# **CURRICULUM VITAE**

# Dr. Elpiniki I. Papageorgiou

Associate Professor

Department of Energy Systems

University of Thessaly, Geopolis, Larisa



Last Update: 1.08.2021

In short: Dr. ELPINIKI I. PAPAGEORGIOU is an Associate Professor at Energy Systems Department, University of Thessaly, Geopolis Campus, Larissa, Greece. She holds a PhD in Computer Science from the University of Patras (Sept. 2004) and an MSc in Medical Physics from the same University (2000). She is Head of Energy Systems Department and Director in MSc program in "Energy and Automation Systems", University of Thessaly, Larissa.

She specializes in developing and applying artificial intelligent models and algorithms to decision support problems for modeling, prediction, strategic decisions, scenario analysis and data mining, solving important emerging problems, arising in engineering, energy, business, medicine, agriculture and environment. Her main research specialization is the development of novel algorithms and fuzzy models for intelligent decision support systems focused on Fuzzy Cognitive Maps. Dr. Elpiniki Papageorgiou is ranked **first author** worldwide in the field of "**Fuzzy Cognitive Maps**", regarding her published work in this field, (source: Scopus, academic.microsoft.com). Based on her pioneering research on Fuzzy Cognitive Maps (FCMs), FCMs have been found great applicability and popularity in discipline research areas. She has more than 250 publications in journals, conference papers and book chapters (**100** of them are in journals with high Impact Factors) and has more than **5000** citations from independent researchers (**h-index=37** in Scopus and **47** in GoogleScholar).

She is also within the 2% among 100,000 overall top-cited most influential scientists in Artificial Intelligence, regarding her composite citation index across all scientists and scientific disciplines, according to the published catalogues by PLoS Biology 2020 & Mendeley Data 2020 (Ioannidis, J. P., Boyack, K. W., & Baas, J. (2020). In particular, she is ranked 407 (1%) for citation impact during the single calendar year 2019, and 821 (2%) for career-long citation impact up until the end of 2019, within the subfield discipline "Artificial Intelligence" which is among her main scientific fields of expertise.

Moreover, she is ranked in the 30th national and 4314th position internationally in **Computer Science**. Source: **Top Scientists in Computer Science** - **Guide–2–Research** (https://www.guide2research.com/scientists/GR)

She is actively involved in various European and Greek projects. More specifically, she has been working for over 19 years as principal investigator and senior researcher in several research projects (participation as Project Manager, Technical Manager and Researcher in 16 EU and 12 national projects, ie. HORIZON2020: NAIADES, KYKLO4.0, Z-Fact0r, PROCETS, OACTIVE, FP7: INCONET-CG2, FP7-SMS-2013, FP7-ICT-2013-ISS-EWATUS, FP7-ICT-2011 USEFIL, FP7-ICT-2007-DEBUGIT). Also, her strong relationship with external funding bodies and especially EU and national funding environments, gave her an experience in managing research teams in different application domain projects. She is Academic Partner in iBO-CERTH and Team Leader in AI Group holding the position of R&D project manager in Horizon projects. Today, she works as Project Manager in the following two HORIZON2020 Projects, in CERTH: NAIADES and KYKLOS 4.0.

She is also **Principal Investigator** in the Horizon2020 project, titled OPTIMAI: Optimizing Manufacturing Processes through Artificial Intelligence and Virtualization (UTH partner) and in one national project HFRI

(Hellenic Foundation for Research and Innovation) at the 2nd Call for H.F.R.I.'s Research Projects to Support Faculty Members & Researchers, entitled EMERALD: "Fuzzy Cognitive Explainable Analytics for Translating Model Complexity in Nuclear Medical Diagnosis".

Dr. Elpiniki Papageorgiou is the Editor of the Springer book "Fuzzy Cognitive Maps for Applied Sciences and Engineering - from fundamentals to extensions and learning algorithms", Intelligent Systems Reference Library 54, Springer 2014. Dr. Elpiniki Papageorgiou organized for first time worldwide the First Summer School for Fuzzy Cognitive Maps in July 2016 at Volos, Greece. Furthermore, she organized a number of Special Sessions on Fuzzy Cognitive maps entitled as "Methods and Applications of Fuzzy Cognitive Maps" in FUZZ-IEEE conferences 2011, 2012, 2013, WCCI2014 (IEEE International Conference on Fuzzy Systems, FUZZ-IEEE 2014), FUZZ-IEEE2015, WCCI2016 and FUZZ-IEEE2017, and she was Chair in 6 of them. She is IEEE Senior Member, IEEE in Women in Computational Intelligence, and member in IEEE CIS. Her research interests include intelligent systems, expert systems, fuzzy cognitive maps, knowledge representation, soft computing methods, decision support systems, cognitive systems, prediction, medical decision making, data mining and machine learning.

#### 1. PERSONAL INFORMATION

#### PERSONAL DATA

Full Name Elpiniki Papageorgiou

Date and place of Larissa, June 1975

Birth

**Current Position** Associate Professor, Energy Systems Department, University of Thessaly

Discipline: «Expert Systems and Knowledge Representation»

**Director of MSc Program** in "Energy and Automation Systems", General

Department, University of Thessaly, Larissa.

Address Giannitson 4, 41221 Larissa, GREECE

Tel +30 6936064613

Email <u>elpinikipapageorgiou@uth.gr</u>

Professional url: https://www.energy.uth.gr/index.php/en/personnel/papageorgiou-

Webpages elpiniki.html

ORCID profile: <a href="https://orcid.org/0000-0003-2498-9661">https://orcid.org/0000-0003-2498-9661</a>

Scopus ID 56429800100:

https://www.scopus.com/authid/detail.uri?authorId=56429800100

GoogleScholar Profile:

https://scholar.google.gr/citations?hl=el&user=lDcjUKIAAAAJ

Research Gate Profile:

https://www.researchgate.net/profile/Elpiniki\_Papageorgiou

# 2. EDUCATION – DEGREES

#### **EDUCATION**

10.2000 - 09.2004	<b>PhD in Electrical and Computer Engineering,</b> Dept. of Electrical and Computer Engineering, University of Patras, Patra, Greece, grade: 10/10 Thesis Title: "New learning algorithms for Fuzzy Cognitive Maps and Applications in Medicine and Engineering" (July 2004)
10.1997 - 07.2000	<b>MSc in Medical Physics</b> , Interdepartmental Program of Medicine and Physics, University of Patras, Patra, Greece, grade: Excellent
09.1993 - 07.1997	<b>BSc in Physics</b> , Dept. of Physics, University of Patras, Patra, Greece, grade: Excellent (8.56/10)

# 3. POST-DOCTORAL RESEARCH

#### **POST-DOCTORAL RESEARCH**

02.2005 - 12.2006

Post-Doctoral Researcher in Pythagoras II- Developing new models and methodologies based on Soft Computing Techniques for complex diagnosis systems and medical decision support systems, University of Patras, Department of Electrical and Computer Engineering, Coordinator: Prof. P. Groumpos, Co-funded by the Ministry of Education of Greece and the European Union, Budget: 50.000.

Post-Doctoral Research funded by IKY (Greek Scholarship Foundation), Dept. of

Electrical Engineering & Computer Technology, University of Patras, Patras, Greece, with title "Dynamic Models using Fuzzy Cognitive Map Techniques for Medical Decision Support".

# **4. CURRENT POSITIONS**

# **CURRENT POSITION(S)**

05.2020 - now	Associate Professor Energy Systems Dept., Faculty of Technology, University of Thessaly, Geopolis Campus, Larissa, Greece
02.2021 - now	<b>Head of Energy Systems Department,</b> Faculty of Technology, University of Thessaly, Geopolis Campus, Larissa, Greece
06.2019 - now	Director in MSc Program in "Energy and Automation Systems" General Department, University of Thessaly, Geopolis Campus, Larissa, Greece
11.2018 - now	Project Manager and Scientific Coordinator (as Collaborate Professor) Institute for Bio-economy and Agri-technology (iBO), Center for Research and Technology Hellas (CERTH), Volos, Greece

# 5. ACADEMIC-PROFESSIONAL EXPERIENCE IN HIGHER EDUCATION

# PREVIOUS POSITION(S)

01.2019 - 05.2020	Associate Professor General Department, University of Thessaly, Geopolis Campus, Larissa, Greece (Inclusion to the University of Thessaly: OGG 784/B/06-03-2019)
03.2018 - 01.2019	Associate Professor Dept of Electrical Engineering, TEI of Thessaly, Larissa, Greece
11.2017 - 03.2018	Associate Professor Dept of Computer Engineering, TEI of Stereas Elladas, Lamia, Greece
01.2014 - 11.2017	Assistant Professor Dept of Computer Engineering, TEI of Stereas Elladas, Lamia, Greece
04.2008 - 01.2014	Lecturer Dept of Computer Engineering, TEI of Lamia, Lamia, Greece
12.2015 - 05.2017	<b>Research Fellow/Visiting Professor</b> , Hasselt University, Faculty of Business Economics, Hasselt, Belgium

03.2015 - 02.2018 Adjunct Assistant Professor (P.D. 407)

Computer Science Department, University of Thessaly, Lamia, Greece

05.2014 - 01.2016 Research Fellow - Collaborate Professor

Center for Research and Technology Hellas (CERTH), Institute of Computer Science and Telecommunications.

10/2017-2/2018 Adjunct Assistant Professor

Postgraduate Courses in Electrical Engineering Department, TEI of Sterea Ellada, Halkida, Master Program in "Intelligent Management of Renewable Energy

Sources".

12/2015-10/2017 Adjunct Assistant Professor

Postgraduate Courses in Dept Informatics with Applications in Biomedicine,

University of Thessaly, Lamia

9/2009-2011 Adjunct Assistant Professor

Teaching Postgraduate Courses—Intelligent Systems in Precision Farming, Automatic Control, MSc Program in Agriculture, School of Agricultural Science,

UTH, Volos, Greece

03.2007 - 07.2011 Adjunct Assistant Professor (P.D. 407)

<u>Dept Informatics with Applications in Biomedicine</u>, University of Stereas Elladas,

Lamia, Greece

09.2005 - 02.2007 Adjunct Lecturer (P.D. 407)

Educational Department of Primary School, University of Thessaly, Volos, Greece

10.2004 - 06.2005 Adjunct Lecturer (P.D. 407)

Dept. Electrical and Computer Engineering, University of Patras, Patra, Greece

09.2004 - 06/2007 Adjunct Assistant Professor

Dept of Computer Science and Informatics and Dept of Electronics, TEI Lamias,

Lamia, Greece

09.2000 - 06.2002 Adjunct Lecturer

General Department of Sciences, TEI of Larissa.

10.2004 - 09.2007 Postdoc Researcher

Dept. Electrical and Computer Engineering, University of Patras, Patra, Greece

Teaching Experience in Higher Education: 17 YEARS
Teaching Experience in Master Programs: 4 YEARS

# 6. FELLOWSHIPS and AWARDS

#### **FELLOWSHIPS and AWARDS**

Ranked within the 2% among 100,000 overall top-cited most influential scientists, regarding her composite citation index across all scientists and scientific disciplines,

according to the published catalogues by PLoS Biology 2020 & Mendeley Data 2020.

In particular, she is ranked 407 (1%) for citation impact during the single calendar year 2019, and 821 (2%) for career-long citation impact up until the end of 2019, within the subfield discipline "Artificial Intelligence and Signal processing" which is among her main scientific fields of expertise.

2020 <u>Distinction: Top Scientists in Computer Science – 28<sup>th</sup> position in Greece and 3947<sup>th</sup> in the world, list **Guide–2–Research** (see</u>

https://www.guide2research.com/scientists/GR)

Ranked **first author** worldwide in the field of "**Fuzzy Cognitive Maps**", regarding her published work in this field, (source: Scopus, academic.microsoft.com).

2018 - Today Senior Member of the "Institute of Electrical and Electronics Engineers" (IEEE)

Publications (255)

International Journals: 104

Book Chapters: 21

Conference proceedings (full review): 118Conference proceedings (abstract): 11

■ Books: 2

Citations

5027; h-index 37, (Source: Scopus)

8305; h-index 47, i10-index 137 (Source: Scholar google)

Best Research Paper Award for the work under the title "Fuzzy Cognitive Maps and Multi-step Gradient Methods for Prediction: Applications to Electricity Consumption and Stock Exchange Returns", presented at 7th International KES Conference on INTELLIGENT DECISION TECHNOLOGIES KES-IDT-15, Hilton Sorrento Palace, Italy, 17-19 June 2015

**2006 - 2007** Scholarship, **IKY** (State Scholarships Foundation) for accomplishing PostDoc studies in Dept. Electrical and Computer Engineering, University of Patras, Patra, Greece

**2001 - 2004** Scholarship, **IKY** (State Scholarships Foundation) for accomplishing PhD studies in Dept. Electrical and Computer Engineering, University of Patras, Patra, Greece

1997 - 1999 Scholarship, BODOSSAKI Foundation for accomplishing MSc studies in Medical Physics, Interdepartmental Program of Medicine and Physics, University of Patras, Patra, Greece

1996 - 1997 Scholarship, IKY (State Scholarships Foundation) for Excellence during the last year of undergraduate studies in Physics, University of Patras, Patra, Greece

1997 - 1999 Scholarship, **IKY** (State Scholarships Foundation) for Excellence during Postgraduate studies, Interdepartmental Program of Medicine and Physics.

Scholarship, **BODOSSAKI** Foundation to honored students, for accomplishing MSc studies, Interdepartmental Program of Medicine and Physics (Overall Ranking: 1<sup>st</sup>).

Scholarship, German state institute, for Postgraduate research studies DAAD, 3 months period) to conduct a research project during the Postgraduate course in Medical Physics

# **8. TEACHING EXPERIENCE**

**UNDERGRADUATE COURSES** 

1998 - 2000

06.1999 - 08.1999

# 09.2019 - Today

**Energy Systems Department**, University of Thessaly, Associate Professor, Self-supported lectures of the lessons:

- Programming I (C), (1<sup>st</sup> Semester), compulsory, 4 hours/week (Theory), Coordinator of the Lab course. Winter Semesters of 2019-2020 and 2020-2021.
- Programming II (C), (2<sup>nd</sup> Semester), compulsory, 4 hours/week (Theory), Coordinator of the Lab course. Spring Semesters of 2019-2020 and 2020-2021.

#### 01.2019 - Today

**General Department**, University of Thessaly, (former TEI of Thessaly, Department of Electrical Engineering), Associate Professor, Self-supported lectures of the lessons:

- Programming, 3 hours/week (Theory) and 4 hours/week (Lab), Spring Semester of 2019-2020.
- Telecommunications I, 2 hours/week (Theory) and 6 hours/week (Lab), Winter Semester of 2020-2021.
- Telecommunications II, 6 hours/week (Lab). Spring Semester of 2020-2021.

# 03.2018 - 01.2019

**Department of Electrical Engineering**, TEI of Thessaly. Associate Professor, (OGG 185/7-2-2018, vol. C), Self-supported lectures of the lessons:

- Programming, 3 hours/week (Theory) and 10 hours/week(Lab), Spring Semester
- Telecommunications I, 2 hours/week (Theory) and 10 hours/week (Lab), Winter Semester.

# 11.2017 - 03.2018

**Department of Computer Engineering**, TEI of Sterea Ellada, Associate Professor, (OGG 1176/23-11-2017, vol. C).

- Programming (C), 3 hours/week (Theory), Winter Semester 2017-2018.
- Artificial Intelligence, 3 hours/week (Theory), Spring Semester 2017-2018
- Knowledge Mining from data, 3 hours/week (Theory), Winter Semester 2017-2018
- Automation & Typical Languages, 3 hours/week (Theory), Spring Semester 2017-2018

# 01.2014 - 11.2017

**Department of Computer Engineering**, TEI of Sterea Ellada, Assistant Professor, (OGG 96 /28/1/2014, vol C).

- Programming I (C),
- Artificial Intelligence, Software Technology,
- Logic Programming
- Knowledge Mining from data
- Automation & Typical Languages

#### 2015-2018

**Department of Computer Science**, University of Thessaly, Lamia. <u>Adjunct Assistant Professor</u> (P.D. 407).

- Artificial Intelligence (Spring Semesters 2015-2016, 2016-2017, 2017-2018)
- Data Mining (Winter Semester 2017-2018)
- Software Technology (Winter Semesters 2015-2016, 2016-2017, 2017-2018)
- Algorithms, (Spring Semesters 2014-2015, 2016-2017)
- Graph Theory (Spring Semester 2015-2016)
- Systems Analysis (Winter Semesters 2015-2016, 2016-2017)

# 04.2008 -01.2014

**Department of Computer Science and Informatics**, TEI of Lamia (OGG 165 /28/2/2008, Vol C). Self-supported lectures of the lessons:

- Programming I (C),
- Artificial Intelligence,
- Software Technology,
- Automation & Typical Languages
- Programming III (Lab)
- Multimedia Technology

# 03.2007-07.2011

**Department of Informatics with Applications in Biomedicine**, University of Stereas Elladas, Lamia. Assistant Professor (P.D. 407).

- Systems Analysis (UML), 4 hours/week (Theory), Spring Semester 2010-2011
- Databases, 6 hours/week (Lab), Winter Semester 2008-2009
- Languages Theory, 4 hours/week (Theory), Spring Semester 2008-2009
- Graph Theory, 4 hours/week (Theory), Winter Semester 2007-2008
- Patterns Identification, 4 hours/week (Theory), Spring Semester 2007-2008
- Languages Theory, 4 hours/week (Theory), Spring Semester 2006-2007

# 09.2005-02.2007

**Department of Primary School Education**, University of Thessaly, Volos. Lecturer (P.D. 407).

• Introduction to Computer Science and Telecommunications, Winter Semesters 2005-2006 & 2006-2007, Part-time: 6 hours/week (6/8).

# 10.2004 - 06.2005

**Department of Electrical and Computer Engineering**, University of Patras, Patra. Lecturer (P.D. 407).

- Automation Control Systems I, Winter Semester 2004-2005, 3<sup>rd</sup> year, Full-time: 6 hours/week (6/6) and
- Automation Control Systems II, Spring Semester 2004-2005, Part-time: 5 hours/week (5/6).

#### 09.2004 - 06.2007

# Department of Computer Science and Informatics and Department of Electronics,

TEI Lamias, Lamia, Adjunct Assistant Professor.

Adjunct Assistant Professor: Lectures. Academic year 2006-2007:

- Programming I (Theory), 1<sup>st</sup> academic semester (3 hours/week)
- Software Technology (Theory), 3<sup>rd</sup> academic semester (2 hours/week)
- Algorithms Design and Analysis (Theory), 4<sup>th</sup> academic semester (2 hours/week)
- Multimedia Technology (Theory), 6th academic semester (2 hours/week)

# Adjunct Lecturer: Lab lectures. Academic year 2006-2007:

- Multimedia Technology (Lab), 6<sup>th</sup> academic semester (3 hours/week)
- Software Technology (Lab), 3<sup>rd</sup> academic semester (2 hours/week)

# Adjunct Assistant Professor: Lectures. Academic year 2005-2006:

- Algorithms Design and Analysis (Theory), 4th academic semester (2 hours/week)
- Multimedia Technology (Theory), 6th academic semester (2 hours/week)

# Adjunct Lecturer: Lab lectures. Academic year 2005-2006:

• Software Technology (Lab), 3<sup>rd</sup> academic semester (10 hours/week)

# <u>Adjunct Lecturer</u>: Lectures. Academic year 2004-2005:

- Software Technology (Theory), 3<sup>rd</sup> academic semester (2 hours/week)
- Multimedia Technology (Theory), 6th academic semester (2 hours/week)
- Programming I (Lab), 1st academic semester (6 hours/week)
- Robotics (Theory), 6<sup>th</sup> academic semester (2 hours/week)- Dept of Electronics
- *Medicine Electronics (Theory),* 7<sup>th</sup> academic semester (2 *hours/week*) Dept of Electronics.

#### 09.2000-06.2002

# General Department of Sciences, TEI of Larissa. Adjunct Lecturer.

Medical Physics Labs, Introduction to Computer Science.

# **POSTGRADUATE COURSES**

#### 09.2019 - Today

**General Department**, University of Thessaly, Postgraduate (MSc) program in "Energy and Automation Systems".

- Smart Energy Networks, (14 hours)
- Integrated Industrial Automation Networks, (10 hours)
- Smart Buildings (6 hours)

# 03.2016 - 06.2018

**Department of Electrical Engineering**, University of Thessaly, (former TEI of Thessaly). MSc program in "Energy and Automation Systems".

- Smart Energy Networks (Spring Semester 2016-2017, 8 hours)
- Smart Energy Networks (Spring Semester 2017-2018, 8 hours)
- Smart Energy Networks (Spring Semester 2018-2019, 8 hours)

#### 03.2016 - 06.2017

**Department of Computer Science**, University of Thessaly, MSc program in "Computer Science and Computational Biomedicine".

- Software Development,
- Knowledge Mining from Big Data

- **10.2017 02.2018 Department of Electrical Engineering**, TEI of Stereas Elladas, MSc program in "Intelligent Management of Renewable Energy Sources".
  - Systems Simulation and Modelling (12 hours)
- **11.2015 06.2016 Department of Informatics with Applications in Biomedicine**, University of Thessaly, MSc program. Adjunct Assistant Professor.
  - Medical Data Knowledge Mining (4 hours)
- **O3.2010 06.2012** School of Agricultural Science, Departments of Agriculture, Plant Production and Rural Environment, University of Thessaly, MSc Program in "Automation in Irrigation, Agricultural Construction and Agricultural Mechanization". Adjunct Assistant Professor.
  - Intelligent Systems in Precision farming (Acad years 2009-2010, 2010-2011)
  - Introduction to Automatic control (preparatory lesson, 2010-2011).
  - Signals and Systems (preparatory lesson, 2010-2011).

# 9. RESEARCH INTERESTS

- Fuzzy Cognitive Maps & Soft Computing
- Learning Algorithms
- > Expert Systems and Knowledge Representation
- Computational Intelligence
- Neural Networks Genetic Algorithms
- Machine Learning
- Deep learning
- Data mining
- Convolutional Neural Networks
- ➤ Al in Energy
- Energy Forecasting
- Decision Support Systems
- Medical Decision Making
- Pattern Recognition, Classification
- Image analysis
- > Intelligent Information Systems
- Intelligent Manufacturing Systems and Control Systems
- participatory analysis using FCMs

# 10. PARTICIPATION IN RESEARCH PROJECTS

**24** (16 EU-funded & 12 national)

Professional Experience in Research Projects (EU and national):

20 YEARS

Period	Project Title	Description - Funding source	Main Role
01.01.2021- Σήμερα	OPTIMAI: Optimizing Manufacturing Processes through Artificial Intelligence and Virtualization (Coordinator: CERTH) https://cordis.europa.eu/project/ id/958264	Funded by the Horizon 2020 Framework Programme of the EU under GA No. 958264 Call: H2020-NMBP-TR-IND-2020- singlestage, (TRANSFORMING EUROPEAN INDUSTRY) Topic: DT-FOF-11-2020 Type of action: IA Proposal number: 958264	Principal Investigator (UTH partner)
01.04.2020 – Σήμερα	KYKLOS 4.0: An Advanced Circular and Agile Manufacturing Ecosystem based on rapid reconfigurable manufacturing process and individualized consumer preferences. https://kyklos40project.eu/	Funded by the Horizon 2020 Framework Programme of the European Union (EU) under grant agreement (GA) No. 872570. Topic: DT-ICT-07-2018-2019 (Digital Manufacturing Platforms for Connected Smart Factories). CENTRE FOR RESEARCH AND TECHNOLOGY HELLAS, IBO Partner- PI: D. Bochtis	Project Manager, WP3 leader (in Intra-factory Operation Components)
01.06.2019 – Σήμερα	NAIADES: A holistic water ecosystem for digitisation of urban water sector, (Coordinator: iBO-CERTH)	Funded by the Horizon 2020 Framework Programme of the EU under GA No.820985 Topic: SC5-11-2018. Type of action: IA. CENTRE FOR RESEARCH AND TECHNOLOGY HELLAS, IBO Coordinator: D. Bochtis.	Project Manager and Team Leader in Al Lab (development of forecasting tools, machine / deep learning algorithms
11.02.2008 – 30.03.2020	<b>Z-Fact0</b> r: Zero-defect manufacturing strategies towards on-line production management for European factories. (Coordinator: iBO-CERTH) <a href="https://www.z-fact0r.eu/">https://www.z-fact0r.eu/</a>	Funded by the Horizon 2020 Framework Programme of the EU under GA No.723906 Topic: FOF-03-2016: Industry 2020 for the Circular Economy, Innovative Action. CENTRE FOR RESEARCH AND TECHNOLOGY HELLAS, IBO Coordinator: D. Bochtis	Project Manager and Team Leader in AI Lab (Development of ML algorithms for machine/process defect detection)
01.11.2017 – 31.12.2017, 11.02.2018 – 30.03.2020	OACTIVE: Advanced personalised, multi-scale computer models preventing OsteoArthritis. https://www.oactive.eu/	Funded by the Horizon 2020 Framework Programme of the European Union under grant agreement No. 777159. Funding scheme: H2020-SC1-PM-17-2017: Personalised computer models and insilico systems for well-being, RIA action. Εθνικό CENTRE FOR RESEARCH AND	Senior Researcher (in development of machine / deep learning algorithms)

		TECHNOLOGY HELLAS, IBO Coordinator: D. Tsaopoulos	
11.02.2018 – 31.12.2019	PROCETS: PROtective composite Coatings via Electrodeposition and Thermal Spraying. <a href="https://cordis.europa.eu/project/id/686135">https://cordis.europa.eu/project/id/686135</a>	Funded by EU, FP7-2015, GRANT AGREEMENT NO 686135. CENTRE FOR RESEARCH AND TECHNOLOGY HELLAS, IBO Coordinator: D. Bochtis	Senior Researcher, (in development of fuzzy methods, LCA analysis)
01.01.2017 – Σήμερα	COST Action 15222, με τίτλο «European Network for cost containment and improved quality of health care" https://www.cost.eu/actions/CA 15222/#tabs Name:overview	Funded by the European Cooperation in Science and Technology (COST). Συμμετοχή στο Working Group 3 for Evaluation criteria of large scale testing of innovative care systems	Network Member
01.09.2016 – 31.01.2017	INCONET-GCC2-Science, Technology and Innovation International Cooperation Network. <a href="https://cordis.europa.eu/project/id/609521">https://cordis.europa.eu/project/id/609521</a>	Funded by EU, FP7- Collaborative Project Targeted to a special group, GA no: 609521. Πανεπιστήμιο Θεσσαλίας. Επ. Υπεύθυνος κ. Κοράκης Αθανάσιος	<u>Senior</u> <u>Researcher</u> (Σχέδιο Συνέχειας των Αποτελεσμάτων του INCONET- GCC2-M36)
01.12.2015 – 31.08.2016	SMS: Sensing Toxicants in Marine Waters makes Sense using biosensors. <a href="http://www.project-sms.eu/">http://www.project-sms.eu/</a>	Funded by EU, FP7-2013, GRANT AGREEMENT NO 613844. University of Thessaly, PI: C. Laspidou.	Senior Researcher in prediction models (data analysis and modelling)
01.05.2014 – 30.11.2015	ISS-EWATUS: Integrated Support System for Efficient Water Usage and Resources Management. www.iss-ewatus.eu	Funded by EU, FP7- Collaborative Project, FP7-ICT-2013-11, Grant agreement no: 619228. Coordinator: University of Silesia, Poland, FP7 ICT for Water Resources Management. Collaborative project, CENTRE FOR RESEARCH AND TECHNOLOGY HELLAS, Funding: 2.473.255.00 €. PI: C. Laspidou	<u>Senior</u> <u>Researcher</u> ,
01.11.2012- 30.09.2013	USEFIL: Unobstrusive Smart Enviroments For Independent Living. <a href="http://www.usefil.eu/">http://www.usefil.eu/</a>	Funded by FP7-ICT-2011-7. Funding: 4.628.909 €. Project coordinator: NCSR Demokritos. Collaboration with Medical Department of Aristotle University of Thessaloniki, PI: P. Bamidis.	Senior Researcher on developing Al algorithms for medical DSS
01.07.2008- 31.12.2011	<b>DEBUGIT-</b> Detecting and Eliminating Bacteria UsinG	Funded by EU, FP7 ICT Patient Safety, FP7-ICT-2007-1. Προϋπολογισμός: 9.398.033 €.	<u>Senior</u> <u>Researcher</u> on

	Information Technology. www.debugit.eu/	Coordinator: AGFA Healthcare. PI: D. lakovidis (period 2010-2012), and S. Karkanis (period 2008-2009). Large-scale integrating project (IP), Lamia Institute of Technology, Dept of Informatics and Computer Technology.	developing fuzzy cognitive maps and AI-based models for medical DSS
01.06.2009- 30.08.2010	SESAME- South European Seas: Assessment and Modelling of the Ecosystem Change. http://www.sesame-ip.eu/	Funded by FP6-ICT-2007, under the priority Sustainable Development, Global Change and Ecosystems, Contract No. GOCE-2006-036949. <i>Funding: 3.825.000.00 €</i> . Environmental Department, University of Aegean, PI: Prof. M. Skourtos	Senior Researcher on applying and analyzing fuzzy cognitive maps for DSS
01.08.2004- 30.09.2004	CO-DESNET: European Virtual Institute on COllaborative DEmand & Supply NETworks. 506673. <a href="http://www.ve-forum.org/apps/pub.asp?Q=1289">http://www.ve-forum.org/apps/pub.asp?Q=1289</a> &T=Clusters%20and%20Projects	Funded by the Concentrate Actions of IST (2003). Funding: 657.000 €. Department of Electrical and Computer Engineering, University of Patras, Supervisor: Prof. P. Groumpos.	PhD Student Researcher
01.04.2002- 30.09.2004	ADMAN-G7RT-CT2001-05060, "ADMAN Manufacturing excellence in the process industries". https://cordis.europa.eu/project/ id/G7RT-CT-2001-05060	Funded by the European Union under IST Growth, FP5-Framework Programme. Funding: 2.310.024 €. Department of Electrical and Computer Engineering, University of Patras, Supervisor: Prof. P. Groumpos.	PhD Student Researcher
01.05.2001- 31.03.2003	PSIM-IST-1999-60004, "Participative Simulation Environment for Integral Manufacturing enterprise renewal". https://cordis.europa.eu/project/ id/IST-1999-60004	Funded by the European Union, under FP5-Fifth Framework Programme, IST project. <i>Project Cost: 4.49 Million Euros</i> . Action-Intelligent Manufacturing Systems, Department of Electrical and Computer Engineering, University of Patras, Supervisor: Prof. P. Groumpos	PhD Student Researcher

# **10.2 NATIONAL PROJECTS**

Period	Project Title	Description - Funding source	Main Role
06/2019- 5/2021	Network Optimization tool for	Funded by Minedu, ESPA 2014-2020, RESEARCH-DEVELOPMENT-INNOVATION Action, ΟΠΣ/ΕΛΚΕ 5030213/282.0213	Technical manager of the project, WP3

	Greek islands' Public Service Obligation		Leader, DSS development using FCMs and intelligent algorithms
Start date: 1.1.2022	EMERALD: "Fuzzy Cognitive Explainable Analytics for Translating Model Complexity in Nuclear Medical Diagnosis"	National project funded by HFRI (Hellenic Foundation for Research and Innovation) at the 2nd Call for H.F.R.I.'s Research Projects to Support Faculty Members & Researchers	Principal Investigator/Coo rdinator
16.01.2019- now	DESIGN AND DEVELOPMENT OF AN EARLY WARNING SYSTEM OF FLOODING IN THE SPERCHIO RIVER	Funded by Perifereia Stereas Elladas, ΣΑΕΠ066, 2013ΕΠ06600002, «URGENT FLOOD PROTECTIONS ON THE SPERCHIO RIVER AND ITS CONTRACTORS», Coordinator: Zardas George. Funding: 64.000€	Scientific Coordinator and Leader of Research Group in prediction algorithms
16.01.2018- 15.01.2019	Extensibility Study of management and planning system of rainwater gutters in Lamia city sewerage grid, including around regions	Funded by DEYA Lamias. Center of Technological Research of Central Greece, TEI of Sterea Ellada and DEYA Lamias.	Coordinator
16.01.2018- 15.01.2019	Integrated Equipment protection system for DEYA Lamias	Funded by DEYA Lamias. Center of Technological Research of Central Greece, TEI of Sterea Ellada and DEYA Lamias.	Coordinator
20.06.2016- 20.06.2017	Development of a risk assessment model for extreme weather conditions and decision support for prediction	Funded by DEYA Lamias. Center of Technological Research of Central Greece, TEI of Sterea Ellada and DEYA Lamias.	Coordinator
06/2014 – 08/2018	<b>RECITAL-</b> Modeling methods for smart grids.	Funded by General Secretarial for Research and Technology-GSRT, DIA.022356-02-01. Supervisor: Jordan Koutsopoulos	Senior Researcher, applying intelligent modelling methods for smart grids
28.11.2012 – 30.06.2014	Archimedes III: "Non-invasive method of measuring hemodynamic parameters and	Funded by ΕΠΕΔΒΜ- ESPA,  Strengthening Research Groups at  Technological Educational Institutes,  Principal Investigator: Ass. Prof. Anna	Senior Researcher (DEP)

	the final level proionton non enzymatic glycosylation students who smoke and those who consume caffeine»	Deltsidou, Nursing Dept, TEI of Central Greece	
01.04.2007- 31.10.2007	METAKNOWLEDGE: A tool for management of scientific and technological results and transmission of knowledge and innovation in Region of Western Greece  www.metagnosis.eu (http://www2.enthesis.net/index.php?news=661	Funded by General Secretariat for Research and Innovation (GSRT), project « Regional Innovation Pole of Western Greece », action 4.6 program « COMPETITIVENESS», code :12-ΠΠΚΟ6. Patras Science Park, Patras, Greece, Scientific Coordinator and Supervisor: C.D Stylios.	Researcher
01.02.2005- 31.10.2006	Pythagoras II- Developing new models and methodologies based on Soft Computing Techniques for complex diagnosis systems and medical decision support systems <a href="http://epeaek.upatras.gr/index/subproject/56">http://epeaek.upatras.gr/index/subproject/56</a>	Co-funded by the Ministry of Education of Greece and the EU, Funding: 50.000 €. Strengthening Research Groups at Universities, Department of Electrical and Computer Engineering, University of Patras, Supervisor: Prof. P. Groumpos.	PostDoc Student
01.12.2005- 30.05.2007	PostDoc Research «Dynamic Models Based on Flexible Computational Techniques for Diagnostic and Decision- Making Systems in Medicine»	Funded by IKY, University of Patras, Department of Electrical and Computer Engineering, Supervisor: Prof. P. Groumpos.	PostDoc Student
1/8/2004- 30/09/2004	CO-DESNET: 'European Virtual Institute on COllaborative DEmand & Supply NETworks	Funded by European Union under Cooperative Actions IST, Code 506673. Concentrate Actions Tou IST (2003), University of Patras, Department of Electrical and Computer Engineering, Supervisor: Prof. P. Groumpos, Funding: 657.000 euro. (1/2004-7/2007) http://www.ve- forum.org/apps/pub.asp?Q=1289&T=Clu sters%20and%20Projects	PhD Student
01.10.2000- 30.07.2001	PENED'99 "Development of advanced hybrid methods for decision support in medicine"	Funded by General Secretariat for Research and Innovation (GSRT), University of Patras, Department of Electrical and Computer Engineering, Supervisor: Prof. P. Groumpos.	PhD Student

#### 5.2017 - 09.2018

Professional Services Contract for Consultation with Portland State University (USA), (14000 US dollars), for consulting the team regarding the computational Implementation of the exploratory modelling approach for consulting/software development

#### 4.2019 - 12.2019

Research Consultant in the project "Assessment of DAY-NRLM (National Rural Livelihood Mission) in J&K" at IRMA, Institute for Rural Management Anand, India (remuneration 5000 euros)

- Develop semi-quantitative models based on FCM technology for assessing impacts of DAY-NRLM in J&K.
- Construction of FCMs from the available questionnaires.
- Development of intelligent soft computing algorithms for policy making
- Impact assessment through the soft computing methodology of fuzzy cognitive maps
- Simulations and scenario analysis using fuzzy cognitive maps
- Combining FCMs with micro-econometric models for impact assessment in DAY-NRLM

# 10.4 Participation in other Funded Projects (not research projects)

#### 07.2015 -05.2016

**Strengthening of studies in Computer Science – TEI of Lamia**: «Organization and teaching of Informatics courses through the e-learning method».

Business education and vocational training program (EPEAEK), Ministry of Education. Funded by the 3<sup>rd</sup> Community Support Framework (Payment: 8800 Euros). Department of Computer Science and Informatics, TEI of Lamia.

- A. Development of printed and digital forms of subjects:
  - Object-oriented design languages UML
  - Artificial Intelligence
  - Health Information Systems
- B. Installation of the digital subjects on the e-learning software platform (Blackboard).
- C. Complete distance learning of the subjects.

#### 05.2007 - 11.2007

**Strengthening of studies in Computer Science – TEI of Lamia**: «Organization and teaching of Informatics courses through the e-learning method».

Business education and vocational training program (EPEAEK), Ministry of Education. Funded by the 3<sup>rd</sup> Community Support Framework. Department of Computer Science and Informatics, TEI of Lamia.

- A. Adaptation-improvement of the existing educational material of the following two subjects:
  - Object-oriented design languages UML
  - Health Information Systems
- B. Installation of the digital subjects on the e-learning software platform (Blackboard).
- **C.** Complete distance learning of the subjects.

01.2004 - 05.2004	<b>EPEAEK II-PE3</b> , Upgrading the undergraduate curriculum with the help of new distance learning methods and techniques through the « <b>Asynchronous Distance Learning Platform e-class</b> ».
	Department of Electrical and Computer Engineering, University of Patras, (Payment:5000 Euros).
06.2007 - 07.2007	Teaching of subject 'Artificial Intelligence techniques in Telecommunication networks- Applications' in Summer School under the project « Strengthening of Computer Science studies in the Department of Telematics and Administration, EPEAEK II.
07.2011 - 03.2012	Quality Assurance Unit (MODIP) TEI Stereas Elladas (former TEI of Lamia) - Member of the Project Team and Coordinator for drafting the Specifications of the Integrated Information System and the Archived Material. Action D2.1.: Information System, Drafting of System Specifications and Action D2.2. Archived material.
04.2012 - 09.2012	Project «Internship for the students of the TEI of Lamia» - Supervisor of students and organizations that employ the students. Responsible for delivering Planning, Supervision, Performance and Evaluation Reports for each Trainee.

# 11. ADMINISTRATIVE POSITIONS

# **ADMINISTRATIVE POSITIONS**

02.2021 – Today	Head of Energy Systems Department,
	Faculty of Technology, University of Thessaly, Geopolis Campus, Larissa, Greece.
06.2019 - Today	Director in the MSc Program "Energy and Automation Systems"
	General Department, University of Thessaly, Geopolis Campus, Larissa, Greece (former Electrical Engineering Department)
10.2020 - Today	Acting Member of the Education and Research Committee (ELKE),
	University of Thessaly.
03.2019 - 08.2020	Rapporteur of the former Electrical Engineering Department
	University of Thessaly, (former TEI of Thessaly), Larissa.
10.2020 - Today	Deputy Head of the "Rehabilitation and Wellness Institute",
	PEK IASON under the presidency of Prof. Nikolaos Strimbakos
11.2019 - Today	Member of Research Institute IASON, University of Thessaly.
02.2020 - 06.2020	Member of the Assembly of the General Department,
	University of Thessaly, Geopolis Campus, Larissa, Greece
10.2018 - 06.2019	<b>Deputy Head</b> of the five-member Steering Committee of the Postgraduate (MSc) program in "Energy and Automation Systems",
	University of Thessaly (former Electrical Engineering Department).
06.2018 - 10.2019	Erasmus+ coordinator,
	former Electrical Engineering Department, University of Thessaly.

08.2014 - 03.2018 Erasmus+ coordinator,
 Department of Computer Engineering, TEI of Stereas Elladas

 11.2015 - 08.2016 Deputy Head of the Computer Engineering Department,
 TEI of Stereas Elladas

 05.2014 - 08.2014 Deputy Head of the Computer Engineering Department,
 TEI of Stereas Elladas

# 12. RESEARCH COLLABORATIONS

- CERTH-CENTER FOR RESEARCH AND TECHNOLOGY, HELLAS, Bio-Economy and Agro-technology
  Institute (iBO), Dr. D. Bochtis
- Human-IST Institute, University of Fribourg, Switzerland, Prof. Edy Portmann
- University of Essex, School of Computer Science and Electronic Engineering, Dr. Javier Andreu-Perez, Chair of the Smart Health Technologies Group, http://csee.essex.ac.uk/research/SmartHealthTech/
- University Hospital of Patras, University of Patras, Rio, Prof. Dimitrios Apostolopoulos
- UNIVERSITA' DEGLI STUDI DI NAPOLI, FEDERICO II, DOCENTI, Prof. Giovanni Acampora
- Universidade de Santiago de Compostela, CiTIUS-USC Affiliated Researcher, Dr. José María Alonso Moral, https://citius.usc.es/v/jose-maria-alonso-moral
- Universidad de las Ciencias Informaticas, Carretera a San Antonio km 2 1/2, CP 54830, La Habana,
   Cuba, Prof. Pedro-Pinero
- Cochin University of Science and Technology (CUSAT), Department of Computer Applications,
   Cochin 682022, <a href="www.cusat.ac.in">www.cusat.ac.in</a>, Prof. Judy Nair
- Institute for Rural Management Anand, India, Prof. Pramod Singh
- Shahid Beheshti University, Cyberspace Research Institute, Tehran, Iran, Dr. Sadra Ahmadi, Aff.
   Researcher
- **Dept of Computer Science & Telecommunications**, University of Thessaly, Greece, Prof. G. Stamoulis
- University of Hasselt, Faculty of Business Economics, Prof. Koen Vanhoof
- University of Michingan, USA, Prof. Steven Gray.
- Oregon State University, Portland, USA, Prof. Antonie Jetter
- **Department of Computer Science**, University of Silecia, Poland, Prof. Wojciech Froelich
- **Department of Agriculture,** University of Thessaly, Greece, Prof. G. Nanos
- Laboratory for Automation and Robotics, Department of Electrical and Computer Engineering,
   University of Patras, Greece, Prof. Petros Groumpos

#### 13. SOFTWARE TOOLS DEVELOPMENT

- 1) FCMWIZARD Fuzzy Cognitive Map Software Tool, <a href="www.fcmwizard.com">www.fcmwizard.com</a> Leader and Principal Investigator Elpiniki Papageorgiou, 2016
- 2) ISEMK software tool based on Fuzzy Cognitive Maps for prediction Katarzyna Poczeta and Elpiniki Papageorgiou, 2014.
- 3) fcm-plugin, plugin for FCM modeling and reasoning in Medical Decision Support Systems, collaboration with Jos De Roo, Agfa Healthcare at 2013, updated 2014.
  <a href="http://eulersharp.sourceforge.net/2006/02swap/fcm-plugin.html">http://eulersharp.sourceforge.net/2006/02swap/fcm-plugin.html</a>
- 4) Open source libraries:
  - a. R, Github, for FCM inference <a href="https://cran.r-">https://cran.r-</a>project.org/web/packages/fcm/vignettes/vignettes.html
  - b. javaFCM for FCM design, inference and Hebbian learning,https://github.com/ziqushru/JFCM-Design-App

# **14. BOOKS**

- Elpiniki I. Papageorgiou (Ed.): Fuzzy Cognitive Maps for Applied Sciences and Engineering From Fundamentals to Extensions and Learning Algorithms. <u>Intelligent Systems Reference Library</u> 54, <u>Springer 2014</u>, ISBN 978-3-642-39738-7, <u>https://www.springer.com/gp/book/9783642397387</u> <u>https://www.springer.com/engineering/computational+intelligence+and+complexity/book/978-3-642-39738-7</u> (Cited:150+)
- 2) Philippe J. GiabbanelliVijay K. MagoElpiniki I. Papageorgiou, Advanced Data Analytics in Health, Part of the Smart Innovation, Systems and Technologies book series (SIST, volume 93), <a href="https://link.springer.com/book/10.1007%2F978-3-319-77911-9">https://link.springer.com/book/10.1007%2F978-3-319-77911-9</a> (cited: 8)

# 15. PUBLICATIONS

15.1 Book Chapters (with peer review process)

#### **BOOK CHAPTERS**

#### Year 2008

- [B1]. **E.I. Papageorgiou**, C.D. Stylios and P.P. Groumpos. The Soft Computing Technique of Fuzzy Cognitive Maps for Decision Making in Radiotherapy. In book: *Intelligent and Adaptive Systems in Medicine*, editors: Dr. O. Haas and Prof. K. Burnham, Chapter 6, Taylor & Francis, LLC, IOPs Publications, February 2008. http://www.crcnetbase.com/isbn/9781420012088
- [B2]. **E.I. Papageorgiou**, and C.D. Stylios. Fuzzy Cognitive Maps. In book: *Handbook of Granular Computing*, by editors: Witold Pedrycz, Andrzej Skowron and Vladik Kreinovich, Chapter 34, John Wiley & Sons, Ltd, 2008, pp. 755-775. <a href="http://onlinelibrary.wiley.com/doi/10.1002/9780470724163.fmatter/pdf">http://onlinelibrary.wiley.com/doi/10.1002/9780470724163.fmatter/pdf</a> **Year 2010**
- [B3]. **E.I. Papageorgiou**. A novel approach on constructed dynamic Fuzzy Cognitive Maps using fuzzified decision trees and knowledge-extraction techniques. In book: *Fuzzy Cognitive Maps: Advances in Theory, Methodologies, Tools, Applications,* edited by M. Glykas, Studies in Fuzziness and Soft Computing, Springer Verlag Berlin, July 2010, pp. 43-70. <a href="https://www.springerlink.com/index/R60631T2K2K77H77.pdf">www.springerlink.com/index/R60631T2K2K77H77.pdf</a>
- [B4]. **E.I. Papageorgiou**, Ath. Markinos, Th. Gemtos. Soft Computing Technique of Fuzzy Cognitive Maps to connect yield defining parameters with yield in Cotton Crop Production in Central Greece as a basis for a decision support system for precision agriculture application. In book: Fuzzy Cognitive Maps: Advances in Theory, Methodologies, Tools, Applications, edited by M. Glykas, Springer Verlag, July 2010, pp. 325-362. <a href="http://www.springerlink.com/content/fx43636378461031/">http://www.springerlink.com/content/fx43636378461031/</a> Year 2011
- [B5]. Michelakos I., N. Mallios, E.I. Papageorgiou, M. Vassilakopoulos. Ant Colony Optimization and Data Mining, in book: Next Generation Data Technologies for Collective Computational Intelligence, edited by Nick Bessis, Springer Verlag, July 2011. <a href="http://www.springer.com/engineering/computational+intelligence+and+complexity/book/978">http://www.springer.com/engineering/computational+intelligence+and+complexity/book/978</a>
  -3-642-20343-5
- [B6]. **E.I. Papageorgiou**. Fuzzy Cognitive Map reasoning mechanism for handling missing data and uncertainty in medical domain, in book: *Cross-Disciplinary Applications of Artificial Intelligence and Pattern Recognition: Advancing Technologies*, (Eds.) Dr. Vijay Kumar Mago and Nitin Bhatia, edited by IGI Global. December 2011, <a href="http://www.igi-global.com/bookstore/titledetails.aspx?titleid=55275">http://www.igi-global.com/bookstore/titledetails.aspx?titleid=55275</a>
  Year 2012
- [B7]. E.I. Papageorgiou & A. Kontogianni. Using Fuzzy Cognitive Mapping in Environmental Decision Making and Management: A Methodological Primer and an Application, in book: International Perspectives on Global Environmental Change, Edited by Stephen S. Young and Steven E. Silvern, ISBN 978-953-307-815-1, Hard cover, 488 pages, Publisher: InTech, Published: February 03, 2012 under CC BY 3.0 license, in subject Environmental Sciences, DOI: 10.5772/1518, pp. 427-450 <a href="http://www.intechopen.com/articles/show/title/using-fuzzy-cognitive-mapping-in-environmental-decision-making-and-management-a-methodological-prime">http://www.intechopen.com/articles/show/title/using-fuzzy-cognitive-mapping-in-environmental-decision-making-and-management-a-methodological-prime</a>

- [B8]. **E.I. Papageorgiou.** Review Study on Fuzzy Cognitive Maps and Their Applications during the Last Decade, In M. Glykas (Ed.): *Business Process Management*, SCI 444, pp. 281–298, springerlink.com © Springer-Verlag Berlin Heidelberg 2013. <a href="http://link.springer.com/chapter/10.1007/978-3-642-28409-0\_11?null">http://link.springer.com/chapter/10.1007/978-3-642-28409-0\_11?null</a> Year 2014
- [B9]. E.I. Papageorgiou and J.L. Salmeron. Methods and algorithms for fuzzy cognitive map-based modelling, in Springer Book: Fuzzy Cognitive Maps for Applied Sciences and Engineering. ISBN: 978-3-642-39738-7, Editor: E.I. Papageorgiou, Fuzzy Cognitive Maps for Applied Sciences and Engineering 2014: 1-28.
- [B10]. W. Froelich and E.I. Papageorgiou. Extended Evolutionary Learning of Fuzzy Cognitive Maps for the Prediction of Multivariate Time-Series, in Springer Book: Fuzzy Cognitive Maps for Applied Sciences and Engineering. ISBN: 978-3-642-39738-7, Editor: E.I. Papageorgiou, Fuzzy Cognitive Maps for Applied Sciences and Engineering 2014: 121-131.
- [B11]. J.L. Salmeron and E.I. Papageorgiou. Using Fuzzy Grey Cognitive Maps for industrial processes control, in Springer Book: Fuzzy Cognitive Maps for Applied Sciences and Engineering. ISBN: 978-3-642-39738-7, Editor: E.I. Papageorgiou, Fuzzy Cognitive Maps for Applied Sciences and Engineering 2014: 237-252
- [B12]. V.K. Mago, **E.I. Papageorgiou**, A. Mago. Employing Fuzzy Cognitive Map for Periodontal Disease Assessment, in Springer Book: *Fuzzy Cognitive Maps for Applied Sciences and Engineering*. ISBN: 978-3-642-39738-7, Editor: E.I. Papageorgiou, <u>Fuzzy Cognitive Maps for Applied Sciences and Engineering 2014</u>: 375-389.

  Year 2015
- [B13]. Patrick Kaltenrieder, E.I. Papageorgiou and Edy Portmann. Digital Personal Assistant for Cognitive Cities: A Paper Prototype, in Springer book: Towards Cognitive Cities: Advances in Cognitive Computing and its Applications to the Governance of Large Urban Systems. editors: Matthias Finger and Edy Protmann, Studies in Systems, Decision and Control, Volume 63 pp. 101-121. http://www.springer.com/us/book/9783319337975
- [B14]. Jose L. Salmeron, Wojciech Froelich and **E.I. Papageorgiou.** Application of Fuzzy Cognitive Maps to the Forecasting of Daily Water Demand, ITISE 2015, Springer series: *Contributions to Statistics*, International Work-Conference on Time Series. Granada, 27-29 June, 2016, Granada. (SPAIN).
- [B15]. **E.I. Papageorgiou**, K. Kokkinos and Z. Dikopoulou. Fuzzy Sets in Agriculture, in Springer book: Fuzzy Logic in Its 50th Year, New Developments, Directions and Challenges, Editor: U. Kaymak, et al., Studies in Fuzziness and Soft Computing, Volume 341, pp. 211-230, <a href="http://link.springer.com/book/10.1007%2F978-3-319-31093-0">http://link.springer.com/book/10.1007%2F978-3-319-31093-0</a>
  Year 2016
- [B16]. O. Motlagh, G. Grozev, **E.I. Papageorgiou**. A neural approach to electricity demand forecasting, 2016, in: *Artificial Neural Network Modeling, Studies in Computational Intelligence*, 628, pp. 281-306.
- [B17]. K. Kokkinos, E.I. Papageorgiou, V. Dafopoulos and I. Adritsos. Efficiency in Energy Decision Support Systems using Soft Computing Techniques, in book: Intelligent Decision Support Systems for Sustainable Computing, editors: Arun Kumar Sangaiah, Ajith Abraham, Patrick Siarry, Michael Sheng, Editors Springer Publishers, Springer 2016, ISSN 1860-949X, Studies in Computational Intelligence, pp. 33-52. DOI: 10.1007/978-3-319-53153-3\_3.
  Year 2017
- [B18]. Alexander Metzger, Steven Gray, **E.I. Papageorgiou**, A. Jetter. Typologies and Tradeoffs: A Standardized Approach to Creating Participatory Fuzzy Cognitive Maps, in book: *Integrated Collaborative Modeling*, Book, USA, Feb. 2017.

- [B19]. Abdollah Amirkhani, Mojtaba Kolahdoozi, **E.I. Papageorgiou** and Mohammad R Mosavi. <sup>6</sup> Classifying mammography images by using fuzzy cognitive maps and a new segmentation algorithm, ADAH 2017, book chapter: *Advanced Data Analysis in Healthcare*, Springer.Editors, Philippe, Vijay Mago, Elpiniki Papageorgiou.
- [B20]. K. Poczeta, Ł. Kubuś, A. Yastrebov, E.I. Papageorgiou. Application of fuzzy cognitive maps with evolutionary learning algorithm to model decision support systems based on real-life and historical data, in book: Studies in Computational Intelligence, 717, pp. 153-175, <a href="https://doi.org/10.1007/978-3-319-59861-1">https://doi.org/10.1007/978-3-319-59861-1</a> 10
  Year 2019
- [B21]. S. D'Onofrio, **E.I. Papageorgiou**, E. Portmann. Using fuzzy cognitive maps to arouse learning processes in cities, Designing Cognitive Cities, pp 107-130, in book: *Studies in Systems, Decision and Control*, 176, <a href="https://link.springer.com/chapter/10.1007%2F978-3-030-00317-3">https://link.springer.com/chapter/10.1007%2F978-3-030-00317-3</a> 5

# 15.2 PUBLICATIONS IN JOURNALS (with Impact Factors (IF)) PUBLICATIONS

CITATIONS

- [P1] E.I. Papageorgiou, C.D. Stylios, P.P. Groumpos. An Integrated Two-Level Hierarchical Decision Making System based on Fuzzy Cognitive Maps, *IEEE Transactions on Biomedical Engineering*, Vol. 50, No 12, December 2003, pp. 1326-1339. (IF=2.302) http://ieeexplore.ieee.org/xpls/abs\_all.jsp?arnumber=1246372&tag=1 (Cited:80+)
- [P2] E.I. Papageorgiou, C.D. Stylios, P.P. Groumpos. Active Hebbian Learning to Train Fuzzy Cognitive Maps, International Journal of Approximate Reasoning, Vol. 37, 2004, pp. 219-249. (IF=2.090) http://www.sciencedirect.com/science/article/pii/S0888613X04000349
- [P3] E.I. Papageorgiou, K. E. Parsopoulos, C. D. Stylios, P. P. Groumpos and M. N. Vrahatis. Fuzzy Cognitive Maps Learning Using Particle Swarm Optimization, in *International Journal of Intelligent Information Systems*, Vol. 25, Number 1, July 2005, pp.95-121 (3rd most downloaded paper for 2005), (IF=1.115) http://www.springerlink.com/content/k10514g35461423x/
- [P4] E.I. Papageorgiou, & P.P. Groumpos. A weight adaptation method for fine-tuning Fuzzy Cognitive Map 75 causal links. In *Soft Computing Journal*, Springer Verlag, 9, (2005), pp. 846-857, DOI 10.10007. (IF=1.328) <a href="http://www.springerlink.com/content/7weqalmefa0lq0gc/">http://www.springerlink.com/content/7weqalmefa0lq0gc/</a>
- [P5] E.I. Papageorgiou, P. Spyridonos, P. Ravazoula, C.D. Stylios, P.P. Groumpos, & G. Nikiforidis. Advanced
  Soft Computing Diagnosis Method for Tumor Grading, in *Artificial Intelligence in Medicine*, Vol. 36,
  Number 1, January 2006, pp. 59-70, (IF=2.136)
  <a href="http://www.sciencedirect.com/science/article/pii/S0933365705000588">http://www.sciencedirect.com/science/article/pii/S0933365705000588</a>
- [P6] E.I. Papageorgiou, & P.P. Groumpos. A new hybrid learning algorithm for Fuzzy Cognitive Maps learning, Applied Soft Computing, Elsevier, Vol. 5, 2005, pp. 409-431, (11th most downloaded paper for 2005), (IF=2.415) <a href="http://www.sciencedirect.com/science/article/pii/S1568494604001012">http://www.sciencedirect.com/science/article/pii/S1568494604001012</a>
- [P7] **E.I. Papageorgiou**, P. Spyridonos, P. Ravazoula, C.D. Stylios, P.P. Groumpos, & G. Nikiforidis. Grading 13 Urinary Bladder Tumors Using Unsupervised Hebbian Algorithm for Fuzzy Cognitive Maps, *Biomedical Soft Computing and Human Sciences*, Vol. 9, No. 2, 2004, pp. 33-39. (available on http://ci.nii.ac.jp/naid/110003963833/en).

[P8]	E.I. Papageorgiou, & P.P. Groumpos. Optimization of Fuzzy Cognitive Map model in Clinical Radiotherapy	27
	Through the Differential Evolution Algorithm, Biomedical Soft Computing and Human Sciences, Vol. 9,	
	No. 2, 2004, pp. 25-31, (http://ci.nii.ac.jp/naid/110003963832/en)	

- [P9] E.I. Papageorgiou, C.D. Stylios & P.P. Groumpos. Unsupervised learning techniques for fine-tuning Fuzzy Cognitive Map causal links, *Intern. Journal of Human-Computer Studies*, Elsevier, vol. 64, 2006, pp. 727-743. (IF=2.38) http://www.sciencedirect.com/science/article/pii/S1071581906000334
- [P10] E.I. Papageorgiou, P. Spyridonos, D. Glotsos, C.D. Stylios, P.P. Groumpos, & G. Nikiforidis. Brain Tumor Characterization using the Soft Computing Technique of Fuzzy Cognitive Maps, Applied Soft Computing, Vol.8, 2008, pp. 820-828. (IF=2.415), <a href="http://www.sciencedirect.com/science/article/pii/S156849460700066X">http://www.sciencedirect.com/science/article/pii/S156849460700066X</a>
- [P11] E.I. Papageorgiou, Ath. Markinos, Th. Gemtos. Application of fuzzy cognitive maps for cotton yield management in precision farming, Expert Systems with Applications, vol. 36 (10), 2009, pp. 12399-12413. (IF=2.879) http://www.sciencedirect.com/science/article/pii/S0957417409003960
- [P12] E.I. Papageorgiou. A new methodology for Decisions in Medical Informatics using Fuzzy Cognitive Maps based on Fuzzy Rule-Extraction techniques, *Applied Soft Computing*, 11 (2011) 500–513 (IF=2.415), <a href="http://www.sciencedirect.com/science/article/pii/S1568494609002646">http://www.sciencedirect.com/science/article/pii/S1568494609002646</a>
- [P13] E.I. Papageorgiou, Ath. Markinos, Th. Gemtos. Fuzzy Cognitive Map based approach for predicting yield 123 in Cotton Crop Production as a basis for decision support system in precision agriculture application, Applied Computing, Volume Issue 4, June 2011, 3643-3657 Soft 11, **Pages** http://www.sciencedirect.com/science/article/pii/S1568494611000548 (IF=2.415)
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(\*It should be noted that Elpiniki Papageorgiou is the first author in **28 out of 100** publications published in International Journals whereas in the 40 among them there is a maximum number of 3 authors. Also, she is the single author in **4 out of 100 publications** published in journals).

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(\*It should be noted that Elpiniki Papageorgiou is the first author in **31 out of 115** publications in International Conferences with full text review. Also, **50 out of 115 publications are** published in the **IEEE Proceedings**).

### 15.4 PUBLICATIONS IN CONFERENCES (with abstract review)

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- [D4]. S. Blackmore, S. Fountas, P. Stavrakakis, E.I. Papageorgiou, K. Apostolidi. "A specification for mobile cognitive security robots in port facilities", in Annual Meeting of Marine Technology 2010, Technological Conference & Exhibition, Hellenic Institute of Marine Technology, 31 November – 1 December 2010, Athens, Greece.
- [D5]. **E.I. Papageorgiou**, K. Aggelopoulou, N. Liolios, Th. Gemtos, G. Nanos. "Machine Learning And Fuzzy Cognitive Map Learning Approaches For Yield Prediction In Apples", *In International Conference of Agricultural Engineering*, <a href="http://cigr.ageng2012.org/comunicaciones-online/htdocs/principal.php?seccion=posters&idcomunicacion=13608&tipo=4">http://cigr.ageng2012.org/comunicacion=s-online/htdocs/principal.php?seccion=posters&idcomunicacion=13608&tipo=4</a>
- [D6]. A. Billis, **E.I. Papageorgiou**, C. Frantzidis, E. Konstantinidis, A. Astaras, Manos Klados, C. Styliadis 1 and P. Bamidis. "Towards unobtrusive sensor based decision support system for independent living: The case of the USEFIL project", *in ELEVIT 2013*, 5<sup>th</sup> Panhellenic Conference in Biomedical Technology, 4-6 April, Athens, Greece.
- [D7]. A. Khanteymoori, **E.I. Papageorgiou**, J. Pirgazi, N. Papandrianos, S. Javad Mousavi. "Gene Regulatory Networks Inference using Fuzzy Cognitive Maps by Improved Compressed Sensing Algorithm", in proceedings of German Conference in Bioinformatics, 16-19 Sept. Heidelberg, 2019, https://gcb2019.de/. https://gcb2019.de/time-table/
- [D8]. N Papandrianos, **El Papageorgiou**, A Anagnostis, A Feleki, K Papageorgiou, DJ Apostolopoulos, Bone metastasis classification in bone scintigraphy using densely-connected convolutional neural networks, EUROPEAN JOURNAL OF NUCLEAR MEDICINE AND MOLECULAR IMAGING, τόμος 47, SUPPL 1, pp. S406-S407, SPRINGER.
- [D9]. Nikolaos Papandrianos, Dimitrios Apostolopoulos, Anna Feleki, Konstantinos Papageorgiou, **Elpiniki Papageorgiou**, Automatic classification of myocardial perfusion imaging scans employing convolutional neural networks and transfer learning,

  15<sup>th</sup> International Conference in Nuclear Medicine (abstract), <a href="https://nmc2021.gr/e-posters/">https://nmc2021.gr/e-posters/</a>
- [D10]. N. Papandrianos, S. Moustakidis, A. Siouras, C. Ntakolia, E. Papageorgiou, Deep Learning for Bone Metastasis Localisation in Nuclear Imaging data of Breast Cancer Patients, 15<sup>th</sup> International Conference in Nuclear Medicine (abstract), <a href="https://nmc2021.gr/e-posters/">https://nmc2021.gr/e-posters/</a>

# **16. CITATIONS**

### **Scopus profile:**

https://www.scopus.com/authid/detail.uri?authorId=56429800100&origin=resultslist (last update 30.07.2021)

	scopus	googlescholar
Citations	5028	8305
h-index	37	47

# 17. REVIEWER OF SCIENTIFIC WORKS IN JOURNALS

ā	IFFE Transactions on Systems May 9 Cuberractics: Dout 4	Assignments
•	IEEE Transactions on Systems, Man & Cybernetics: Part A	2
•	IEEE Transactions on Systems, Man & Cybernetics: Part B	2
•	IEEE Transactions on Fuzzy Systems	6 2
•	IEEE Transactions on Information Technology in Biomedicine	
•	Applied Soft Computing Information Sciences	18
•		3
•	Int. Journal of Approximate Reasoning	4 2
•	Fuzzy Sets and Systems (Elsevier)	2
•	Environmental Modelling and Software	1
•	International Journal of Computational Intelligence	1
•	International Journal of Computational Intelligence	1
•	Journal of Information Science and Engineering European Journal of Operational Research	1
	Knowledge-based Systems (Elsevier)	3
•	Journal of Travel Medicine & Infectious Diseases	1
•	Research Agriculture	1
•	Computers & Electronics in Agriculture	3
•	Intelligent Decision Technologies Journal	1
•	Computer Methods & Programs in Biomedicine	2
•	Journal of Machine Learning Systems	1
•	Enterprise Information Systems	1
•	Ecological Modeling	1
•	Journal of Biomedical Informatics	1
•	Artificial Intelligence in Medicine	1
•	Journal of Intelligent Systems	2
•	Information & Management (Elsevier)	1
•	Evolving Systems, Springer	1
•	Expert Systems with Applications	2
•	Neural Computing and Applications	1
•	Precision Agriculture	1
•	Journal of Clean Production	1
•	Applied Computing and Informatics	1
•	Tourism Management	1

•	Environmental Systems and Research	1
•	International Journal of Fuzzy Systems	2
•	Journal of AI and Data Mining	1
•	Journal of Production Economics	1
•	Climatic Change	1
•	Sustainability	1
•	Journal of Information Technology and Decision Making	1
•	Applied Sciences	1
•	Agricultural Science and Tecnology	1
•	Computational Intelligence, Springer	1
•	Frontiers of Computer Science, Springer	1
•	Journal of Medical Internet Research	1
•	Neurocomputing, Elsevier	2
•	Journal of Intelligent Computing and Cybernetics	1
•	Water (MDPI)	1
•	Sustainability (MDPI)	1
•	Energies (MDPI)	1
•	Diagnostics (MDPI)	1
•	PlosONE	1
•	ResearchSquare	1
•	Medical and Biological Engineering and Computing	1
•	Health Informatics Journal	1

# 18. EDITORIAL BOARD MEMBER

- Journal of Smart Environments and Green Computing, Editor W. Pedryez, https://hrjournal.net/index.php/jsegc/editorsChief/index
- Quantum Machine Intelligence journal, Springer,
   <a href="https://www.springer.com/engineering/computational+intelligence+and+complexity/journal/42484">https://www.springer.com/engineering/computational+intelligence+and+complexity/journal/42484</a>
- Journal of Fuzzy Extension and Applications, <a href="http://www.journal-fea.com/journal/editorial.board">http://www.journal-fea.com/journal/editorial.board</a>
- Journal of Intelligent Systems <a href="http://www.degruyter.com/view/j/jisys">http://www.degruyter.com/view/j/jisys</a>
- International Journal of Interactive Multimedia and Artificial Intelligence, http://www.ijimai.org/journal
- Emerald journal, "International Journal of Intelligent Computing and Cybernetics: <a href="http://www.emeraldinsight.com/ijicc.htm"><u>Http://www.emeraldinsight.com/ijicc.htm</u></a>
- International Editorial Review Board International Journal of Distributed Systems and Technologies (IJDST), http://www.igi-global.com/Bookstore/TitleDetails.aspx?TitleId=1164
- "International Journal of Cognitive Computing in Engineering" for KeAi Publishers (Co published with China Science Publishing & Media and Elsevier).
- Research Journal of Environmental Sciences, http://scialert.net/jindex.php?issn=1819-3412
- European Scientific Journal, ESJ's international editorial team, http://eujournal.org/index.php/esj/pages/view/committee
- INTERNATIONAL JOURNAL OF ADVANCES IN ELECTRONICS AND TELECOMMUNICATION, http://aperito.org/journal/journals

■ INTERNATIONAL JOURNAL ON SOFT COMPUTING (IJSC), ISSN: 2229 - 6735 [ONLINE]; 2229 - 7103 [PRINT], HTTP://AIRCCSE.ORG/JOURNAL/IJSC/IJSC.HTML

# 19. REVIEWER IN SCIENTIFIC CONFERENCES

- EMBC 2006- IEEE 2006 International Conference of the Engineering in Medicine and Biology Society, August 30-Sept. 3, 2006, New York City, USA, http://embc2006.njit.edu/
- EMBC 2007 29th Annual International Conference of the IEEE Engineering in Medicine and Biology Society, http://www.embc07.ulster.ac.uk/
- EMBC 2008 30th Annual International Conference of the IEEE Engineering in Medicine and Biology Society, August 20-24, 2008, Vancouver, Canada. <a href="http://www.embc2008.com/">http://www.embc2008.com/</a>
- EMBC 2009- 31th Annual International Conference of the IEEE Engineering in Medicine and Biology Society, September 2-6, 2009, Minneapolis, Minnesota. http://www.embc2009.com/
- **EMBC** 2010-32nd of Annual International Conference the IEEE Engineering in Medicine and Biology Society August 31 - September 4, "Merging Medical Humanism and Technology", 2010 Buenos Aires Sheraton Hotel, Buenos Aires, Argentina, http://embc2010.embs.org/
- 1st International Workshop on Information Technology for Patient Safety, ITPS 2009, <a href="http://ivibis.ctr.teilam.gr/itps09.htm">http://ivibis.ctr.teilam.gr/itps09.htm</a> στα πλαίσια του ITAB 2009 9th International Conference on Information Technology and Applications in Biomedicine, November 5-7, 2009, Larnaca, Cyprus, <a href="http://www.cs.ucy.ac.cy/itab2009/">http://www.cs.ucy.ac.cy/itab2009/</a>
- 3PGCIC 2010- Fifth International Conference on P2P, Parallel, Grid, Cloud and Internet Computing November 4-6, 2010, Fukuoka Institute of Technology, Fukuoka, Japan.
- FUZZ-IEEE 2011- International Conference on Fuzzy Systems, Special Session on Fuzzy Cognitive Maps: Theory and Applications, 27-30 June, Taipei, Taiwan, 2011 (Organizer and Chair of the Special Session on FCMs) <a href="https://fuzzieee2011.nutn.edu.tw/download/FUZZ-IEEE%202011-SS42-01242011.pdf">http://fuzzieee2011.nutn.edu.tw/download/FUZZ-IEEE%202011-SS42-01242011.pdf</a>
- ICAI 2011- International Conference on Artificial Intelligence, Fuzzy Cognitive Map Special Session, 18-21 July, Las Vengas, USA, <a href="http://www.world-academy-of-science.org/worldcomp11/ws/program/ica19">http://www.world-academy-of-science.org/worldcomp11/ws/program/ica19</a>
- **FUZZ-IEEE 2012-** IEEE International Conference on Fuzzy Systems, <a href="http://www.ieee-wcci2012.org/ieee-wcci2012/index.php?option=com\_content&view=article&id=55&Itemid=59">http://www.ieee-wcci2012.org/ieee-wcci2012/index.php?option=com\_content&view=article&id=55&Itemid=59</a>
- SETN 2012 Hellenic Conference of Artificial Intelligence, <a href="http://setn2012.ucg.gr/index.php/en/">http://setn2012.ucg.gr/index.php/en/</a>

- AIAI 2013 9th International Conference on Artificial Intelligence Applications & Innovations,
   <a href="http://aiai2013.cut.ac.cy/">http://aiai2013.cut.ac.cy/</a> (track chair, subreviewer, proceedings author)
- **FUZZ-IEEE 2013**, IEEE International Conference on Fuzzy Systems, July 7-10, Hyderabad, India, http://www.isical.ac.in/~fuzzieee2013/?q=node/82
- AIAI 2014 10th International Conference on Artificial Intelligence Applications & Innovations
- **FUZZ-IEEE 2014,** IEEE International Conference on Fuzzy Systems, WCCI 2014, IEEE World Congress on Computational Intelligence, July 6-11, Beijing, China.
- AIAI 2015 11th International Conference on Artificial Intelligence Applications & Innovations, Italy
- FUZZ-IEEE 2015, IEEE International Conference on Fuzzy Systems, ISTANBUL, http://fuzzieee2015.org/
   Istanbul, Turkey, 2-4 August, 2015
- WCCI 2016, World Congress on Computational Intelligence 2016, Vancouver 25-29 July, 2016, Canada
- **KES-IDT 2016,** 8th International Conference on Intelligent Decision Technologies (IDT-2016), Puerto de la Cruz, Tenerife, Canary Islands, Spain, 15th-17th June 2016, <a href="http://idt-16.kesinternational.org/">http://idt-16.kesinternational.org/</a>
- ICFMsquare'16, International Conference on Fuzzy Management Methods (ICFMsquare'16),
   University of Fribourg, Switzerland, September 29-30, 2016.
- 8th Workshop on Applications of Knowledge-Based Technologies in Business (AKTB 2016), http://bis.kie.ue.poznan.pl/bis2016/workshops/aktb-2016/
- 9th Workshop on Applications of Knowledge-Based Technologies in Business (AKTB 2017)
- **FUZZ-IEEE 2017,** IEEE International Conference on Fuzzy Systems, Naples, Italy.
- PCI 2017, Pan-Hellenic Conference on Informatics (PCI), Sep 28-30, 2017 Larisa, Greece
- FUZZ-IEEE 2018, IEEE International Conference on Fuzzy Systems, Rio de Janeiro, Brazil.
- ICFMsquare 2019, Second International Conference on Fuzzy Management Methods, Friburg, 11th November, 2019.
- IISA 2019, 10th International Conference on Information, Intelligence, Systems and Applications 15-17 July 2019, Patras, Greece
- IISA 2020, 11th International Conference on Information, Intelligence, Systems and Applications 15-17 July 2020, Piraeus.
- **FUZZ-IEEE 2020,** IEEE International Conference on Fuzzy Systems, IEEE WORLD CONGRESS ON COMPUTATIONAL INTELLIGENCE (WCCI) 2020, 19 24th July, 2020, Glasgow (UK)

### 21. SPECIAL ISSUE ORGANIZATION

**SPECIAL ISSUE ORGANIZATION** 

2020

Guest Editor in Energies, Special Issue in <u>Energies</u>: <u>Applications of Machine Learning and</u>
<u>Soft Computing in Energy Use Forecasting</u>, MDPI.

- Special Issue in Smart Cities Smart Governance Models for Future Cities, Electronic Markets The International Journal on Networked Business, Guest Editors: Edy Portmann, Human-IST Institute, University of Fribourg, Switzerland, Sara D'Onofrio, CC Smart Citizen, Business Engineering Institute St. Gallen, Switzerland, Simon Trang, Chair of Information Security and Compliance, University of Göttingen, Germany, Elpiniki I. Papageorgiou, Department of Energy Systems, University of Thessaly, Greece, Witold Pedrycz, Department of Electrical and Computer Engineering, University of Alberta, Canada, Call for papers: https://www.springer.com/journal/12525/updates/17969836
- 2019 Special Issue in Fuzziness in Smart Cities in Frontiers in Artificial Intelligence, "Fuzziness in smart cities", (LinkedIn and Twitter posts), https://www.frontiersin.org/researchtopics/10953/fuzziness-in-smart-cities
- 2017 Special Issue on "Fusion of Cognitive Neural Computing Paradigms for Prevailing User

  Behaviour in Online Social Networks" in Future Generation Computer Systems, Elsevier

  http://www.journals.elsevier.com/future-generation-computer-systems/call-forpapers/special-issue-on-fusion-of-cognitive-neural-computing-paradi
- 2012 Οργάνωση ως Guest Editor ενος Ειδικού Τεύχους *Special Issue on "Theoretical Issues and Advanced Applications on Fuzzy Cognitive Maps" in Applied Soft Computing Journal*, Elsevier, Volume 12, Issue 12, Pages 3701-3840 (December 2012)

  <a href="http://www.sciencedirect.com/science/journal/15684946/12">http://www.sciencedirect.com/science/journal/15684946/12</a> Edited by Elpiniki

  I.Papageorgiou and Jose L.Salmeron

# 22. ORGANIZATION OF CONFERENCES, WORKSHOPS & SPECIAL SESSIONS

- Program Chair, IISA2020, The 11th International Conference on Information, Intelligence, Systems and Applications, 15 17 July, 2020, Piraeus, Greece, http://easyconferences.eu/iisa2020/committees/
- Key Organizer of Special Session on «Methods and Applications of Fuzzy Cognitive Maps", WCCI 2018 (FUZZ-IEEE 2018), 8-13 July, 2018, Rio De Janeiro, Brazil, http://www.ecomp.poli.br/~wcci2018/fuzz-sessions/
- 3. **Key Organizer of Special Session** on «Methods and Applications of Fuzzy Cognitive Maps", FUZZ-IEEE 2017, **Naples, Italy**, 9-12 July, 2017, http://www.fuzzieee2017.org/specialSessions.php
- 4. Organizer of Special Session on IS09: Recent advances in Fuzzy Systems, <a href="http://idt-16.kesinternational.org/cms/userfiles/is09.pdf">http://idt-16.kesinternational.org/cms/userfiles/is09.pdf</a>
- 5. **Key Organizer of Special Session** on «Methods and Applications of Fuzzy Cognitive Maps", FUZZ-IEEE 2016, **WCCI2016**, Vancouver, Canada, 25-30 July, 2016. http://epapageorgiou.com/index.php/provisionally-accepted-special-session-on-fcms

- 2016 Summer School on Fuzzy Cognitive Maps, 4-8 July 2016, Volos, Greece, <a href="http://fcm-summerschool.com/wp-content/uploads/2017/10/fcmschool\_EN\_FF.pdf">http://fcm-summerschool.com/wp-content/uploads/2017/10/fcmschool\_EN\_FF.pdf</a>.
   <a href="http://www.taxydromos.gr/Topika/230344-sxoleio-texnhths-nohmosynhs-sto-bolo.html">http://www.taxydromos.gr/Topika/230344-sxoleio-texnhths-nohmosynhs-sto-bolo.html</a>
- 7. FCM Workshop Team (A. Jetter, E. Papageorgiou and S. Gray), Portland State University, Oregon, USA: Scientific contribution on main innovation aspects of advanced Fuzzy Cognitive Maps and their applications in medical decision making, Portland State University, USA, August 1-2, 2016. https://sites.google.com/a/pdx.edu/fcm-workshop/
- 8. <u>Hasselt University, Faculty of Business Economics:</u> Scientific research training on "Main aspects of Neural Networks and Fuzzy Cognitive Maps" to a research group of master and PhD students, 3-7 November 2015
- 9. **Organizer of the "13th International Conference on Protection and Restoration of the Environment** that will be held in Mykonos", Greece, 3rd to 8th of July, 2016.
- 10. Special Session on «Methods and Applications of Fuzzy Cognitive Maps", στο FUZZ-IEEE 2015, http://fuzzieee2015.org/ Istanbul, Turkey, 2-4 August, 2015, http://fuzzieee2015.org/program/prgdetails/
- 11. Key Organizer of Special Session on «Methods and Applications of Fuzzy Cognitive Maps", WCCI 2014, IEEE World Congress on Computational Intelligence, July 6-11, Beijing, China, <a href="http://www.ieee-wcci2014.org/accepted-ss.htm">http://www.ieee-wcci2014.org/accepted-ss.htm</a>
- 12. Key Organizer of Special Session on «Emerging Trends in Methods and Applications of Fuzzy Cognitive Maps", FUZZ-IEEE 2013, IEEE International Conference on Fuzzy Systems, July 7-10, Hyderabad, India, <a href="http://www.isical.ac.in/~fuzzieee2013/?q=node/82">http://www.isical.ac.in/~fuzzieee2013/?q=node/82</a>
- 13. Special Session on « *Emerging Trends on Fuzzy Cognitive Maps*", FUZZ-IEEE 2012, IEEE World Congress on Computational Intelligence, <a href="http://www.ieee-wcci2012.org/ieee-wcci2012/index.php?option=com">http://www.ieee-wcci2012.org/ieee-wcci2012/index.php?option=com</a> content&view=article&id=55&Itemid=59
- **14.** Special Session on *« Fuzzy Cognitive Maps: Theory and Applications»,* FUZZ-IEEE **2011**, June 28-31, Taipei, Taiwan. <a href="http://fuzzieee2011.nutn.edu.tw/Special">http://fuzzieee2011.nutn.edu.tw/Special</a> Sessions.htm
- 15. 1st Workshop on Fuzzy Cognitive Maps Theory and Applications (FCMTA 2013), 1st October 2013, Paphos, Cyprus, http://aiai2013.cut.ac.cy/fcmta-2013/

# 23. REVIEWING ACTIVITIES

### **REVIEWING ACTIVITIES**

2014 – 2018	Evaluator in Health Informatics, European Research Council (ERC) - EU Horizon 2020 main
2014 2010	streams: 3 Priority SOCIETAL CHALLENGERS
2012 – 2015,	Evaluator, General Secretarial for Research and Technology-GSRT (www.gsrt.gr)
2017- now	
2017 - 2018	Evaluator Division of Research & Graduate Studies (http://www.uaeu.ac.ae/en/dvcrgs/),
2017 - 2018	United Arab Emirates University

2016 - 2020  Bogenbai batyr Street, 050026, Almaty, Kazakhstan, https://is.ncste.kz  Evaluator (13 research proposals), Slovenia Research Agency-ARRS, <a href="http://www.arrs.gov.si">http://www.arrs.gov.si</a>
2014 - 2019
2017 - 2019 Evaluator, Minedu, ESPA 2014-2020, Evaluator for RESEARCH-DEVELOPMENT-
INNOVATION Action
2007-Today Reviewer in several Al-related journals, medical and health informatics journals (more
than 120 reviews in various journals and conferences the last 10 years)
2016-Today Senior IEEE Member & IEEE Women in Computational Intelligence member
Member of P.b. Dithesis Evaluation Foreign Evaminer's nanel of ANNA LINIVERSITY
2015-Today CENTRE FOR RESEARCH, CHENNAI - 600 025, India (41 PhD Evaluations)
Member of P h D thesis Evaluation Foreign Examiner's nanel of Clayton School of
2014-2016 Information Technology, Monash University, Australia (3 PhD Evaluations).
External Foreign Examiner for PhD Thesis Evaluation at Annamalai University (4 PhD
evaluations), and MotherTeresa University (4 PhD Evaluations), India

# 24. SCIENTIFIC COMMITTEE MEMBER

IISA2021	Program Committee, 12th International Conference on Information, Intelligence,
	Systems and Applications 12-14 July 2021, Crete, virtually
ICTAI 2021	Program Committee, 33rd IEEE International Conference on Tools with Artificial
	Intelligence. 1-3 November 2021, Virually
	Program Committee, CAoNS 2020, 1 <sup>st</sup> International Conference on Computational Aspects of Network Science, https://caons2020.sigappfr.org/
	Program Chair, 11th International Conference on Information, Intelligence, Systems and Applications 15-17 July 2020, Piraeus.
	Program Committee & Reviewer, IEEE International Conference on Fuzzy Systems, WCCI2020, 19 – 24th July, 2020, Glasgow (UK)
	Program Committee & Reviewer, 10th International Conference on Information,
	Intelligence, Systems and Applications 15-17 July 2019, Patras, Greece.
ICFMsquare 2019	Program Committee & Reviewer, Second International Conference on Fuzzy
	Management Methods, Friburg, 11 <sup>th</sup> November, 2019.
TPNC 2019	Program Committee & Reviewer, 8th International Conference on the Theory and
	Practice of Natural Computing, TPNC 2019, Kingston, Canada - December 9-11, 2019
FUZZ-IEEE 2018	Program Committee & Reviewer, FUZZ-IEEE2018, IEEE International Conference on
	Fuzzy Systems, and WCCI2018, Brazil, Rio De Janeiro, July
IDT 2018	Intelligent Decision Technologies 2018
AKTB 2018	10th Workshop on Applications of Knowledge-Based Technologies in Business (AKTB
	2018)
FUZZ-IEEE 2017	Program Committee & Reviewer, FUZZ-IEEE2017, IEEE International Conference on
	Fuzzy Systems, Naples, Italy

DCI 2047	Durana Committee of Dec Hellenia Conference on Information (DCI) Con 20 20
PCI 2017	Program Committee of Pan-Hellenic Conference on Informatics (PCI), Sep 28-30,
	2017 - Larisa, Greece, <a href="http://pci2017.teilar.gr/">http://pci2017.teilar.gr/</a>
ICC 2017	Program Committee of Second International Conference on Internet of Things and
	Cloud Computing, <a href="http://icc-conference.org/index.php/program-committees">http://icc-conference.org/index.php/program-committees</a>
EANN 2017	TPC of EANM 2017, 18 International Conference on. Engineering Applications of
	Neural Networks (EANN'2017).
AKTB 2017	Program Committee of the 9th Workshop on Applications of Knowledge-Based
	Technologies in Business (AKTB 2017)
ICFMsquare'16	International Conference on Fuzzy Management Methods (ICFMsquare'16),
	University of Fribourg, Switzerland, September 29-30, 2016.
AKTB2016	8th Workshop on Applications of Knowledge-Based Technologies in Business, BIS
	2016, & 19th International Conference on Business Information Systems, 6-8 July
	2016, Leipzig, Germany
<b>AAAI 2016</b>	Program Committee of 12th International Conference on Artificial Intelligence
	Applications & Innovations, Thessaloniki, Greece
KES-IDT-16	IPC Member, International Programme Committee Member, Puerto de la Cruz,
	Tenerife, Spain, 15-17 June 2016
WCCI 2016	Program Committee & Reviewer, WCCI 2016, IEEE International Conference on Fuzzy
	Systems, Vancouver, Canada
ICTAI 2015	Program Committee, International Conference on Tools with Artificial Intelligence,
	Nov 9, 2015 - Nov 11, 2015, Vietri sul Mare Italy
ICACI2015	Program Committee, The Seven International Conference on Advanced
	Computational Intelligence, Web site: http://icaci2015.fzu.edu.cn/index.html
AKTB 2015	Program Committee & Reviewer, 7th Workshop on Applications of Knowledge-Based
	Technologies in Business (AKTB 2015), Poznan, Poland 24-26 June, 2015.
CSCC 2015	Program Committee of Intelligent Systems and Applications
KAM 2015	International Symposium on Knowledge Acquisition and Modeling (KAM 2015)
	http://www.atlantis-press.com/php/pub.php?publication=kam-
	15&frame=http%3A//www.atlantis-
	<pre>press.com/php/organizers.php%3Fpublication%3Dkam-15</pre>
ICEECE2015	Programme Committee of 2015 International Conference on Energy, Environmental
	and Chemical Engineering, June 28-29, 2015, Bangkok, Thailand,
	http://www.iceece2015.org/,
AIAI 2015	Programme Committee of 11th International Conference on Artificial Intelligence
	Applications & Innovations, Bayonne, France
FUZZ-IEEE 2015	Programme Committee & Reviewer, 2015 IEEE International Conference on Fuzzy
	Systems Istanbul, Turkey, 2-4 August, 2015
CSCC 2015	Programme Committee, 19th International Conference on Circuits, Systems,
	Communications and Computers (CSCC 2015) will take place in Zakynthos Island,
	Greece, from 16 to 20 July, 2015
BESC 2014	Programme Committee & Reviewer, 2014 International Conference on Behavioral,
	Economic, and Socio-Cultural Computing, Shanghai, China
AIAI 2014	Programme Committee & Reviewer, 10th International Conference on Artificial
	Intelligence Applications & Innovations, Rhodos, Greece

WCCI 2014	Programme Committee & Reviewer, IEEE International Conference on Fuzzy
	Systems, July 6-11, Bejing, China
AIAI 2013	Programme Committee & Reviewer AIAI 2013 - 9th International Conference on
	Artificial Intelligence Applications & Innovations, Cyprus, http://aiai2013.cut.ac.cy/

# 25. PH.D THESIS SUPERVISION

#### 25.1 SUPERVISOR OF PH.D THESIS

**SUPERVISOR (University of Thessaly, Dept of Energy Systems)** 

- 1. "Optimization of Deep Reinforcement Learning and Fuzzy Logic hybrid methodologies with application to smart manufacturing", Lambros Leontaris, 11/2020-now.
- 2. "Advanced methods based on Fuzzy Cognitive Maps and deep learning for explainable Artificial Intelligence". Katerina Rapti, 2/2021-now
- 3. "Development of advanced algorithms for Fuzzy cognitive maps and Deep learning for data analysis and decision support", Tziolas Theodoros (June 2021- now).
- 4. "Cloud-based architecture addressing heterogenous data-intensive sources for intelligent decision making", Kolorizos Vasileios, (June 2021- now).
- 5. "Design and development of an integrated IoT-based information system for energy-efficient smart agriculture applications", Makaritis Nikolaos, (June 2021- now).

# 25.2 CO-SUPERVISOR OF PH.D THESIS (Completed successfully)

CO-SUPERVISOR (completed)

- 1. « **Self-organization of Artificial Agents**», Oikonomou Panagiotis, Department of Electrical and Computer Engineering, University of Thessaly. (defended 6/2017).
- 2. "Modeling complex business perceptions using Fuzzy Cognitive Maps", Z.Dikopoulou, Business Department of Hasselt University, Doctoral grants in the framework of the bilateral scientific cooperation, Supervisor Prof. Koen Vanhoof, Hasselt University, Ιούνιος 2014-Αυγουστος 2020 (defended 26/8/2020).
- 3. **Sara D'Onofrio**, Department of Informatics, University of Friburg, PhD defence: 25 September 2019, Fribourg. It was completed successfully in September 2019, title: "From Simple Question-Answering Systems to "Intelligent" Chatbots, A Conceptual Framework for Using Computational Intelligence and Analogical Reasoning to Smartify Web-based Dialogue Systems.".
- 4. Title: "Differential diagnosis and classification of tissue lesions based on Fuzzy Cognitive Maps", Abdollah Amirkhani, Dept. of Electrical Engineering, Iran University of Science and Technology, Tehran 16846-13114, Iran. (Supervisor Committee: Prof M. R. Mosavi and Prof. K. Mohammadi and E. Papageorgiou): September 2014-November 2017 (defended).

- 5. "ROUGH COGNITIVE NETWORKS", Gonzalo Napoles, Business Department of Hasselt University, through a <u>Bilateral Doctoral Agreement with «Hasselt University</u>, Supervisor Prof. Koen Vanhoof, September 2014-May 2017 (defended).
- Title: Developments in Fuzzy Cognitive Maps and Their Applications to Enterprise Resource Planning Readiness Assessment, Sadra Ahmadi, Monash University, Clayton School of Information Technology, Faculty of Information Technology, Monash University, Australia, defended in June 2016.
- 7. Lema Evaggelia, **«Shipping greenhouse gas emission control tools»**, Panteion University of Social and Political Sciences, Department of Economic and Regional Development, defended June 2016.

### 25.3 CO-SUPERVISOR OF PH.D THESIS

### CO-SUPERVISOR OF PH.D THESIS (PENDING)

- Anagnostis Athanasios «Investigation and development of machine learning algorithms for analysis of large volumes of data», Department of Informatics and Telecommunications, University of Thessaly, Supervisor: Dionysios Bochtis, (02.2018- now)
- 2. Gousetis Anastasios, «Development of Artificial Intelligence Algorithms in Nanophotonics», Physics Dept EKPA, Supervisor: George Tsigaridas, (09.2018 Today)
- 3. Christos Kokkotis, «*Determination of risk factors for the diagnosis and prognosis of osteoarthritis of the knee using machine learning algorithms*», Department of Physical Education and Sports Science, University of Thessaly, (02.2019- Today)
- 4. Dimitrios Katikaridis, «Cooperation of aerial and ground robotic vehicles in agriculture», Department of Informatics and Telecommunications, University of Thessaly, Supervisor: Dionysios Bochtis, (06.2019- Today)
- 5. Vasilios Moisiadis, «**Human-Robot Collaboration in Agricultural Work**», Department of Informatics and Telecommunications, University of Thessaly Supervisor: Dionysios Bochtis, (06.2019- Today)
- 6. Mr. Salah Hasan Saleh-Al subhi, "New extensions of Fuzzy Cognitive Maps for Multi-Stage Sequential Decision Making problems", PhD student in Universidad de las Ciencias Inform´aticas, Carretera a San Antonio km 2 1/2, CP 54830, La Habana, Cuba, Supervisor Pedro-Pinero, (2019-Today).

### 25.4 EXTERNAL EVALUATOR OF PH.D THESIS

- Member of Ph.D thesis Evaluation Foreign Examiner's panel of Clayton School of Information Technology, Monash University, Australia. (Two PhD Examinations)
- Member of Ph.D thesis Evaluation Foreign Examiner's panel of ANNA UNIVERSITY, CENTRE FOR RESEARCH, CHENNAI - 600 025, INDIA (47 PhD Examinations)

- External Foreign Examiner for PhD Thesis Evaluation at Annamalai University, India (Two PhD Examinations)
- External Foreign Examiner for PhD Thesis Evaluation at MotherTeresa University, India (One PhD Examination)

## 26. SUPERVISION OF MASTER THESIS

MASTER PROGRAM «ENERGY AND AUTOMATION SYSTEMS», GENERAL DEPARTMENT, UNIVERSITY OF THESSALY, LARISSA.

- 1. Dedikousis Asterios, «Study of the methodology of the vague cognitive systems and their application in the modeling of daily, weekly and monthly electricity consumption», Dec. 2017.
- 2. Sioulas George, «Study and Application of Neural Networks for the forecast of gas demand», June 2018.
- 3. Mpaikamis Asterios, «*Daily forecast of gas demand using fuzzy logic and neural networks*», March 2019.
- 4. Samakovlis Ioannis, «Study of intelligent methodologies and Evaluative Comparison of Artificial Intelligence models in the smart industry», March 2021
- 5. Tasios George, «*Study of Fuzzy Logic and Applications in Energy*», expected to be completed in March 2021.
- 6. Krikos Hlias, «Fuzzy Energy Decision Making Systems and Models», May 2021.
- 7. Choumos Lampros, «Forecast of energy production from photovoltaics using fuzzy logic and neuro-fuzzy algorithms», March 2021.
- 8. Mprousovanas Alexandros, «*Modeling of a microgrid using Fuzzy Cognitive Network*», (under work).

SUPERVISOR IN THE POSTGRADUATE (MSC) PROGRAM «SOFTWARE ENGINEERING», GENERAL DEPARTMENT, UNIVERSITY OF THESSALY (FORMER DEPARTMENT OF COMPUTER ENGINEERING, TEI OF THESSALY)

- 9. Basilis Kolorizos, «Design and development of an agricultural remote sensing platform using satellite imagery from ESA», presented 8 Dec. 2020.
- 10. Anna Feleki, «Deep learning approach for myocardial perfusion representations and software development for their automatic categorization», (under work)

SUPERVISOR IN THE INTER-DEPARTMENTAL MSc PROGRAM «INFORMATICS AND COMPUTER BIOMEDICS», DEPARTMENT OF INFORMATICS WITH APPLICATIONS IN BIOMEDICINE, UNIVERSITY OF STEREAS ELLADAS, LAMIA.

1. Christodoulou Irini, «Investigate Deep Learning for big data prediction and classification tasks», May 2019.

### **Supervision of undergraduate thesis:**

Dept. of Computer Engineering, TEI of Sterea Ellada: 23

Dept. of Computer Science, TEI of Lamia: 45

Dept. of Electrical Engineering, TEI of Thessaly: 8

# 30. INVITED PRESENTATIONS/SPEAKER

- 1. <u>E.I. Papageorgiou,</u> "Artificial Intelligence applications in Medical Decision Support", 15<sup>th</sup> Panhellenic Conference in Nuclear Medicine, Patra, it will be held in May 27<sup>th</sup> 30<sup>th</sup> 2021.
- 2. <u>E.I. Papageorgiou</u>, Fuzzy Cognitive Maps and their applications in medical decision making, Portland State University, USA, August 1, 2016, <a href="https://sites.google.com/a/pdx.edu/fcm-workshop/">https://sites.google.com/a/pdx.edu/fcm-workshop/</a>
- 3. <u>E.I. Papageorgiou</u>, Forecasting Water Demand Using Fuzzy Cognitive Maps, First Final Event of ISS-EWATUS EU project, Skiathos, September 1-2, 2016.
- 4. <u>E.I. Papageorgiou, Fuzzy Cognitive Maps: Methods and Applications</u>, BNAIC 2015, Hasselt University, Belgium, bnaic2015.be
- 5. <u>E.I. Papageorgiou</u>, "Fuzzy Cognitive Maps for Decision Support", Department of Computer Science, University of Cyprus, May 25, 2012, 15.30-16:30 EET, <a href="http://www.cs.ucy.ac.cy/colloquium/">http://www.cs.ucy.ac.cy/colloquium/</a>
- E.I. Papageorgiou, "Fuzzy Cognitive Maps for Applied Sciences and Engineering", talk at Fuzzy Cognitive
  Maps and Time-dependent Issues Workshop, Limassol, Cyprus, 2012,
  <a href="http://www.cs.ucy.ac.cy/fcmdss/FCM">http://www.cs.ucy.ac.cy/fcmdss/FCM</a> workshop.pdf

# 31. COMPUTER SKILLS

- Operating Systems: MS-DOS, UNIX, Windows 2000/XP/Vista, Windows 2007, Linux.
- Programming Languages: C/C++, Visual Basic, LISP, PROLOG, CLIPS, HTML, Fortran 77.
- Systems Analysis UML
- Application Programs: MATLAB, Simulink, Labview 6.0, Mathematica, Origin
- MS-OFFICE 2000, LATEX, FrontPage
- Multimedia Software: Flash MX8, AuthorWare, Director της Macromedia, Toolbook
- Browsers: Internet Explorer, Netscape Communicator

# 32. LANGUAGES

### **ENGLISH**

• Advanced Certificate in English

• TOEIC-Certificate of Advanced in English (Grade: 850)

# 33. MEMBERSHIPS

- Institute of Electrical and Electronics Engineers (IEEE) Member
- IEEE Computational Intelligence Society Membership
- IEEE Women in Engineering Membership
- Greek Society of Artificial Intelliegence (EETN)
- European Society for Fuzzy Logic and Technology
- ΕΠΥ-Εταιρία Πληροφορικής και Υπολογιστών