PERSONAL INFORMATION

Dimitris K. Iakovidis

2-4 Papasiopoulou Str, Lamia, 35131, Greece
+30 22310 66711
diakovidis@uth.gr; dimitris.iakovidis@gmail.com
https://is-innovation.eu/iakovidis; http://dib.uth.gr/?personnel=diakovidis; https://orcid.org/0000-0002-5027-5323
Sex Male | Nationality Greek

POSITION

Professor (Full)

RESEARCH INTERESTS

Signal Processing, Decision Support Systems, Data Analytics, Artificial Intelligence, Computer Vision, Impactful applications, including but not limited to Biomedicine

PROFESSIONAL EXPERIENCE

ACADEMIC

2021 – today — Professor of Signal Processing and Medical Decision Support Systems
Dept of Computer Science and Biomedical Informatics, University of Thessaly (UTH), Lamia, Greece

2015 – 2021 — Associate Professor
Dept of Computer Science and Biomedical Informatics, UTH, Lamia, Greece

2014 – 2015 — Associate Professor
Dept of Computer Engineering, Technological Educational Institute (TEI) of Central Greece, Lamia, Greece[1]

2010 – 2014 — Assistant Professor
Dept of Informatics and Computer Technology, TEI Lamia, Lamia, Greece

2009 – 2014 — Adjunct Assistant Professor and Lecturer
Dept of Computer Science and Biomedical Informatics, University of Central Greece (UCG), Lamia, Greece[2]

2006 – 2009 — Adjunct Assistant Professor
Dept of Regional Economic Development, UCG, Levadia, Greece

2005 – 2010 — Adjunct Assistant Professor and Lecturer
Dept of Informatics and Computer Technology, TEI Lamia, Lamia, Greece

2004 – 2005 — Adjunct Lecturer
Dept of Informatics and Telecommunications, and Dept of Philosophy and History of Science, University of Athens (UoA), Athens, Greece

2004 – 2008 — Research Fellow
Dept of Informatics and Telecommunications, and Dept of Philosophy and History of Science, University of Athens (UoA), Athens, Greece

2002 — Research Associate
Dept of Bioinformatics, Medical School, University of Pennsylvania (UPENN), Philadelphia, USA

ADMINISTRATIVE

2019 – today — Deputy Department Head
Dept of Computer Science and Biomedical Informatics, UTH, Lamia, Greece

2019 – today — Director of the Biomedical Imaging Laboratory
Dept of Computer Science and Biomedical Informatics, UTH, Lamia, Greece

[1] The Technological Educational Institute of Lamia was a University of Applied Sciences located in the city of Lamia in Central Greece, which was renamed to Technological Educational Institute of Central Greece in 2014. In 2018 it was merged into the University of Thessaly.
[2] The University of Central Greece was merged into the University of Thessaly in 2018.

2019 **Department Head**
Dept of Computer Science and Biomedical Informatics, UTH, Lamia, Greece

2015 – 2023 **Department Committee Member**
Including Committees for Internal Quality Evaluation, Academic Curriculum, Master Studies, Evaluation of Doctoral and Postdoctoral Applications, Research Committee Vice Representative
Dept of Computer Science and Biomedical Informatics, UTH, Lamia, Greece

2015 **Department Head**
Dept of Computer Engineering, TEI Central Greece, Lamia, Greece

2015 **Head of Research, Entrepreneurship, Innovation, and EU Projects Office**
TEI Central Greece, Lamia, Greece

2014 – 2015 **Vice Rector of Research and Educational Affairs (acting)**
TEI Central Greece, Lamia, Greece

2011 – 2013 **Department Head**
Dept of Informatics and Computer Technology, TEI Lamia, Greece

2011 – 2013 **Head of the Institute of Information Technology**
Center for Technological Research of Central Greece, Lamia, Greece

2011 – 2013 **Vice Director**
Center for Technological Research of Central Greece, Lamia, Greece

2010 – 2015 **Department Committee Member**
Including committees for Internal Quality Evaluation, Academic Curriculum
Dept of Computer Engineering, TEI Central Greece, Lamia, Greece

OTHER

2000 – 2010 **Software Development Services**
Development of database management systems, data analysis, signal processing and decision support systems, in the context of commercial applications and research projects (see Appendix)

2002 – 2003 **Computer Systems Management, Hellenic Airforce**
Military Service (16 months) at 111 Combat Wing, Volos, and General Staff Squadron, Athens

1996 **Seismic Data Acquisition & Processing**
Internship (1 month), Geophysical Services Ltd, Budapest, Hungary

EDUCATION AND TRAINING

2000 – 2004 **Ph.D. on Informatics and Telecommunications**
Dept of Informatics and Telecommunications, UoA, Athens, Greece
- Thesis title: “Multichannel Medical Data Acquisition and Processing” Disputation date: 10.05.2004

1998 – 2001 **M.Sc. on Cybernetics**
Dept of Informatics and Telecommunications, and Dept of Physics, UoA, Athens, Greece
- Automatic Control, Computing Systems

1994 – 1997 **B.Sc. on Physics**
Dept of Physics, UoA, Athens, Greece
- Physics, Electronics and Telecommunications

PERSONAL SKILLS

Mother tongue(s): Greek

Other language(s):

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	Excellent	Excellent	Excellent	Excellent	Excellent
	Certificate of the University of Cambridge				

Communication skills	▪ Excellent communication skills (speaking and writing) gained through experience as an academic with international activities, including conferences, invited lectures, project meetings, evaluation panels etc (see Appendix)
Organisational / managerial skills	▪ Leadership (currently responsible for a team of ~45 people) ▪ Coordination (currently coordinating 2 national projects co-funded by the EU)
Computer skills	▪ Excellent computer programming skills (Java, C, Matlab, etc)

ADDITIONAL INFORMATION

Publications	208 Monographs (1); Books (2); Journals (78); Conferences & Book Chapters (125); T. Reports (4)
Citations	5465 Source: Google scholar
h/i10 indices	41 / 102
Honours and awards	▪ Fellow EAMBES (European Alliance of Medical and Biological Engineering and Science) ▪ Ranked within the top 2% scientists in computer science (Baas, Boyak, Ioannidis, 2021-2022) ▪ Best paper nomination among 1,459 papers published in 2018 in the 'Sensor, Signal, and Imaging Informatics' subfield of medical informatics (Hsu, W., Baumgartner, C., & Deserno, T., 2019) ▪ Outstanding reviewer awards (Elsevier) ▪ Scholarships: NATO (2020, 2021); Best Postgraduate Student, State Scholarship Foundation (1998)

APPENDIX

COMMISSIONS OF TRUST

2022 – today	Member of the IEEE P2976 Working Group for Standardization of XAI - Explainable Artificial Intelligence
2020 – today	Editorial Board Member, Sensors (Impact Factor[3]/IF 3.8)
2019 – 2022	Associate Editor, IET Signal Processing (IF 1.8)
2017 – today	Editorial Board Member, Measurement Science and Technology (MST), IOP (IF 2.4)
2015 – 2021	Associate Editor, IEEE Transactions on Fuzzy Systems (IF 12.3)
2019	Guest Editor, Special Issue with Focus on Optical Measurement Methods for Health & Related Applications, MST; Special Issue on Sensors, Signal and Image Processing in Biomedicine and Assisted Living, Sensors, MDPI
2011	Guest Editor, Special Issue on Imaging Systems and Techniques, Measurement Science and Technology, IOP
2004 – today	Reviewer in >50 journals and conferences – Currently regular in Pattern Recognition; IEEE Transactions on Medical Imaging; IEEE Journal of Biomedical and Health Informatics; ICPR, MICCAI, ICIP, SMC, IST, IROS etc.
2022	External Faculty Promotion Reviewer, Dept of Computer Science and Engineering, University of North Texas, USA
2012 – today	Vice Chair – Quality Controller, Rapporteur, and Evaluator, Research Executive Agency (REA), European Commission
2020 – 2022	Evaluator, National Research Agency of France (ANR)
2021 – 2022	EuroTechPostdoc2 Marie Curie Fellowship programme, co-funded by EC
2018 – 2022	Evaluator, Open Calls of H2020 & HORIZON EUROPE projects (ODIN, GATEKEEPER, ACTIVAGE)
2021	Evaluator, Latvian Council of Science
2018 – 2019	Evaluator, Hellenic Foundation for Research and Innovation of Greece (HFRI); General Secretariat for Research and Technology of Greece (GSRT)
2013,2016 – 2017	Evaluator, National Science Foundation of Poland
2017	Evaluator, National Medical Research Council, Ministry of Health, Singapore; Vrije University Brussels (VUB), Strategic Research Programmes; Research Promotion Foundation of Cyprus

LEADERSHIP IN INDUSTRIAL AND INNOVATION DESIGN

2015 – 2017	Invited consultant of International Pharmaceutical and Medical Device Industries (under NDA)

MEMBERSHIPS TO SCIENTIFIC SOCIETIES

2004 – today	IEEE Senior Member / Engineering in Medicine and Biology (EMBS), Computational Intelligence (CIS), and Signal Processing (SPS) societies	*ieee.org*
2022 – today	ICARE Group, Scientific Committee Member	*icaregroup.org*
2017 – today	ESC European Society of Cardiology (e-Cardiology)	*escardio.org*
2014 – today	EUCOG European Network for the Advancement of Artificial Cognitive Systems	*eucognition.org*
2011 – today	VPHI Virtual Physiological Human Institute	*vph-institute.org*
2006 – today	IAPR International Association for Pattern Recognition	*iapr.org*
2006 – today	GAIPDM Greek Association for Image Processing and Digital Media	*gaipdm.web.auth.gr*

SUPERVISION OF GRADUATE STUDENTS AND RESEARCH FELLOWS

2008 – today	Principal supervisor Post-doctoral Research Fellows (5); Doctoral Researchers (8); Master Students (3); Undergraduate Students (>50)
2015 – today	External PhD Committee Member after invitation from the following Universities:
2021 – 2022	Dept. of Electrical Engineering, University of Las Palmas de Gran Canaria, Spain (2)
2015 – 2017	Dept. of Electrical Engineering, Technical University of Eindhoven, Netherlands (1)
2015	Dept. of Computer Sciences, University of Salzburg, Austria (1)

[3] Journal Citation Reports (JCR), Clarivate Analytics, Released 2022

COURSES TAUGHT

2021 – today	Biomedical Image Analysis (MSc, BSc); Object Oriented Programming, Dept of Computer Science and Biomedical Informatics, UTH, Greece
2009 – today	Medical Decision Support Systems (BSc), Dept of Computer Science and Biomedical Informatics, UTH, Greece
2016 – 2021	Health Informatics (MSc), Faculty of Medicine, UoA, Greece
2020 – 2021	Biomedical Systems Modelling and Control (MSc), Dept of Computer Science and Biomedical Informatics, UTH, Greece
2015 – 2021	Biomedical Signal Processing (BSc), Dept of Computer Science and Biomedical Informatics, UTH, Greece
2015 – 2017	Big Data Mining and Analysis in Medicine and Biology (MSc), Dept of Computer Science and Biomedical Informatics, UTH, Greece
2009 – 2015	Advanced Object-Oriented Programming (BSc), Dept of Computer Engineering, TEI Central Greece
2005 – 2013	Digital Image Processing (BSc), Dept of Informatics and Computer Technology, TEI Central Greece
2010 – 2013	Structured Programming (BSc), Dept of Informatics and Computer Technology, TEI Central Greece
2006 – 2009	Structured Programming (BSc), Dept of Regional Economic Development, UCG, Greece
2004 – 2005	Digital Signal Processing (BSc), Dept of Computer Engineering, TEI Lamia
2004 – 2005	Bioinformatics (BSc), Dept of Computer Engineering, TEI Lamia
2004 – 2005	Expert Systems, Dept of Philosophy and History of Science, UoA, Greece
2004 – 2005	Realtime Systems, Dept of Informatics and Telecommunications, UoA, Greece

INVITED LECTURES

2022	Workshop Lecture “Artificial Intelligence: From Art to Healthcare,” JOIST Innovation Park, Dec. 14, 2022, Larissa, Greece
2022	Webinar “Next Generation Measurement Systems,” Organized by IOP, May 6, 2022, London, UK
2021	Online Training School, “Image Analysis in the Sphere of Capsule Endoscopy: Insights and Challenges,” Dec.6, 2021, NTNU, Norway
2018	Summer School Lecture “Medical Decision Support Systems,” NCSR Demokritos, May 2018, Athens, Greece
2018	Conference Lecture “Computer Vision Technologies at the Service of Medicine and Rehabilitation,” Session “Artificial Intelligence and Medicine in the Future,” Annual Panhellenic Medical Conference, May 2018, Athens, Greece
2018	Conference Lecture “Unstructured Data Analysis,” Session “Datathons in Evidense-based Medicine: Support Cross-Disciplinary Education and Research,” Annual Panhellenic Medical Conference, May 2018, Athens, Greece
2015	Conference Lecture “Computer-Aided Detection of Abnormalities in Gastrointestinal Endoscopy: Achievements and Challenges,” Medical Image Computing and Computer Assisted Intervensions (MICCAI), Workshop on Robotic Endoscopic Capsules for Gastrointestinal Screening, Diagnosis, and Therapy, Oct. 9, 2015, Munich, Germany.
2015	Conference Lecture “Automatic Lesions Detection for Wireless Capsule Endoscopy,” IEEE International Conference on Intelligent Robots and Systems (IROS), Workshop on Robotic Endoscopic Capsules for Gastrointestinal Screening, Diagnosis, and Therapy: Achievements and Future Challenges, Sept. 28, 2015, Hamburg, Germany.
2015	Conference Lecture “Digital Image Processing: Clinical Applications & Challenges in Cosmetics,” Cosmetic Measurement and Testing (COMET), June 8-9, 2015, Paris, France
2011	Conference Lecture “On the Importance of Computer Science in Medicine and Healthcare,” Future of Health Technologies Summit 2011, MIT, Cambridge, Massachusetts, USA
2010	Summer School Lecture “Image Mining,” University of Linkoping, Linkoping, Sweden, June 22, 2010
2010	Winter School Lecture “Image Mining,” Institute National de la Santé et de la Recherche Médicale (INSERM), Jan. 14, 2010, Paris, France

ORGANISATION OF INTERNATIONAL SCIENTIFIC MEETINGS

2019	Organizer of the International Workshop on Pervasive Intelligence, in EANN 2019, Crete, Greece
2017	Organizer of Special Session on Computer Aided and Robotic Endoscopy Systems, in CBMS 2017,Thessaloniki, Greece
2013	Organizer of Special Session on Advanced Concepts in Endoscopic Imaging and Engineering in BIBE 2013, Chania, Greece
2012	Organizer of Special Session on Intelligent Annotation of Digital Content, in SETN 2012, Lamia, Greece
2009	Organizer of the International Workshop on Information Technology for Patient Safety (ITPS), in ITAB 2009, Larnaca, Cyprus
2008 – 2018	Regular Steering Committee Member in IEEE Int. Conference on Imaging Systems and Techniques (IST)
2005 – today	Regular Programme Committee Member in Advanced Concepts on Intelligent Vision Systems (ACIVS), Computer-Based Medical Systems (CBMS), Int. Conference on Computer Vision Theory & Applications (VISAPP), Int. Conference on Pattern Recognition Applications & Methods (ICPRAM)

OTHER DISSEMINATION ACTIVITIES

2023	Organizer of the Workshop “An Artificial Intelligence System at the Service of Man and Civilization,” Department of Computer Science and Biomedical Informatics (CSBI), UTH, Lamia, Greece
2022	Organizer of the Workshop “Human-Centred Technology Infrastructures & Research,” CSBI, UTH, Lamia, Greece
2022	Invited presentation in the 4th Balkan Forum, of the Department of Computer Science and Biomedical Informatics (CSBI), Organized by the Ministry of Interior, Thessaloniki, Greece
2021 – 2022	Participation in International and National Exhibitions, Presentation of CSBI Research: International Thessaloniki Fair, Thessaloniki (2022); Innovent Forum, Larissa (2022); Beyond 4.0, Thessaloniki (2021-2022); Lamia Expo (2022)
2021 – 2023	Presentation of CSBI Research to the Wider Public: 12 Press Releases; 3 Interviews on Panhellenic TV networks

RESEARCH & DEVELOPMENT PROJECTS

2023 – 2026 SOFTREACH: Minimally-Invasive Soft-Robot-Assisted Deep-Brain Localized Therapeutics Delivery for Neurological Disorders; EU Pathfinder Horizon EUROPE; Budget: €2,915,065; It develops an image-guided minimally invasive soft robot to reach the human brain through the spine for local drug delivery
(UTH, Senior Researcher – Role: Image Analysis, AI/Machine Learning, Computational Modelling and Simulations)

2022 – 2025 HS4U: Healthy Ship 4 U; EU Horizon EUROPE; Budget: €6,500,000; https://hs4u.eu/ It develops and demonstrates holistic solutions that will facilitate the early detection, prevention, mitigation, and management of large passenger and cruise ships ensuring healthy ship operations and safe return to port over conditions of a health crisis
(UTH, PI/Senior Researcher – Role: Structured Data Analysis, Decision Support System, AI/Machine Learning, Computational Modelling and Simulations)

2020 – 2022 ENDORSE: Safe, Efficient and Integrated Indoor Robotic Fleet for Logistic Applications in Healthcare and Commercial Spaces; EU Horizon 2020 MSCA RISE Action; Budget: €1,122,400; http://www.endorse-project.eu/ It developed and validated a safe, efficient and integrated indoor robotic fleet for logistic applications in healthcare and commercial spaces
(UTH, Senior Researcher – Role: Supervision of Data Analysis for Robotics)

2020 – 2023 SMART TOURIST: Intelligent Research Infrastructure For Accessible Innovative Human Centered Cultural-Tourism Development in Central Greece; EU and Greek national funds (National Strategic Reference Framework, NSRF); Budget: €1,804,308; https://www.smart-tourist.gr/ It develops an infrastructure for accessible tourism based on smart technologies, virtual reality, machine learning, and cloud computing in Central Greece.
(UTH, Coordinator – PI/Senior Researcher – Role: Multimodal Data Analysis, Image processing, AI/Machine Learning, Computational Modelling and Simulation)

2020 – 2023 ParICT_CENG: Improvement of ICT research infrastructures in Central Greece for the processing of: large volumes of data from sensor streams, multimedia and complex mathematical simulation models; EU and Greek national funds (National Strategic Reference Framework, NSRF); Budget: €1,200,000; https://www.smart-tourist.gr/ It develops an infrastructure for big data analysis, data streaming, multimedia, and complex mathematical simulations in Central Greece
(UTH, Researcher – Role: Image and Video Analysis)

2019 – 2023 GeoMake-IT: Complete System for Developing and Running Geo-Games EU and Greek national funds (NSRF); Budget: €262,858,46; http://www.geomakeit.gr/ It develops a platform for easy development and running of geo-games on mobile computing systems
(UTH, Researcher – Role: AI/Machine Learning)

2019 – 2022 CAPSULE-AI3D: Improved Pathology Detection in Wireless Capsule Endoscopy Images through Artificial Intelligence and 3D Reconstruction; The National Research Council of Norway; Budget: €1,500,000; It investigated endoscopic image analysis methods
(UTH, Role: Supervisory – Consulting)

2018 – 2023 ENORASI: Intelligent Audiovisual System Enhancing Experience and Accessibility to Civilization; EU and Greek national funds (NSRF); Budget: €1,000,000; http://www.enorasi-project.com/ It develops a deep learning -based computer vision system capable of assisting visually impaired individuals to navigate in outdoor spaces
(UTH, Coordinator, PI/Senior Researcher – Role: Multimodal Data Analysis, AI/Machine Learning)

2013 – 2015 AVICENNA, CSA: Coordination and Support Action, EU FP7 Call 10, ICT Virtual Physiological Human; Budget: €1,177,480; It developed a roadmap for in-silico clinical trials
(TEI Lamia, Associated Partner – Role: Contribution to Research Roadmap)

2008 – 2012 DEBUGIT: Detecting and Eliminating Bacteria Using Information Technologies, EU IP FP7 Project; Coordination: AGFA Healthcare; Funded by European Union; Budget: €9,398,033; It developed a system for monitoring and detection of adverse health events related to bacterial infections, using semantic web and machine learning-based technologies;
(TEI Lamia, PI/Senior Researcher – Role: Multimodal Data Analysis and Decision Support Systems)

2006 – 2008 METAON: Ontology Driven Construction and Management of Meta-Data for Intelligent Search in Text and Image Collections; General Secretary for Research and Technology of Greece and EU (GSRT-EU); Budget: €596.610; It developed a semantically-aware search engine for multimodal data
(UoA, Role: Workpackage Leader Multimodal Data Mining)

2006 – 2009 Study-Analysis of Gene Expression with cDNA Microarrays in Childhood Leukemia and Discovery of Therapeutic Clonal Markers with the Support of Prototype Machine Learning Methodologies; GSRT-EU; Budget: €207,657 (UoA, Postdoctoral Researcher – Role: DNA Microarray Data Analysis)

2006 – 2009 Detection and Genotyping of Pathogenic Respiratory and Enteroviruses with Original Computational Techniques from DNA Microarray Data; GSRT-EU; Budget: €207,000 (UoA, Postdoctoral Researcher – Role: DNA Microarray Data Analysis)

2006 Computer-Aided Processing and Analysis of Ultrasound Images for Thyroid Nodule Detection and Characterization, GSRT-EU; Budget: €134.862 (UoA, Role: Postdoctoral Researcher - Data Analysis, Image Processing, AI).

2004 – 2006 Development of a Medical Decision Support System for Cancer Diagnosis based on Clinical and Genomic Data, Co-funded by the Ministry of Education of Greece and EU; Budget: €59,500 (UoA, Role: Lead Postdoctoral Researcher – Data Analysis, Image Processing, AI)

2001 Development and Evolution of Nucleotide Sequence Identification Methodology: Analysis of Other IRF Family Transcription Factors and STAT1 in Chronic Myelogenous Leukemia; GSRT-EU; Budget: €134.862 (Foundation for Research & Technology/FORTH Microchemistry Lab, Role: Researcher – DNA Sequencing)

2001 WINE: Wireless Internet Networks; FP5-IST; Budget: €4,810,000 (UoA, Role: Researcher – Data Analysis)

2000 MEDEA: Development of a Microscanning Endoscope with Diagnostic and Enhanced Resolution Attributes. Funded by the European Union, IST Biomed-2 Project, Budget: €1,400,000 (UoA, Role: Doctoral Researcher – Data Acquisition, Processing and Analysis)

PUBLICATIONS[4]

A. MONOGRAPHS

A.001. **D.K. Iakovidis**, "Multichannel Medical Data Acquisition and Processing," PhD Thesis, Department of Informatics and Telecommunications, University of Athens, Greece, 2004

B. BOOKS

B.002. E. Spyrou, **D. Iakovidis**, P. Mylonas, Semantic Multimedia Analysis and Processing, CRC Press, Taylor & Francis, ISBN 978-1466575493, 2014 (519 pages)

B.001. **D. Iakovidis**, Absolute Java, Greek Edition (Translation of W.Savitch, Absolute Java), ION Publications, Athens, 2008 (1,218 pages)

C. BOOK CHAPTERS[5]

C.029. G. Sovatzidi, and **D. K. Iakovidis**, "Interpretable EEG-based Emotion Recognition using Fuzzy Cognitive Maps," in *Proc. Medical Informatics Europe* (MIE), *Public Health and Informatics*, IOS Press, 2023 (accepted)

C.028. G. Sovatzidi, M. Vasilakakis, and **D.K. Iakovidis**, "IF3: An Interpretable Feature Fusion Framework for Lesion Risk Assessment based on Auto-Constructed Fuzzy Cognitive Maps," in *Proc. International Conference on Medical Image Computing and Computer-Assisted Intervention* (MICCAI), *Workshop Cancer Prevention through Early Detection*, *Lecture Notes in Computer Science,* vol. 13581, 2022, doi: https://doi.org/10.1007/978-3-031-17979-2_8

C.027. G. Triantafyllou, G. Dimas, P. Kalozoumis, and **D.K. Iakovidis**, "Reconstruction of Cultural Heritage 3D Models from Sparse Point Clouds Using Implicit Neural Representations," in *Proc. International Conference on Pattern Recognition* (ICPR), *Workshop on Pattern Recognition for Cultural Heritage, Lecture Notes in Computer Science*, 2022

C.026. G. Sovatzidi, M. Vasilakakis, and **D.K. Iakovidis**, "Constructive Fuzzy Cognitive Map for Depression Severity Estimation," in *Proc. Medical Informatics Europe* (MIE), *Public Health and Informatics*, IOS Press, vol. 294, pp. 485-489, 2022

C.025. P.G. Kalozoumis, M. Marino, E.L. Carniel, and **D.K. Iakovidis**, "Towards the Development of a Digital Twin for Endoscopic Medical Device Testing," *In:* Hassanien, A.E., Darwish, A., Snasel, V. (eds) *Digital Twins for Digital Transformation: Innovation in Industry. Studies in Systems, Decision and Control,* vol. 423, pp. 113-145, *Springer, Cham.* doi: 10.1007/978-3-030-96802-1_7, 2022

C.024. D.E. Diamantis, P.G. Kalozoumis, and **D.K. Iakovidis**, "Digital Twin for Simulation and Evaluation of Assistive Navigation Systems," *In:* Hassanien, A.E., Darwish, A., Snasel, V. (eds) *Digital Twins for Digital Transformation: Innovation in Industry. Studies in Systems, Decision and Control,* vol. 423, pp. 147-170, *Springer, Cham.* Springer, 2022

C.023. M. Vasilakakis, G. Sovatzidi, and D.K. Iakovidis, "Explainable Classification of Weakly Annotated Wireless Capsule Endoscopy Images based on a Fuzzy Bag-of-Colour Features Model and Brain Storm Optimization," in *Proc. International Conference on Medical Image Computing and Computer-Assisted Intervention* (MICCAI), 2021, *Lecture Notes in Computer Science*, vol 12903. Springer, doi:10.1007/978-3-030-87199-4_46

C.022. M.D. Vasilakakis, D.K. Iakovidis, and G. Koulaouzidis, "A Constructive Fuzzy Representation Model for Heart Data Classification," in *Proc. Medical Informatics Europe* (MIE), *Public Health and Informatics*, pp. 13-17, 2021

C.021 G. Sovatzidi, and **D.K. Iakovidis**, "Determinative Braistorm Optimization," in *Proc. International Conference on Swarm Intelligence* (ICSI), *Lecture Notes in Computer Science*, vol. 12145, pp. 259–271, 2020

C.020. G. Dimas G., C. Ntakolia, and **D.K. Iakovidis**, "Obstacle Detection Based on Generative Adversarial Networks and Fuzzy Sets for Computer-Assisted Navigation." In: Macintyre J., Iliadis L., Maglogiannis I., Jayne C. (eds) *Engineering Applications of Neural Networks* (EANN). *Communications in Computer and Information Science*, vol 1000, Springer, Cham, pp. 533-544, 2019.

C.019. D.E. Diamantis, D.-C.C. Koutsiou, and **D.K. Iakovidis**, "Staircase Detection using a Lightweight Look-Behind Fully Convolutional Neural Network" In: Macintyre J., Iliadis L., Maglogiannis I., Jayne C. (eds) *Engineering Applications of Neural Networks* (EANN). *Communications in Computer and Information Science*, vol 1000, Springer, Cham, pp. 522-532, 2019.

C.018. N. Panagou, P. Oikonomou, P.K. Papadopoulos, M. Koziri, T. Loukopoulos, and **D. Iakovidis**, "On Predicting Bottlenecks in Wavefront Parallel Video Coding Using Deep Neural Networks" In: Macintyre J., Iliadis L., Maglogiannis I., Jayne C. (eds) *Engineering Applications of Neural Networks* (EANN). *Communications in Computer and Information Science*, vol 1000, Springer, Cham, pp. 501-510, 2019.

C.017. **D.K. Iakovidis**, D. Diamantis, G. Dimas, C. Ntakolia, and E. Spyrou, "Digital Enhancement of Cultural Experience and Accessibility for the Visually Impaired", In *Improved Mobility for the Visually Impaired*, Sara Paiva (eds), Springer, pp. 237-271, 2020.

C.016. A. Loukopoulos, M. Koziri, N. Panagou, P.K. Papadopoulos, and **D.K. Iakovidis**, "Cloud Video Guidance as "Deus ex Machina" for the Visually Impaired", In *Improved Mobility for the Visually Impaired*, Sara Paiva (eds), Springer, pp. 127-143, 2020.

C.015. M.D. Vasilakakis, **D.K. Iakovidis**, E. Spyrou, D. Chatzis, and A. Koulaouzidis, "Beyond Lesion Detection: Towards Semantic Interpretation of Endoscopy Videos." In: Boracchi G., Iliadis L., Jayne C., Likas A. (eds) Engineering Applications of Neural Networks (EANN), *Communications in Computer and Information Science*, vol 744. Springer, pp. 379-390, 2017.

C.014. M. Vasilakakis, **D.K. Iakovids**, E. Spyrou, and A. Koulaouzidis, "Weakly-Supervised Lesion Detection in Video Capsule Endoscopy based on a Bag-of-Colour Features Model," in Medical Image Analysis and Computer Assisted Interventions (MICCAI) *Workshop on Computer Assisted and Robotic Endoscopy* (CARE), *Lecture Notes in Computer Science*, pp. 97-104, 2016.

C.013. **D. Iakovidis**, D. Douska, E. Barba, and G. Koulaouzidis, "Wavelet-based Signal Analysis for Heart Failure Hospitalization Prediction," in *Proc. EFMI Personalized Health Conference* (pHealth), *Studies in Health Technology and Informatics*, vol. 224, pp. 21-26, IOS Press, 2016

C.012. **D. Iakovidis**, and C. Smailis, "A Semantic Model for Multimodal Data Mining in Healthcare Information Systems," in *Proc. Medical*

[4] Q1/Rank-A publications and publications in flagship venues of international associations/societies are indicated in boldface typesetting.
[5] Book chapters in collective volumes, including high-quality conference proceedings published in books.

Informatics Europe (MIE), *Studies in Health Technology and Informatics*, vol. 180, pp. 574-578, IOS Press, 2012

C.011. C.V. Smailis, and **D.K. Iakovidis**, "Ontology-Based Automatic Image Annotation Exploiting Generalized Qualitative Spatial Semantics," in *Proc. 7th Conference on Artificial Intelligence* (SETN), *Lecture Notes in Artificial Intelligence*, (Berlin, Heidelberg: Springer), vol. 7297, pp.205-214, 2012

C.010. S. Tsevas, **D.K. Iakovidis**, and G. Papamichalis, "Mining Patterns of Lung Infections in Chest Radiographs," in *Proc. International Federation for Information Processing*, *Artificial Intelligence Applications and Innovations* (AIAI), vol. 296, (Boston: Springer), pp.205-214, 2009

C.009. **D.K. Iakovidis**, N. Pelekis, E. Kotsifakos, and I. Kopanakis, "Intuitionistic Fuzzy Clustering with Applications in Computer Vision," in *Proc. Advanced Concepts for Intelligent Vision Systems* (ACIVS), *Lecture Notes in Computer Science*, eds. J. Blanc-Talon, W. Philips, D. Popescu, (Berlin, Heidelberg: Springer), vol. 5259, pp. 764-774, 2008

C.008. S. Tsevas, **D. Iakovidis**, D. Maroulis, E. Pavlakis, and A. Polydorou, "Non-Negative Matrix Factorization for Endoscopic Video Summarization," in *Proc. SETN*, *Lecture Notes in Artificial Intelligence*, (Berlin, Heidelberg: Springer), vol. 5138, pp. 425-430, 2008

C.007. **D.K. Iakovidis**, E.G. Keramidas, and D.E. Maroulis, "Fuzzy Local Binary Patterns for Ultrasound Texture Characterization," in *Proc. International Conference on Image Anaysis and Recognition* (ICIAR), *Lecture Notes in Computer Science*, (Berlin, Heidelberg: Springer), vol. 5112, pp. 750-759, 2008

C.006. **D.K. Iakovidis**, M.A. Savelonas, and D. Maroulis, "Adaptive Vision System for Segmentation of Medical Images based on Modified Mumford Shah Functional," in *Proc. Advanced Concepts for Intelligent Vision Systems* (ACIVS), *Lecture Notes in Computer Science*, eds. J. Blanc-Talon, W. Philips, D. Popescu, (Berlin, Heidelberg: Springer), vol. 4678, pp. 565-574, 2007

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