# Curriculum Vitae

## Personal information

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| First name / Surname | **Dimitrios Vogiatzis** |
| Address | 22, Alevizatou, 15669, Athens, Greece |
| Telephone | +30-6977805508 |
| E-mail | dimitrv@acg.edu, <br> dimitrv@iit.demokritos.gr |

## Work experience

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| Dates | 2007–2017 |
| Position held | **Assistant Prof** (2016-2017) **Research Faculty**, full-time (2010-2016), part-time (2007-2010, 1998-2001) |
| Main activities | Coordinator of the Postgraduate programme in Data Science <br><br> Instructor of Information Technology courses and Research. <br> <u>Taught</u> the following courses: CS1070 Introduction to Information Systems (L4), ITC3175 Communications & Networking Essentials (L5), and ITC2188 Introduction to Programming (L4). <br> <u>Designed and taught</u> the following courses: ITC3413 Algorithms and Complexity (L5), ITC3480 Artificial Intelligence Principles (L6), ITC4417 Game Programming (L6), ITC3441 Web Science (L6), CS-ITC 3254 Cognitive Computing with IBM Watson. Also, designed a course in Data Mining and Big Data Analysis. <br><br> Participated in: the validation of the CIS programme; in the design and validation of the IT programme and MIS programme in 2010 and 2014 respectively; in the revalidation of the IT programme in 2015 <br><br> Member of the ACG Library Committee since 2013 <br><br> Received the merit stipend in 2015 |
| Employer | American College of Greece –Deree, Athens, Greece |
| Sector | Non-profit, private, higher education institution |
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| Dates | 2007–2011, 2013-2015 |
| Position held | **Research Associate** |
| Main activities | Research in Machine Learning & Applications. Supervision of a small group of researchers |
| Employer | NCSR "Demokritos", Institute of Informatics and Telecommunications, Athens, Greece |
| Sector | Research Centre |
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| Dates | June 2002–Feb 2007 |
| Position held | **Visiting Lecturer** (Jan 2004-Dec 2005), **Research Associate** (Jun 2002-Dec 2003, Jan 2006-Feb 2007) |
| Main activities | Teaching and Research. Designed and taught the following courses: EPL450 Bioinformatics, EPL442 Computational Intelligence, and EPL032 C-Programming |
| Employer | University of Cyprus, Department of Computer Science |
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| Dates | Dec 1997–Jun 2002 |
| Position held | **Research Associate** |
| Employer | National Technical University of Athens, Department of Electronic and Electrical Engineering |
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| Dates | May 1996–May 1998 |

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| Position held | **Columnist** at Greek magazines popularising science |
| Employer | "Millenium" (1997-1998), "Periskopeion" (1996-1998) |
| Sector | Publishers |

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| Dates | Mar 1996–Apr 1997 |
| Position held | **Part time instructor** at a training centre (IEK) |
| Employer | "Athinaion", Athens, Greece |
| Sector | Private, Training in Computing Skills |

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| **Research Interests** | Machine Learning and Artificial Intelligence methods as applied to user modeling and to social media mining. Application of logic and probabilities to big data analysis and in particular to streaming and heterogeneous data. |

## Education and training

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| Dates | Jan 1997–Mar 2002 |
| Title of qualification awarded | PhD in Computer Science, Machine learning |
| Principal subjects | Thesis "Rule Extraction from Artificial Neural Networks" |
| Institution | National Technical University of Athens, Department of Electrical and Computer Engineering |

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|---|---|
| Dates | Oct 1994 – Oct 1995 |
| Title of qualification awarded | MSc in Knowledge Based Systems |
| Principal subjects | Artificial Intelligence, Knowledge Based Systems |
| Institution | University of Edinburgh, Department of Artificial Intelligence |

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|---|---|
| Dates | Nov 1987 – Dec 1991 |
| Title of qualification awarded | Degree (BSc) in Computer Science (Ptychio) |
| Institution | National and Capodistrian University of Athens, Department of Informatics |

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| **Awards** | • Scholarship from the "Scottish Office" Foundation for postgraduate studies (1994)<br>• Scholarship from the Thomaidion Trust for doctoral studies (2001) |

Other language(s)
Self-assessment
*European level (\*)*

| | **Understanding** | | | **Speaking** | | | | **Writing** | |
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| | Listening | | Reading | | Spoken interaction | | Spoken production | | |
| **English** | C1 | Proficient User | C2 | Proficient User | C1 | Proficient User | C1 | Proficient User | C1 | Proficient User |
| **French** | B2 | Independent User | B2 | Independent User | B2 | Independent User | B2 | Independent User | B2 | Independent User |

*(\*) Common European Framework of Reference for Languages*

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| **Other Activity** | • I **supervised** a group of students during the International Research-Centered **Summer School** in Cognitive Systems and Interactive Robotics, Data and Content Analysis (IRSS), in 2013 and 2014. The summer schools were research oriented, our groups aimed at social network analysis with machine learning methods<br>• Since 2010 I have **co-supervised the diploma theses** (undergraduate or postgraduate) of 15 students from various Greek Universities in the domain of machine learning, graph mining and used modeling. About 50% ended in conference publications<br>• In the context of the **faculty research seminars** of the American College of Greece, I have given the following speeches: *"A Conversant Robotic Guide to Art Collections (2011)", "Mining on-line Social Networks (2012)", "Semantic Web: Fashion Style Advice (2013)", "Social Networks, Information Diffusion (2014)".*<br>• I have proposed the **research day in Informatics at Deree** event, which aims to disseminate faculty research with the main aim of attracting students at research. (1st event took place in Sept 2015) |

**Publications**

**Book chapters**

1. S. Tzafestas and D. Vogiatzis, "Concerning Hopfield Networks: An overview with Applications to System Identification and Control", S. Tzafestas Editor, Computational Intelligence in Systems and Control Design and Applications, pages 311-334, Kluwer, Boston, MA, 2000
2. G. Paliouras, S. Papadopoulos, D.Vogiatzis, and I. Kompassiaris, "User communities", edited volume, Springer, 2014

**Journal Articles**

1. D. Vogiatzis and A. Stafylopatis, "Reinforcement Learning for Symbolic Expression Induction", Mathematics and Computers in Simulation, 51, pages 169-179, 2000
2. D. Vogiatzis and A. Stafylopatis, "Reinforcement Learning for Rule Extraction from a Labeled Dataset", Cognitive Systems Research Journal, Special Issue on Integration of symbolic and connectionist systems, vol.3, num.2, pages 237-253, 2002
3. P. Avgeriou, D. Vogiatzis, A. Tzanavari, S. Retalis, "Towards a pattern language for adaptive web-based educational systems, Advanced Technology for Learning", Vol. 1, Issue 4, ACTA Press, 2004
4. A.Tzanavari, D. Vogiatzis, M. Zembylas, S. Retalis, P. Lalos, "Affective Aspects of Web Museums", Special Issue: Journal of Communication Studies, 2005
5. D. Vogiatzis and N. Tsapatsoulis, "Active Learning for Microarray Data", Special Issue of IJAR on Approximate reasoning and Machine Learning for Bioinformatics, vol. 7, Issue 1, Jan, 2008
6. D. Vogiatzis and V. Karkaletsis, "A Cognitive Framework for Robot Guides in Art Collections", Universal Access in the Information Society, Long Paper in special is-sue on "Pervasive Technologies and Assistive Environments: Social Impact, Financial, Government And Privacy Issues", issue 10/2, 2010
7. S. Konstantopoulos, V. Karkaletsis, D. Vogiatzis, and D. Bilidas,"Authoring semantic and linguistic knowledge for the dynamic generation of personalized descriptions", book chapter, Springer 2011.
8. D. Vogiatzis, "Influential Users in Social Networks", Springer Series on Studies in Computational Intelligence, edited volume: "Semantic Hyper/Multi-media Adapta-tion: Schemes and Applications", Forthcoming Springer 2012
9. D. Vogiatzis, et al., "Expert and community based style advice", Expert Systems with Applications, Available online 28 February 2012, ISSN 0957-4174, 10.1016/j.eswa.2012.02.178

**Conference Articles**

1. D. Vogiatzis and A. Stafylopatis, "A neural network endowed with symbolic processing ability", IJCNN'99, International Joint Conference on Neural Networks, Washington D.C, July 1999
2. G. Stamou, D. Vogiatzis and S. Stove, "Bridging the gap between subsymbolic and symbolic techniques: A pragmatic approach", CSCC'99, Circuits Systems Communictions and Computers, Athens, July 1999

3. D. Vogiatzis and A. Stafylopatis, "Reinforcement Learning for Rule Generation", 5th International Conference on Artificial Neural Networks and Genetic Algorithms, Prague, Czech Republic, April 22-25, 2001

4. A. Gavoyiannis, D. Vogiatzis and N. Hatziargyriou, "Dynamic Security Classification using Support Vector Machines", ISAP , Budapest, Hungary, June 2001

5. D. Frossyniotis, S. Vrettos, D. Vogiatzis & A. Stafylopatis, C. Constantinopoulos, D.I. Fotiadis & A. Likas, G. Potamias, A. Naka, Th. Tzimas & L.K. Michalis, "An Intelligent System for the Early Diagnosis of Coronary Artery Disease", 4th International Conference "Neural Networks and Expert Systems in Medicine and Healthcare", NNESMED 2001,20-22 June 2001, Milos Island, Greece 2001

6. A. Gavoyiannis, D. Vogiatzis and N. Hatziargyriou, "Combined Support Vector Classifiers using Fuzzy Clustering for Dynamic Security Assessment", IEEE, Power Engineering Society, Summer Power Meeting, July 15-19, Vancouver 2001

7. D. Vogiatzis and A. Stafylopatis, "Mapping the Growing Neural Gas to Situation Calculus", in J. Gros, J. Hartamanis and J. van Leeuwen, eds., Artificial Neural Networks – ICANN 2002, Verlag 957-962, 2002

8. D. Vogiatzis, D. Frosyniotis and A.G. Papadopoulos, "The protein structure prediction module of the Prot-Grid information system", International Conference On Enterprise Information Systems, Angers France, April 2003

9. P. Avgeriou, D. Vogiatzis, A. Tzanavari, S. Retalis, "Design Patterns in Adaptive Web-Based Educational Systems" First International Workshop on Authoring of Adaptive and Adaptable Hypermedia, WBE'04 conference, Innsbruck, Austria, February 16-18, 2004

10. D. Bolser, E.O. de Brock, R. C. Jansen, A. Kozlenkov, P. Dafas, G. A. Papadopoulos, A. Robinson, M. Schroeder, A. Stavrou, M. A. Swertz, D. Vogiatzis, "The bioGRID System: A Trial of GRID Technology for the Biotech Industry", Health Grid, Clermont Ferrand, France, 2004

11. D .Vogiatzis, A. Tzanavari, S. Retalis, P. Avgeriou & A. Papasalouros, "The Learner's Mirror". In: Proceedings of the Ninth European Conference on Pattern Languages of Programs, Isree, Germany, July 2004

12. N. Tsapatsoulis and D. Vogiatzis, "InUbiHealt: Intelligent Artefacts for Ubiquitous Health Monitoring", Special Session on Image, Signal and Distributed Data Processing for Networked eHealth Applications' within the 5th International Network Conference (INC 2005), Samos, Greece, July, 2005

13. D. Vogiatzis, A. Tzanavari, M. Zembylas, S. Retalis, "Clustering the affective aspects of web users", 10th International Conference on User Modeling, Edinburgh, UK, 2005

14. D. Vogiatzis D. and N. Tsapatsoulis, "Active Learning with Wavelets for Microarray Data", Second International Meeting on Computational Intelligence Methods for Bioinformatics and Biostatistics,. WILF 2005 Springer-Verlag, LNCS series volume number 3849, Crema, Italy, Sept 2005

15. A. Andreou, D. Vogiatzis and G. Papadopoulos, "Intelligent Classification and Retrieval of Software Components", Compsac 2006, Chicago, USA, 2006

16. D. Vogiatzis and N. Tsapatsoulis, "Missing Value Estimation for DNA Microarrays with Mutliresolution Schemes", ICANN 2006, Athens, Greece, 2006

17. D. Vogiatzis and N. Tsapatsoulis, "Clustering Microarray Data with Space Filling Curves", CIBB 2007, Portofino, Italy, 2007

18. E Kyriacou, C. Pattichis, M. Pattichis, A. Jossif, L. Paraskeva, A. Constantinides and D. Vogiatzis. "An m-Health Monitoring System for Children with Suspected Arrhythmias", EMBC , Lyon, France, 2007

19. D. Vogiatzis, D. Galanis, V. Karkaletsis, I. Androutsopoulos and C.D. Spyropoulos, "A Conversant Robotic Guide to Art Collections", Language Technology for Cultural Heritage Data, (LaTeCH), Marrakech, Morocco, 2008

20. D. Vogiatzis and E. Karkaletsis, "A Framework for Human-Robot Interaction", 1st International Conference on Pervasive Technologies Related to Assistive Environments, PETRA, Athens, Greece, 2008

21. D. Vogiatzis, C. D. Spyropoulos, S. Konstantopoulos, V. Karkaletsis, Z. Kasap, C. Matheson and O. Deroo, "An Affective Robot Guide to Museums", 4th International Workshop on Human-Computer Conversation, Bellagio, Italy, 2008.

22. D. Vogiatzis and N. Tsapatsoulis, "Modeling User Networks in Recommender Systems", 3rd International Workshop on Semantic Media Adaptation and Personalization, Prague, Czech Republic, 2008

23. E.Kyriacou, C. Pattichis, M. Pattichis, A. Jossif, D. Vogiatzis, L. Paraskeva, A. Konstantinides and A. Kounoudes, "An m-health system for continuous monitoring of children with suspected cardiac arrhythmias", 4th european conference of the international federation for medical and biological engineering, IFMBE Proceedings, 2009, Volume 22, Part 10, 1325-1328, DOI: 10.1007/978-3-540-89208-3_316

24. V. Karkaletsis, S. Konstantopoulos, D. Bilidas, D. Vogiatzis, "INDIGO project: Personality and Dialogue Enabled Cognitive Robots", Proceedings of the PErvasive Technologies Related to Assistive Environments (PETRA), Samos, Greece, 2010

25. M. Dima, D. Vogiatzis, G. Paliouras, "Expert Based Prediction of User Preferences", accepted at 5th International Workshop on Semantic Media Adaptation and Personalization (SMAP) , Limassol Cyprus, 2010

26. D. Vogiatzis, "Influence Study on Hyper-Graphs", Social Networks and Social Contagion, Social Networks and Social Contagion, Arlington, 2013

27. A. Karavolia, D. Vogiatzis, B. Truong, A. Tapia, C. Caragea, A. Squicciarini and G. Paliouras, "Tweet Type, Location and Popularity: Case Study Hurricane Sandy", KDD-LESI 2014

28. G. Katsimpras, D. Vogiatzis and G. Paliouras. "Determining Influential Users with Supervised Random Walks", 6th International Workshop on Modeling Social Media co-located with the 24th International World Wide Web Conference, 18-22 May 2015, Florence, Italy.

29. D. Karna, G.. Diakidis, D. Fassarakis-Hilliard, D. Vogiatzis, and G.. Paliouras, "Predicting the Evolution of Communities in Social Networks", Proceedings of the 5th International Conference on Web Intelligence, Mining and Semantics, Limassol, Cyprus, 2015.

30. K. Zamani, G.. Paliouras, and D. Vogiatzis, "Similarity-based User Identification across Social Networks", Proceedings of the 3rd International Workshop on Similarity-Based Pattern Analysis and Recognition, Copenhangen, Denmark, 2015.

31. Ch. Vlassopoulos, I. Kontopoulos, M. Apostolou, A. Artikis, D. Vogiatzis, "Dynamic graph management for streaming social media analytics", Proceedings of the 10th International Conference on Distributed and Event-based Systems, 382—385, DEBS, Irvine, CA, USA, June 20 – 24, 2016

32. D. Vogiatzis, A. Keros, "A density based algorithm for community detection in multi-partite networks", Proceedings of the Semantic Media Adaptation and Personalization (SMAP) conference 2017

33. M. Pavlopoulou, G. Tzortzis, D. Vogiatzis and G. Paliouras, "Predicting the Evolution of Communities in Social Networks Using Structural and Temporal Features", Proceedings of the Semantic Media Adaptation and Personalization (SMAP) conference 2017

**Technical Reports**

1. Tzanavari, A., Avgeriou, P. & Vogiatzis, D. "Patterns for Adaptive Web-based Educational Systems". Technical Report TR-2003-4, Department of Computer Science, University of Cyprus. December 2003

2. D. Vogiatzis et al.,"Cyber Bullying and Online Grooming: Helping to protect against Risks", European Networks and Information Security Agency (ENISA), co-authored by Dimitrios Vogiatzis, Sept 2011

| **Research Project Participation** | I have participated in several European and National project with the role of researcher as shown next: |

- REVEAL (Revealing Hidden Concepts in Social Media), Nov 2013- Dec 2016, FP7-ICT-2013-10 (http://revealproject.eu/).  The project aims to reveal trustworthy information in social media which is an important aspect for journalists. **Role:** graph mining for user profile elicitation and in particular, community detection, community evolution tracking and prediction.

- SERVIVE (SERvice Oriented Intelligent Value Adding nEtwork for Clothing-SMEs embarking in Mass-Customisation) aimed to be the launching platform enabling large-scale implementation of Mass Customisation in the European Fashion Domain (http://www.servive.eu/), NMP-2007, FP-7. **Role:**  I was involved in the creation of user stereotypes, automatic derivation of user stereotypes, and creating user communities based on common preferences. Additionally, I was involved in the creation of a recommendation engine which will suggest apparels of interest to a consumer based on his preferences.

- INDIGO (Interaction with personality and Dialogue Enabled Robots), IST-FP6 project. Indigo aimed to develop human-robot communication technology for intelligent mobile robots that operate and serve tasks in populated environments. In doing so, the project involved technologies from various sectors, The project addressed human-robot communication from two sides: by enabling robots to correctly perceive and understand natural human behaviour and by making them act in ways that are familiar to humans (see http://www.ics.forth.gr/indigo/description.html). Involvement: 01/6/2008-30/06/2008 (6pms), at NCSR "Demokritos", Athens, Greece. **Role:** I was involved in the building and maintenance of personal user profiles as well as in the creation of user communities based on common preferences. The user's profiling also involved capturing, and storing user's recognised emotions from audio input.

- XENIOS: Greek Project, General Secretariat of Research and Technology. Summary: A robot human interface was developed, based on perception of visual, audio information as well as on the production of natural language. The system aimed to serve as a guide in exhibitions and museums (http://www.ics.forth.gr/xenios/description.html ). Involvement: 01/5/2007-30/11/2007 (7pms), at NCSR "Demokritos", Athens, Greece. **Role:** I was involved in the personalisation of information presented to museum visitors based on user stereotypes and user profiles of preferences.

- Project: AMEK (Wireless Microsensors for the Detection of Cardiac Arrythmias", Research Promotion Foundation of Cyprus, Grant IPE/PLHRO/0506,  01/12/2006-31/12/2008 (http://www.medinfo.cs.ucy.ac.cy/index.php/research/22/53-wireless-microsensors-for-the-detection-of-cardiac-diseases).  The project aimed at the design and development of a mobile-health system platform that will be used in order to monitor children with suspected cardiac arrhythmias. The proposed system is based on sensor networks, in order to monitor a subject, while being in a predefined area, typically his/her house; while another module based on PDAs and wearable ECG recorders was used in order to extent the coverage outside the patient's house. Furthermore the system was based on a variable sampling rate to conserve power for the possible arrhythmia episode. **Role:** I was involved in co-supervision of the project execution as well as in data mining tasks, such as supervised recognition of patterns at the University of Cyprus

- GENESTREAM (IST project.  Jun 2002- Dec. 2003), Automatic categorization of information in the field of biotechnology: classification of bioinformatics' articles according to Gene Ontology. **Role:** I designed and implemented a workflow that the retrieved functional, structural and pathway information for a set of identified proteins.

- BIOGRID (IST project, Sep. 2003- Sep. 2004), Development of a Grid technology for knowledge extraction in bioinformatics. In particular, integration of resources and fast computation of protein interaction maps were the primary targets. **Role**: I was mainly involved in the distributed computation of the protein interactions maps, this involved the deployment of grid architecture, performing the experiments and evaluating the results.

- PHYSTA (Principled Hybrid Systems: Theory and Applications, Training and Mobility of Researchers, 1998-2000). Development of a system for the automatic recognition of emotions in human faces. The methods have been based on image recognition, hybrid neural networks, fuzzy logic and rule extraction from neural networks.

- MODULATES (Multimedia Organisation for Developing the Understanding and Learning of Advanced Technology in European Schools, 1998-2000), E.C. Educational Multimedia Task Force project.

- PENED 318 (National Project Greek, 1999-2000). Development of an intelligent system for the early diagnosis of coronary artery disease. **Role:** Development of methods based on computational intelligence and data mining