








PERSONAL INFORMATION

Athena Vakali



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PERSONAL STATEMENT

*“I’m privileged by a profession which constantly evolves and opens research and innovation horizons. Being a professor at a Greek University has given me valuable knowledge and skills. Working with a vibrant worldwide network of colleagues, researchers and entrepreneurs offers strong empowering and serendipitous experiences. **My vision** is to encourage and motivate our bright young researchers to progress and excel with open minds and high ethical standards for establishing social good and sustainable Data Science and ICT solutions .”*

EDUCATION AND TRAINING

- 1993-1997** PhD degree in Informatics, School of Informatics, Aristotle University, Greece (excellence Degree, grade 10 in 1-10 scale)
- 1986-1988** MSc degree in Computer Science, Department of Computer Science, Purdue University, USA (Fulbright scholarship for USA studies)
- 1981-1985** BSc degree in Mathematics, Mathematics Department, Aristotle University, Greece (excellence Degree, grade 8,85 in 1-10 scale)

WORK EXPERIENCE

- 1997-TODAY** Full Professor, Faculty member, Vice Chair (2017-2020), School of Informatics, Aristotle University of Thessaloniki, Greece. Director of Data and Web Science (Datalab¹) research lab (since 2017).
- 1993-1997** IT technical administrator staff, School of Informatics, Aristotle University of Thessaloniki, Greece
- 1990-1993** Computing division director, Research Programs Office, Aristotle University of Thessaloniki, Greece
- 1988-1990** Educator in Computing and Mathematics, American College Anatolia, Thessaloniki, Greece
- 1986-1988** Teaching and Research assistant (during MSc studies), Computer Science Department, Purdue University, USA

EDUCATIONAL ACTIVITIES

Graduate level courses and PhD/Msc theses

- *“Social Networks analysis”*, 1st semester of “Data and Web Science” MSc course program, School of Informatics, Aristotle University (since 2015)
- *“Web Data Mining”*, 2nd semester “Data and Web Science” (earlier “Information and Communication Technology Systems”) MSc course program, School of Informatics, Aristotle University (since 2004)
- *“Decentralized technologies”*, 2nd semester “Data and Web Science” MSc course program, School of Informatics, Aristotle University (since 2018)
- *“Social networks technology for marketing”*, 2nd semester of “Management and Information Systems”, Joint MSc course program, School of Informatics & Schools of Economics, Aristotle University (since 2018)

¹ <https://datalab.csd.auth.gr>

- “*Web Information frameworks*”, 2nd semester of “Informatics and Management” Joint MSc course program, School of Informatics & Schools of Economics, Aristotle University (2003-2018)
- “*Web Information Systems*”, 1st semester of “Information and Communication Technology Systems” MSc course program, School of Science & Technology, International Hellenic University (2010-2014)
- “*Advances in Software Engineering*”, 2nd year of Information Systems MSc course program, Hellenic Open University (2005-2014)
- Supervised more than 60 MSc level diploma theses (Aristotle University, Hellenic International University, Hellenic Open University)
- Supervised 10 completed PhD dissertations mostly in the topics of Web information systems and Data analytics. Most of former PhD students are already faculty members or advanced experts in national and worldwide Universities, research centres, and companies.
- Currently (2020-21) collaboration with 5 post doc level researches and supervision of 7 PhD students and 12 MSc students’ theses.

Undergraduate courses and BSc theses

- “*Operating Systems*”, 5th semester of Informatics undergraduate course program, School of Informatics, Aristotle University (since 1997)
- “*Web Information Systems*”, 6th semester of Informatics undergraduate course program, School of Informatics, Aristotle University (since 2003)
- “*Distributed Operating Systems*”, 6th semester of Informatics undergraduate course program, School Informatics, Aristotle University (1997-2019)
- “*Internet Technologies, Services and Applications*”, 6th semester of Informatics undergraduate course program, School of Informatics, Aristotle University (1997-2002)
- Supervised more than 100 diploma theses at the School of Informatics, Aristotle University (since 1997)

Mentorship

- Mentorship and support for the establishment and promotion of the ACM Aristotle University Student Chapter as the official student chapter of the ACM in the Aristotle University of Thessaloniki to be based at the School of Informatics (since 2008).
- Faculty Sponsor, Mentorship and support for the establishment and promotion of the AUTH ACM-W Student Chapter as the official chapter of ACM-W at Aristotle University of Thessaloniki, Greece (AUTH), based at the School of Informatics (since 2012).
- Mentorship and students empowerment to participate in local and international challenges such as the ACM Student Research Competition, IEEE Contests, OK Thess innovation challenges, Meetups for entrepreneurships, etc (since 2005).
- Mentorship and coaching for students Web information portal projects implementations which propose platforms for UN Sustainable Development Solutions Network (SDSN) goals and collaboration with the SDSN Black Sea Universities Network to promote students work and to inspire social innovation (since 2019).
- Mentor and coach of the student groups who have participated at the students competition of the 11th International Conference on Interactive Mobile Communication Technologies and Learning, IMCL 2017.
- Mentorship and supervision of the Memrise hackathon challenge with open APIs and interesting learning gamification experiences (Summer 2013).
- Mentor and coach of the student group which has achieved the 3rd place at the Greek competition “Microsoft Imagine Cup 2011” at Software Design category, presenting the software platform “Life Avatar” which contributes to a healthier way of living.
- Mentor and coach of the student group which has achieved the 3rd place at the national competition of Imagine Cup Software 2010 Design International presenting the “beeHive: an Educational Platform for Teens”.

RESEARCH PROJECTS

Role : coordinator, scientific and research supervision, design and implementation of Data Science tasks, sustain projects collaboration networks.

- **“RESET: Redesigning Equality and Scientific Excellence Together”**, EU H2020 Science With And For Society (SWAFS) Programme, 2021-2024
- **“INCENTIVE: Establishing Citizen Science Hubs in European Research Performing and Funding Organisations to drive institutional change and ground Responsible Research and Innovation in society”**, EU H2020 Science With And For Society (SWAFS) Programme, 2021-2024
- **EuroCC: National Competence Centres in the framework of EuroHPC**, EU H2020 Euro HPC & Greek Secretary of Research Programme, 2020-2022
- **“RAINBOW: An open, trusted and secure fog computing platform”**, EU H2020 ICT-15-2019-2020, 2020-2022, <https://rainbow-h2020.eu>
- **“Lifechamps: A Collective Intelligent Platform to Support Cancer Champions”**, H2020 SC1-DTH-01-2019, Digital Transformation in Health and Care, 2019-2022, <https://lifechamps.eu>
- **“RAIS: Real-time Analytics for Internet of Sports”**, EU H2020 Marie Skłodowska Curie ITN Action, 2019-2022, <https://rais-itn.eu/>
- **“CUREX: Secure and private health data exchange”**, EU H2020 SC1-FA-DTS-2018 Trusted digital solutions and Cybersecurity in Health and Care, 2018-2021, <https://curex-project.eu>
- **“HEART: Hardware-enabled Energy Analytics in Real Time”**, GR Research-Create-Innovate Action, 2020-2023
- **“Clinapp : “An advanced AI-based patient appointment scheduler for smart management of patients and medical data”**, GR Research-Create-Innovate Action, 2020-2023
- **“TTLS: Tourism Transportation and Leisure Services optimization using intelligent systems”**, GR Research-Create-Innovate Action, 2018-2021, <https://ttls.gr>
- **“PTwist: An open platform for plastic lifecycle awareness, monetization, and sustainable innovation”**, EU H2020 ICT-11-2017 CAPS, 2017-2019, <https://ptwist.eu>

Completed Projects (indicative list)

- **“ENCASE: Enhancing security and privacy in the Social Web: a user-centered approach for the protection of minors”**, EU H2020 Marie Skłodowska Curie RISE Action, 2015-2019, <https://encase.socialcomputing.eu>
- **“ONLINE S3: An Online Platform for Smart Specialisation Policy Advice”**, EU H2020 On-line mechanisms for knowledge-based policy advice project under the Integrating Society in Science and Innovation, 2016-2018, <https://www.onlines3.eu>
- **“Fix the Fixing: Proactive quelling of sports events manipulation”**, Erasmus+ project, Education, Audiovisual and Culture Executive Agency, 2016-2018
- **“REVITAL: Real and Virtual Social Interactions”**, EU FP7 Internet Science Network of Excellence, 2013-2015
- **“SEN2SOC: Sensors talk and humans sense”**, EU FP7 SmartSantander, 2013-2014
- **“Digital cities architectures and systems”**, EADIC and National Research funded, 2012-2015
- **“Cloud4Trends: Leveraging the cloud infrastructure for localized real-time trend detection in social media”**, EU Venus-C, 2011-2012
- **“Virtual Museum over a Sensor Web”**, EOX Grants, 2009-2011
- **“Towards Archaeological Heritage New Accessibility”**, EU funded Culture Project, 2004-2007
- **“XML Data Management on the Semantic Web”**, bilateral research project between Greece-Czech Republic, funded by the Greek Secretary of Research, 2005 - 2008
- **“Access Control Techniques on Distributed Environments and on the Web”**, bilateral research project between Greece-Italy, funded by Greek Secretary of Research, 2005 - 2008
- **“Hrakteitos: Methodologies and Techniques for Internet Objects Management”**, funded by Greek Secretary of Research, 2003-2006
- **“Internet Data Classification and Information Retrieval”**, bilateral research project between Greece-China, funded by the Greek Secretary of Research, 2003-2005

- **“Web Data Mining Algorithms”**, bilateral research project between Greece-Czech Republic, funded by the Greek Secretary of Research, 2003 - 2008
- **“ERMIS: Development of an Advanced Collaborative e-business system for Retail Chain”**, Research Technological Development Framework, funded by the Information Society, 2003-2005

RESEARCH FOCUS

Prof. Vakali research efforts focus on Data Science disciplines with emphasis on Big Data analytics and Data technologies. Her research work spans from foundational principles (with algorithms and feature engineering approaches) to design and implementations of actual technologies, tools, and systems implemented in various domains. At her core research work, prof Vakali explores the : (i) dynamics and trends which drive online Web content and usage evolution; (ii) modelling and management of big data entities; (iii) knowledge extraction by appropriate graph mining and AI inspired techniques; and (iv) study of emerging data technologies from cloud to the edge, and their extend to decentralized (blockchain) frameworks. Her research work has valuable contributions to multiple domains since her research work is extensively validated by robust experimentation in social networks, health, energy, creative platforms, and smart cities. Under her lead, the Datalab research team is intensively involved in research and innovation actions with a focus on the next main topics :

- *Evolving big data analytics* with various methodologies (community detection, graph mining, incremental clustering, data mining, machine learning, etc.) on multiple (Web logs, social networks, reviews, etc.) datasets targeting opinions, topics, emotions and latent knowledge detection from big data sources;
- *Social media and networks modelling and mining* with usage and content summarization methodologies for topics and events detection in various contexts (geo-location, time, sentiment, etc). Emphasis on social networks trends and phenomena, such as social media fraud, and behavioural patterns revealing;
- *Smart cities and IoT data integration and summarization* with focus on smart city data threads management and detection of communities, trends, events, and sentiment on geo-located data and on distributed smart city infrastructures.
- *Cloud to the edge and fog evolving data streams analytics* with efforts on the design and implementation of cloud to the edge frameworks for health, wellbeing, energy, and social networks domains at which decentralized technologies are also explored and validated;
- *Social and sustainable innovation, creative and cultural platforms* designs and implementations via data driven technologies which establish methods, tools and frameworks at which content and usage are reflected and analysed under ethical and protected data regulations and norms.

PERSONAL SKILLS

Mother tongue(s)
Other language(s)

Greek

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C2	CW	C2	C2	C2
French	A1	A1	A1	-	-

Communication skills

Excellent communication skills gained through her experience as a data scientist and expert for over than 25 years. Her educational capacities have been extended by her attendance to “train the train” programmes and her social communication skills are constantly extended with her impressive worldwide network of colleagues and collaborators in all continents.

Organisational / managerial skills

Leadership in team building and consulting gained from the faculty member overall experience. Her graduate level studies coordination skills are augmented by the director’s position at the Informatics MSc program and by her inclusion in several boards and committees (locally and internationally). Her term as Vice head at the School of Informatics as well as her participation in several boards (faculty selection, data science policies consulting, etc) augment her managerial and leadership skills.

International presence Strong research collaborations and synergies capacity gained by more than 25 years of a strong academic career. Research and implementation projects skills gained by the coordination of many EU and national research programmes. Prof. Vakali has a very strong network due to both her academia research work (more than 200 co-authors in her published work) and to her multiple research and innovation projects coordination (more than 25 EU and national projects). Moreover, she has taken sabbatical leaves to Australia (University of South New Whales and University of Melbourne, 2006-2007), USA (Purdue University, 1999-2000) and short visits under bilateral projects to many Universities worldwide : Dept. of Computer Science and Engineering Jiao Tong, Shanghai University, China; Dept. of Computer Science of Boston University, USA; University of Magdeburg, Germany; Polytechnic University of Madrid, Spain; University of Claude Bernard Lyon, France; Charles University, Praha, Czech Republic, Zayed University, Dubai; University of Sabanci, Turkey; University of Chile, Chile; etc

Digital competence

SELF-ASSESSMENT				
Data exploration	Communication and networking	Content analytics	Protected data solutions	Problem solving and supervision
PROFICIENT USER	PROFICIENT USER	PROFICIENT USER	PROFICIENT USER	PROFICIENT USER

- Excellent design and programming skills in many software technologies (Java, Python, C, etc)
- Excellent design and programming skills in Web software development, distributed data management, databases, etc.

Other skills

Programming contests team consulting, mentorship and supervision skills, gained by her long experience as a University advisor, supervisor, coach, and mentor.

SCIENTIFIC PUBLICATIONS

Publications record and highlights

In summary, prof. Vakali has (co-)authored **5 books** and **more than 15 book chapters** in edited books from Springer and IGI, and **more than 60 papers** in refereed journals most of them at high quality journals, such as ACM Transactions on the Web, ACM Computing Surveys, ACM Transactions on Modeling and Computer Simulation, IEEE Transactions on Knowledge and Data Engineering, IEEE Internet Computing, IEEE System Man & Cybernetics, World Wide Web Journal, etc. She has **110 papers** in International conferences and editor (PC co-chair) at more than 15 prestigious International Conferences (eg IEEE/WIC/ACM International Conference on Web Intelligence, WI 2019, Web Information Systems Engineering - WISE 2014 , etc) . Her proceedings publications place emphasis on Web data and analytics technologies, Social networks, and data science topics such as the Web Intelligence (ACM/WI), Web Information Systems Engineering (WISE), the ACM Hypertext Conference, the Social Networks and Social Media Mining on the Web in conjunction with DASFAA, the Conference for Data Warehousing and Knowledge Discovery (DaWaK), the ACM Conference on Recommender systems (RecSys), etc. Professor Vakali has a wide and strong co-authorship network with 217 unique co-authors (according to DBLP co-authors index) who originate from worldwide research affiliations.

Her publications have attracted **8380 citations**, with **h-index 38** and **i10-index 102**, according to Google Scholar (March 2021).

Publications quality: Prof. Vakali has published more than 60 papers in scientific journals with peer-reviewing process. According to the latest Journal Citation Reports (ISI 2020), most of her published journals have impact factor higher than two and some of her papers are in prestigious journals (such as ACM Computing Surveys, ACM Transactions of the Web, IEEE Internet Computing, Experts Systems with Applications, etc). Moreover, a significant number of more than 100 papers in international conferences have very competitive acceptance rate lower than 25% such as: *WebSci Conf*, *ACM HyperText (HT)*, *WWW Companion*, *ACM Web Intelligence (WI)*, *WISE*, *International Conference on Web and Social Media (ICWSM)*, etc. Finally, six of her papers received the best paper award in International Conferences and journals.

An indicative list of publications (last 8 years) is given next. More info for her publications at :

- <https://dblp.org/pid/v/AthenaVakali.html> and
- https://scholar.google.gr/citations?user=sq_u8P0AAAAJ&hl=en

PUBLICATIONS LIST

- 2021 **"An exploratory approach for urban data visualization and spatial analysis with a game engine."** Multimedia Tools and Applications (2021): 1-25. Psaltoglou, Artemis, and Athena Vakali.
"Lumina: an adaptive, automated and extensible prototype for exploring, enriching and visualizing data." *Journal of Visualization* (2021): 1-25. Kagkelidis, Konstantinos, Ilias Dimitriadis, and Athena Vakali.
- 2020 **Bot-Detective: An explainable Twitter bot detection service with crowdsourcing functionalities,** (MEDES 2020). (Best Paper Award) 12th International Conference on Management of Digital EcoSystems, ACM Digital Library 2020. Maria Kouvela, Ilias Dimitriadis and Athena Vakali
A Methodology for Runtime Detection and Extraction of Threat Patterns. SN Comput. Sci. 1(5): 238 (2020). Christos Bellas, Athanasios Naskos, Georgia Kougka, George Vlahavas, Anastasios Gounaris, Athena Vakali, Apostolos Papadopoulos, Evmorfia Biliri, Nefeli Bountouni, Gustavo Gonzalez Granadillo
DeCStor: A Framework for Privately and Securely Sharing Files Using a Public Blockchain. DS 2020: 280-293. Maria Siopi, George Vlahavas, Kostas Karasavvas, Athena Vakali
DeTRACT: a decentralized, transparent, immutable and open PKI certificate framework. International Journal of Information Security, 1-18. T Sermpinis, G Vlahavas, K Karasavvas, A Vakali
TRIAGE: Temporal Twitter attribute graph patterns. WIMS 2020: 44-53. Ilias Dimitriadis, Marinos Poiitis, Christos Faloutsos, Athena Vakali
CityDNA Dynamics: A Model for Smart City Maturity and Performance Benchmarking. WWW (Companion Volume) 2020: 829-833. Vaia Moustaka, Antonis Maitis, Athena Vakali, Leonidas G. Anthopoulos
On the Aggression Diffusion Modeling and Minimization in Online Social Networks. CoRR abs/2005.10646 (2020). Marinos Poiitis, Athena Vakali, Nicolas Kourtellis
My tweets bring all the traits to the yard: Predicting personality and relational traits in Online Social Networks. CoRR abs/2009.10802 (2020). Dimitra Karanatsiou, Pavlos Sermpetzis, Jon Gruda, Konstantinos Kafetsios, Ilias Dimitriadis, Athena Vakali
I'm simply the best, better than all the rest: Narcissistic leaders and corporate fundraising success. Personality and Individual Differences 168, 110317. D Gruda, J McCleskey, D Karanatsiou, A Vakali
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- 2019 **City dynamics tracking based on citizens' data and sensing analytics.** Smart Cities in the Post-algorithmic Era. A Vakali, V Moustaka
A Systematic Review for Smart City Data Analytics. ACM Comput. Surv. 51(5): 103:1-103:41 (2019). Vaia Moustaka, Athena Vakali, Leonidas G. Anthopoulos
Enhancing social networking in smart cities: Privacy and security borderlines. Technological Forecasting and Social Change 142, 285-300. V Moustaka, Z Theodosiou, A Vakali, A Kounoudes, LG Anthopoulos
Behind the cues: A benchmarking study for fake news detection. Expert Syst. Appl. 128: 201-213 (2019). Georgios Gravanis, Athena Vakali, Konstantinos I. Diamantaras, Panagiotis Karadais
Introduction to the special issue on social data analytics in medicine and healthcare. Int. J. Data Sci. Anal. 8(4): 325-326 (2019). Alejandro Rodríguez González, Athena Vakali, Miguel Angel Mayer, Takashi Okumura, Ernestina Menasalvas Ruiz, Myra Spiliopoulou
Detecting Cyberbullying and Cyberaggression in Social Media. ACM Trans. Web 13(3): 17:1-17:51 (2019). Despoina Chatzakou, Ilias Leontiadis, Jeremy Blackburn, Emiliano De Cristofaro, Gianluca Stringhini, Athena Vakali, Nicolas Kourtellis
Software technologies skills: A graph-based study to capture their associations and dynamics. BCI 2019: 22:1-22:7. Konstantinos Georgiou, Maria Papoutsoglou, Athena Vakali, Lefteris Angelis
A crowdsourcing approach to advance collective awareness and social good practices. WI (Companion) 2019: 200-207. Ilias Dimitriadis, Vasileios G. Psomiadis, Athena Vakali
A Unified Deep Learning Architecture for Abuse Detection. WebSci 2019: 105-114. Antigoni-Maria Founta, Despoina Chatzakou, Nicolas Kourtellis, Jeremy Blackburn, Athena Vakali, Ilias Leontiadis
TOMI: A Framework for Smart Tourism on the Move Innovation. WWW (Companion Volume) 2019: 123-129. Vaia Moustaka, Athena Vakali, Nikos Zikos, Theoklis Tsirakidis, Leonidas G. Anthopoulos

Detecting Cyberbullying and Cyberaggression in Social Media. CoRR abs/1907.08873 (2019). Despoina Chatzakou, Ilias Leontiadis, Jeremy Blackburn, Emiliano De Cristofaro, Gianluca Stringhini, Athena Vakali, Nicolas Kourtellis

Cloud-based architectures for geo-located blogosphere dynamics detection. Journal of Smart Cities 2 (1), 28-40. A Vakali, S Antaris, M Giatsoglou.

2018 **Large Scale Crowdsourcing and Characterization of Twitter Abusive Behavior.** ICWSM 2018: 491-500. Antigoni-Maria Founta, Constantinos Djouvas, Despoina Chatzakou, Ilias Leontiadis, Jeremy Blackburn, Gianluca Stringhini, Athena Vakali, Michael Sirivianos, Nicolas Kourtellis

Demo: Diligent - An OSN Data Integration System Based on Reactive Microservices. SMARTCOMP 2018: 285-287. Alexandros Tsilingiris, Ilias Dimitriadis, Athena Vakali, Georgios Andreadis

Demo: Bostonhood: A Multi-criteria Platform for Ranking City Neighborhoods. SMARTCOMP 2018: 288-290. Despoina Kazepidou, Maria Rousi, Vasiliki Gkatziaki, Athena Vakali

Fake Review Detection via Exploitation of Spam Indicators and Reviewer Behavior Characteristics. SOFSEM 2018: 581-595. Ioannis Dematis, Eirini D. Karapistoli, Athena Vakali

LOCAST: Optimal Location Casting by Crowdsourcing and Open Data Integration. WI 2018: 407-412. Konstantinos Platis, Ilias Dimitriadis, Athena Vakali

Smart Cities at Risk! Privacy and Security Borderlines from Social Networking in Cities. WWW (Companion Volume) 2018: 905-910. Vaia Moustaka, Zenonas Theodosiou, Athena Vakali, Anastasis Kounoudes

Enhancing Social Networking in Smart Cities: Privacy and Security Borderlines. *Technological Forecasting & Social Change*, Elsevier, 2018. Vaia Moustaka, Zenonas Theodosiou, Athena Vakali, Anastasis Kounoudes, Leonidas G. Anthopoulos

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Evolving Social Graph Clustering. Encyclopedia of Social Network Analysis and Mining. 2nd Ed. 2018. Athena Vakali

Flickr and Twitter Data Analysis. Encyclopedia of Social Network Analysis and Mining. 2nd Ed. 2018. Athena Vakali

A Unified Deep Learning Architecture for Abuse Detection. CoRR abs/1802.00385 (2018). Antigoni-Maria Founta, Despoina Chatzakou, Nicolas Kourtellis, Jeremy Blackburn, Athena Vakali, Ilias Leontiadis

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2017 **Experience of emotion in face to face and computer-mediated social interactions: An event sampling study.** Comput. Hum. Behav. 76: 287-293 (2017). Konstantinos Kafetsios, Despoina Chatzakou, Nikolaos Tsigilis, Athena Vakali

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DynamiCITY: Revealing city dynamics from citizens social media broadcasts. Inf. Syst. 71: 90-102 (2017). Vasiliki Gkatziaki, Maria Giatsoglou, Despoina Chatzakou, Athena Vakali

Class-based Prediction Errors to Detect Hate Speech with Out-of-vocabulary Words. ALW@ACL 2017: 36-40. Joan Serrà, Ilias Leontiadis, Dimitris Spathis, Gianluca Stringhini, Jeremy Blackburn, Athena Vakali

Hate is not Binary: Studying Abusive Behavior of #GamerGate on Twitter. HT 2017: 65-74. Despoina Chatzakou, Nicolas Kourtellis, Jeremy Blackburn, Emiliano De Cristofaro, Gianluca Stringhini, Athena Vakali

Mean Birds: Detecting Aggression and Bullying on Twitter. WebSci 2017: 13-22. Despoina Chatzakou, Nicolas Kourtellis, Jeremy Blackburn, Emiliano De Cristofaro, Gianluca Stringhini, Athena Vakali

Detecting Aggressors and Bullies on Twitter. WWW (Companion Volume) 2017: 767-768. Despoina Chatzakou, Nicolas Kourtellis, Jeremy Blackburn, Emiliano De Cristofaro, Gianluca Stringhini, Athena Vakali

CityDNA: Smart City Dimensions' Correlations for Identifying Urban Profile. WWW (Companion Volume) 2017: 1167-1172. Vaia Moustaka, Athena Vakali, Leonidas G. Anthopoulos

Vol4All: A Volunteering Platform to Drive Innovation and Citizens Empowerment. WWW (Companion Volume) 2017: 1173-1178. Athena Vakali, Ioannis Dematis, Athanasios Tolikas

Measuring #GamerGate: A Tale of Hate, Sexism, and Bullying. WWW (Companion Volume) 2017: 1285-1290. Despoina Chatzakou, Nicolas Kourtellis, Jeremy Blackburn, Emiliano De Cristofaro, Gianluca Stringhini, Athena Vakali

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2015 **Multispot: Spotting sentiments with semantic aware multilevel cascaded analysis.** DaWaK, 2015. Despoina Chatzakou, Nikolaos Passalis, Athena Vakali

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Automated Design in the Cloud International Journal of Future Computer and Communication, 2015. Georgios Andreadis, Konstantinos-Dionysios Bouzakis, Athina Vakali, Konstantinos Stamos

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Explorimeter: Leveraging Personality Traits for Coverage and Diversity Aware Recommendations WWW(Companion Volume), 2015. Evangelos Chatzicharalampous, Zigmolis Christos, Athena Vakali

Internet Science - Second International Conference, INSCI 2015, Brussels, Belgium, May 27-29, 2015, Proceedings. Lecture Notes in Computer Science 9089, Springer 2015. Thanassis Tiropanis, Athena Vakali, Laura Sartori, Pete Burnap

Web Information Systems Engineering - WISE 2014 Workshops. Lecture Notes in Computer Science 9051, 2015. Boualem Benatallah, Azer Bestavros, Barbara Catania, Armin Haller, Yannis Manolopoulos, Athena Vakali, Yanchun Zhang

Professional profiles and personality traits towards social network team building. Technical Sciences, 2015. Orestes Evangelinos, Christos Zigmolis, Athena Vakali

New Trends in Database and Information Systems II. Advances in Intelligent Systems and Computing 312, Springer 2015. Nick Bassiliades, Mirjana Ivanovic, Margita Kon-Popovska, Yannis Manolopoulos, Themis Palpanas, Goce Trajcevski, Athena Vakali

2014 **Branty: a social media ranking tool for brands.** ECML/PKDD, 2014. Alexandros Arvanitidis, Anna Serafi, Athena Vakali, Grigorios Tsoumakas

Web Information Systems Engineering--WISE International Conference Proceedings. Lecture Notes in Computer Science 8786, Springer 2014, Boualem Benatallah, Azer Bestavros, Yannis Manolopoulos, Athena Vakali, Yanchun Zhang

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Foreword to 3M4City Workshop. WIMS 2014. Leonidas G Anthopoulos, Athena Vakali

Emotube: A sentiment analysis integrated environment for social web content. WIMS 2014. Evangelia Polymerou, Despoina Chatzakou, Athena Vakali

Towards a Framework for Social Semiotic Mining. WIMS 2014. Eirini Giannakidou, Athena Vakali, Nikolaos Mavridis

Smart Cities Data Streams Integration: experimenting with Internet of Things and social data flows. WIMS 2014. Athena Vakali, Leonidas Anthopoulos, Srdjan Krco

Building Permission Smart e-Service Status: A Literature Review. European Conference on e-Government, 2014. Leonidas Anthopoulos, Christos Bellos, Athena Vakali

Collaborative event annotation in tagged photo collections. Multimedia Tool Appl 70(1), 2014. Christos Zigkolis, Symeon Papadopoulos, George Filippou, Yiannis Kompatsiaris, Athena Vakali

Contextual object category recognition for RGB-D scene labelling. Robotics Autonomous Systems, 2014. Haider Ali, Faisal Shafait, Eirini Giannakidou, Athena Vakali, Nadia Figueroa, Theodoros Varvadoukas, Nikolaos Mavridis

New Trends in Databases and Information Systems Advances in Intelligent Systems and Computing 241, Springer 2014. Barbara Catania, Tania Cerquitelli, Silvia Anna Chiusano, Giovanna Guerrini, Mirko Kämpf, Alfons Kemper, Boris Novikov, Themis Palpanas, Jaroslav Pokorný, Athena Vakali

2013 **Integrating similarity and dissimilarity notions in recommenders.** Expert Syst. Appl. 40(13): 5132-5147 (2013), Christos Zigkolis, Savvas Karagiannidis, Ioannis K. Koumarelas, Athena Vakali.

Capturing Social Data Evolution Using Graph Clustering. IEEE Internet Comput. 17(1): 74-79 (2013). Maria Giatsoglou, Athena Vakali

Micro-blogging Content Analysis via Emotionally-Driven Clustering. ACII 2013: 375-380. Despoina Chatzakou, Vassiliki A. Koutsonikola, Athena Vakali, Konstantinos Kafetsios

New Trends in Databases and Information Systems: Contributions from ADBIS 2013. ADBIS (2) 2013: 1-13. Yamine Ait Ameur, Witold Andrzejewski, Ladjel Bellatreche, Barbara Catania, Tania Cerquitelli, Silvia Chiusano, Matteo Golfarelli, Giovanna Guerrini, Krzysztof Kaczmarski, Mirko Kämpf, Alfons Kemper, Tobias Lauer, Boris Novikov, Themis Palpanas, Jaroslav Pokorný, Stefano Rizzi, Athena Vakali

Compact and Distinctive Visual Vocabularies for Efficient Multimedia Data Indexing. ADBIS 2013: 98-111. Dimitrios Kastrinakis, Symeon Papadopoulos, Athena Vakali

Social Data Sentiment Analysis in Smart Environments - Extending Dual Polarities for Crowd Pulse Capturing. DATA 2013: 175-182. Athena Vakali, Despoina Chatzakou, Vassiliki A. Koutsonikola, George Andreadis

Sensors talk and humans sense Towards a reciprocal collective awareness smart city framework. ICC Workshops 2013: 189-193. Athena Vakali, Lefteris Angelis, Maria Giatsoglou

Dissimilarity Features in Recommender Systems. ICDM Workshops 2013: 825-832. Christos Zigkolis, Savvas Karagiannidis, Athena Vakali

Semi-supervised Concept Detection by Learning the Structure of Similarity Graphs. MMM (1) 2013: 1-12. Symeon Papadopoulos, Christos Sagonas, Ioannis Kompatsiaris, Athena Vakali

Requirements and architecture design principles for a smart city experiment with sensor and social networks integration. Panhellenic Conference on Informatics 2013: 327-334. Christos Samaras, Athena Vakali, Maria Giatsoglou, Despoina Chatzakou, Lefteris Angelis

Using social annotations to enhance document representation for personalized search. SIGIR 2013: 1049-1052. Mohamed Reda Bouadjeneq, Hakim Hacid, Mokrane Bouzeghoub, Athena Vakali

Community Detection in Social Media by Leveraging Interactions and Intensities. WISE (2) 2013: 57-72. Maria Giatsoglou, Despoina Chatzakou, Athena Vakali

SCIENTIFIC & OTHER ACTIVITIES

Chairing & Keynote speeches

- Program Chair (WI 2019), IEEE/WIC/ACM International Conference on Web Intelligence 2019.
- General Chair of the 1st EAI International Conference on Future Internet (FI) Infrastructures and Enablers, (FINE 2016)
- General Chair of the 5th International Conference on Model & Data Engineering (MEDI 2015)
- Program Chair of the EU Network of Excellence 2nd Internet Science Conference (EINS 2015)
- Workshops co-chair of the 24th International World Wide Web Conference (WWW 2015), the 16th, 17th, and 18th East-European Conference on Advances in Databases and Information Systems (ADBIS 2013, 2014, 2015), the 5th IEEE International Workshop on Content Delivery Networks (CDN 2010) in conjunction with CCGrid 2010.
- Program Chair of the 15th International Conference on Web Information System Engineering (WISE 2014), Thessaloniki, Greece, Oct 2014
- Keynote and invited speaker at several International Conferences and events such as : the Marie Sklodowska Curie ETN training event on Journalism, Crowdsourcing & Data Exploration techniques for Citizens' Awareness and Empowerment (2020), the IEEE/CAS School on "Building blocks for the Internet of Things" (2017), the DINO Research Group Lecture Series at Paris Descartes University, Paris (2016), the Zayed University MSc Programme Lecture series, Dubai (2016), the 4th International Conference on Web Intelligence, Mining and Semantics (WIMS 2014), the 18th East-European Conference on Advances in Databases and Information Systems (ADBIS 2014), the 8th Summer School on Applications of IoT and Wireless and Sensor Networks (Senzations 2013), as well as at the 16th International Database Engineering & Applications Symposium (IDEAS 2012)

Books, Proceedings, Special Issues

Guest-editor or co-chair in the following Journals and Conferences (Workshops):

- Payam M. Barnaghi, Georg Gottlob, Yannis Manolopoulos, Theodoros Tzouramanis, Athena Vakali: IEEE/WIC/ACM International Conference on Web Intelligence (WI 2019), Thessaloniki, Greece, October 2019, ACM 2019.
- Payam M. Barnaghi, Georg Gottlob, Dimitrios Katsaros, Yannis Manolopoulos, Rahul Pandey, Theodoros Tzouramanis, Athena Vakali, 2019 IEEE/WIC/ACM International Conference on Web Intelligence, WI 2019, Thessaloniki, Greece, October 14-17, 2019 - Companion Volume.
- Nick Bassiliades, Mirjana Ivanovic, Margita Kon-Popovska, Yannis Manolopoulos, Themis Palpanas, Goce Trajcevski, Athena Vakali: New Trends in Database and Information Systems II - Selected papers of the 18th East European Conference on Advances in Databases and Information Systems and Associated Satellite Events, ADBIS 2014 Ohrid, Macedonia, September 7-10, 2014 Proceedings II. Advances in Intelligent Systems and Computing 312, Springer 2015.
- Thanassis Tiropanis, Athena Vakali, Laura Sartori, Pete Burnap: Internet Science - Second International Conference, INSCI 2015, Brussels, Belgium, May 27-29, 2015, Proceedings. Lecture Notes in Computer Science 9089, Springer 2015.
- Boualem Benatallah, Azer Bestavros, Barbara Catania, Armin Haller, Yannis Manolopoulos, Athena Vakali, Yanchun Zhang: Web Information Systems Engineering - WISE 2014 Workshops - 15th International Workshops IWCSN 2014, Org2 2014, PCS 2014, and QUAT 2014, Thessaloniki, Greece, October 2014, Revised Selected Papers. Lecture Notes in Computer Science 9051, Springer 2015.
- Barbara Catania, Tania Cerquitelli, Silvia Chiusano, Giovanna Guerrini, Mirko Kämpf, Alfons Kemper, Boris Novikov, Themis Palpanas, Jaroslav Pokorný, Athena Vakali: New Trends in Databases and Information Systems, 17th East European Conference on Advances in Databases and Information Systems, ADBIS 2013, Genoa, Italy, 2013. Proceedings II. Advances in Intelligent Systems and Computing 241, Springer 2014.
- Boualem Benatallah, Azer Bestavros, Yannis Manolopoulos, Athena Vakali, Yanchun Zhang: Web Information Systems Engineering - WISE 2014 - 15th International Conference, Thessaloniki, Greece, October 12-14, 2014, Proceedings, Parts I and II. Lecture Notes in Computer Science 8786, Springer 2014.
- Abdelkader Hameurlain, Josef Küng, Roland R. Wagner, Barbara Catania, Giovanna Guerrini, Themis Palpanas, Jaroslav Pokorný, Athena Vakali: Transactions on Large-Scale Data- and Knowledge-Centered Systems XV - Selected Papers from ADBIS 2013 Satellite Events. Lecture Notes in Computer Science 8920, Springer 2014.
- Athena Vakali and Leonidas Anthopoulos Workshop on "Modelling, Mining, Managing smart city data flows", 3M4city 2014, 4th International Conference on Web Intelligence, Mining and Semantics (WIMS 2014)

- Hakim Hacid , Shengbo Guo, Athena Vakali, Workshop on “Mining Social Networks Dynamics” at the 2013 WWW Conference, Rio de Janeiro, Brazil, May 2013.
- Athena Vakali and Hakim Hacid, Workshop on “Social Web Analytics for Trend Detection”, at the 13th International Conference on Web Information System Engineering (WISE 2012), Paphos, Cyprus, 2012.
- Jaroslav Pokorny, Athena Vakali and Vaclav Snasel, Workshop on “Social Data Processing”, at the 16th East-European Conference on Advances in Databases and Information Systems, September 2012.

BOOKS (edited and chapters), ENCYCLOPEDIA ARTICLES, & SPECIAL ISSUES (co-edited)

- Athena Vakali and Vaia Moustaka : City dynamics tracking based on citizens data and sensing analytics. Smart Cities in the Post-algorithmic Era. Edward Elgar, USA, 2019.
- Athena Vakali: “Access Control Policy Languages”. Encyclopedia of Database Systems (2nd ed.) 2018
- Athena Vakali: Security Services. Encyclopedia of Database Systems (2nd ed.) 2018
- Athena Vakali: Evolving Social Graph Clustering. Encyclopedia of Social Network Analysis and Mining. 2nd Ed. 2018
- Athena Vakali: Flickr and Twitter Data Analysis. Encyclopedia of Social Network Analysis and Mining. 2nd Ed. 2018.
- Lara Srivastava and Athena Vakali. 2012. Towards a narrative-aware design framework for smart urban environments. *The Future Internet*, F. Alvarez et al. (Eds.), Lecture Notes in Computer Science. Vol. 7281. Springer.
- Athena Vakali, Lakhmi C. Jain: New Directions in Web Data Management 1. Studies in Computational Intelligence 331, Springer, 2011.
- Sivasubramanian, D. Katsaros, G. Pallis, A. Vakali. IEEE Network, special issue on "Cloud Computing", 2011.
- Spiros Nikolopoulos, Eirini Giannakidou, Ioannis Kompatsiaris, Ioannis Patras, Athena Vakali: Combining Multi-modal Features for Social Media Analysis. Social Media Modeling and Computing 2011: 71-96
- Symeon Papadopoulos, Athena Vakali, Yiannis Kompatsiaris: Community Detection in Collaborative Tagging Systems. Community-Built Databases 2011: 107-131
- Athena Vakali: Innovations and Trends in Web Data Management. New Directions in Web Data Management 1 2011: 1-18
- Maria Giatsoglou, Symeon Papadopoulos, Athena Vakali: Massive Graph Management for the Web and Web 2.0. New Directions in Web Data Management 1 2011: 19-58
- Spiros Nikolopoulos, Elisavet Chatzilari, Eirini Giannakidou, Symeon Papadopoulos, Ioannis Kompatsiaris, Athena Vakali: Leveraging Massive User Contributions for Knowledge Extraction. Next Generation Data Technologies for Collective Computational Intelligence 2011: 415-443.
- Giancarlo Fortino, Carlo Mastroianni, Al-Mukaddim Khan Pathan, Athena Vakali: Proceedings of the 4th Workshop on the Use of P2P, GRID and Agents for the Development of Content Networks, UPGRADE-CN'09, held with 18th International Symposium on High-Performance Distributed Computing, ACM 2009.
- M. D. Dikaiakos, D. Katsaros, G. Pallis, A. Vakali. IEEE Internet Computing special issue (Sep. 2009) on Cloud Computing.
- Buyya, R., Pathan, A., Vakali, A. (eds.): “Content Delivery Networks: Principles and Paradigms”, Springer Verlag, LNCS Vol.XVI, 2008.
- Vakali, Athena, and Pallis George (editors) : Web Data Management Practices: Emerging Techniques and Technologies: Emerging Techniques and Technologies. IGI Global, 2006.
- George Pallis, Konstantina Stoupa, Athena Vakali: Storage and Access Control Issues for XML Documents. Encyclopedia of Information Science and Technology (V) 2005: 2616-2621

Committees & Memberships

- Associate Member at the EU European Big Data Value Strategic Research Innovation Association - BDVA, (since 2015).
- National Representative at the EU Open and Agile Smart Cities Council - OASC, (since 2016).
- Member at the GRNET – National Infrastructures for Research and Technology Executive Management Board (2019-20).

- Expert member at the Next Generation Internet (NGI) European initiative for a Human Internet that respects the fundamental values of privacy, participation and diversity (views : <https://www.ngi.eu/news/2020/10/27/next-generation-internet-opinion-on-future-directions-with-expert-athina-vakali/>)
- Founding Member of the Greek Chapter of the ACM-W (ACM's Council on Women in Computing), active member (since 2018).
- Member of the ACM/IEEE/WIC Web Intelligence Technical Committee (WI -TC) and WI Conference Steering Committee (since 2019).
- Active evaluator and Reviewer in multiple EU H2020, FP7, and International projects (since 2010).
- Active member in ACM, IEEE/IEEE CS Societies.
- Chairing and member at several Committees of the Aristotle University (AUTH) and its School of Informatics during her faculty career (eg Faculty of Science Library and Information Centre, AUTH IT Center Steering Committee, AUTH Research Programmes Assembly member; AUTH Day Care Unit; School of Informatics website and dissemination/MSc program chairing Committees, etc)
- Appointed as member in the Future Internet Assembly Steering Committee (2012-14) for her achievements in Future Internet and Networking (FIA Committee had 10 members from both academia and the industry and have shown European excellence).
- Supervisor in 10 completed PhD theses in the area of Data Science and Web data analytics since 2005, and currently supervising 7 PhD candidates and 10 MSc theses.
- PC member to many International Conferences, Workshops, Tutorials, etc (she has been a PC member at more than 90 International Conferences and Workshops since 2005).
- Organized and presented tutorials about “Sentiment analysis and Fraud detection” (DINO, WIMS), “Detecting, Understanding and Exploiting Web communities” at the 18th International World Wide Web Conference, a tutorial about "Clustering on the Web: Theory and Practices" at the ADBIS Conference,, and a tutorial on “Learning from Evolving Data” at the ECML/PKDD Conference.
- Member of the editorial board of “Web Intelligence Journal”, the "Computers & Electrical Engineering" Journal (Elsevier) since 2007 the International Journal of Grid and High Performance Computing (IGI publishing) and the Web Intelligence Journal, since 2009.
- Member of numerous election boards, advisory and steering Committees for faculty positions at Computer Science and Engineering Schools nationally and abroad.

Awards and excellence recognition

- Awarded as ACM Senior Member and ACM Distinguished Speaker (since 2020).
- DEEPMIND and MSc on Data and Web Science (DWS) MSc Scholarship programme assigned for supervision to prof. Vakali in recognition to her research work and her strong mentorship impact on DWS MSc students (since 2020).
- Marie Skłodowska Curie Scholarship for advanced research visit in UK, under the premises of LStech under the ENCASE project, Milton Keynes, UK (summer 2019).
- Aristotle University of Thessaloniki honoured Prof. Vakali, with its Excellence Award 2020 for her outstanding performance in terms of research projects funding activity and capacity to attract research and innovation funds from EU and national sources.
- The paper "TRIAGE: Temporal Twitter attribute graph patterns", by Ilias Dimitriadis, Marinos Poiitis, Christos Faloutsos and Athena Vakali, received the Best Paper Award at the 10th International Conference on Web Intelligence, Mining and Semantics, ACM 2020.
- The paper "Bot-Detective: An explainable Twitter bot detection service with crowdsourcing functionalities", by Maria Kouvela, Ilias Dimitriadis and Athena Vakali, received the Best Paper Awards at the 12th International Conference on Management of Digital EcoSystems, ACM 2020.
- Faculty Scholarship for participating at the Grace Hopper Celebration for Women Technology pioneers 2018, Houston, USA.
- The paper “ClustTour: City Exploration by use of Spatio-temporal Analysis and Clustering of User Contributed Photos”, co-authored by S. Papadopoulos, C. Zigolis, S. Kapiris, I. Kompatsiaris and A. Vakali received the Best demo award at the International Conference on Multimedia Retrieval 2011, organized by the American company of Computer Machines at Trento, Italy.

- The paper entitled “The Dynamics of Content Popularity in Social Media” co-authored by S. Papadopoulos, A. Vakali and I. Kompatsiaris received the best paper award of the International Journal of Data Warehousing and Mining for the year 2010.
- The paper entitled “A New Approach to Web Users Clustering and Validation: a Divergence-based Scheme”, co-authored by V. Koutsonikola, S. Petridou, A. Vakali and G. Papadimitriou received the best paper award of the International Journal of Web Information Systems for the year 2010.
- The paper M. Dikaiakos, G. Pallis, D. Katsaros, P. Mehra, Hewlett-Packard Labs, A. Vakali, “Cloud Computing”, September/October 2009 (Vol. 13, No. 5) pp. 10-13, ranked at top (#32) accessed articles by IEEE for September 2009, 1st for IEEE Internet Computing for Sept 2009.