

PERSONAL INFORMATION



Demertzis Konstantinos

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Sex Male | Date of birth 13 Oct 1975 | Nationality Greek

EDUCATION AND TRAINING

20/12/2017–Present

Postdoc "Development of Intelligent Models and Respective Big Data Analytics Platform for Cyberdefense of Urban Critical Infrastructure"

Department of Civil Engineering (Faculty of Mathematics, Programming and general courses), School of Engineering, Democritus University of Thrace, Xanthi (Greece)

01/06/2013–14/02/2017

PhD "Computational Intelligence and Smart Information Systems"

Department of Forestry and Management of the Environment and Natural Resources (Lab of Forest-Environmental Informatics and Computational Intelligence), Democritus University of Thrace, Orestiada (Greece)

18/10/2017–Present

Master Degree "Cyber Security and Big Data"

University of Thessaly, School of Science, Department of Computer Science and Biomedical Informatics, Lamia (Greece)

29/08/2010–16/03/2012

Master Degree " Communication & Computer Networking Technologies"

Department of Information and Communication Systems Engineering, School of Sciences, University of the Aegean, Samos (Greece)

10/10/1994–15/08/1996

Bachelor Degree from Hellenic Army Academy of Non-Commissioned Officers

Hellenic Army Academy of Non-Commissioned Officers, Trikala (Greece)

01/08/2017–29/08/2017

Certified Cloud Technology

UniNettuno University of Rome - National University of Distance Education of Madrid - Institute for Work and Technology at the University of Applied Sciences Gelsenkirchen

- Certified Cloud Technology Professional
- Certified Cloud Professional for Business
- Certified Cloud Professional for Public Administrations
- Certified Cloud Professional for Education

01/07/2017–03/09/2017

Google Certified Partner

Google Digital Academy, Mountain View, CA

- Google Mobile Sites Certification

- Google Digital Marketing Certification
- Google Analytics Individual Qualification
- Google Adwords Certification
 - Search Advertising
 - Mobile Advertising
 - Video Advertising
 - Display Advertising
 - Shopping Advertising

14/11/2016–09/12/2016 **Advanced Network Security Certificate**
School of Research and Informatics Officers of the Hellenic Army

01/02/2010–10/05/2010 **Certified Cisco Information Technology Essential Expert**
Aristotle University of Thessaloniki and Cisco Networking Academies

01/10/2008–30/11/2009 **Microsoft Network Engineer Certificate**
Microsoft and School of Research and Informatics Officers of the Hellenic Army

03/02/2003–26/06/2003 **Computer Programming Certificate**
School of Research and Informatics Officers of the Hellenic Army

Online Certifications

- Certificate in Cyber Security and Its Ten Domains, Kennesaw State University, University System of Georgia, Kennesaw
- Network security, Faculty of Mathematics, Computing and Technology at The Open University, UK
- Forensic engineering, Faculty of Mathematics, Computing and Technology at The Open University, UK
- Big Data, Cloud Computing, & CDN Emerging Technologies, Yonsei University, Department of Computer Science, S. Korea
- Engineering, Faculty of Mathematics, Computing and Technology at The Open University, UK
- Ethics in Information and Computer Sciences, Faculty of Mathematics, Computing and Technology at The Open University, UK
- Assistive technologies and online learning, Faculty of Mathematics, Computing and Technology at The Open University, UK
- Open Educational Resources (OER), Faculty of Mathematics, Computing and Technology at The Open University, UK
- Open education, Faculty of Mathematics, Computing and Technology at The Open University, UK
- Accessibility of eLearning, Faculty of Mathematics, Computing and Technology at The Open University, UK
- Online Certification Grow Greek Tourism, Google Digital Academy, Mountain View, CA

WORK EXPERIENCE

19/07/2018–Present **Chief Information Security Officer at the Research & Informatics Directorate of Hellenic Army**
Greek Ministry of Defence, Didymoteicho (Greece)

- Computer emergency response and incident response team
- Cybersecurity and data protection
- Disaster recovery and business continuity management

- Identity and access management
- Information privacy and information regulatory compliance
- Information risk management and information assurance
- IT investigations, digital forensics, eDiscovery
- Security architecture

31/10/2019–Present

Adjunct Professor

Department of Physics, Faculty of Sciences, International Hellenic University, Kavala (Greece)

- Signal Processing
- Neural Networks
- Optoelectronics

01/10/2013–Present

Research Associate

Vocational Training Center of the National and Kapodistrian University of Athens, Athens (Greece)

- Smart Energy Grids
- CMS Drupal

01/01/2018–Present

Guest Editor

MDPI

- *Applied Sciences* (ISSN 2076-3417; CODEN: ASPCC7) Journal, MDPI, Special Issue "Bio-Inspired Hybrid Artificial Intelligence Framework for Cyber Security" (**Impact Factor 2.217**)
- *Sustainability* (ISSN 2071-1050; CODEN: SUSTDE) Journal, MDPI, Special Issue "Sustainability Science and Technology" (**Impact Factor 2.592**)

01/03/2019–30/09/2019

Adjunct Professor

School of Civil Engineering, Democritus University of Thrace, Xanthi (Greece)

Postgraduate Program: "Applied Mathematics"

- Intelligent Models and Hybrid Soft Computing Information Systems

12/03/2019–30/09/2019

Adjunct Professor

Department of Forestry and Management of the Environment and Natural Resources, Democritus University of Thrace, Orestiada (Greece)

- Information Systems and Internet Technologies
- Database Technologies

01/03/2017–10/10/2018

Adjunct Professor

Department of Computing and Informatics Engineering, Eastern Macedonia and Thrace Institute of Technology, Kavala (Greece)

- Computer Graphics

10/09/2017–10/10/2018

Adjunct Professor

Department of Business Administration, Eastern Macedonia and Thrace Institute of Technology, Kavala (Greece)

- Computer Graphics

01/12/2015–14/02/2017

Research Assistant

Department of Forestry and Management of the Environment and Natural Resources,
Democritus University of Thrace, Orestiada (Greece)

- Laboratory Research Assistant at the Lab of Forest-Environmental Informatics and Computational Intelligence

01/08/2005–01/09/2016

IT Manager & Network Administrator

Hellenic Army/Research & Informatics Directorate

- Information Technology Manager
- Information Systems Security Manager
- Senior Systems Analyst/System Architect
- Senior Network Administrator
- Senior Programmer
- Database Administrator

15/08/1996–01/08/2005

Human Resources Manager

Hellenic Army/General Staff

- Human Resources Manager & Secretarial

PERSONAL SKILLS

Mother tongue(s)

Greek

Foreign language(s)

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C1	C1	C1	C1	C1
TIE C1+					
French	A1	A1	A1	A1	A1
Turkish	A1	A1	A1	A1	A1

Levels: A1 and A2: Basic user - B1 and B2: Independent user - C1 and C2: Proficient user
Common European Framework of Reference for Languages - Self-assessment grid

Communication skills

- Extremely organized person
- Good abilities for synthetic and global views over concrete situations
- End-oriented work capacity
- Problem-solving attitude
- Responsibility
- Self-respect and self-reliance
- Strong referential values of fairness, equity and dignity
- Ability to establish and maintain good working relations with people of different national and cultural backgrounds
- Ability to live and/or serve in hardship locations

Organisational / managerial skills

- Good experience in project and team management
- Strong sense of leadership
- Highly organized
- Excellent planning skills with great attention to detail and ability to prioritize work

Job-related skills

- Data Center Infrastructure & Data Center Management
- Network Planning
- IT Systems Analyst & Architecture
- Systems Engineering
- Information Assurance and Cyber Defence (Security Architecture)
- Enterprise Architecture
- Backup & Recovery Technology
- Operating System Technology
- Disaster Recovery Hardware & System Software Technology

ADDITIONAL INFORMATION

Citation & Social Profile

Google Scholar

Total citations **946**, h-index **20**, i-10 index **37**
Scopus

Total citations **198**, h-index **8**
DBLP | **Researchgate** | **Linkedin**

Publications

Cyber Security informatics
Journals

1. Demertzis, K., and L. Iliadis. **Cognitive Web Application Firewall to Critical Infrastructures Protection from Phishing Attacks**, Journal of Computations & Modelling, vol.9, no.2, 2019, 1-26, ISSN: 1792-7625 (print), 1792-8850 (online), Scienpress Ltd, 2019.
2. Xing, L., K. Demertzis, and J. Yang. **Identify Data Streams Anomalies by Evolving Spiking Restricted Boltzmann Machines**. Neural Computing & Application, Springer, 2019. doi:10.1007/s00521-019-04288-5.
3. Demertzis, K., L. Iliadis, and I. Bougoudis. **Gryphon: A semi-supervised anomaly detection system based on one-class evolving spiking neural network**. Neural Computing & Application, Springer, 2019. doi:10.1007/s00521-019-04363-x.
4. Demertzis, K., and L. Iliadis. 2017. **Computational intelligence anti-malware framework for android OS**. Vietnam Journal of Computer Science vol. 4, 245–259. <https://doi.org/10/gdp86x>.
5. Demertzis, Konstantinos. Iliadis, L.S., Anezakis, V.-D., 2018. **An innovative soft computing system for smart energy grids cybersecurity**. Advances in Building Energy Research 12, 3–24. <https://doi.org/10/gdp862>
6. Demertzis, Konstantinos. Kikiras, P., Tziritas, N., Sanchez, S.L., Iliadis, L., 2018. **The Next Generation Cognitive Security Operations Center: Network Flow Forensics Using Cybersecurity Intelligence**. Big Data and Cognitive Computing 2, 35. <https://doi.org/10/gfkhpp>
7. Demertzis, Konstantinos. Iliadis, L.S., 2016. **Ladon: A Cyber Threat Bio-Inspired Intelligence Management System**. Journal of Applied Mathematics & Bioinformatics, vol.6, no.3, 2016, 45-64, ISSN: 1792-6602 (print), 1792-6939 (online), Scienpress Ltd, 2016.
8. Demertzis, K., N. Tziritas, P. Kikiras, S. L. Sanchez, and L. Iliadis. **The Next Generation Cognitive Security Operations Center: Adaptive Analytic Lambda Architecture for Efficient Defense against Adversarial Attacks**. Big Data Cognitive Computing 3, no. 1 (2019): 6. doi:10.3390/bdcc3010006.
9. Demertzis, K., L. Iliadis, N. Tziritas and P. Kikiras. **Anomaly Detection via Blockchain Deep Learning Smart Contracts in Industry 4.0**. Neural Computing & Application, Springer, (in press).

Book Chapters

10. Demertzis, K., and L. Iliadis. **A Bio-Inspired Hybrid Artificial Intelligence Framework for Cyber Security**. In Computation, Cryptography, and Network Security. Edited by N. J. Daras and M. T. Rassias, 161–93. Cham: Springer International Publishing, 2015. doi:10.1007/978-3-319-18275-9_7.

11. Demertzis, Konstantinos. Iliadis, L.S., 2018. **Real-time Computational Intelligence Protection Framework Against Advanced Persistent Threats**. Book entitled Cyber-Security and Information Warfare, Series: Cybercrime and Cybersecurity Research, NOVA science publishers, ISBN: 978-1-53614-385-0, Chapter 5.
12. Demertzis, K., and L. Iliadis. **A Computational Intelligence System Identifying Cyber-Attacks on Smart Energy Grids**. In Modern Discrete Mathematics and Analysis: With Applications in Cryptography, Information Systems and Modeling, Springer Optimization and Its Applications. Edited by N. J. Daras and T. M. Rassias, 97–116. Cham: Springer International Publishing, 2018. doi:10.1007/978-3-319-74325-7_5.

Conferences

13. P. Kikiras, Demertzis, K., S. L. Sanchez, N. Tziritas and L. Iliadis. **The Next Generation of Cognitive Security Operation Centers for AI enabled Cyber Defence**. NATO Cooperative Cyber Defence Centre of Excellence, 12th International Conference on Cyber Conflict (CyCon 2020), 26-29 May 2020, Tallinn, Estonia, (in press)
14. Demertzis, K., L. Iliadis, P. Kikiras, and N. Tziritas. **Cyber-Typhon: An Online Multi-task Anomaly Detection Framework**. In Artificial Intelligence Applications and Innovations. AIAI 2019. IFIP Advances in Information and Communication Technology, Vol. 559. Edited by J. MacIntyre, I. Maglogiannis, L. Iliadis, and E. Pimenidis. Cham: Springer, 2019. doi:10.1007/978-3-030-19823-7_2.
15. Demertzis, K., and L. Iliadis. **Bio-inspired Hybrid Intelligent Method for Detecting Android Malware**. In Knowledge, Information and Creativity Support Systems, Advances in Intelligent Systems and Computing. Edited by S. Kunifuji, G. A. Papadopoulos, A. M. J. Skulimowski, and J. Kacprzyk, 289–304. Springer International Publishing, 2016. doi:10.1007/978-3-319-27478-2_20.
16. Demertzis, K., and L. Iliadis. **Evolving Smart URL Filter in a Zone-Based Policy Firewall for Detecting Algorithmically Generated Malicious Domains**. In Statistical Learning and Data Sciences. Edited by A. Gammernan, V. Vovk, and H. Papadopoulos, 223–33. Lecture Notes in Computer Science. Springer International Publishing, 2015. doi:10.1007/978-3-319-17091-6_17.
17. Demertzis, K., and L. Iliadis. **SAME: An Intelligent Anti-malware Extension for Android ART Virtual Machine**. In Computational Collective Intelligence. Edited by M. Núñez, N. T. Nguyen, D. Camacho, and B. Trawiński, 235–45. Lecture Notes in Computer Science. Springer International Publishing, 2015. doi:10.1007/978-3-319-24306-1_23.
18. Demertzis, K., and L. Iliadis. **A Hybrid Network Anomaly and Intrusion Detection Approach Based on Evolving Spiking Neural Network Classification**. In E-Democracy, Security, Privacy and Trust in a Digital World, Communications in Computer and Information Science. Edited by A. B. Sideridis, Z. Kardasiadou, C. P. Yialouris, and V. Zorkadis, 11–23. Springer International Publishing, 2014. doi:10.1007/978-3-319-11710-2_2.
19. Demertzis, K., and L. Iliadis. **Evolving Computational Intelligence System for Malware Detection**. In Advanced Information Systems Engineering Workshops, Lecture Notes in Business Information Processing. Edited by L. Iliadis, M. Papazoglou, and K. Pohl, 322–34. Springer International Publishing, 2014. doi:10.1007/978-3-319-07869-4_30.
20. Demertzis, K., L. Iliadis, and V. Anezakis. 2018. **MOLESTRA: A Multi-Task Learning Approach for Real-Time Big Data Analytics**, in: 2018 Innovations in Intelligent Systems and Applications (INISTA). Presented at the 2018 Innovations in Intelligent Systems and Applications (INISTA), pp. 1–8. doi:10.1109/INISTA.2018.8466306.
21. Demertzis, Konstantinos. Iliadis, L., Anezakis, V.-D., 2018. **A Dynamic Ensemble Learning Framework for Data Stream Analysis and Real-Time Threat Detection**, in: Kůrková, V., Manolopoulos, Y., Hammer, B., Iliadis, L., Maglogiannis, I. (Eds.), Artificial Neural Networks and Machine Learning – ICANN 2018, Lecture Notes in Computer Science. Springer International Publishing, pp. 669–681.
22. Demertzis, Konstantinos. Iliadis, L., Spartalis, S., 2017. **A Spiking One-Class Anomaly Detection Framework for Cyber-Security on Industrial Control Systems**, in: Boracchi, G., Iliadis, L., Jayne, C., Likas, A. (Eds.), Engineering Applications of Neural Networks, Communications in Computer and Information Science. Springer International Publishing, pp. 122–134.
23. Rantos, K., G. Drosatos, K. Demertzis, C. Ilioudis, and A. Papanikolaou. 2018. **Blockchain-based Consents Management for Personal Data Processing in the IoT Ecosystem**. Presented at the International Conference on Security and Cryptography, pp. 572–577. doi:10.5220/0006911005720577.
24. Rantos, K., G. Drosatos, K. Demertzis, C. Ilioudis, A. Papanikolaou, and A. Kritsas. **ADvoCATE: A Consent Management Platform for Personal Data Processing in the IoT Using Blockchain Technology**. In Innovative Security Solutions for Information Technology and Communications.

SECITC 2018, Vol. 11359. Edited by J. L. Lanet and C. Toma. Lecture Notes in Computer Science. Cham: Springer, 2019. doi:10.1007/978-3-030-12942-2_23.

Environmental informatics

Journals

25. Anezakis, V.-D., K. Demertzis, L. Iliadis, and S. Spartalis. **Hybrid intelligent modeling of wild fires risk**. *Evolving Systems*, no. 4 (2018): 267–83. <https://doi.org/10/gdp863> doi:10.1007/s12530-017-9196-6.
26. Bougoudis, I., K. Demertzis, L. Iliadis, V.-D. Anezakis, and A. Papaleonidas. 2018. **FuSSFFra, a fuzzy semi-supervised forecasting framework: the case of the air pollution in Athens**. *Neural Computing & Application*, Springer, vol. 29, 375–388. <https://doi.org/10/gc9bbf> doi:10.1007/s00521-017-3125-2.
27. Bougoudis, I., K. Demertzis, and L. Iliadis. 2016. **HISYCOL a hybrid computational intelligence system for combined machine learning: the case of air pollution modeling in Athens**. *Neural Computing & Application*, Springer, vol. 27, 1191–1206. <https://doi.org/10/f8r7vf> doi:10.1007/s00521-015-1927-7.
28. Anezakis, V.-D., L. Iliadis, K. Demertzis, and G. Mallinis. **Hybrid Soft Computing Analytics of Cardiorespiratory Morbidity and Mortality Risk Due to Air Pollution**. In *Information Systems for Crisis Response and Management in Mediterranean Countries*, Lecture Notes in Business Information Processing. Edited by I. M. Dokas, N. Bellamine-Ben Saoud, J. Dugdale, and P. Díaz, 87–105. Springer International Publishing, 2017. doi:10.1007/978-3-319-67633-3_8.
29. Bougoudis, I., K. Demertzis, and L. Iliadis. **Fast and low cost prediction of extreme air pollution values with hybrid unsupervised learning**. *Integrated Computer-Aided Engineering* 23, no. 2 (2016): 115–27. <https://doi.org/10/f8dt4t> doi:10.3233/ICA-150505.
30. Demertzis, K., and L. Iliadis. 2017. **Detecting invasive species with a bio-inspired semi-supervised neurocomputing approach: the case of Lagocephalus sceleratus**. *Neural Computing & Application*, Springer, vol. 28 pp. 1225–1234. <https://doi.org/10/gbkgb7> doi:10.1007/s00521-016-2591-2.
31. Demertzis, Konstantinos. Iliadis, L., Anezakis, V.-D., 2017. **Commentary: Aedes albopictus and Aedes japonicus—two invasive mosquito species with different temperature niches in Europe**. *Frontiers Environmental Science* 5. <https://doi.org/10/gdp865>
32. Demertzis, K., L. Iliadis, S. Avramidis, and Y. A. El-Kassaby. 2017. **Machine learning use in predicting interior spruce wood density utilizing progeny test information**. *Neural Computing & Application*, Springer, vol. 28, 505–519. <https://doi.org/10/gdp86z> doi:10.1007/s00521-015-2075-9.
33. Demertzis, Konstantinos. Iliadis, L.S., Anezakis, V.-D., 2018. **Extreme deep learning in biosecurity: the case of machine hearing for marine species identification**. *Journal of Information and Telecommunication* 2, 492–510. <https://doi.org/10/gdwszn>
34. Dimou, V., V.-D. Anezakis, K. Demertzis, and L. Iliadis. **Comparative analysis of exhaust emissions caused by chainsaws with soft computing and statistical approaches**. *International Journal of Environmental Science and Technology* 15, no. 7 (2018): 1597–608. <https://doi.org/10/gdp864> doi:10.1007/s13762-017-1555-0.
35. Iliadis, L., V.-D. Anezakis, K. Demertzis, and G. Mallinis. 2017. **Hybrid Unsupervised Modeling of Air Pollution Impact to Cardiovascular and Respiratory Diseases**. *IJISCRAM* 9, 13–35. <https://doi.org/10/gfkhpm> doi:10.4018/IJISCRAM.2017070102.
36. Demertzis, K.; Iliadis, L., **GeoAI: A Model-Agnostic Meta-Ensemble Zero-Shot Learning Method for Hyperspectral Image Analysis and Classification**. *Algorithms* 2020, 13, 61; <https://doi.org/10.3390/a13030061>

Conferences

37. Demertzis, K., L. Iliadis, and V. D. Anezakis. **A Machine Hearing Framework for Real-Time Streaming Analytics Using Lambda Architecture**. In *Engineering Applications of Neural Networks. EANN 2019. Communications in Computer and Information Science*, Vol. 1000. Edited by J. Macintyre, L. Iliadis, I. Maglogiannis, and C. Jayne. Cham: Springer, 2019. doi:10.1007/978-3-030-20257-6_21.
38. Anezakis, V., G. Mallinis, L. Iliadis, and K. Demertzis. 2018. **Soft computing forecasting of cardiovascular and respiratory incidents based on climate change scenarios**, in: 2018 IEEE Conference on Evolving and Adaptive Intelligent Systems (EAIS). Presented at the 2018 IEEE

Conference on Evolving and Adaptive Intelligent Systems (EAIS), pp. 1–8
doi:10.1109/EAIS.2018.8397174.

39. Anezakis, V.-D., K. Demertzis, and L. Iliadis. 2018. **Classifying with fuzzy chi-square test: The case of invasive species**. AIP Conference Proceedings 1978, 290003. <https://doi.org/10/gdtm5q>

40. Anezakis, V.-D., K. Demertzis, L. Iliadis, and S. Spartalis. **A Hybrid Soft Computing Approach Producing Robust Forest Fire Risk Indices**. In Artificial Intelligence Applications and Innovations, IFIP Advances in Information and Communication Technology. Edited by L. Iliadis and I. Maglogiannis, 191–203. Springer International Publishing, 2016. doi:10.1007/978-3-319-44944-9_17.

41. Anezakis, V.-D., K. Demertzis, L. Iliadis, and S. Spartalis. **Fuzzy Cognitive Maps for Long-Term Prognosis of the Evolution of Atmospheric Pollution, Based on Climate Change Scenarios: The Case of Athens**. In Computational Collective Intelligence. Edited by N.-T. Nguyen, L. Iliadis, Y. Manolopoulos, and B. Trzmiński, 175–86. Lecture Notes in Computer Science. Springer International Publishing, 2016. doi:10.1007/978-3-319-45243-2_16.

42. Bougoudis, I., K. Demertzis, L. Iliadis, V.-D. Anezakis, and A. Papaleonidas. **Semi-supervised Hybrid Modeling of Atmospheric Pollution in Urban Centers**. In Engineering Applications of Neural Networks, Communications in Computer and Information Science. Edited by C. Jayne and L. Iliadis, 51–63. Springer International Publishing, 2016. doi:10.1007/978-3-319-44188-7_4.

43. Demertzis, Konstantinos. Anezakis, V.-D., Iliadis, L., Spartalis, S., 2018. **Temporal Modeling of Invasive Species' Migration in Greece from Neighboring Countries Using Fuzzy Cognitive Maps**, in: Iliadis, L., Maglogiannis, I., Plagianakos, V. (Eds.), Artificial Intelligence Applications and Innovations, IFIP Advances in Information and Communication Technology. Springer International Publishing, pp. 592–605.

44. Demertzis, K., and L. Iliadis. **Adaptive Elitist Differential Evolution Extreme Learning Machines on Big Data: Intelligent Recognition of Invasive Species**. In Advances in Big Data, Advances in Intelligent Systems and Computing. Edited by P. Angelov, Y. Manolopoulos, L. Iliadis, A. Roy, and M. Vellasco, 333–45. Springer International Publishing, 2017. doi:10.1007/978-3-319-47898-2_34.

45. Demertzis, K., and L. Iliadis. **Intelligent Bio-Inspired Detection of Food Borne Pathogen by DNA Barcodes: The Case of Invasive Fish Species Lagocephalus Sceleratus**. In Engineering Applications of Neural Networks, Communications in Computer and Information Science. Edited by L. Iliadis and C. Jayne, 89–99. Springer International Publishing, 2015. doi:10.1007/978-3-319-23983-5_9.

46. Demertzis, K., L. Iliadis, and V. Anezakis. 2017. **A deep spiking machine-hearing system for the case of invasive fish species**, in: 2017 IEEE International Conference on INnovations in Intelligent Systems and Applications (INISTA). Presented at the 2017 IEEE International Conference on INnovations in Intelligent Systems and Applications (INISTA), pp. 23–28
doi:10.1109/INISTA.2017.8001126.

47. Iliadis, L., V.-D. Anezakis, K. Demertzis, and S. Spartalis. **Hybrid Soft Computing for Atmospheric Pollution-Climate Change Data Mining**. In Transactions on Computational Collective Intelligence XXX. Edited by N. Thanh Nguyen and R. Kowalczyk, 152–77. Lecture Notes in Computer Science. Cham: Springer International Publishing, 2018. doi:10.1007/978-3-319-99810-7_8.

Book Chapters

48. K. Demertzis, Bougoudis, I., L. Iliadis, **Geospatial Big Data Analytics: Air Quality and Pollution Forecasting Using AI and GIS**, MACHINE LEARNING PARADIGMS – Advances in Data Analytics, Springer, INTELLIGENT SYSTEMS REFERENCE LIBRARY bookseries (in press)

49. Demertzis, K., and L. Iliadis. 2018. **The Impact of Climate Change on Biodiversity: The Ecological Consequences of Invasive Species in Greece**, in: Leal Filho, W., Manolas, E., Azul, A.M., Azeiteiro, U.M., McGhie, H. (Eds.), Handbook of Climate Change Communication: Vol. 1: Theory of Climate Change Communication, Climate Change Management. Springer International Publishing, Cham, pp. 15–38. https://doi.org/doi:10.1007/978-3-319-69838-0_2.

Panhellenic Conferences

50. Ανεζάκης, Βαρδής-Δημήτριος, Κωνσταντίνος Δεμερτζής, Λάζαρος Ηλιάδης, (2017) **Πρόβλεψη Χαλαζοπτώσεων Μέσω Μηχανικής Μάθησης**. 3ο Πανελλήνιο Συνέδριο Πολιτικής Προστασίας SafeEvros 2016: Οι νέες τεχνολογίες στην υπηρεσία της Πολιτικής Προστασίας, Proceedings, ISBN : 978-960-89345-7-3, Ιούνιος 2017, Εκδοτικός Οίκος: Δημοκρίτειο Πανεπιστήμιο Θράκης.

51. Κωνσταντίνος Δεμερτζής, Λάζαρος Ηλιάδης, 2019, **Η Αξιοποίηση των Συγχρόνων Τεχνολογιών Πληροφορικής και Επικοινωνιών στην Μουσικοπαιδαγωγική: Η Περίπτωση του**

Λαογραφικού Μουσείου Νέας Ορεστιάδας και Περιφέρειας, Πρακτικά 2ου Πανελληνίου Συνεδρίου Ιστορίας και Πολιτισμού της Ορεστιάδας Πολιτιστική Κληρονομιά και Τοπική Ανάπτυξη, Έκδοση Σχολής Επιστημών Γεωπονίας και Δασολογίας Δημοκρίτειου Πανεπιστημίου Θράκης και Δήμου Ορεστιάδας, ISBN: 978-618-00-1152-4, Απρίλιος 2019, Επιμέλεια: Ευάγγελος Μανωλάς.

Greek Books Chapters

52. Κωνσταντίνος Δεμερτζής, 2018, **Ενίσχυση της Διοικητικής Ικανότητας των Δήμων Μέσω της Ηλεκτρονικής Διακυβέρνησης: Η Στρατηγική των Έξυπνων Πόλεων με Σκοπό την Αειφόρο Ανάπτυξη**, Θέματα Δασολογίας και Διαχείρισης Περιβάλλοντος και Φυσικών Πόρων, 10ος Τόμος: Περιβαλλοντική Πολιτική: Καλές Πρακτικές, Προβλήματα και Προοπτικές, σελ. 84 - 100, ISSN: 1791-7824, ISBN: 978-960-9698-14-6, Νοέμβριος 2018, Εκδοτικός Οίκος: Δημοκρίτειο Πανεπιστήμιο Θράκης.

53. Κωνσταντίνος Δεμερτζής, Λάζαρος Ηλιάδης, 2015, **Γενετική Ταυτοποίηση Χωροκατακτητικών Ειδών με Εξελιγμένες Μεθόδους Τεχνητής Νοημοσύνης: Η Περίπτωση του Ασιατικού Κουνουπιού Τίγρης (Aedes Albopictus)**, Θέματα Δασολογίας & Διαχείρισης Περιβάλλοντος & Φυσικών Πόρων, 7ος τόμος, Κλιματική Αλλαγή: Διεπιστημονικές Προσεγγίσεις, ISSN: 1791-7824, ISBN: 978-960-9698-11-5, Εκδοτικός Οίκος: Δημοκρίτειο Πανεπιστήμιο Θράκης.

Lecture Notes and Course Material

- Lecture Notes in "Information Systems and Internet Technologies". Undergraduate Course in Department of Forestry and Management of the Environment and Natural Resources, Democritus University of Thrace.
- Lecture Notes in "Database Technologies". Undergraduate Course in Department of Forestry and Management of the Environment and Natural Resources, Democritus University of Thrace.
- Lecture Notes in "Information and Communication Technologies for Environmental Education". Postgraduate Course in Department of Forestry and Management of the Environment and Natural Resources, Democritus University of Thrace.
- Lecture Notes in "Computer Graphics". Undergraduate course in Computer and Informatics Engineering Department, Eastern Macedonia & Thrace Institute of Technology.
- Lecture Notes in "Computer Graphics". Undergraduate course in Department of Business Administration, Eastern Macedonia & Thrace Institute of Technology.
- Lecture Notes in "Smart Energy Grids". Online course in Vocational Training Center of the National and Kapodistrian University of Athens.
- Lecture Notes in "CMS Drupal". Online course in Vocational Training Center of the National and Kapodistrian University of Athens.
- Lecture Notes in "Web Programming and Information Security". Undergraduate course in Department of Civil Engineering, Democritus University of Thrace.

Articles

- Open Source Intelligence, K. Demertzis.
- Overview Smart Energy Grids, K. Demertzis - Ch Skianis.
- Wireless Networks 2,4 GHz, K. Demertzis.

PhD Thesis

- Development of Intelligent Models and respective Information Systems, inspired by Biological prototypes, aiming in the assessment of Environmental Problems and Risks, Supervisor Professor Lazaros Iliadis

Master Thesis

- Conceptual Framework, Interoperability, Active Standards & Network Architecture for Smart Energy Grids, Supervisor Associate Professor Charalabos Skianis

Master Thesis

- Blockchain Adaptive Federated Auto MetaLearning Architecture for CyberSecurity and Privacy in Industry 4.0, Supervisor Assistant Professor Maria Koziri

Research Projects

- 2018 - 2019 Research Project entitled, "Cybersecurity Algorithms for Spiking Neural Networks". BrainChip, Inc., Aliso Viejo, California, U.S.A and School of Civil Engineering, Democritus University of Thrace, Greece.
- 2016 - 2018 Cyber Operations Expert Analyst at Electoral Observatory Internet Research

Programme "<http://electionsnet.org/>" by the Centre of International & European Political Economy & Governance of the University of Peloponnese and the European Network of Political Foundations.

- 2015 - 2016 Information Technology Advisor at Operational Programme 'Digital Convergence', Programme under the Convergence objective co-funded by the European Regional Development Fund (ERDF) - Technical Chamber of Greece (TEE-TCG) & Greek Research and Technology Network (GRNET S.A.) ID:94.

Awards, Honors & Fellowships

- Postgraduate Academic Excellence Scholarship at the Department of Computer Science and Biomedical Informatics, School of Science, University of Thessaly for 2017 - 2018.
- Intel® Edge AI Scholarship, Intel® 2019- 2020
- Cisco CCNA Cyber Ops Scholarship by the Global Cybersecurity Scholarship program for 2017-2018.
- Cloud Developer Award by IBM Skills Academy for 2017-2018.
- Google Developer Challenge Scholarship to the Android Developer and the Mobile Web Specialist track, 2017 - 2018.
- Certificate for the highest average review score paper to the Fourth International Conference on Information Systems for Crisis Response and Management in Mediterranean Countries (ISCRAM-med 2017).
- Microsoft Windows Azure for Research Award Winner for 2015 - 2016.
- Postgraduate Academic Excellence Scholarship at the Department of Forestry & Management of the Environment & Natural Resources (Lab of Forest-Environmental Informatics and Computational Intelligence) at the Democritus University of Thrace for 2015 - 2016.

Professional Societies & Affiliations

- Expert and Evaluator of the General Secretariat for Research and Technology (GSRT) to the Ministry of Education, Research and Religious Affairs of Greece
- Expert and Evaluator of the Cyprus Research Promotion Foundation's Programme for Technological Development and Innovation
- Expert and Evaluator of the European Commission INNOVATIVE LABS (INNOLABS) project
- Expert and Evaluator of the Science Fund of the Republic of Serbia
- Member of Cloud Security Alliance (CSA) Working Group Industrial Control Systems (ICS)
- Researcher of Global Foundation for Cyber Studies and Research, Special Interest Group - Cyber Systems & Trust (CySAT)
- Member of European Society for Cognitive Systems (EUCognition)
- Member of Computer and Information Systems Security Group of Greek Free/Open Source Software Society
- Member of Hellenic Artificial Intelligence Society
- Member of Hellenic Association for Information and Communication Technologies in Agriculture Food and Environment
- Member of Web Services and Cyber Security Lab at the Computer and Informatics Engineering of the Eastern Macedonia & Thrace Institute of Technology
- Scientific Research Partner of the Labour Institute of the Greek General Confederation of Labour (INE/GSEE)
- Cyber Security Forum Initiative (CSFI) Volunteer

Reviewer in International Scientific Journals

- Evolving Systems (EVOS), Springer
- Telecommunication Systems, Springer
- Frontiers of Information Technology & Electronic Engineering (JZUS-C), Springer
- Information Sciences, Elsevier
- Applied Computing and Informatics (ACI), Elsevier
- Applied Soft Computing (ASOC), Elsevier
- Neurocomputing (NEUCOM), Elsevier
- Journal of Environmental Management (JEMA), Elsevier

- Knowledge-Based Systems (KNOSYS), Elsevier
- Computers & Security (COSE), Elsevier
- Swarm and Evolutionary Computation (SWEVO), Elsevier
- The Computer Journal (COMPJ), Oxford University Press
- Cryptography, Open Access Journal by MDPI
- Information, Open Access Information Science Journal by MDPI
- Applied Sciences, Open Access Information Science Journal by MDPI
- Advances in Networks (NET), Science Publishing Group
- Automation, Control and Intelligent Systems (ACIS), Science Publishing Group
- International Journal of Intelligent Information Systems (IJIS), Science Publishing Group
- Journal of Information and Telecommunication (JIT), Taylor & Francis/Routledge

Program Committee

- 21st Engineering Applications of Neural Networks (EANN), 5 - 7 June 2020, Halkidiki - Greece
- 16th International Conference on Artificial Intelligence Applications and Innovations (AIAI2020), 5 - 7 June 2020, Halkidiki - Greece
- 2021 IEEE International Conference on Cyber-Security and Resilience (IEEE CSR 2021), Rhodes, Greece, March 22-24, 2021
- IEEE International Black Sea Conference on Communications and Networking (IEEE BlackSeaCom 2019), 3-6 June 2019 // Sochi, Russia
- 2019 International Joint Conference on Neural Networks (IJCNN 2019), Budapest, Hungary, July 14-19, 2019
- 20th International Conference on Engineering Applications of Neural Networks (EANN 2019), Crete island Greece, May 24 - 26, 2019
- 15th AIAI 2019: 15th Artificial Intelligence Applications and Innovations conference (AIAI 2019), Crete island Greece, May 24 - 26, 2019
- 19th International Conference on Engineering Applications of Neural Networks (EANN 2018), 03-05 Sep 2018, Bristol, United Kingdom.
- 2018 IEEE World Congress on Computational Intelligence (WCCI 2018) ---2018 International Joint Conference on Neural Networks (IJCNN 2018), the 2018 IEEE International Conference on Fuzzy Systems (FUZZ-IEEE 2018), and the 2018 IEEE Congress on Evolutionary Computation (IEEE CEC 2018)---, 08-13 July 2018, Rio de Janeiro, Brazil
- The Fourth International Conference on Big Data, Small Data, Linked Data and Open Data (ALLDATA 2018), April 22, 2018 to April 26, 2018 - Athens, Greece
- The International Conference on Artificial Neural Networks (ICANN 2018), 05 - 07 Oct, Rhodes, Greece
- The 2018 IEEE Conference on Evolving and Adaptive Intelligent Systems (EAIS 2018), 25 - 27 May, Rhodes, Greece
- 2018 IEEE International Conference on INnovations in Intelligent SysTems and Applications (INISTA 2018), 3-5 of July 2018, Thessaloniki, Greece
- The 3rd International Conference on Fuzzy Systems and Data Mining, November 24-27, 2017, National Dong Hwa University, Hualien, Taiwan
- 13th IFIP International Conference on Artificial Intelligence Applications and Innovations (AIAI 2017), August 19-25, 2017, Melbourne, Australia
- 18th International Conference on Engineering Applications of Neural Networks (EANN 2017), August 25-27, 2017, Athens, Greece
- 2017 International Joint Conference on Neural Networks (IJCNN 2017), Anchorage, Alaska, USA, May 14-19, 2017
- International Neural Network Society Conference on Big Data (INNS Big Data conference 2016), Thessaloniki, Greece 23-25 October 2016
- 12th IFIP International Conference on Artificial Intelligence Applications and Innovations (AIAI 2016), Thessaloniki, Greece 16-18 September 2016
- 17th International Conference on Engineering Applications of Neural Networks (EANN 2016),

September 2nd - 5th, 2016, Robert Gordon University, Aberdeen

- 16th International Conference on Engineering Applications of Neural Networks (EANN 2015), Island of Rhodes, Greece, 25-28 September 2015

Computer Skills

- MS Windows based Servers (2k, 2003, 2008, 2012, 2016, Exchange)
- Linux based Servers (Debian, Ubuntu, CentOS, etc)
- Penetration Testing, Forensic Analysis, Advanced Network Security
- Cloud & VM Computing (Microsoft Azure, HyperV, VMware)
- Database technologies (SQL and no-SQL)
- Semantic Web technologies (RDF/S, OWL, SPARQL)
- HTML5, PHP, CSS3, jQuery, Ajax, Java, Visual Basic
- C, C++, C#, Python (Scikit Learn, TensorFlow)
- Big Data (Hadoop, Hbase, Pig, MapReduce, Mahout, Sawzall, Bigtable)
- Machine Learning (Matlab, R, Weka, Azure ML Studio, MLib, H2O)
- CMS Back/Front-end Editor (Joomla, Wordpress, Moodle, Drupal, etc)

Special Knowledge in Computer Networks

- Incident Response and Handling
- Vulnerability Assessment and Risk Analysis
- Malware Analysis
- Penetration Testing and System Hacking
- Cryptography
- Windows & Linux Hardening
- Design, implementation and support of secure multi-protocol networks, with high efficiency and guaranteed quality of service
- Design of security policies for computer networks, IDS/IPS, firewalls and honeypots administration
- Design and configuration virtual private networks (VPNs)
- Configuration and administration of network devices of CISCO Systems (Routers, Access Servers, Switches, VPN concentrators)
- Research, design and implementation of TCP/IP networks for advanced network services, such as electronic commerce, distance learning, tele-medicine, teleconference and video broadcasting
- Integration of Data and Voice networks

Interests

- AI and ML (Spiking Neural Networks, Bio-inspired Computing, Model-Agnostic Meta-Learning, Multi-task learning, Automated Machine Learning)
- AI in Cybersecurity (Automated Assessment and Response Systems, AI Anomaly Detection, AI Malware Analysis, AI IDS-IPS, AI Forensics)
- AI in Blockchain (Smart Contracts, Blockchain Scalability, Pattern Vulnerable to Reentrancy)
- AI in Big Data (Real-Time Analytics, Secure Computations in Distributed Programming Frameworks, NoSQL Data Storage, Security/Compliance Monitoring, Scalable and Composable Privacy-Preserving Data Mining, etc)
- AI in Bio-Security - Bio-Surveillance (Invasive Species, DNA Barcoding, Climate Change)