshop on Assurance in Distributed Systems and Networks

- IEEE International Symposium on Signal Processing and Information Technology
- IEEE International Conference on Electronics, Circuits and Systems
- IEEE Mediterranean Electrotechnical Conference
- Operational Research

2. Member-at-Large for the Administrative Committee of the IEEE Industrial Electronics Society (2008-2010)
3. Invited reviewer for the Austrian National R&D Program "FIT-IT Embedded Systems" (2002).
4. Member of the WORKING PARTY 17 of the IRDAC (Industrial Research and Development Advisory Committee of the European Commission), Brussels, 1994.
5. Member of the IEEE Society.
6. Member of the Technical Chamber of Greece and the National Association of Electrical and Mechanical Engineers