

CURRICULUM VITAE

Identity

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Education-Degrees

28/08/2025	:	PhD, Computer Engineering and Informatics Department (CEID), University of Patras (UoP)
19/05/2004	:	Master's in Computer Science and Technology, CEID, UoP
31/07/1998	:	Diploma in Computer Engineering & Informatics, UoP

Lifelong Learning-Training & Seminars

15/01/2007- 19/01/2007	:	Oracle Database 10g: Administration Workshop I, by Oracle University, HOU in Patras.
11/01/2007- 12/01/2007	:	Oracle Database 10g: SQL Fundamentals II, by Oracle University, HOU in Patras.
09/2006- 04/2007	:	Teacher Education Program, Measure 3.1 of the Employment and Vocational Training, Ministry of Labor and Social Affairs, General Secretariat for Management of European Funds, project "Training of trainers ongoing training, MENTOR TRAINING SA
23/01/2006- 24/01/2006	:	«Introduction to GRIDS», National Networking Research & Technology, Department of Electrical and Computer Engineering, UoP (Task NA3-Educational Activities of EGEE).
13/06/2003	:	“Microsoft Approved Course: Upgrading from Microsoft Windows 2000 Server to Microsoft Windows Server 2003», ITEC Microsoft Certified Technical Education Center, Computer Laboratory of CEID
11/11/2002- 14/11/2002	:	“System of Quality Management for Technical Companies. Programs for Quality of Technical Projects”, Technical Chamber of Greece (T.E.E.), Department of West Greece.
11/03/2002- 15/03/2002	:	“Tivoli Framework/Inventory MGT (T1A)”, at IBM Learning Center in Greece (Athens).
22/05/2000- 26/05/2000	:	“Sun Solaris Administration II (SA 287)”, educational group of SUN Microsystems, at “New Horizons” Educational Center in Informatics (Department in Greece, Athens), for technical staff of GUNET (Greek Universities Network).

Conferences- Meetings- Presentations

14/05/2025 : «Artificial Intelligence and Technological Revolutions», «RIAM 2025- Research in Arts and Music Education Symposium» of the University of the Aegean in Rhodes

06/05/2025 : Roundtable on social networks and artificial intelligence in school bullying, environmental responsibility and sustainability, "Global K Leaders" Conference at the Pampeloponnisiko Stadium.

29/03/2025 : "Artificial Intelligence as a tool for Gifted Children - Adapted Learning", Workshop "Is my child gifted?" at the Conference and Cultural Center of the University of Patras.

20/05/2023 : "Artificial Intelligence and Technological Revolutions", Conference "Artificial Intelligence in Education" at the Conference and Cultural Center of the University of Patras.

01/12/2010 : "The learning activities of Patras Science Home", organized by the Center for Science Education and the Regional Directorate of Primary and Secondary Education in Western Greece, Patras Science Home.

22/01/2006 : Educational Meeting of ECDL Supervisors Group.

23/01/2005

15/03/2001 : Promotion and Presentations of Network Operation Center (NOC) UoPatras activities to rector and professors of UoP and technicians of GUnet.

21/02/2001 : Promotion of NTS's activities and presentation for projects "Askoi tou Aiolou" and "Greek Schools Data Network- EDUnet", and also Data Network of UoP, to students and professors of 1st Technical & Proficiently Preparation Lycee (TEE) of Kiatos.

20/12/2000 : Promotion of NTS's activities and presentation for projects "Askoi tou Aiolou" and "Greek Schools Data Network- EDUnet", and also Data Network of UoP and GUnet to students and professors of "Proficiently Preparation Institute"(IEK) of Aigion and Patras and to the students of Electrical Department of Technological Educational Institute of Patras.

06/12/2000-07/12/2000 : Promotion of NTS's activities and presentation for projects "Askoi tou Aiolou" and "Greek Schools Data Network- EDUnet", and also Data Network of UoP and GUnet, Conference and Exhibition of National Education Ministry about the progress and results of EC's Programs, December 2000, Athens (Zappeion).

29/09/2000-30/09/2000 : "6th Conference for Applications in Informatics- The Citizen and the Business Corporations in a Net Society", Hellexpo- 14η Infosystem 2000, September 2000, Thessaloniki.

29/09/2000 : Meeting of National Ministry of Education. "The Preparation of Educational Community and the Citizens in Society of Informatics. Planning of National Education Ministry, 3rd CSF of the EC, Hellexpo- 14η Infosystem 2000, September 2000, Thessaloniki.

28/09/2000-01/10/2000 : Technical and Network Support of Presence of National Education Ministry and CTI in National Prohibition of Thessaloniki (Helexpo)- 14η Infosystem 2000, September 2000.

14/03/2000 : "The Information Society for all Citizens", Meeting of National Commission of Telecommunications and Posts(EETT) and CTI, Conference and Cultural Center of UoP.

04/12/1995-05/12/1995 : "The Status quo and the Future of Educational Software: Methods and Tools", Two-days meeting of Informatics and Computer Scientists, as an introducer, on the subject "Database Management System and Multimedia Application for managing a company which sells car spare parts", Ceremonial Hall of UoP, December 1995.

Working Positions

16/09/2014- : *Laboratorial Teaching Staff of CEID at UoP- Greece*, is teaching the courses of:

- Technology and Computer Programming (Compulsory Courses- Semester 1)
- Operating Systems (Compulsory Courses- Semester 5)
- Quality Assurance and Standards (Elective Courses- Winter Semester, from 5th to 9th)
- Computer Networks (Compulsory Courses- Semester 8)
- Software Engineering (Compulsory Courses- Semester 8)
- Writing and Presentation technical Papers (Compulsory Courses- Semester 6)

21/05/2003- 16/09/2014 : *Specific Technical Laboratorial Staff of Laboratory for Computing (Computer Center- CC) of CEID at UoP- Greece*, as Technical Responsible for Informatics & Communication Technologies (ICT) of CEID, responsibilities which include design, development and support of:

- computer systems architecture (UNIX/LINUX servers), used as servers for services such as E-mail servers, DNS servers, ftp servers, ITTP servers, LDAP, etc., and its services,
- passive and active network equipment (routers, switches, hubs, wifi access points, etc.),
- applications, web application services and portals,

15/11/1999- 20/05/2003 : Network Technologies Sector (NTS)/ Academic Research Computer Technology Institute and Press "Diophantus", where I worked in various positions as project manager, designer, author of technical studies, author of the project data sheet and specifications to develop software/applications/database and systems/network administrator. In more detail:

- security of critical IT infrastructures,
- workstations and servers in windows operating system for the computing center of CEID.
- (31/08/2000- 31/12/2000 and 01/09/2001- 20/05/2003 "Greek School Network- EDUnet", where I had been employed as:
 - o analyst and designer of telematics services,
 - o author of Project & Subproject Technical Issues, documentation of technical specifications and declarations of documents for competitions to procure infrastructures (S/W and H/W),
 - o software developer for telematics purpose,
 - o systems (UNIX) administrator, which were used as services servers (E-mail servers, DNS servers, ftp servers, HTTP servers, LDAP, etc) and networks (Cisco) administrator.
- (17/09/2001- 31/12/2002) University of Peloponnese
 - o project and technical manager of the team implementing advanced telematic services on the project "Development of Content and Advanced Telematic Services in the Educational Process, University of Peloponnese,
 - o designer of Advanced Telematic Services and the Portal (Portal), University of Peloponnese
 - o author of technical studies, factsheets project specifications,
 - o designer of Information & Communications University Peloponnese for both the city of Tripoli and the cities Corinth, Nafplion, Sparta, Kalamata where they were to extend Foundation in the future.
- (15/11/1999- 15/02/2002) "Network Operating Center (NOC)" of UoP, where I had been employed as:
 - o systems administrator (UNIX), used as servers, network services (E-mail servers, DNS servers, FTP servers, HTTP servers, etc.)
 - o responsible for dial-up service,
 - o responsible for help-desk of UoP,
 - o administrator of webhosting service and UoP webmaster:
 - www.upatras.gr,
 - www.noc.upatras.gr and
 - www.confer.upatras.gr (Conference & Cultural Center).
 - o designer and developer of the website NOC of UoP.
- (15/11/1999- 31/08/2000) project "Askoi tou Aiolou" (pilot project of interconnection of Greek schools in 29 prefectures), as system (UNIX) and service (E-mail, DNS, FTP, HTTP, etc.) administrator.
- Concurrently, I had worked on many other projects as:
 - o Designer and developer technical telematics solutions,
 - o author of Project Technical Design Issue for Information Society and Ministry of National Education and Religious Affairs,
 - o author of contracts for project assumptions on behalf of RACTI,
 - o technical and project manager of the development of several information systems,
 - o participation in the project "Provision of Technical Support Services Consultant" for the project "National Network of Public Administration SYZEFXIS", etc.

01/11/1996- 31/12/1997 : Advanced Informatics Ltd. Software developer on Real-Time applications and systems, specific purpose microprocessors and assemblers, and also research projects on ESPRIT of European Community (EC).

Experience in Technical Studies

January 2009 : Participation in the development of the study "Analysis, design and technical requirements of digital management and monitoring of vehicles and facilities of the Association of Municipal Cleanness of Zakynthos County".

August 2007 : Participation in the "T3- Study on integration of national computing infrastructure for e-business", Deliverable to the project HellasGrid, GRNET SA.

August 2007 : Participation in the "T2- Study National Computational Infrastructure Integration in Public Administration study", Deliverable to the project HellasGrid, GRNET SA.

June 2007 : Participation in the project "Design, Implementation and User's Guide System Automated Digital Recording of Courses", Deliverable P5.4.7, UoP, CEID, Undergraduate Curriculum Reform in Science and Technology of Computers, 2nd Operational Program for Education and Initial Vocational Training (Operational Program "Education"), MEASURE 2.2 Curriculum Reform- Enlargement Action Line 2.2.2 Completion of enlargement and reform of the curricula of higher education.

September 2006 : Participation in the project "Operation Complete Instructions for Distance Lecture", Deliverable P5.5.2, UoP, CEID, Undergraduate Curriculum Reform in Science and Technology of Computers, 2nd Operational Program for Education and Initial Vocational Training (Operational Program "Education"), Measure 2.2 Curriculum Reform- Enlargement Action Line 2.2.2 Completion of enlargement and reform of the curricula of higher education.

June 2006 : Participation in the project "User Management System", Deliverable P5.4.6, UoP, CEID, Undergraduate Curriculum Reform in Science and Technology of Computers, 2nd Operational Program for Education and Initial Vocational Training (Operational Program "Education"), Measure 2.2 Curriculum Reform- Enlargement Action 2.2.2 Completion of the enlargement and reform of the curricula of higher education.

June 2006 : Participation in the project "Implementation Report: Pilot Digital Recording Lectures and course materials, filing and Selling Through the Internet", Deliverable P5.4.5, UoP, CEID, Undergraduate Curriculum Reform in Science and Technology of Computers, 2nd Operational Program for Education and Initial Vocational Training (Operational Program "Education"), Measure 2.2 Curriculum Reform- Enlargement Action 2.2.2 Completion of enlargement and reform of the curricula of higher education.

June 2006 : Participation in the project "Implementation Report for Distance Lecture" Deliverable P5.5.3, UoP, CEID, Undergraduate Curriculum Reform in Science and Technology of Computers, 2nd Operational Program for Education and Initial Vocational Training (Operational Program "Education"), Measure 2.2 Curriculum Reform- Enlargement Action 2.2.2 Completion of enlargement and reform of the curricula of higher education.

January 2006 : Participation in the project "Energy Handbook for Conducting Distance Education", Deliverable P5.5.1, UoP, CEID, Undergraduate Curriculum Reform in Science and Technology of Computers, 2nd Operational Program for Education and Initial Vocational Training (Operational Program "Education"), Measure 2.2 Curriculum Reform- Enlargement Action 2.2.2 Completion of the enlargement and reform of the curricula of higher education.

December 2005 : Participation in the project "Design and Implementation of Digital Recording System Course", Deliverable P5.4.1, UoP, CEID, Undergraduate Curriculum Reform in Science and Technology of Computers, 2nd Operational Program for Education and Initial Vocational Training (Operational Program "Education"), Measure 2.2 Curriculum Reform- Enlargement Action 2.2.2 Completion of the enlargement and reform of the curricula of higher education.

May 2004 : Case Study and Design of and Interior Wireless Data Network of CEID.

December 2002 : Author of "Study for central remote system administration service of RACTI network" and technical specifications of competition for an integrated system providing the service.

November 2002 : Case Study and technical-financial estimation for ICT expansion to all presence nodes of University of Peloponnese.

October 2002 : "Study for Central Remote System Management of Greek School Network" (Ministry of national education and religious affairs) in cooperation with Dr. Dimitrios Kalogeras and Agis Andreou of Institute of Communication & Computer Systems (ICCS) of National Technical University of Athens (NTUA).

September 2002 : Study of interoperability of infrastructural demands in order to integrated informatics & communication services of University of Peloponnese.

August 2002 : Developmental Study and Initial Configuration of data network telematics services of University of Peloponnese.

July 2002 : Study of network devices configuration of data & voice intranet of University of Peloponnese.

June 2002 : Questionnaire for infrastructure and usability of ICT in Bulgaria for INTERREG III.

May 2002 : Proposal under the title "Pilot development of ICT on schools in Bulgaria" for INTERREG III.

April 2002 : Design and implementation project studies and proposals for researching and developmental telematics networks of INTERREG III.

January 2002 : Study for the development of an educational center of networks technologies in West Greece.

November 2001 : Design of integrated ICT services (computer & informatics laboratories, infrastructures of tele-teaching halls, data & voice network, necessary servers, UPSs, statutory structures of ICT, basic & advanced telematics services) of University of Peloponnese.

October 2001 : Initial proposal for infrastructures of ICTs of University of Peloponnese.

Experience in Writing Outbidding & Project Proposals

November 2025 : Participation in the technical offer for the project "Organizational and operational readjustment of EKAB to modern requirements and social needs" of the Project "Development and operation of an intelligent management system in EKAB procedures" of the association of companies EEO GROUP S.A. - KNOWLEDGE SOCIETY- University Research Center of Patras

March 2025 : Participation in the proposal entitled "Arts for Resilient Teaching, Inclusion & Transformative Engagement (ARTITE)" within the framework of Erasmus+ Action Type KA220-HED - Cooperation partnerships in higher education (KA220-HED) with collaborating bodies University of the Aegean, University of Patras, New University of Bulgaria, Mykolo Romerio Universitetas, Universitat Autonoma De Barcelona and Universitat De Valencia.

November 2014 : Participation in the proposal "Big Data Analysis of Insurance Companies Using Advanced Research and Technological Development Techniques- BD@IN", cooperation of the University of Patras, Interamerican and CITRIX, Operational Program "Education and Lifelong Learning", Action Category "Interventions Promotion and Support of Innovative Business Ideas", Action "Promotion of the Academic Ideas to Enhance the Extroversion of Universities".
 Participation in the proposal "SM@RTY: Delivery System Customized Synchronous and Asynchronous e-Learning Services in Medicine", cooperation of the University of Patras and SYSTSERV, Operational Program "Education and Lifelong Learning", Action Category "Interventions Promotion and Support of Innovative Business Ideas", Action "Promotion of the Academic Ideas to Enhance the Extroversion of Universities".
 Participation in the proposal "mSQUAD-T: Optimizing quality mobile services for tourism, using advanced space-time crowd-sourced data", cooperation of the University of Patras and SYSTSERV, Operational Program "Education and Lifelong Learning", Action Category "Interventions Promotion and Support of Innovative Business Ideas", Action "Promotion of the Academic Ideas to Enhance the Extroversion of Universities".

September 2010 : Proposal "Building, Strengthening and Upgrading of Infrastructure Research and Development for the CEID of the UoP", Operational Program of Region of Western Greece (Budget 4.111.000 €).

April 2010 : Proposal "Development of Sophisticated Infrastructure for Supporting of Research and Information Technology and Communications at the CEID of UoP", Invitation "Infrastructure for Research and Technology", General Secretariat for Research and Technology, Ministry of Education and Lifelong Learning Religious, Program: "Infrastructure for Research and Technology (including buildings, offices and high-speed computer networks linking research centers)", Priority: "Creating and exploiting innovation", supported by Science and Technology, Operational Program "Competitiveness II", ESPA 2007-2013 (Budget 3.150.000 €).

November 2009 : Participation in drafting the proposal for the European Grid Initiative (EGI) the transformation of EGEE in collaboration with RACTI.

July 2006 : Offer of the association RACTI and the Special Account for Research of the University of Macedonia for Open Competition Project Design & Development Pilot Advanced Infrastructure & Services for Grid Computing Systems- HellasGrid, "Part B: Pilot Study and Completion of existing National Computer infrastructure HellasGrid", Contracting Authority: National Research & Technology Network.

September 2003 : Technical and financial outbidding of RACTI Contest for "Provision of Technical Support Services Consultant for the project National Network of Public Administration SIZEFXIS", Contracting Authority: Information Society SA.

June 2003 : "Development/ Management Advanced Network Services Virtual Center (Advanced Network Services)", Union of the RACTI and the Special Account for Research of the University of Crete, Contracting Authority: GRNET.

May 2003 : Project "Joint Operations, Information for ecotourism programs", Consortium RACTI, Road Editions Ltd, OgilvyOne WorldWide Athens Ltd, Code Creative Ltd and PETA Ltd, for the "Development of Ecotourism Route", Contracting Authority: General Secretary of the Ministry of Tourism Development, Reference Number Declaration.: T/2998.

December 2002 : Writing and technical review of the technical outbidding of RACTI for selecting the contractor to provide consulting services Management and Technical Support,

Action "e-Business", coordinated by the Secretariat of the Ministry of Industry Development (RACTI was selected as contractor).

November 2002 : Preparation of technical and supply of RACTI for the contest "Implementation Portal University Peloponnese" (RACTI was selected as contractor).

November 2002 : Preparation of technical and supply of RACTI for the contest "Implementation of Advanced Telematic Services University of the Peloponnese" (RACTI was selected as contractor).

October 2002 : Preparation of technical and supply of RACTI the competition to select the contractor to provide technical support services for the project ARIADNE of Information Society SA (RACTI was selected as contractor).

Experience in Writing of Technical Specifications

June 2005 : Technical Specifications for the HOU on the project of "Additional Educational Workshops and Schools HOU", Measure 5.2, Action 5.2.8, Operational Program "Education".

May 2005 : Technical Specifications for the CEID entitled "Supplementary Educational Laboratory and School of the UoP", Measure 5.2, Action 5.2.8, Operational Program "Education".

April 2005 : Technical Specifications for the supply of active network equipment Gigabit technology to upgrade the data network of the CEID.

March 2005 : Technical Specifications for the procurement of personal computers for the Department of Computer Science (Computing Center) of CEID.

October 2004 : Technical Specifications for the supply of electronic equipment and software for creating a new lab, the Digital Systems & Media Computing Lab (DSMC) of HOU.

July 2004 : Technical specifications for equipment supply personal computer systems, servers and printers for the Laboratory of Computing (CC) of CEID.

May 2004 : Technical specification for competition 4/05 of UoP (for CEID), project "IST Support of UoP", Measure 5.2, Action 5.2.8, Operational Program "Education".

July 2003 : Technical Specifications for the UoP to develop e-learning room at the UoP, Invitation 7, Measure 1.1, "Infrastructure for Tele-education Rooms".

February 2003 : Technical Specifications for tender document entitled "Supply and installation of remote server management school laboratories" in the framework of "National Network of Education-EDUNet: Supply of Network Equipment for the Implementation and Operation".

January 2003 : "Study for Central Remote System Management of RACTI Intranet" technical specifications of recommended infrastructures.

Experience in Writing Technical Reports of Projects

April 2006 : "Development Lifelong Learning Institutes and Operation of Lifelong Learning in Higher Education at HOU", Operational Program for Education II, Priority Axis 2, Measure 2.5 "Lifelong learning", Action 2.5.1: Alternative for Lifelong Education (Budget 70.000.000 €).

November 2004 : Modification of the Technical Infrastructure Report of Project entitled "Supplementary Educational Workshops and Schools HOU", Measure 5.2, Action 5.2.8, Operational Program "Education".

October 2004 : Modification of the Technical Infrastructure Report of the Project entitled "Supplementary Education Departments of the Higher Education Equipment" for CEID of UoP, Measure 5.2, Action 5.2.8 Operational Program "Education".

September 2004 : Technical Infrastructure Report of the Project entitled "Laboratory Scientific Equipment of CEID of UoP", Measure 5.2, Action 5.2.8, Operational Program "Education".

November 2003 : Technical Infrastructure Report of the Project entitled "Supplementary Educational Laboratory Schools and the HOU", Measure 5.2, Action 5.2.8, Operational Program "Education".

November 2003 : Development of Integrated Digital Support Systems Association of "TIRES KOUTSOUPOS SA" under the Program of Electronic Business of Ministry of Development.

November 2003 : Computerization System of "Freedom Publishing Inc." newspaper, under the Program of Electronic Business of Ministry of Development.

October 2003 : Technical Infrastructure Report of the Project entitled "Supplementary Education Departments of the Higher Education Equipment" for CEID, UoP, Measure 5.2, Action 5.2.8, Operational Program "Education".

September 2003 : Reform Technical Infrastructure Report of the Project "ICT Strengthening of the UoP (of CEID)", Measure 5.2, Action 5.2.8, Operational Program "Education".

July 2003 : Reform Technical Infrastructure Report of the Project of the development of tele-education room at the UoP, entitled "Equipment for the tele-education Room at the UoP", Call 7, Measure 1.1, Infrastructures for Tele-education Room".

December 2002 : Technical Infrastructure Report for the Project of the development of e-School on "Design & Development for Advanced Infrastructure & Services for the Implementation of e-School», Measure 2.4 "Regional geographic information systems and innovative actions" (Second edition).

November 2002 : Technical Infrastructure Report for the Project entitled "Equipment and Networking Primary Education", Invitation 11, Measure 1.1 "Equipment and networking at all levels of education", Action Categories 1 and 2, "Computational equipment of schools" and "Connecting schools to the Internet", respectively.

September 2002 : Modification Project Technical Infrastructures Report for the Project entitled "Internal Network Infrastructure", "Laboratory Information Infrastructure" and "Infrastructure Galleries Tele-Education of the University of the Peloponnese, Invitation 7, Measure 1.1 "Equipment and networking at all levels of education, categories of operations 3 and 4: "Higher education" and "Infrastructure tele-education and tele-education, infrastructure rooms at the regional level, for activities related to higher education".

August 2002 : Modification Project Technical Report, entitled "Content Development and Advanced Telematic Services in the Educational Process, University of Peloponnese", Call 10, Measure 1.2 "Introduction and Utilization of New Technologies in Education", Action Categories 1 and 3, content development advanced telematic services in the educational process and Infrastructure tele-education and tele-education, infrastructure rooms at the regional level, for activities related to Higher Education.

June 2002 : Technical Infrastructure Report Project for the development of e-School on "Design & Development for Advanced Infrastructure & Services for the Implementation of e-School", Measure 2.4 "Regional geographic information systems and innovative actions" (First Version).

January 2002 : Technical Infrastructures Report Project "Internal Network Infrastructure", "Laboratory Information Infrastructure" and "Infrastructure Galleries Tele-Education of the University of the Peloponnese", Invitation 7, Measure 1.1 "Equipment and networking at all levels of education", category 3 and 4: "Higher education" and "Infrastructure tele-education and tele-education, infrastructure rooms at the regional level, for activities related to higher education".

December 2001 : Technical Report of the project entitled "Content Development and Advanced Telematic Services in the Educational Process", University of Peloponnese, Call 10, Measure 1.2 "Introduction and Utilization of New Technologies in Education", Action Categories 1 and 3, "Content development and advanced Telematics services in the educational process" and "e-Infrastructure education and tele-education, infrastructure rooms at regional level", for actions related to higher education.

September 2001 : Technical Infrastructure Report of the Project: "CTInet- supply network and telecommunications equipment, installation and operational support Integrated Network Broadband Data and Voice of the Research Academic Computer Technology Institute" (Second edition).

July 2001 : Technical Report of the Project "Interior Telematics & Network Services UoP".
Technical Report of the Project "Advanced telematic services at the UoP/ Patreasnet".

April 2001 : Technical Report of the Project "CTInet- supply network and telecommunications equipment, installation and operational support Integrated Network Broadband Data and Voice of the Research Academic Computer Technology Institute", 3rd Community Support Framework (A version).

Designs and Promotion

September 2010 : Promotion Brochure of the activities of the Computing Center Laboratory of the CEID.

January 2010 : Documentation of experience and profile of the Computing Center Laboratory of the CEID.

December 2004-December 2010 : Proceedings and Report of the Laboratory of Computing Center Laboratory (CC) and Information & Communication Technologies of the CEID at the UoP, 2004. Since 2004, each December, the CC lab. introduced the annual report on the activities and type of account.

December 2004- December 2010 : Actions and Development Plan of Information & Communications Technologies of CEID for the future period 2005-2008. Since 2004, each December, the CC lab. of the CEID has been updated its actions and developments plan for next three years.

November 2004 : Operating Rules for Information & Communications Technology of CEID (continuously updated once a year).

Experience in the Formulation of Proposals for Educational Projects

July 2024 : Program proposal entitled "Artificial Intelligence and Machine Learning: Educational Tools, Economy and Entrepreneurship" in the Thematic Field of Informatics for the Center for Training and Lifelong Learning (K.E.D.I.V.I.M.) of the University of Patras.

October 2016 : Design and writing the training course for the call of Brief Programs of Hellenic Open University entitled "Cloud Computing Technologies and Applications"

February 2012 : "Training Graduates in Modern Information Systems and ICT Security", Program "Lifelong Learning for Universities Alumni" (code 07.08.73.12.01), Action Category "Lifelong Learning", University of Patras- Computer Engineering and Informatics Department/ Economic University of Athens- Computer Science) (Project Budget € 250,000).

September 2009 : Design and writing the training project's offer entitled "Tutorial use basic concepts of ICT and Database (word processing, spreadsheets, Internet applications, databases)" for the Vocational Training Center at the UoP, in the Open international public tender for the selection of contractors for operations, "(1). Services e-learning ICT unemployed in 8 regions of convergence, (2). Services e-learning ICT unemployed in regions 3 phase output (3). Services e-learning ICT unemployed in regions 2 phasing, the final beneficiary Ministry of Employment and Social Protection Special Service for the actions co-financed by ESF, ESPA 2007- 2013, Operational Program "Human Resources Development, Division 24 (educational services and vocational training) on the implementation of continuing vocational training programs for 10,000 unemployed persons, certified by the National Centre for Vocational Training Centers, which have certified computer room, in order to obtain certification knowledge in basic skills to use information and communication technologies (ICT) certification bodies recognized by the National Accreditation Centre for Continuing Vocational Training (EKEPIS), articles tailored to the requirements of the labor market and the needs of the unemployed, the Declaration 06/2009 (Project Budget 28.080 €).

September 2009 : Design and writing the training project's offer entitled "Tutorial use basic concepts of ICT and Presentations (Word Processing, Spreadsheets, Internet applications, presentations)" for the Vocational Training Center at the UoP, in the open public international tender for the selection of contractors for operations, "(1). Services e-learning ICT unemployed in 8 regions of convergence, (2). Services e-learning ICT unemployed in regions 3 phase output (3). Services e-learning ICT unemployed in regions 2 phasing, the final beneficiary Ministry of Employment and Social Protection Special Service for the actions co-financed by ESF, ESPA 2007- 2013, Operational Program "Human Resources Development, Division 24 (educational services and vocational training) on the implementation of continuing vocational training programs for 10,000 unemployed persons, certified by the National Centre for Vocational Training Centers, which have certified computer room, in order to obtain certification knowledge in basic skills to use information and communication technologies (ICT) certification bodies recognized by the EKEPIS, articles tailored to the requirements of the labor market and the needs of the unemployed, the Declaration 06/2009 (Project Budget 28.080 €).

September 2009 : Design and writing the training project's offer entitled "NETWORK TECHNICIAN (CompTIA Network)" for Vocational Training Center at the UoP, in the Open international public tender for the selection of contractors of acts (1). Training for the unemployed specialized skills in ICT use in 8 regions of convergence, (2). Training for the unemployed specialized skills in ICT use in 3 regions phasing, (3). Training for the unemployed specialized skills in ICT use in phasing-2, Final Beneficiary Ministry of Employment and Social Protection Special Service for the actions co-financed by ESF, ESPA 2007 to 2013, Operational Program "Human Resources Development, Division 24 (educational services and vocational training) on the implementation of continuing vocational training programs for 4,000 unemployed people certified by the National Centre for Vocational Training Centers in the subject field of information technology in order to obtain certification of knowledge specialized skills to use information and communication technologies (ICTs) by internationally recognized certifying bodies in subjects adapted to market demands and needs of the unemployed, the Declaration 05/2009 (Project Budget 64.800 €).

September 2009 : Design and writing the training project's offer entitled "Web Designer-Web Designer (Adobe Certified Associate-Web Communication Using Adobe Dreamweaver & Rich Media Communication Using Adobe Flash)" for Vocational Training Center at the UoP, in the Open international public tender for the selection of contractors of acts (1). Training for the unemployed specialized skills in ICT use

in 8 regions of convergence, (2). Training for the unemployed specialized skills in ICT use in 3 regions phasing, (3). Training for the unemployed specialized skills in ICT use in phasing-2, Final Beneficiary Ministry of Employment and Social Protection Special Service for the actions co-financed by ESF, ESPA 2007- 2013, Operational Program "Human Resources Development, Division 24 (educational services and vocational training) on the implementation of continuing vocational training programs for 4,000 unemployed people certified by the National Centre for Vocational Training Centers in the subject field of information technology in order to obtain certification of knowledge specialized skills to use information and communication technologies (ICTs) by internationally recognized certifying bodies in subjects adapted to market demands and needs of the unemployed, the Declaration 05/2009 (Project Budget 64.800 €).

September 2009

: Design and writing the training project's offer entitled "SCHEDULE OF USE LEARNING BASIC CONCEPTS ICT, database and Presentation" for the Vocational Training Center at the UoP, in the Open international public tender for the selection of contractors for operations' (1). Training for the unemployed in basic skills to use ICT in 8 regions of convergence, (2). Training for the unemployed in basic skills to use ICT in 3 regions phasing, (3). Training for the unemployed in basic skills to use ICT in the phasing-2, Final Beneficiary Ministry of Employment and Social Protection Special Service for actions co-financed by the ESF, ESPA 2007 to 2013, Operational Program "Human Resources Development, Division 24 (educational services and vocational training) on the implementation of continuing vocational training programs for 30,000 unemployed people certified by the National Centre for Vocational Training Centers in the subject field of information technology in order to obtain certification of knowledge basic skills to use information and communication technologies (ICT) certification bodies recognized by the EKEPIS, articles tailored to market demands and needs of the unemployed, the Declaration 04/2009 (Project Budget 19.822 €).

September 2009

: Design and writing the training project's offer entitled "SCHEDULE OF USE LEARNING BASIC CONCEPTS ICT and presentation of the Vocational Training Center at the UoP, in the Open international public tender for the selection of contractors of acts (1). Training for the unemployed in basic skills to use ICT in 8 regions of convergence, (2). Training for the unemployed in basic skills to use ICT in 3 regions phasing, (3). Training for the unemployed in basic skills to use ICT in the phasing-2, Final Beneficiary Ministry of Employment and Social Protection Special Service for actions co-financed by the ESF, ESPA 2007 to 2013, Operational Program "Human Resources Development, Division 24 (educational services and vocational training) on the implementation of continuing vocational training programs for 30,000 unemployed people certified by the National Centre for Vocational Training Centers in the subject field of information technology in order to obtain certification of knowledge basic skills to use information and communication technologies (ICT) certification bodies recognized by the EKEPIS, articles tailored to market demands and needs of the unemployed, the Declaration 04/2009 (Project Budget 19.822 €).

September 2009

: Design and writing the training project's offer entitled "Schedule Of Use Learning Basic Concepts ICT and Databases" on the Vocational Training Center at the UoP, in the Open international public tender for the selection of contractors for operations "(1). Training for the unemployed in basic skills to use ICT in 8 regions of convergence, (2). Training for the unemployed in basic skills to use ICT in 3 regions phasing, (3). Training for the unemployed in basic skills to use ICT in the phasing-2, Learning ICT Usage of Basic and Databases (Training Program for Type 1) "The ultimate beneficiary of the Ministry of Employment and Social Protection Special Service for actions co-financed by the ESF, NSRF 2007- 2013, Operational Program "Human Resources Development, Division 24 (educational services and vocational training) on the implementation of continuing vocational training programs for 30,000 unemployed people certified by the National Centre for Vocational Training Centers in the subject field of information technology in order to obtain certification of knowledge basic skills to use information and communication technologies (ICT) certification bodies recognized by the EKEPIS, articles tailored to market demands and needs of the unemployed, the Declaration 04/2009 (Project Budget 19.822 €).

June 2007

: Design and writing the training project's offer entitled "Electronic Processing of photography, audio and video for use in programming environments and Internet environments" for the Vocational Training Center at the UoP, Final Beneficiary Region of Western Greece, Program "Training the Unemployed in Certified Vocational Training Centers in the Region of Western Greece for the years 2007 to 2008, (Project Budget 59.670 €, rejected the formal documents and rated high in the techno party).

June 2007

: Design and writing the training project's offer entitled "Design and development of databases for organizing and managing data small businesses" for Vocational Training Center at the UoP, Final Beneficiary Region of Western Greece, Program "Training the Unemployed in a Certified Training Centers Training in Western

Greece Region for the years 2007 to 2008 (Project Budget 59.670 €, rejected the formal documents and rated high in the techno party).

June 2007 : Design and writing the training project's offer entitled "Organization and Promotion Events Art and Culture, by using new Information and Communication Technologies" for the Vocational Training Center at the UoP, Final Beneficiary Region of Western Greece, Program "Training the Unemployed in Certified Vocational Training Centers in the Region of Western Greece for the years 2007 to 2008 (Project Budget 59.670 €, rejected the formal documents and rated high in the techno party).

November 2006 : Design and writing the training project's offer entitled "Design and Development Systems Servers Service Web Presence, Web Design, Development and Management of Applications and Internet portals (Web design & Portals)» for Vocational Training Center at the UoP, Final Beneficiary Ministry of Employment and Social Protection Special Service for the actions co-financed by ESF, Program "Training unemployed Certified Training Centers 2006-2008 (Project budget 117.000 €).

November 2006 : Design and writing the training project's offer entitled "Using Open Source Software Package in corporate environments" for the Vocational Training Center at the UoP, Final Beneficiary Ministry of Employment and Social Protection Special Service for actions co-financed by the Vocational Training Center of UoP, Program Training unemployed Certified Training Centers 2006-2008 (Project budget 117.000 €, implemented by the UoP).

October 2006 : Development of Lifelong Learning Institutes and operation of lifelong learning in Higher Education in Measure 2.5: Lifelong Education, Action 2.5.1: Alternative for Lifelong Education, category 2.5.1.a: "Development of Lifelong Learning Institutes and operation of lifelong education", Title Document: Training Program graduates in modern concepts of chemistry and methods of Instrumental Food Analysis, Final Recipient (operator): HOU.

October 2006 : "Development of Lifelong Learning Institutes and operation of lifelong learning in Higher Education in Measure 2.5: Lifelong Education, Action 2.5.1: Alternative for Lifelong Education", category 2.5.1.a: "Development of Lifelong Learning Institutes and operation of lifelong education", Title Document: Training Program: Pollution of the Environment Pollution Control Technologies, Final Beneficiary (operator): HOU.

Participation in Developmental Projects

January 2012- September 2014 : Subproject 1 "Continuation of providing distance learning services with innovative actions to the HOU" Priority 7 "Enhancing Lifelong Adult Education in the 8 Convergence Regions' object of work package (WP2)" Creation of distance laboratories- Management and Network Development Computer Systems (UNIX/ LINUX and GRID Technologies)".

May 2008- April 2010 : Project EGEE-III (Enabling Grids for ESciencE-II), which is based on the achievements of the project EGEE and EGEE II, was designed to provide a production Grid (grid) across the European Research Area (European Research Area, ERA) and the world. Among the responsibilities was to monitor changes in the configuration node, Management User Interface and the subsidiary's participation in education as an instructor GRNET.

July 2008- February 2009 : Project "Planning and Development Pilot for Advanced Infrastructure & Services Grid Computing Systems-HellasGrid", Section E: "Design and Operation of a Management Computer Systems and Storage Space (Grid Operation Centers) and Adaptation/ Software Development Management Grid, contracting authority: National Network Research & Technology.

July 2007- December 2008 : Project "Planning and Development Pilot for Advanced Infrastructure & Services Grid Computing Systems-HellasGrid", Part B: Pilot Study and Completion of existing national infrastructure Computational Infrastructure HellasGrid», Contracting Authority: National Research & Technology Network.

April 2007- August 2007 : Development of WiFi Network of CEID.

November 2006- March 2008 : Project EGEE-II (Enabling Grids for ESciencE-II) which was based on the achievements of the EGEE project to provide a production Grid (grid) across the European Research Area (European Research Area, ERA) and the world.

September 2006- August 2008 : Enhancing Computer Studies, CEID, UoP, Graduate Program in Science and Technology of Computers, Ministry of Education.

01/04/2006- 30/06/2006 : Development of the central management system, Project: Development and pilot system in remote management of computer systems and network administration (Remote System Management), RACTI.

01/10/2004- 17/01/2005 : Practical guide-handbook for the protection and rights management of digital cultural content and rights management system with the use of international metadata standards, Ministry of National Education and Religious Affairs,

Operational Program "Information Society" 2000-2006 3rd Community Support.

November 2003- December 2005 : Technical advisor for the project "Development of Integrated Computerized Support Company TIRES KOUTSOUPOS SA" under the Electronic Business.

July 2003- October 2004 : Development of tele-education room at the UoP, entitled "Equipment room tele-education at the UoP", Call 7, Measure 1.1, Infrastructures Tele-education Rooms.

January 2003- June 2006 : Enhancing Computer Studies, CEID, UoP, Undergraduate Program in Science and Technology Computer WP5. Sub-total upgrade of Study Program included actions:

- E5.1 Renovation and expansion of the website and portal of CEID,
- E5.2 Presentations of scientific and technological issues of well-trained scientists and leaders of labor market,
- E5.3 Applied courses in advanced technology,
- E5.4 Pilot digital recording of lectures and course material, archiving and distribution via the Internet,
- E5.5 Pilot online real time (on-line) with other universities and research centers for co-teaching courses.

January 2003- June 2006 : Enhancing Computer Studies, CEID, UoP, Graduate Program in Science and Technology Computer Responsibilities: technical support actions.

November 2002 : "Equipment and Networking in Primary Education" as part of Invitation 11 of Measure 1.1 "Equipment and networking at all levels of education" for the Action Categories 1 and 2, "Computational equipment of schools" and "Connecting schools to the Internet, respectively.

September 2002 : "Internal Network Infrastructure", "Laboratory Information Infrastructure" and "Infrastructure Galleries Tele-Education of the University of the Peloponnese in the Invitation 7 of Measure 1.1" Equipment and networking at all levels of education "category 3 and 4: Higher education 'and' Infrastructure tele-education and tele-education, infrastructure rooms at the regional level, for activities related to higher education.

August 2002 : "Content Development and Advanced Telematic Services in the Educational Process, University of Peloponnese, 10 Call of Measure 1.2" Introduction and Utilization of New Technologies in Education in Action Categories 1 and 3, 'content development and advanced telematic services in the educational process "and" Infrastructure tele-education and tele-education, infrastructure rooms at the regional level, for activities related to higher education.

July 2001 : "Inside Telematics & Network Services UoP".
"Advanced telematic services at the UoP/ Patreasnet».

Scientific Project Manager

07/2024- : Program "Artificial Intelligence and Machine Learning: Educational Tools, Economy and Entrepreneurship" in the Thematic Field of Informatics for the Center for Training and Lifelong Learning (K.E.D.I.V.I.M.) of the University of Patras.

15/05/2023- : Support for Research Activity in Software Technologies with Applications in Cybersecurity. University Research Center of Patras.

Qualifications & Expertise

Member of Organization for Reviewing

02/2011- currently : Assessors Record of Operational Program "Digital Convergence" (Application ID 107/09-12-2010).

01/2007- currently : Assessors Unified Record (E.M.A.) of the Ministry of Labor and Social Insurance.

06/2010- currently : Register of Consultants and Assessors of the Intermediary Bearer of the Operational Program "Competitiveness and Entrepreneurship" (ID 398).

04/2010- currently : Open Register of Consultants of the Special Support the Operational Program for Education and Lifelong Learning, Ministry of Education.

09/2006- currently : Assessors Record of the General Secretariat for Research and Technology.

02/2006- currently : Assessors Record of Private Sector Projects, Information Society (Decision 3428/16-02-2006).

Reviewer of Proposals & Competitions

20 March 2014 : Operational Program "Digital Convergence", Priority "ICTs and Improving Quality of Life," Call 20.1 entitled "Digital Municipalities Services".

17 March 2014 : Operational Program "Digital Convergence", Project "Digitization, Documentation and Emergence of the Cultural Heritage of Archaeological Sites of the Patra's Castle, of the Rion Fortress, of Castle of the Chelmoutsi and of the Permanent Exhibition of the Frankish at the Castle of Chelmoutsi (MIS 372898)".

9-10 July 2011 : Operational Program "Digital Convergence", Priority "ICT and Quality of Life" Call 20.1 entitled "Digital Services for Municipalities".

December 2006 : Public Tender, No. 10/11/15-2006, CEID/ UoP under the Public Investment Program.

November 2006 : "Digital Future", Measure 3.2, Operational Program "Information Society, Ministry of Development, General Secretariat of Industry, Ministerial Decision No. 25827/ΔΠΛ700/Φ19Γ/31/10/06.

August 2006 : As a representative of the Technical Chamber of Greece, "Building Engineering Department of Computer & Information»- 12.000.000 € (2326/ 19-07-2006).

May 2006 : Rough contest on "Equipment Supply Management Analysis and Network Security for Existing Router (CISCO 7606) Infrastructure Network at the UoP", Budget 45.000 €.

July 2006 : Public International Competition (04/2006) for the supply of other equipment (teaching aids and photocopying), Project "Supplementary Educational Equipment Departments of the UoP (Rector Council Decision 800/2005, UoP, Total Budget 314.718,58 €).

May 2006 : Public International Competition (03/2006) for the supply of computers- electronic assemblies and software- Project "Supplementary Educational Equipment Departments of the UoP" (Rector Council Decision 800/2005, UoP, Total Budget 706.793,38 €).

April 2006 : Public International Competition (02/2006) for the supply of scientific instruments- Project "Supplementary Educational Equipment Departments of the UoP" (Rector Council Decision 800/2005, UoP, Total Budget 1.696.940,25 €).

July 2005 : Tender for "Supply terminals Voice Network Infrastructure" (Budget 35.105,00 €).

July 2005 : Tender for "Hiring of buses for transporting students from the city of Patras to the UoP and return (Rector Council Decision 12406/20-07-2005, UoP).

July 2005 : Tender for "Supply of equipment":

- 1. management, analysis and network security for existing network router infrastructure in UoP,
- 2. for the gradual upgrading of the computing infrastructure of the basic data network
- 3. extending the network backbone and a back-up network connectivity of the campus buildings,
- 4. active management of network infrastructure equipment to UoP
- 5. for maintenance and extension of existing UPS systems of the network infrastructure".

(Rector Council Decision 10574/08-07-2005, UoP, Total budget 177.000 €).

May 2005 : Competition on "Strengthening of the Information Technology and Telecommunications", UoP (Rector Council Decision 7523/25-05-2005, UoP, Total budget 361.037 €).

December 2003 : Tender "Supply and installation of remote management of servers school laboratories" in the project "National Network of Education-EDUnet: Supply Network Equipment for the Implementation and Operation (Total budget 179.678 €).

September 2003 : Competition for the development of tele-education room at the UoP, Invitation 7, Measure 1.1, Infrastructures Tele-education Rooms" (Rector Council Decision 14160/08-09-2003, UoP, Total Budget 65.000 €).

Academic & Research Experience

Publications

Journals

J1. A study on implementing the BLAS interface in the MPC context
 Theodoros Symeonidis, **Aristidis Ilias**, Yannis C. Stamatou
 Journal of Information Security and Applications 91, 2025, 104036

DOI: 10.1016/j.jisa.2025.104036

J2. Using Level-Based Multiple Reasoning in a Web-Based Intelligent System for the Diagnosis of Farmed Fish Diseases
 Konstantinos Kovas, Ioannis Hatzilygeroudis, Konstantinos Dimitropoulos, Georgios Spiliopoulos, Konstantinos Poulos, Evi Abatzidou, Theofanis Aravanis, **Aristidis Ilias**, Grigoris Kanlis, John A. Theodorou
 Applied Sciences, MDPI, 2023, 13, 13059
 DOI: 10.3390/app132413059

J3. Intelligent Surveillance Systems on the Internet of Things based on Secure Applications with the IBM Cloud Platform
 Ioannis Adamopoulos, **Aristidis Ilias**, Christos Makris, Yannis C. Stamatou
 International Journal of Information Technologies & Security, 2023, No 2 (vol. 15)
 DOI: 10.59035/XVRS3592

J4. Integrating Elliptic Curve Cryptography with the Modbus TCP SCADA Communication Protocol
 Despoina Chochtoula, **Aristidis Ilias**, Yannis C. Stamatou, Christos Makris
 Future Internet, MDPI, 2022, 14(8):232
 DOI: 10.3390/fi14080232

J5. A Medical Decision Support System for the Differential Diagnosis Based on Medical Information Text Mining
Aristidis Ilias, Andreas Kanavos, Maria Adamopoulou
 Biomedical Journal of Scientific & Technical Research, 2020, p. 23773-23778, ISSN: 2574 -1241
 DOI: 10.26717/BJSTR.2020.30.005020

J6. Scisola: Automatic Moment Tensor Solution for SeisComP3
 Nikolaos Triantafyllis, Eftimios Sokos, **Aristidis Ilias**, Jiri Zahradnik
 Seismological Research Letters, 2016, 87(1):157-163
 DOI: 10.1785/0220150065

J7. A Grid-enabled CPU Scavenging Architecture and a Case Study of its Use in the Greek School Network
 Fotis Georgatos, Vasileios Gkamas, **Aristidis Ilias**, Giannis Kouretis, Manos Varvarigos
 Journal of Grid Computing, 2010, 8(1):61-75
 DOI: 10.1007/s10723-009-9143-2

J8. Undergraduate studies in computer science and engineering: Gender issues
Aristidis Ilias, Maria Kordaki
 ACM SIGCSE Bulletin, 2006, 38(2):81-85
 DOI: 10.1145/1138403.1138439

International Conferences Proceedings

C1. Predicting Fish-Mortality: Artificial Neural Networks vs Symbolic Regression
 Theofanis I. Aravanis, **Aristidis Ilias**, Ioannis Hatzilygeroudis, Georgios Spiliopoulos
 14th International Conference on Information, Intelligence, Systems & Applications (IISA), 2023
 DOI: 10.1109/IISA59645.2023.10345962

C2. A Novel System for Detecting and Preventing SQL Injection and Cross-Site-Script
 Petros Tanakas, **Aristidis Ilias**, Nineta Polemi
 International Conference on Electrical, Computer and Energy Technologies (ICECET), 2021
 DOI: 10.1109/ICECET52533.2021.9698688

C3. Implementation and Repeatability Aspects Combined with Refactoring for a Reviews Manager System
 Agorakis Bompotas, **Aristidis Ilias**, Andreas Kanavos, Panayiotis Kechagias, Panayiotis Arvanitakis, Nikos Zotos, Konstantinos Kovas, Christos Makris
 17th International Conference on Web Information Systems and Technologies (WEBIST 2021), p. 607-615
 ISBN: 978-989-758-536-4; ISSN: 2184-3252
 DOI: 10.5220/0010727000003058

C4. Computing Massive Trust Analytics for Twitter using Apache Spark with Account Self-Assessment
 Georgios Drakopoulos, Andreas Kanavos, Konstantinos Paximidis, **Aristidis Ilias**, Christos Makris, Phivos Mylonas
 16th International Conference on Web Information Systems and Technologies (WEBIST 2020), p. 403-415,
 ISBN: 978-1-7138-4075-6
 DOI: 10.5220/0010214104030414

C5. A Sentiment-based Hotel Review Summarization using LSTM Neural Networks
 Agorakis Bompotas, **Aristidis Ilias**, Maria Adamopoulos, Andreas Kanavos, Christos Makris, Gerasimos Rompolas, Alkiviadis Savvopoulos
 11th International Conference on Information, Intelligence, Systems and Applications (IISA), 2020
 DOI: 10.1109/IISA50023.2020.9284397

C6. Improving Movie Recommendation Systems Filtering by Exploiting User-Based Reviews and Movie Synopses
 Konstantina Iliopoulou, Andreas Kanavos, **Aristidis Ilias**, Christos Makris, Gerasimos Vonitsanos
 IFIP Advances in Information and Communication Technology ((IFIP AICT, volume 585)), 2020
 DOI: 10.1109/IISA50023.2020.9284397

C7. A Sentiment-Based Hotel Review Summarization Using Machine Learning Techniques
 Agorakis Bompatas, **Aristidis Ilias**, Andreas Kanavos, Christos Makris, Gerasimos Rompolas, Alkiviadis Savvopoulos
 IFIP Advances in Information and Communication Technology ((IFIP AICT, volume 585)), 2020, pp 155-164
 DOI: 10.1007/978-3-030-49190-1_14

C8. Pre-processing Framework for Twitter Sentiment Classification
 Elias Dritsas, Gerasimos Vonitsanos, Ioannis E. Livieris, Andreas Kanavos, **Aristidis Ilias**, Christos Makris, Athanasios Tsakalidis
 IFIP Advances in Information and Communication Technology (IFIP AICT), volume 560, p. 138-149, 2019
 DOI: 10.1007/978-3-030-19909-8_12

C9. SCISOLA: Real-Time Moment Tensor Monitoring for Seiscomp3
 Nikolaos Triantafyllis, Efthimios Sokos, **Aristidis Ilias**
 14th International Conference of the G.S.G., Bulletin of the Geological Society of Greece, 2017, 50(2):1120
 DOI: 10.12681/bgsg.11817

C10. Enhancing Distance Learning Platforms with Social Media Analytics
 Oksana Kalita, **Aristidis Ilias**, George Pavlidis
 11th International Conference on Artificial Intelligence Applications and Innovations (AIAI'15), 2015
 DOI: 10.1007/978-3-319-23868-5_31

C11. Scisola: Automatic Moment Tensor Solution for SeisComP3
 Nikolaos Triantafyllis, Efthimios Sokos, **Aristidis Ilias**
 Second European Conference on Earthquake Engineering and Seismology, 2014
 DOI: 10.1785/0220150065

C12. Gender Differences and Achievement in Computer Science and Engineering
Aristidis Ilias, Maria Kordaki
 CELDA2005 (Cognition and Exploratory Learning in Digital Age), Porto, Portugal, 2005

C13. Protecting Intellectual Property Rights and the JPEG2000 Coding Standard
 Bill Vassiliadis, Vassilis Fotopoulos, **Aristidis Ilias**, Athanassios Skodras
 Advances in Informatics, 10th Panhellenic Conference on Informatics, PCI 2005, Volos, Greece, November 11-13, 2005, Proceedings, Lecture Notes in Computer Science 3746:705-715
 DOI: 10.1007/11573036_67

C14. An approach to a methodology and implementation of a Network Monitoring Analysis Tool
 Elias Aravantinos, Christos Bouras, Petros Ganos, **Aristidis Ilias**
 EUROMEDIA 2003- COMTEC, Plymouth, UK, April 14- 16 2003, pp. 125- 129

Proposals for Organizing Conferences

October 2010 : Proposal of collaboration between the 4th Conference of Open Source Communities (FOSSCOMM 2011)

Participation in Conferences Committees

4th Conference Organizing Committee open source community (FOSSCOMM 2011), 7-8 May 2011.
 Member of the Organizing Committee of the 2nd National Conference of Computer Science Student-student Eureka 2008 (<http://eyreka08.ceid.upatras.gr/>), Pythagorion, Samos, Conference Center Doryssa Seaside Resort Hotel, 29 August 2008.
 Member of the Organizing Committee of the first National Student Conference of Computer Science, Eureka 2007, 1th PCSI2007 (<http://eyreka07.ceid.upatras.gr/>), Patras Conference and Cultural Center, UoP, May 17, 2007.
 Member of the Organizing Committee of 11th National Computer Conference (International Conference), 11th PCI2007 (<http://pci2007.upatras.gr/>), Patras Conference and Cultural Center, UoP, 18-20 May 2007.
 Member of the Organizing Committee of the first National Student Conference of Computer Science, Eureka 2007, 1th PCSI2007 (<http://eyreka07.ceid.upatras.gr/>), Patras Conference and Cultural Center, UoP, May 17, 2007.
 Member of the Organizing Committee of 11th National Computer Conference (International Conference), 11th PCI2007 (<http://pci2007.upatras.gr/>), Patras Conference and Cultural Center, UoP, 18-20 May 2007.

Participation in Committees Meetings

Member of the Organizing Committee of the anniversary and scientific conference entitled "The Engineering and Computer: The new realities and opportunities for growth", Conference and Cultural Centre, UoP, December 18, 2010, organized by CEID and Technology Association Engineering, Information Technology and Communications (part of Western Greece).

Member of the Organizing Committee of the anniversary and scientific conference entitled "Moving a Graduate in Computer Engineering he joined in 1989 until today and Learning in Practice 'Conference and Cultural Center, UoP, December 5, 2009, organized by CEID and Technology Association Engineering, Information Technology and Communications (part of Western Greece).

Member of the Organizing Committee of the anniversary and scientific conference entitled "20 Years of trails, experience concerns perspective/role of Computer & Information Technology Engineer, Conference and Cultural Center, UoP, December 13, 2008, organized by CEID and Technology Association Engineering, Information Technology and Communications (part of Western Greece).

Member of the Organizing Committee of the anniversary and scientific conference entitled "From information society to knowledge society and prosperity", December 15, 2007, Conference and Cultural Centre, UoP, organized by CEID and Technology Association Engineering, Information Technology and Communications (part of Western Greece).

Member of the Organizing Committee of the anniversary and scientific conference entitled "From information society to knowledge society and Prosperity: The Role of Computer Engineer, December 15, 2007, Conference and Cultural Centre, UoP, organized by CEID and Technology Association Engineering, Information Technology and Communications (part of Western Greece).

Member of the Organizing Committee of the anniversary and scientific event, the colloquium titled "1980-2006 Pioneers in research, development, innovation, use of technology in society", 9-10 December 2006, Conference and Cultural Centre, UoP.

Member of the Organizing Committee of the anniversary and scientific conference on "Bridges to Information: from the University of the labor market," November 20, 2004, Conference and Cultural Centre, UoP, organized by CEID and Technology Association of Engineers, PC and Informatics (Annex West Greece).

Experience in Academic Studies and Activities Content

July 2001	: "Wavelength Demands &Conversion in Optic Fiber Networks".
May 2001	: "Face tracking and recognition Methods".
March 2001	: "Multiwavelength Optical Networks with Limited Wavelength Conversion".
February 2001	: "Abridgement on History & Evolution of Greek Language & Writing".
January 2001	: "Measurements & Analysis of LDAP Performance".
December 2000	: "MultiProtocol Label Switching (MPLS)".

Research Experience

06/10/2025-	: CADMUS- DIGITAL-2023-SKILLS-/ 04-11-2024- DIGITAL EUROPE PROGRAM. Computer Technology Institute and Press "DIOPHANTUS" (CTI). The project aims to address the lack of cybersecurity expertise in Europe by developing targeted training opportunities based on approaches including cybersecurity projects, games, hackathons, bootcamps and practical exercises. These interventions aim to upgrade the skills of trainers, educators, employees of SMEs and start-ups, civil servants, as well as postgraduate students aiming for careers in cybersecurity, through practical experiences and development of theoretical background. The project will build on existing initiatives offered in cybersecurity education to build on and develop improved training curricula based on the integration of proven training models and standards. The project will contribute to achieving the objectives of the call by fostering a strong cybersecurity workforce, addressing specific sectoral and legislative requirements and addressing the needs of SMEs, start-ups and public administrations.
08/07/2025- 31/12/2025	: AKADIMOS- DIGITAL-2023-SKILLS-05-CYBERA/ 04-11-2024- DIGITAL EUROPE PROGRAM. Computer Technology Institute and Press "DIOPHANTUS" (CTI). The AKADIMOS project aims to support the creation and initial operation of the European Cybersecurity Skills Academy (henceforth "the Cyber Skills Academy" or "the Academy") which, as specified in the relevant EC Communication aims at a single point of entry that establishes synergies for cybersecurity training initiatives along with funding opportunities regarding the development of cybersecurity skills and thus contributing towards closing the skills gap of cybersecurity professionals across EU. AKADIMOS is a horizontal project, and it will work towards the support and evolution of important instruments and outcomes envisioned by all pillars of the Academy, including the coordinated cooperation and involvement of all relevant stakeholders (EC, ENISA, ECCC, relevant EC-funded projects, cybersecurity training companies and industry, public entities and SMEs). The goal is to avoid scattered and redundant efforts, offering the opportunity to scale-up and make a noticeable impact in closing the cybersecurity professionals' gap. The project will enhance the European

Cybersecurity Skills Framework and will also create tools for improvement and effective monitoring of the impact of existing and future initiatives. It will create an information system for cybersecurity curricula that will contain all courses material, their metadata, the registry of Trainers, and provide Services to various entities for scale-up, and services for updating the Digital Skills and Jobs Platform and for validating content towards a solid and realistic plan for the sustainability of the Academy. The project will establish procedures for the efficient and effective decentralized operation of the Academy, towards making the Academy the unique EU reference ecosystem for cybersecurity professionals.

15/05/2023- : Support for Research Activity in Software Technologies with Applications in Cybersecurity. University Research Center of Patras

26/01/2022- 27/11/2023 : Sub-project 1: "Supporting Actions for Farming Risk Management" of the Project "Improving the Competitiveness of Greek Fish Farms Through the Development of Intelligent Systems for Fish Pathological Diagnosis & Disease Treatment Proposal and Supporting Actions for Farming Risk Management

10/2020- 09/2021 : Niove. The nIoVe project is a European initiative funded by the EU's Horizon 2020 research and innovation program. Its primary goal is to develop a multi-layered interoperable cybersecurity solution specifically for the Internet of Vehicles (IoV), focusing on the Connected and Autonomous Vehicles (CAVs) ecosystem. The project aims to enhance cybersecurity by enabling stakeholders to share cyber threat intelligence, synchronize cybersecurity strategies, and respond effectively to threats. It will involve the use of advanced data analytics and machine learning tools to improve threat detection and incident response capabilities across the IoV ecosystem.

09/2020- 01/2021 : SELFIE. Supporting the analysis of SELFIE qualitative data applying text mining techniques (SELFIE-Mining). Joint Research Centre. Growth and Innovation (Seville). Human Capital and Employment

01/02/2020- 31/08/2021 : ECOBLUETOURISM: Aims to increase entrepreneurship opportunities in blue ecotourism in coastal countries through an innovative training methodology to improve the entrepreneurial skills of long-term unemployed youngsters. The project includes the implementation of a training course in centres and training organizations, the improvement of the professional competence of adult trainers, and the development of a mobile learning app to acquire business skills required to create a blue ecotourism company. The main beneficiaries of the project are long-term unemployed young people and trainers interested in acquiring new methods of entrepreneurship training aimed at creating companies in blue ecotourism. The project also targets other interested parties such as training centres, entrepreneur organizations, chambers of commerce, business associations, and local, regional or national authorities related to entrepreneurship and tourism. ERASMUS EU programme for education, training, youth and sport.

26/05/2020- 10/11/2021 : NET: New Approach In Educational Technology. Promotes innovative teaching methods and didactical approaches that support the effective use of ICT in education. ICT learning materials, tools and actions are able to foster creativity, critical thinking and project-based learning, and promote the use of interactive methods for students' diversity. ERASMUS EU programme for education, training, youth and sport

26/11/2019- 07/06/2021 : Reviews Manager, Intelligent mechanisms for evaluating the impact of reviews on Tourism Businesses using machine learning techniques. Operational Program: Western Greece 2014-2020. Action: Strengthening Research, Development & Innovation Projects in the RIS3 Priority Sector "Information & Communication Technologies". Conducting natural language processing research, designing and checking the correctness and quality of the implementation of the interconnection mechanisms, the emotion and opinion extraction algorithms, with hotel systems.

14/12/2018- 31/03/2019 : Design and Implementation of a methodology for business compliance with Directive (EU) 2016/679 on the protection of personal data

06/11/2018- 31/08/2019 : Astronomy for the Blind and People with Special Needs, ERASMUS EU programme for education, training, youth and sport

03/01/2012- 30/09/2014 : Development and support of Physics remote laboratories, in particular the management and development of computer systems networks (UNIX/LINUX and GRID technologies) for the framework of the work package "Creation of remote laboratories" within the framework of the operational program "Education and Lifelong Learning"

07- 10/2014 : Task "Design and development mechanisms for secure and trusted user identification and services for GSM", Work Package "WP4: Content Gateway Module", Project «Virtual eCO-friendly urban Multi-modal route PIAnning Services for Mobile uSers (eCOMPASS)», FP7 - Information & Communication Technologies.

10/2006- 05/2008 : Project «Enabling Grids for E-sciencE-II» (EGEE-II), INFSO-RI-031688, European Program «Structuring the European research Area/ Research Infrastructures» Integrated Infrastructure Initiative.

02- 03/2006 : Project EGEE (Enabling Grids for ESciencE) to create a production Grid (grid) across the European Research Area (European Research Area, ERA) and the world.

06/2005- 06/2006 : Planning and Development Pilot Advanced Infrastructure & Services Grid Computing Systems Grid- HellasGrid, Technical Director of the Department of Computer & Information Technology for the node HellasGrid hosted on CEID, UoP.

01- 12/2006 : "Pythagoras: Research Groups in Universities" Implementing Agency: UoP, CEID, Contact: Professor Ch. Zaroliagkis, Research Project Title: Integrated Approaches to Wide-Scale Networks.

08/2004- 01/2005 : Copyright Protection System for Digital Projects: STIGMA, Number 02PRAXE89 Project, HOU.

11/2003- 04/2005 : "Pythagoras: Research Groups in Universities", HOU, Department of Information Technology, Scientific Director: Professor A. Skodras, Title Research Group: Digital Systems & Media Computing, Research Title: New Methods of Mining for the Protection of Intellectual Property Rights Management and Digital Image Collections coded according to the standard Jpeg2000, employment in the discipline of the transfer of data through networks (JPEG2000 digital image transmission through networks as well as processed by GRID distributed applications and research and development of knowledge management model based on digital images standard JPEG2000).

01/01/2005- 31/12/2005 : Research in the field of knowledge management of digital images and writing deliverables in work packages WP1-WP4 under the program Pythagoras-Support Research Group of HOU (Operational Program "Education II"/ 3rd Community Support Framework).

02- 06/2002 : ANAIS- Advanced Network Architecture for in flight cabin systems, a project which was part of the European Program Competitive and Sustainable Growth and its main objective the implementation and completion of new Information and Communication Technologies on passenger planes through a single network infrastructure, with emphasis on design, implementation, monitoring and evaluation of an economically viable and expandable Gigabit Ethernet communication network, which can be used on planes that can provide differentiated services to 800 passengers.

28/08/2000- 31/12/2001 : Design, development and maintenance of an accounting mechanism for the traffic of services of electronic mail and dial-up on UoP Data Network, and also quantity and quality analysis of the results, introducing measures of users' and network behavior and analytical personal report for each user.

15/11/1999- 21/05/2003 : Design, development and maintenance of an accounting mechanism for the traffic of services of electronic mail and dial-up on Greek Schools Data Network, and also quantity and quality analysis of the results, introducing measures of users' and network behavior and analytical personal report for each user.

01/11/1996- 31/12/1997 : Safety analysis of Safety Critical Real- Time Applications and evaluation of ANDF (Architectural Neutral Distribution Format) technology on specific and general purpose microprocessors and its assemblers(Siemens ST90R40 microcontroller and SAB80C167 microcontroller). Researching team for Programs of EC, which are OMI/ANTICRASH(ESPRIT Project 20899), Safety & Reliability Analysis Algorithms(ESPRIT Project 23256) and Safe(ESPRIT Project 23920).

01/11/1996- 31/12/1997 : Participation in teams of Community Programs OMI/ANTICRASH (ESPRIT Project 20899), Safety & Reliability Analysis Algorithms (ESPRIT Project 23256) and Safe (ESPRIT Project 23920).

PhD Thesis

The security enhancement of SCADA (Supervisory Control and Data Acquisition) systems is presented, which constitute- and frame- critical industrial and energy infrastructures. SCADAs monitor and control operations, detect malfunctions and often take corrective measures. However, their connection to the Internet makes them vulnerable to various attacks, such as data interception, malicious modifications, measurement corruption and denial of service (DoS) attacks. The research focuses on the use of cryptographic mechanisms with the aim of encrypting data, identifying devices and ensuring communication integrity. Due to the limited computing resources in sensors and embedded systems, Elliptic Curve Cryptography (ECC) is proposed, which offers a high level of security with smaller key sizes and lower power and memory requirements, in contrast to conventional systems, such as RSA. In this context, the ECC library was integrated with Modbus, a popular SCADA communication protocol, and experimental tests were carried out to evaluate its effectiveness in real-world conditions.

Furthermore, the research examined the growing importance of data flows on the World Wide Web, especially when industrial infrastructures use microservices for data processing, movement and storage. The need to ensure confidentiality and identification of transacting parties is raised. For this purpose, modern cryptographic tools are used that are building blocks for complex schemes, with an emphasis on Secure Multi-Party Computation (MPC).

Linear Algebra is integrated with MPC to ensure privacy in computational processes, as a key tool in sensitive data processing. Specifically, the research examines the implementation of the BLAS (Basic Linear Algebra Subprograms) interface in MPC, with the aim of almost immediately replacing the widespread CBLAS interface. Existing MPC frameworks (Level 1) were evaluated.

Security challenges in Web data flows always focus on the confidentiality-integrity-availability triad. The data flow from sources to sinks is analyzed, as well as security measures that include information flow control policies, encryption, access control, and network surveillance. Emphasis is placed on common threats, such as SQL Injection and Cross-Site Scripting (XSS) attacks. A new method for detecting such attacks without a firewall is proposed, leveraging custom Nginx Reverse Proxy and Suricata NIDS/IPS protocols, thus reducing network costs and enhancing security. (Members of the PhD Commission: Professor Christos Zaroliagakis, Associate Professor John Stamatou, Assistant Professor Christos Makris).

MSc Thesis

"Remote centralize system administration services over IP wide area networks", impresses the factors that influence the management of systems of a network and the development and growth of the central remote system management service via IP networks of wide area. It proposes the architecture of such a service and it studies the possibilities of adaptability in the model of commercial tools that is provided for this aim. Finally, the thesis is proposed the pilot design of service in one of the bigger data networks in Greece but also in Europe, the Greek School Network (GSN) (Supervisor Professor Christos Bouras).

Diploma Thesis

"Teletrade: Case study and pilot application development "- Intended for a pilot program for Electronic Commerce and a theoretical study of international techniques about the subject in other countries which are more advanced in Informatics and finally how to fit some models in Greece. Another part of diploma thesis was the development of an application which can accomplish Teletrade using a Web interface(HTML pages, 3D images, database, etc) (Supervisor Professor Athanasios Tsakalides).

Participation in Conferences- Meetings

27-29/05/2022	: 8th Panhellenic Conference Teaching Staff of Laboratories of Greek Universities, "Education, Teaching Quality and Research in Tertiary Education", National Technical University of Athens
24-26/11/2014	: Participation in the cyber defense exercise "Cyber protector 2014" within the framework of the 4th ISACA's Conference Chapter Athens in Greece
18-20/11/2014	: Participation in the NATO cyber defense exercise "Cyber Coalition 2014"
10/04/2013	: 3o Conference InfoCom Security, Athens, Greece, Divani Caravel (6,75 CPE)
10- 13/07/2012	: OWASP AppSec Research 2012, Athens, Greece
12- 13/05/2012	: Organized two-day security challenge workshop, FOSSCOMM 2012 (Free and Open Source Software Communities Meeting), 5th Free and Open Source Software Communities Open, Serres
20-22/09/2010	: 15th European Symposium on Research in Computer Security (ESORICS 2010), Athens, Greece.
13/12/2008	: 20 Years' experience-thinking tracks prospects/ the role of Computer Engineering & Information Technology, Conference and Cultural Centre, UoP.
29/08/2008	: 2nd National Conference of Computer Science Student-student Eureka 2008, (http://eyreka08.ceid.upatras.gr/), Samos-Convention Center Doryssa Seaside Resort Hotel.
15/12/2007	: Seminar entitled "From the information society in the knowledge society and welfare, Congress and Cultural Centre of the UoP.
18-20/05/2007	: 1st Pan-Hellenic Conference on Informatics Student-Eureka 2007, 1th PCSI2007 (http://eyreka07.ceid.upatras.gr/), Patras Conference and Cultural Center, UoP.
18-20/05/2007	: 11th Pan-Hellenic Conference on Informatics (International Congress), 11th PCI2007 (http://pci2007.upatras.gr/), Patras Conference and Cultural Center, UoP.
9-10/12/2006	: Anniversary Event and scientific symposium entitled "1980-2006 Pioneers in research, development, innovation, use of technology in society, Conference and Cultural Centre, UoP.
20/11/2004	: Scientific conference on "Bridges to Information: from the University of the labor market", Conference and Cultural Centre, UoP.
02/02/2002	: Participation in the first Nationwide Online Symposium Law & New Technologies.
29/09/2000- 30/09/2000	: "6th Conference of Applied Informatics, citizens and businesses in the networked society ', International Organization Fair (Helexpo)- 14th Infosystem 2000, September 2000, Thessaloniki.
29/09/2000	: Workshop Ministry of Education/ Operational Program "Education". "The preparation of the educational community and the Citizen's Information Society. The design of the Ministry of Education for the 3rd Community Support

14/03/2000	Framework, "International Organization Fair Competition (Hellexpo)- 14th Infosystem 2000, September 2000, Thessaloniki.
04/12/1995- 05/12/1995	: The Information Society for All Citizens "Conference of the National Telecommunications and Post Commission and RACTI, Conference and Cultural Center, UoP.
	: "Present and future in educational software: Methods, Tools, Packs, Conference of Greek Computer Society (GCS), a recommendation on "database and multimedia, the management company for automobile spare parts", Main Hall of UoP, in December 1995, Patras.

Teaching Experience

Academic Year	Course	Semester	Department/ Institution	Compulsory (core)/Elective
2014-2022	Introduction to Programming and Computer Organisation	1	CEID	Compulsory (core)
2022-2026	Introduction to Programming	1	CEID	Compulsory (core)
2017-2018			CEID	Compulsory (core)
2022-2024	Data Structures	4	CEID	Compulsory (core)
2016-2017	Operating Systems I	5	CEID	Compulsory (core)
2017-2026	Operating Systems	5	CEID	Compulsory (core)
2016-2023	Computer Networks	8	CEID	Compulsory (core)
2016-2017	Laboratory of Computer Networks	8	CEID	Compulsory (core)
2014-2026	Software Engineering	6, 8	CEID	Compulsory (core)
2016-2018	Writing and Presenting Technical Texts	6	CEID	Compulsory (core)
2014-2017	Software Quality Assurance and Standards	5, 7, 9	CEID	Elective
2021-2026	Advanced Information Systems	5, 7, 9	CEID	Elective
2024-2026	Software Project Management and Development with Agile Methods	5, 7, 9	CEID	Elective
2024-2026	Applied Information Systems II	5, 7, 9	CEID	Elective
2023-2026	Computer and Network Security	5, 7, 9	Department of Electrical and Computer Engineering/ University of Patras	Elective

Evaluation of the Quality Assurance Unit of the University of Patras

Course	Average of Teaching Evaluation
Introduction to Programming and Computer Organisation	3,62
Introduction to Programming	4,32
Data Structures	4,86
Operating Systems	4,15
Computer Networks	3,99
Software Engineering	3,14
Writing and Presenting Technical Texts	3,66
Advanced Information Systems	3,79

* Evaluation Scale 0-5

Innovation & Excellence Awards

23- 27/05/2016	: Technical Head of the team of Computer Engineering & Informatics Department and of the University of Patras that participated in the national exercise on Cyber Defense "PANOPTIS 2016" of the General Staff of National Defense Ministry.
25- 29/05/2015	: Technical Head of the team of Computer Engineering & Informatics Department and of the University of Patras that participated in the national exercise on Cyber Defense "PANOPTIS 2015" of the General Staff of National Defense Ministry.

28- 20/04/2014 : Technical Head of the team of Computer Engineering & Informatics Department and of the University of Patras that participated in the national exercise on Cyber Defense "PANOPTIS 2014" of the General Staff of National Defense Ministry and «Cyber-Europe 2014».

18- 20/03/2014 : Technical Head of the team of Computer Engineering & Informatics Department and of the University of Patras that participated in the «Cyber Protector 2014-A».

21- 25/01/2013 : Technical Head of the team of Computer Engineering & Informatics Department and of the University of Patras that participated in the national exercise on Cyber Defense "PANOPTIS 2013" of the General Staff of National Defense Ministry.

21- 25/01/2013 : 1st place in the OWASP University Challenge during the international OWASP AppSec Research 2012. The competition involved scientific groups representing the academic and research institutions. The group represented the University of Patras consisted of: Professor G. Pavlidis, Technical Head Aristidis Ilias and the members were (members of Laboratory for Computer and students of the CEID): Evangelia Tsitsoka, Anestis Bechtsoudis, Dionisis Panagiotopoulos, Ilias-Dimitrios Vrachnis, Alexander Panagopoulos, Nikolaos Gkogkos, Spyros Seimenis.

12- 13/05/2012 : Security challenge workshop during FOSSCOMM 2012, 5th Conference Free and Open Source Software Communities, Serres, Greece

28/10- 1/11/2011 : Technical Head of the team of Computer Engineering & Informatics Department and of the University of Patras that designed and developed the cyber scenarios in the national exercise on Cyber Defense "PANOPTIS 2011" of the General Staff of National Defense Ministry.

Technical Head of the team of Computer Engineering & Informatics Department and of the University of Patras that participated in the national exercise on Cyber Defense "PANOPTIS 2011" of the General Staff of National Defense Ministry.

18- 20/05/2010 : Participation in the national exercise on Cyber Defense "PANOPTIS 2010" of the General Staff of National Defense Ministry.

3- 4/05/2010 : Mentor of team eAnima and participation in the national final of the student innovation competition "Imagine Cup 2010" that was Microsoft's qualifying for the team representing Greece in international competition (The group consists of students from Sofia Malagkoniari, Apostolis Mastoris, Ioannis Papavassiliou and Dimitris Gkortzilas).
 The title of the project was iProtection and the issue of implementation was to develop an application-service social networking for the interactive and real-time information to network members for various forms of crisis and natural disasters. Emphasis was placed on the technologies and platforms and windows mobile devices that combine and communicate with the portal iProtection, to those involved in the service can inform and be informed in various ways (use of mobile phones, PDA, portal via PC or Laptop, etc.) for critical situations, natural disasters and/or any natural disaster occurring or will occur and which are present or have direct information.
 The information available to all members directly, while those who have made selection of specific events or even geographic areas they occur, can be updated focused on their behalf, or on his mobile phone or mobile device, etc.
 The application is personalized and access to it requires authentication of users, so as to guarantee the participation of real stakeholders and solvent users, but also the use of accounts with the possibility of setting specific parameters for those involved to be informed "guided", for example during a journey or at critical points depending on their geographic location, etc.
 The team ranked first in the 10-SAA groups and members of the 40 people (out of 1500) launched a few months ago (November 2009) effort.

Writings

Books

B1. (in Greek) "Laboratory of Digital Systems ", A. N. Skodras, V. Fotopoulos, **A. Ilias**, Publications of Hellenic Open University, Patras 2006, PLI 21/4, ISBN 960-538-586-4.

Lecture Notes

S1. (in Greek) Introduction in usage of computer, informatics and communication technologies and systems, UoP, CEID, First Edition, Patras 2004.

Educational-Teaching Notes

E1. Training materials for the Small Enterprises' Institute of the Hellenic Confederation of Professionals, Craftsmen and Merchants (IME GSEVEE) on the topic of "Computer & Network Technician" as part of implementation of subproject 6 "Development of analytical training standards and training materials/ content including questions for knowledge and skills assessment responses of the beneficiaries", 2016.

Experience in developing educational materials

June 2015 : "Working Time Management and Team Collaboration Using New Technologies" Program "Officials Office", Operational Program "Human Resources Development", Action "Interconnection to the labor market of unemployed high-education graduates".

November 2014 : "Computers & Applications: Text Processing- Computational Sheets- Email-Working Time Management", Program "Clerical Office", program "Voucher- Entrance to the labor market of young people aged 25 to 29" (24 hours).

June 2012 : "Network IT (Cisco) CCNP- CCNA, Active Directory, Microsoft Server & Web server, Database Administrator Oracle & Sql Server", Program "Structural Adaptation of the Workers and Companies in the Financial Crisis" Greek Management Association/ AkarPort Ltd

August 2009 : «Web Developer» and «Web Developer: Laboratorial Exercises», 01 Pliroforiki Ltd

September 2009 : «JAVA Exercises», Project «Education of engineers in specific skills training in ICT», Technical Chamber of Greece (T.E.E.), Measure 2.5, Action Category 2, Operational Program "Information Society" (2000- 2006), 01 Pliroforiki Ltd

June 2009 : "Advanced Internet Technologies, Technical Planning and Development Dynamic Web Sites" in the project Engineering Education in Information and Communication Technologies (ICT), Measure 2.5, Action Line 2, Operational Program "Information Society".

January 2009 : "Working Papers and Public Papers of the editor MS-WORD", Institute of Education PI.NE.P. of Western Greece, National Center for Public Administration and Local Government.

June 2008- September 2008 : "Introduction to Using Computer and Network Systems, CEID, UoP.

November 2007- March 2008 : "Using Open Source Software Package in corporate environments," Centre of Vocational Training of UoP.

April – June 2005 : Development of Multimedia Educational Materials (webcast) on the theme of the Digital Systems Laboratory Program in Computer Science from the HOU.

March 2005 : Hypertext and Software Development Simulation Exercise Standards under the project "Development of Alternative Teaching Material" for the laboratory module of the Digital Systems Laboratory Program in Computer Science from the HOU.

May 2004- June 2005 : Hypertext and Software Development Simulation Exercise Standards under the project "Development of Alternative Teaching Material" for the theme of the Digital Systems Laboratory Program in Computer Science from the HOU.

Scientific & General Articles

- "Statistical Analysis of Graduate Engineers of Computer & Information Technology, Aristidis Ilias, On-line Journal of Board of the Information and Communication Engineers of Greece, Issue 4, 2004.
- "Inventory of Engineers PC & Information Technology, Aristidis Ilias, On-line Journal of Board of the Information and Communication Engineers of Greece, Issue 2, 2004.

Computer Tools Knowledge

Operating Systems	: Linux (CentOS, Red Hat, SuSe, Ubuntu), Unix (SunOS 4, Sun Solaris 2.x), VMS, Windows 95/98/NT/2000/XP/Vista/7, Windows Servers NT/2003/2008, MS-DOS
Remote System & Application Management	: IBM Tivoli Reach Out, Control IT, NetOp
Systems and Services Monitoring	: OpenNMS, Nagios
Computer Networks	: Novell, TCP/IP (ATM, MPLS, κ.ο.κ.), FastEthernet/Gigabit
Programming Languages	: C, C++ (Visual C++), Perl, Python, Unix Shell Programming, JAVA, J++, PHP, Visual Studio, Turbo Pascal 7.0, .NET
Databases	: MS-Access, Oracle, Sybase, SQL/4GL, MySQL
Web Pages and WWW Sites Development	: AJAX, PHP, Javascript, Django, HTML (DHTML), FrontPage, Macromedia Homesite 5, Macromedia Dreamweaver UltraDev, VRML, Active X, ASP
Mathematical Software Tools	: Matlab

Electronic Design	: CorelDraw, Photoshop, Paint Shop, MS-Vision
Tally Tools	: MS-Excel
Text Processing	: MS-Word
Presentation Processing	: MS-PowerPoint
Project Management	: MS-Project Manager
Statistical Analysis	: STATGRAPHICS, SPSS

Scientific Interests

- Security in ICT and CyberSecurity,
- Artificial Intelligence/ Machine Learning,
- Applications for mobile devices,
- Internet technologies,
- Social networking,
- Search engines and systems,
- Applications and Systems on evaluation and self-evaluation,
- Parallel and Distributed Systems/ Issues of Operating Systems on multiprocessors and distributed environments,
- Grid Computing,
- Performance Analysis of Computer & Information Systems,
- Security in services and applications of different operating platforms and grid technologies, applications, mobile devices, optimizing large-scale networks, Internet technologies, social networking, search engines and systems and applications on self-evaluation,
- Design, implementation and maintenance of integrated and differentiated services and telematics applications in networks, transmission over networks, routing problems, load balancing, technical information processing, flow control and congestion in data networks, especially in very high speed networks (LAN, MAN, WAN, ATM, TCP/ IP, Ethernet/ Fast Ethernet/ Gigabit Ethernet, MPLS, etc.),
- Optimizing large-scale and ad-hoc networks,
- Queuing Theory and Operations Research,
- Networks Multimedia & Hypertext, Internet Sites/Web Programming (HTML, DHTML, XML, CSS, PHP, Perl, cgi scripts and Java/J++),
- Issues of Operating Systems on multiprocessors and distributed environments,
- Performance Analysis of Computer & Information Systems,
- Statistical Data Analysis,
- Design, implementation and maintenance of databases, applications in Pascal, Visual Basic, ANSI C, C++ and Visual C++.

Committees, Associations & Chambers

Staff evaluation

2008- currently	: Examination License Committees of Greek Computer Society
2006- currently	: Evaluation and Evolution Committees of Special Technical Laboratory Staff, University of Patras (Anyfantis - Constantine Santas, 15-05-2008, Chemical Engineers- ECE 2009 & CEID)

Participating in Chambers & Associations

01/10/2002	: Greek Computer Society (member of IFIP, CEPIS, ECDL), registration number 3680.
23/10/1998	: Technical Chamber of Greece (T.E.E.), registration number 79753.
23/10/1998	: Greek Association of Electrical and Mechanical Engineers.
2006- currently	: Member of the Board of the Information and Communication Engineers of Greece part of Western Greece.
01/10/1998	: CEID Alumni Club.
01/10/2000	: CEID Postgraduate students club.

Participating in Scientific Commissions

08/07/2004 : Commission Training Program Training Center Computer Training of the Greek Mathematical Society (Annex Patras).

04/03/2002 : Commission Training Program Training Center Computer Training of the Greek Mathematical Society (Annex Patras).

20/11/2001 : Commission Training Program Training Center Computer Training of the Greek Mathematical Society (Annex Patras).

Administration of Commissions

2005- currently : Member of the Institute of Electrical & Electronics Engineers (IEEE-Registration Number 80456735).

Chambers, Associations & Committees

30/04/2014- currently : Member of the National Working Committee of Cyber security for the regulatory framework of cybersafety (Representative of the University of Patras).

31/10/2002- 31/08/2004 : Regular member of Board of Directors of CEID.

05/11/2001- currently : Regular member of General Assembly of CEID.

05/11/2001- 31/10/2002 : Active member of General Assembly with special composition of CEID.

05/11/2001- 31/08/2004 : Representative of Postgraduate students of CEID in Division of Applications and Foundations of Computer Science.

05/11/2001- 31/08/2004 : Regular member of Board of Directors of Postgraduate students of CEID.

Military Service

01/04/1999- 23/09/1999 : Sergeant of 2nd & 3rd Office (Security-Information & Planning Operations) of military unit of 3rd corps in Kavala.

17/08/1998- 31/03/1999 : Sergeant of 2nd & 3rd Office (Security-Information & Planning Operations) of military unit of XII Division in Alexandroupolis.

14/08/1998- 23/09/1999 : Sergeant of Artillery.

14/08/1998- 23/09/1999 : Responsible for computerization systems of selective service office of Artillery Center in Theba.

23/03/1998- 23/09/1999 : Chief of multiple rocket launcher RM-70 with "katiusa rockets".

Foreign Languages

English : Very Good

Personal Interests

Sailing, Music (guitar), photography, traveling, classical athletics, Basketball.

Memorandum of Scientific Publications

Journals

J1. A study on implementing the BLAS interface in the MPC context

Theodoros Symeonidis, **Aristidis Ilias**, Yannis C. Stamatiou

Journal of Information Security and Applications 91, 2025, 104036

DOI: 10.1016/j.jisa.2025.104036

Abstract: Linear Algebra (LA) plays a significant role in fields where computation on sensitive data is performed, like Machine Learning (ML), for example, and where privacy of the computation is a desirable property. Basic Linear Algebra Subprograms (BLAS) is an interface for the most commonly used Linear Algebra functions. It enables hardware vendors to provide implementations that are optimized for their selling hardware and also for the operating system running on it. Secure Multi-Party Computation (MPC/SMPc) is a class of interactive cryptographic protocols that enable multiple participants to securely evaluate arbitrary public functions on their private inputs, thus achieving a privacy-preserving computation. In this article, we explore the requirements and the current possibilities of implementing the BLAS interface in the context of MPC, to achieve privacy for the computation process and its probably sensitive data input. Our focus is on setting the requirements for providing an almost drop-in replacement for the CBLAS interface, the BLAS interface for the C programming language, which is the interface most commonly used today. We believe that implementing such a crucial part of modern frameworks that process sensitive data, in terms of MPC, will have an impact on the world of privacy. Next, we review how some of the most popular MPC frameworks do not fulfill our purpose. Using the most suitable frameworks from our evaluation, we implement and benchmark all the Level-1 CBLAS interface functions. This is the maximum possible subset of the interface that could be implemented on the basis of existing MPC frameworks, while satisfying the most crucial of our requirements. Finally, we highlight the gaps that exist in current MPC protocols and framework implementations that forbid us from implementing the complete CBLAS interface and discuss probable solutions that can be examined in future work, that will help fill those gaps.

Citations:

J2. Using Level-Based Multiple Reasoning in a Web-Based Intelligent System for the Diagnosis of Farmed Fish Diseases

Konstantinos Kovas, Ioannis Hatzilygeroudis, Konstantinos Dimitropoulos, Georgios Spiliopoulos, Konstantinos Poulos, Evi Abatzidou, Theofanis Aravanis, **Aristeidis Ilias**, Grigoris Kanlis, John A. Theodorou

Applied Sciences, MDPI, 2023, 13, 13059

DOI: 10.3390/app132413059

EID:

Part of ISSN:

Abstract: Farmed fish disease diagnosis is an important problem in the fish farming industry, affecting quality of production and financial losses. In this paper, we present a web-based intelligent system that tackles the problem of fish disease diagnosis. To this end, it uses multiple knowledge representation and reasoning methods: rule-based, case-based, weight-based, and voting. Knowledge, which concerns the diagnosis of sea bass diseases, was acquired from experts in the field and represented in the form of decision trees. The diagnostic process is performed in two stages: a general one and a specialized one. In the general stage, a level-based diagnosis is performed, where environmental parameters, external signs, and internal signs are successively examined, and the three most probable diseases are identified. In the specialized stage, which is optional, a specialized expert system is used for each of the resulting diseases, where additional parameters concerning laboratory tests (microbiological, microscopic, molecular, and chemical) are considered. The general stage is the most useful, given that it can be performed on-site in real-time, whereas the specialized one requires time-consuming lab tests. The system also provides explanations for its decisions. Evaluation of the general-stage diagnostic process showed a top-3 accuracy of 78.79% on expert test cases and 94% on an artificial dataset.

Citations: 6

J3. Intelligent Surveillance Systems on the Internet of Things based on Secure Applications with the IBM Cloud Platform

Ioannis Adamopoulos, **Aristidis Ilias**, Christos Makris, Yannis C. Stamatiou

International Journal of Information Technologies & Security, 2023, No 2 (vol. 15)

DOI: 10.59035/XVRS3592

Abstract: The Internet of Thing (IoT) is one of the most fast-evolving and most pervasive technological advancements of the last decade. Driven by IoT's promise for an interconnected world for all people, through a shared Internet-based infrastructure, more and more businesses expand their activities

to embrace, competitively, this new concept. More importantly, the ubiquitous, highly granular, and of increasing interconnection and computational capabilities nature of the IoT fabric creates a unique ecosystem for developing powerful, intelligent applications not limited to simply gathering and analyzing environmental and people data. This potential combines the IoT's physical capabilities with the achievements of the more mature discipline of Artificial Intelligence (AI). However, there is still a large number of businesses with no clear plans of investing in the IoT-plus-AI potential, citing multiple obstacles mainly related to the difficulty of understanding, adapting, and developing advanced AI techniques. Our goal is to show that advanced AI functionalities can, now, be easily implemented and operated through existing IoT platforms, by developing an intelligent, remote, surveillance application based on IBM's Cloud and Watson platforms as well as the Raspberry Zero W low-cost IoT device.

Citations: 9

J4. Integrating Elliptic Curve Cryptography with the Modbus TCP SCADA Communication Protocol

Despoina Chochtoula, **Aristidis Ilias**, Yannis C. Stamatou, Christos Makris

Future Internet, MDPI, 2022, 14(8):232

DOI: 10.3390/fi14080232

Abstract: SCADA systems monitor critical industrial, energy and other physical infrastructures in order to detect malfunctions, issue alerts and, in many cases, propose or even take remedial actions. However, due to their attachment to the Internet, SCADA systems are, today, vulnerable to attacks such as, among several others, interception of data traffic, malicious modifications of settings and control operations data, malicious modification of measurements and infrastructure data and Denial-of-Service attacks. Our research focuses on strengthening SCADA systems with cryptographic methods and protection mechanisms with emphasis on data and messaging encryption and device identification and authentication. The limited availability of computing power and memory in sensors and embedded devices deployed in SCADA systems make render cryptographic methods with higher resource requirements, such as the use of conventional public key cryptography such as RSA, unsuitable. We, thus, propose Elliptic Curve Cryptography as an alternative cryptographic mechanism, where smaller key sizes are required, with lower resource requirements for cryptographic operations. Accordingly, our approach integrates Modbus, a commonly used SCADA communication protocol, with Elliptic Curve Cryptography. We have, also, developed an experimental set-up in order to demonstrate the performance of our approach and draw conclusions regarding its effectiveness in real SCADA installations.

Citations: 7

J5. A Medical Decision Support System for the Differential Diagnosis Based on Medical Information Text Mining

Aristidis Ilias, Andreas Kanavos, Maria Adamopoulou

Biomedical Journal of Scientific & Technical Research, 2020, p. 23773-23778, ISSN: 2574 -1241

DOI: 10.26717/BJSTR.2020.30.005020

Abstract: Many methodologies, as well as information systems, have been developed to support medical decision making in terms of disease diagnosis. The majority of them are based on keyword searches, while others on artificial intelligence, ontologies, etc. However, there is no single approach that can successfully diagnose diseases because most of them rely on either the statistical appearance of keywords describing symptoms, and many have similar symptoms. In contrast, the more advanced ones dealing with artificial intelligence approaches and ontologies lead to poor results. This paper proposes a system based on the approach given by the medical practice itself and is called Differential Diagnosis (DD). More to the point, doctors' logic concerns data retrieval from knowledge recorded in their memory, combining thus more descriptive expressions that describe symptoms critical for concluding the correct disease. One doctor could exclude diseases or converge on them depending on the combined data assessment from the clinical examination and the history, which is then confirmed by some additional examinations. The proposed system approaches the diagnosis with the logic of the doctor's approach due to the DD. It relies on its back-end core where Natural Language Processing (NLP) of the medical bibliography is utilized. Furthermore, common areas, with medical protocols and findings on Venn diagrams leading to a successful diagnosis, are extracted.

Citations:

J6. Scisola: Automatic Moment Tensor Solution for SeisComP3

Nikolaos Triantafyllis, Efthimios Sokos, **Aristidis Ilias**, Jiri Zahradnik

Seismological Research Letters, 2016, 87(1):157-163

DOI: 10.1785/0220150065

Abstract: An automatic moment tensor is a significant product of regional seismic networks and an essential piece of information for real-time seismological applications, like shake maps or tsunami warning. In this article, we present scisola, a new software for automatic moment tensor (MT) retrieval, based on the ISOLated Asperities (ISOLA) MT inversion code and SeisComP3 real-time processing system. Scisola connects SeisComP3 with the ISOLA FORTRAN codes by retrieving event, station, waveform, and instrumental response data from SeisComP3 and passing the information to ISOLA. The Green's function calculation and centroid spatiotemporal grid search are done in parallel mode in scisola, thus the computational time is significantly reduced. The user has full control of all calculation aspects, for example, frequency range of inversion and station selection through the creation of

magnitude-based rules. Scisola is programmed in Python and provides a complete graphical user interface (GUI) and a database for storing the results. The automatic solution is stored in the database, and the user is able to revise it through a GUI. The software provides a complete logging of processing steps, extended graphical output, a text file useful for e-mail dissemination, and a handful of quality indexes of the solutions. The code's performance was tested against manual MT solutions and proved to be efficient. Online Material: Installation guide, short presentation on browsing, configuration information, and evaluation test of the scisola software, including screenshots from the software.

Citations: 18

J7. A Grid-enabled CPU Scavenging Architecture and a Case Study of its Use in the Greek School Network

Fotis Georgatos, Vasileios Gkamas, **Aristidis Ilias**, Giannis Kouretis, Manos Varvarigos

Journal of Grid Computing, 2010, 8(1):61-75

DOI: 10.1007/s10723-009-9143-2

Abstract: In this paper we present a CPU scavenging architecture suitable for desktop resources, and we study its appropriateness in exploiting the PC Laboratory resources of the Greek School Network and their integration to the existing HellasGrid national infrastructure. School laboratories form an extensive network equipped with computational systems and fast Internet connections. As this infrastructure is utilized at most 8 h per day and 5 days per week, it could be made available during its remaining idle time for computational purposes through the use of Grid technology. The structure and organization of the school laboratories and backbone network enables the CPU scavenging service, as an independent and additional service, which will not violate the operational rules and policies of the school network, while it will add additional resources to the current HellasGrid infrastructure with low adaptation cost.

Citations: 4

J8. Undergraduate studies in computer science and engineering: Gender issues

Aristidis Ilias, Maria Kordaki

ACM SIGCSE Bulletin, 2006, 38(2):81-85

DOI: 10.1145/1138403.1138439

Abstract: This study focuses on gender issues in terms of participation, achievement and duration of studies at the Tertiary level of education in Computer Science and Engineering (CS&E). For this reason, 1957 degrees earned by Computer Engineers were studied. These diplomas cover a 21 year period of graduation at the Computer Engineering and Informatics Department (CEID), University of Patras, Greece. The analysis of the data shows that: a) male graduate students outnumbered the female ones by three to one, b) in terms of achievement, no significant differences exist between male and female graduate computer engineers, and c) female students complete their studies earlier than their male counterparts.

Citations: 35

Conferences

C1. Predicting Fish-Mortality: Artificial Neural Networks vs Symbolic Regression

Theofanis I. Aravanis, **Aristidis Ilias**, Ioannis Hatzilygeroudis, Georgios Spiliopoulos

14th International Conference on Information, Intelligence, Systems & Applications (IISA), 2023

DOI: 10.1109/IISA59645.2023.10345962

Abstract: In this paper, we present a comparison between a collection of Artificial Neural Networks (ANNs)- specifically, Multilayer Perceptrons- and a collection of Symbolic Regression (SR) models, all developed for predicting fish-deaths due to infectious diseases in aquaculture. The implemented Machine-Learning models are able to identify patterns that indicate an increased risk of fish-deaths, and provide early warning-alerts to fish-farmers and other stakeholders, enabling them to take necessary measures to prevent or minimize losses of fishes. The models were trained using real-world data acquired from a large Greek fish-farming unit, and evaluated in a validation dataset (distinct from the training dataset) based on their Mean Absolute Error (MAE) performance. The study found that, for each disease considered, the corresponding ANN model outperformed the respective SR model in terms of MAE. However, the ANNs sacrificed interpretability for higher performance, while the developed SR models, despite lower performance, managed to produce transparent and understandable mathematical expressions for estimating fish-deaths. Overall, this study not only provides a valuable method for generating early warning-alerts of pathogenetic circumstances to the interested stakeholders, improving the efficiency and sustainability of fish-farming operations, but it also sheds light on the strengths and limitations of the developed ANN and SR models.

Citations: 1

C2. A Novel System for Detecting and Preventing SQL Injection and Cross-Site-Script

Petros Tanakas, **Aristidis Ilias**, Nineta Polemi

International Conference on Electrical, Computer and Energy Technologies (ICECET), 2021

DOI: 10.1109/ICECET52533.2021.9698688

Abstract: SQL Injection and Cross-Site Scripting are the two most common attacks in database-based web applications. In this paper we propose a system to detect different types of SQL injection and XSS attacks associated with a web application, without the existence of any firewall, while significantly reducing the network overhead. We use properly modifications of the Nginx Reverse Proxy protocols and Suricata NIDS/ IPS rules. Pure work has been done from other researchers based on the capabilities of Nginx and Suricata and our approach with the experimental results provided in the paper demonstrate the efficiency of our system.

Citations: 10

C3. Implementation and Repeatability Aspects Combined with Refactoring for a Reviews Manager System

Agorakis Bompotas, **Aristidis Ilias**, Andreas Kanavos, Panayiotis Kechagias, Panayiotis Arvanitakis, Nikos Zotos, Konstantinos Kovas, Christos Makris

17th International Conference on Web Information Systems and Technologies (WEBIST 2021), pages 607-615
ISBN: 978-989-758-536-4; ISSN: 2184-3252

DOI: 10.5220/0010727000003058

Abstract: With the advent of social media, there is a data abundance so that analytics can be reliably designed for ultimately providing valuable information towards a given product or service. Hotel customers express reviews for every accommodation service provided and/or for the accommodation as a whole. On the other hand, reviews are particularly interested for the tourism industry in order to extract customers' opinions and aspects, which will assist them to improve their provided services. In this paper, we delve into the detail of design and implementation of a system that initially utilizes some pre-processing techniques, as classic Natural Language Processing approaches, namely TF-IDF bag of words and word embeddings, are employed. These approaches can be further used as the input of various classifiers and Long Short Term Memory Neural Networks. The main aspects of this system have been described in (Bompotas et al., 2020a) and (Bompotas et al., 2020b). In the present article we essentially refactor the system that was described in and by embedding in the implementation the Latent Dirichlet Allocation (LDA) component and perform a repeatability study on the experimental findings that were reported in (Bompotas et al., 2020a) depicting that its experimental findings are valid.

Citations:

C4. Computing Massive Trust Analytics for Twitter using Apache Spark with Account Self-Assessment

Georgios Drakopoulos, Andreas Kanavos, Konstantinos Paximadis, **Aristidis Ilias**, Christos Makris, Phivos Mylonas

16th International Conference on Web Information Systems and Technologies (WEBIST 2020), p. 403-415,
ISBN: 978-1-7138-4075-6

DOI: 10.5220/0010214104030414

Abstract: Although trust is predominantly a human trait, it has been carried over to the Web almost since its very inception. Given the rapid Web evolution to a true melting pot of human activity, trust plays a central role since there is a massive number of parties interested in interacting in a multitude of ways but have little or even no reason to trust a priori each other. This has led to schemes for evaluating Web trust in contexts such as e-commerce, social media, recommender systems, and e-banking. Of particular interest in social networks are classification methods relying on network-dependent attributes pertaining to the past online behavior of an account. Since the deployment of such methods takes place at Internet scale, it makes perfect sense to rely on distributed processing platforms like Apache Spark. An added benefit of distributed platforms is paving the way algorithmically and computationally for higher order Web trust metrics. Here a Web trust classifier in MLlib, the machine learning library for Apache Spark, is presented. It relies on both the account activity but also on that of similar accounts. Three datasets obtained from topic sampling regarding trending Twitter topics serve as benchmarks. Based on the experimental results best practice recommendations are given.

Citations: 6

C5. A Sentiment-based Hotel Review Summarization using LSTM Neural Networks

Agorakis Bompotas, **Aristidis Ilias**, Maria Adamopoulos, Andreas Kanavos, Christos Makris, Gerasimos Rompolas, Alkiviadis Savvopoulos

11th International Conference on Information, Intelligence, Systems and Applications (IISA), 2020

DOI: 10.1109/IISA50023.2020.9284397

Abstract: Hotel customers express reviews for every accommodation service provided and/or for the accommodation as a whole. On the other hand, reviews are particularly interested for the tourism industry in order to extract customers' opinions and aspects, which will assist them to improve their provided services. The reviews can be thoroughly found in the Web and their quantity can be considered as big data in Natural Language Processing. In this paper, we have designed an architecture and have implemented a system that initially utilizes some preprocessing techniques, as classic Natural Language Processing approaches, namely TF-IDF bag of words and word embeddings, are employed. These approaches can be further used as the input of various classifiers and Long Short Term Memory Neural Networks. The accuracy of these classifiers is evaluated on a dataset consisting of several reviews for the well known evaluation metrics, namely Precision, Recall and F1-Measure.

Citations: 6

C6. Improving Movie Recommendation Systems Filtering by Exploiting User-Based Reviews and Movie Synopses

Konstantina Iliopoulou, Andreas Kanavos, **Aristidis Ilias**, Christos Makris, Gerasimos Vonitsanos\

IFIP Advances in Information and Communication Technology ((IFIP AICT, volume 585)), 2020

DOI: 10.1109/IISA50023.2020.9284397

Abstract: This paper addresses the subject of Movie Recommendation Systems, focusing on two of the most well-known filtering techniques, Collaborative Filtering and Content-based Filtering. The first approach proposes a supervised probabilistic Bayesian model that forms recommendations based on the previous evaluations of other movies the user has watched. The second approach composes an unsupervised learning technique that forms clusters of users, using the K-Means algorithm, based on their preference of different movie genres, as it is expressed through their ratings. Both of the above approaches are compared to each other as well as to a basic method known as Weighted Sum, which makes predictions based on the cosine similarity and the euclidean distance between users and movies. In addition, Content-based Filtering is implemented through K-Means clustering techniques that focus on identifying the resemblance between movie plots. The first approach clusters movies according to the Tf/Idf weighting scheme, applying weights to the terms of movie plots. The latter identifies the likeness between movie plots, utilizing the BM25 algorithm. The efficiency of the above methods is calculated through the Accuracy metric.

Citations: 4

C7. A Sentiment-Based Hotel Review Summarization Using Machine Learning Techniques

Agorakis Bompatas, **Aristidis Ilias**, Andreas Kanavos, Christos Makris, Gerasimos Rompolas, Alkiviadis Savvopoulos

IFIP Advances in Information and Communication Technology ((IFIP AICT, volume 585)), 2020, pp 155-164

DOI: 10.1007/978-3-030-49190-1_14

Abstract: With the advent of social media, there is a data abundance so that analytics can be reliably designed for ultimately providing valuable information towards a given product or service. In this paper, we examine the problem of classifying hotel critiques using views expressed in users' reviews. There is a massive development of opinions and reviews on the web, which invariably include assessments of products and services, and beliefs about events and persons. In this study, we aim to face the problem of the forever increasing amount of opinionated data that is published in a variety of data sources. The intuition is the extraction of meaningful services despite the lack of sufficient existing architectures. Another important aspect that needs to be taken into consideration when dealing with brand monitoring, relates to the rapid heterogeneous data processing, which is vital to be implemented in real-time in order for the business to react in a more immediate way.

Citations: 8

C8. Pre-processing Framework for Twitter Sentiment Classification

Elias Dritsas, Gerasimos Vonitsanos, Ioannis E. Livieris, Andreas Kanavos, **Aristidis Ilias**, Christos Makris, Athanasios Tsakalidis

IFIP Advances in Information and Communication Technology (IFIP AICT), volume 560, p. 138-149, 2019

DOI: 10.1007/978-3-030-19909-8_12

Abstract: Twitter Sentiment Classification is undergoing great appeal from the research community; also, user posts and opinions are producing very interesting conclusions and information. In the context of this paper, a pre-processing tool was developed in Python language. This tool processes text and natural language data intending to remove wrong values and noise. The main reason for developing such a tool is to achieve sentiment analysis in an optimum and efficient way. The most remarkable characteristic is considered the use of emojis and emoticons in the sentiment analysis field. Moreover, supervised machine learning techniques were utilized for the analysis of users' posts. Through our experiments, the performance of the involved classifiers, namely Naive Bayes and SVM, under specific parameters such as the size of the training data, the employed methods for feature selection (unigrams, bigrams, and tri-grams) are evaluated. Finally, the performance was assessed based on independent datasets through the application of k-fold cross-validation.

Citations: 19

C9. SCISOLA: Real-Time Moment Tensor Monitoring for Seiscomp3

Nikolaos Triantafyllis, Efthimios Sokos, **Aristidis Ilias**

14th International Conference of the G.S.G., Bulletin of the Geological Society of Greece, 2017, 50(2):1120

DOI: 10.12681/bgsg.11817

Abstract: Automatic Moment Tensor (MT) calculation is exceptionally valuable in many realtime seismological applications, such as shake map generation or tsunami warning. Scisola, a new software for automatic MT retrieval, has been recently developed. This software binds the extensively used ISOLA MT inversion code with the widely known real-time seismological processing tool, SeisComP3. Automatic MT calculation is achieved by passing the event location information, the waveforms and the station meta-data produced by SeisComP3 to ISOLA. Scisola has been written in Python, many powerful libraries were used and significantly reduced the MT computation time by calculating the Green's functions and the centroid position/time grid search in parallel mode. This tool provides a graphical user interface for easy solution overview of the extended graphical output and a quick revision of the corresponding solution; a database for storing the results and an extensive configuration customized to the user's preferences. Apart from the real-time MT

approach, scisola is capable of running in offline mode mostly for testing or playback purposes. Lately, a scisola plug-in was completed for real-time MT monitoring by automatically updating a Web page with the latest MT calculations. The code's performance was compared to manual MT solutions and proved to be satisfying.

Citations: 2

C10. Enhancing Distance Learning Platforms with Social Media Analytics

Oksana Kalita, **Aristidis Ilias**, George Pavlidis

11th International Conference on Artificial Intelligence Applications and Innovations (AIAI'15), 2015

DOI: 10.1007/978-3-319-23868-5_31

Abstract: The current paper emphasizes on how enhancement of human interconnection improves distance learning processes through the use of social media analytics. Until today, educators, learners, parents and everyone else interested in a distance learning activity were able to customize and personalize their educational trajectory through representative structures, which actually promoted very general composites of the individual opinions. Over time, distance learning platforms, combined with social media and services, have to evolve and focus in strengthening the influence of the voices of their users, as well as promote the active participation of them in the educational activities. In accordance to this need, the purpose of this paper is to present an intelligent extension of existing distance learning platforms. We discuss the details of a system that utilizes big amount of structured and unstructured, historical and real-time data in order to inform, create new contacts and strengthen the dialogue and cooperation between the participants in an educational procedure. We cite an example from the field of learning Russian language from Greek students.

Citations: 2

C11. Automatic Moment Tensor Determination for the Hellenic Unified Seismic Network

Nikolaos Triantafyllis, Efthimios Sokos, **Aristidis Ilias**

13th International Congress of Geological Society of Greece, Bulletin of the Geological Society of Greece, 2013, 47(3):1308

DOI: 10.12681/bgsg.10912

Abstract: Modern seismic networks with broadband sensors and real time digital telemetry made Moment Tensor (MT) determination a routine procedure. Automatic MT's are now provided by global networks and a few very dense regional networks, within minutes after a significant event. An automatic MT determination wasn't possible for the broader Hellenic area since seismic station density wasn't sufficient. The creation of the Hellenic Unified Seismic Network (HUSN) provided the opportunity to apply an automated MT procedure using the available broad band data from almost one hundred stations. Thus the ISOLA code was extended towards the automatic operation based on Linux OS shell scripts, stand alone Fortran codes and SAC2000. Software supports both manual and automatic mode; at the first case, the user manually runs the program with the desired input parameters while at the latter, the system monitors a mailbox or RSS feed and if it receives an appropriate notification triggers the MT inversion procedure based on certain conditions. As it is setup now it calculates automatically the moment tensor of earthquakes larger than 3.5M w using data from HUSN. Application of an automated MT inversion procedure for HUSN will provide important real time information for studies like ground motion evaluation, tsunami warning etc.

Citations: 7

C12. Gender Differences and Achievement in Computer Science and Engineering

Aristidis Ilias, Maria Kordaki

CELDA2005 (Cognition and Exploratory Learning in Digital Age), Porto, Portugal, 2005

DOI:

Abstract: This study focuses on gender ,differences at University ,level of education ,regarding with Computer ,Science and Engineering (CS&E). For this reason, 1957 diplomas of Computer Engineers were studied. These diplomas have been taken through a 21 year period of time at the Computer Engineering and Informatics Department (CEID), University of Patras, Greece. In particular, the data of these diplomas were studied in order to investigate if there is any relation between gender and: a) diplomas taken through this 21 year period of time, b) achievement in terms of diploma's grading, and c) duration of undergraduate studies. The analysis of the data shows that during 21 years of graduation at CEID: a) male graduated students were three times more than the female ones, b) regarding achievement, no significant differences exist between male and female graduate computer engineers, and c) female students complete their studies earlier than their male colleagues.

Citations: 1

C13. Protecting Intellectual Property Rights and the JPEG2000 Coding Standard

Bill Vassiliadis, Vassilis Fotopoulos, **Aristidis Ilias**, Athanassios Skodras

Advances in Informatics, 10th Panhellenic Conference on Informatics, PCI 2005, Volos, Greece, November 11-13, 2005, Proceedings, Lecture Notes in Computer Science 3746:705-715

DOI: 10.1007/11573036_67

Abstract: The ever-increasing use of the Internet and file sharing applications based on Peer to Peer networks has alarmed content authors, providers and resellers of digital content. Techniques proposed for protecting digital media include watermarking, use of metadata and self-protection and self-

authentication. In this paper we review the most important of these methods and analyse their potential use in Digital Rights Management systems. The main focus is on IPR management through watermarking for digital images coded with the new and a lot promising compression standard: JPEG2000.

Citations: 5

C14. An approach to a methodology and implementation of a Network Monitoring Analysis Tool

Elias Aravantinos, Christos Bouras, Petros Ganos, **Aristidis Ilias**

EUROMEDIA 2003- COMTEC, Plymouth, UK, April 14- 16 2003, pp. 125- 129

DOI:

Abstract: In this paper we describe the design and implementation of a network monitoring analysis tool. The network resources were configured to support SNMP under various operating systems, thresholds definitions and events. The data were collected by a network monitoring system and handled according to the values of the variables or the event type. A real- time report to a database was established via adaptive scripts. A Network Node Manager (NNM) will inform an external, remote database about the network status by sending real time data containing alerts and events. The whole tool is called Network Management Analysis Tool (NMAT).

Citations: