



Intelligent Systems Lab,
Dept. of Cultural Technology and Communication,
University of the Aegean,
University Hill, Lesvos 81100, Greece
<http://i-lab.aegean.gr>

About

The University of the Aegean, as an Academic Institute, through its research potential and research laboratories, has developed successful past and active collaborations with research institutes, businesses, as well as with development, social, business entities. These collaborations have been achieved and many continue to exist through joint educational and research programs and exchanges within national and European programs such as NSRF 2007-2013, H2020, European Territorial Cooperation, Erasmus + and other development initiatives.

The Cultural Technology and Communication Dept. is multi-disciplinary department, with research focusing on humanities, informatics and media sciences. Several faculty members have a strong research portfolio securing of external funding, as well as production of high-quality research outputs. Among the Research labs in the department, **the Intelligent Systems Lab (i-Lab)** research and develops Intelligent, Interactive and Web technologies to support the reproduction, display and promotion of cultural heritage assets and services.

Main Areas of Expertise/ Research Topics / Research Groups

3D Visualization group: Machine Vision, 3D Graphics Technologies, Mixed Reality and Remote Sensing with ground and aerial media for the implementation of intelligent applications in Digital Culture.

Computational Intelligence group: Artificial and Computational Intelligence, Neural Networks, Deep Learning and Expert Systems for modeling cultural data, Fuzzy Systems, Intelligent systems, Genetic Algorithms

Intelligent Interaction group: Affective Computing, Human Computer Interaction, Intelligent Systems, Cultural Heritage Management, Context Awareness, User Experience.

Semantic Technologies group: Knowledge/Ontology Engineering, Semantic Web technologies, Semantic (cultural) Data Management, Semantic IoT.

Academic Members (Professors)

Prof. Christos-Nikolaos Anagnostopoulos (<https://www.linkedin.com/in/cnanagnostopoulos/>) is the Head of Cultural Technology and Communication Department, University of the Aegean and Director of the Mixed Reality lab in the same Department. He received his Mechanical Engineering Diploma from the National Technical University of Athens (NTUA) in 1998, and the Ph.D. degree from the Electrical and Computer Engineering Dpt., NTUA in 2002. His research interests include image processing, computer graphics, cultural informatics and artificial intelligence. He has published more than 180 papers in scientific journals and conferences, in the above subjects as well as other related fields in informatics.

Prof. George Tsekouras (<https://scholar.google.gr/citations?user=tQoukVYAAAAJ&hl=el>) serves the Cultural Technology and Communication Department from 2002. His research interests focus on artificial intelligence, cultural informatics and expert systems. He has authored more than 100 papers in scientific journals and conferences, in the above subjects and participated in numerous scientific projects as member of the Mixed Reality lab, University of the Aegean.

Assist. Prof. George Caridakis (<http://ii.ct.aegean.gr/>) serves as a faculty member, Assistant Professor, the Department of Cultural Technology & Communication, University of the Aegean where he founded and coordinates the Intelligent Interaction Research Group (ii.aegean.gr), a recently established but dynamic research group already making an impact attracting Regional and National funding and participating in numerous International conferences and workshops. He is also affiliated as an Adjunct Professor at the Athena RC (athenarc.gr/en) and as a Senior Researcher with the Intelligent Systems, Content and Interaction Laboratory, National Technical University of Athens. He offers courses offered in undergraduate and postgraduate levels in different institutions and supervises PhD, MSc and undergraduate theses. He has served in boards and committees and as a reviewer in numerous international scientific journals, conferences and workshops and is a member of the Association for the

Advancement of Affective Computing and the board of the Greek ACM SIGCHI Special Interest Group in Computer-Human Interaction. His research on various aspects of intelligent human-computer interaction, such as Affective Computing, Artificial Intelligence, Natural, Augmented and Embodied Interaction, has been published in more than 25 journal articles and book chapters and more than 50 papers in conferences and workshops and has been well recognised by the scientific community by being cited more than 1500 times with an h-index of 20. He has served as an evaluator in many funding and grants frameworks and has long experience in European and National funded R&D projects participating as a researcher, Principal Investigator and Scientific Coordinator in over 20 projects during the past 15 years.

Assist. Prof. Konstantinos Kotis (<https://gr.linkedin.com/in/kotis>, <http://i-lab.aegean.gr/kotis>) owns a BSc in Computation from University of Manchester, UK and a PhD in Information Management (Knowledge Representation/Management) from the University of the Aegean, Greece. He worked as a post-doc researcher and adjunct lecturer/professor at the AI Lab of the University of the Aegean (2015-2010), at VTT Technical Research Centre of Finland (2011-2012) as an ERCIM “Allain Bensoussan” post-doc fellow, and a post-doc researcher at the AI Lab of the University of Piraeus (2013-2018). He is currently an assistant professor at the University of the Aegean, Dept. of Cultural Informatics and Communication and a research associate at the University of Piraeus, Dept. of Digital Systems (AI Lab). His research interests include but not limited to Knowledge Engineering, Semantic Web and Internet of Things. He has published more than 50 papers (h-index 16) in peer-reviewed international journals (incl. IJDST, KAIS, ILE, IJKEDM, FGCS, IEEE IS, IJWGS, IJMSO, Applied AI) and conferences (incl. ESWC, ISWC, KSEM, IJCAI, VLDB) and served as reviewer and PC member in several journals and conference events (incl. IEEE IS, IEEE TKDE, KAIS, JWS, JUCS, IJMMMM, ICTAI, IJCAI). He has also participated in several national and international projects, including among them, Grid4All (FP7, 2008), iCore (FP7, 2012), Internet of Things (Finnish Tivit/Tekes, 2012), AMINESS (Greek, Research & Technology General Secretary. 2014) and datACRON (H2020 ICT, 2016). ORCID: <https://orcid.org/0000-0001-7838-9691>.

Representative Research Publications (last 2 years)

Christos Vasilakos, George Tsekouras, Palaiologos Palaiologou, Kostas Kalabokidis, “Neural-Network Time-Series Analysis of MODIS EVI for Post-Fire Vegetation Regrowth”, *SPRS International Journal of Geo-Information*, vol 7, issue 11, 2018.

GE Tsekouras, S Chatzistamatis, CN Anagnostopoulos, D Makris, “Color adaptation for protanopia using differential evolution-based Fuzzy Clustering: A case study in digitized paintings”, 2018 IEEE Conference on Evolving and Adaptive Intelligent Systems (EAIS), 1-8.

GE Tsekouras, V Trygonis, A Maniatopoulos, A Rigos, A Chatzipavlis, “A Hermite Neural Network incorporating artificial bee colony optimization to model shoreline realignment at a reef-fronted beach”, *Neurocomputing* 280, 32-45, 2018.

A Tamvakis, GE Tsekouras, A Rigos, C Kalloniatis, CN Anagnostopoulos, “A methodology to carry out voting classification tasks using a particle swarm optimization-based Neuro-Fuzzy Competitive Learning Network”, *Evolving Systems* 8 (1), 49-69, 2017.

A Tamvakis, CN Anagnostopoulos, G Tsirtsis, AD Niros, S Spatharis, “Optimized Classification Predictions with a New Index Combining Machine Learning Algorithms”, *International Journal on Artificial Intelligence Tools* 27 (03), 1850012, 2017.

A Dimara, CN Anagnostopoulos, “Data Based Stock Portfolio Construction Using Computational Intelligence”, *International Conference on Internet Science*, 76-94, 2017.

T Iliou, CN Anagnostopoulos, IM Stephanakis, G Anastassopoulos, “A novel data preprocessing method for boosting Neural Network performance: a case study in osteoporosis prediction”, *Information Sciences* 380, 92-100, 2017.

G Santipantakis, K Kotis, GA Vouros, “OBDAIR: Ontology-Based Distributed framework for Accessing, Integrating and Reasoning with data in disparate data sources”, *Expert Systems with Applications*, 90, 464-483, 2018.

K Kotis, I Athanasakis, and G A Vouros, “Semantically Enabling IoT Trust to Ensure and Secure Deployment of IoT Entities,” *Int. J. of Internet of Things and Cyber-Assurance*, vol. 1, issue 1: Inderscience, pp. 3-21, 2018.

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<https://goo.gl/maps/WMB3puAgwtC2>

Collaborations

