

curriculum vitæ: Aristides Gionis

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PERSONAL INFORMATION

Family name, first name: Gionis, Aristides
Date of birth: September 26, 1972
Nationality: Greek
Personal URL: users.ics.aalto.fi/gionis
Research group URL: research.ics.aalto.fi/dmg



EDUCATION

PhD	Department of Computer Science, Stanford University, USA	2003
MS	Department of Computer Science, Stanford University, USA	1998

PRESENT POSITION

– Professor, Department of Computer Science, Aalto University, Finland 2017 – present

PREVIOUS POSITIONS

– Visiting professor, University of Rome “Sapienza”, Italy	fall 2016
– Associate professor, Department of Computer Science, Aalto University, Finland	2013 – 2017
– Senior research scientist, Yahoo! Research, Barcelona, Spain	2006 – 2012
– Senior researcher, University of Helsinki, Finland	2003 – 2006
– Research assistant, Stanford University, USA	1996 – 2003
– Research intern, Microsoft Research, USA	2001
– Research intern, AT&T Labs, USA	2000
– Research intern, Lucent Technologies and Bell Labs, USA	1999

RESEARCH

- My research focuses on data mining and algorithmic data analysis. I am particularly interested in developing methods for mining large graphs, mining heterogeneous and information-rich networks, social-network analysis, analysis of time-evolving networks, data-summarization problems, streaming and sketching techniques, and applications in social-media, web mining, and mining of urban data.
- I have worked on a wide variety of problems, producing highly-cited results on a number of different areas. I have worked on theoretical methods on algorithms design, and I have experience on practical data-mining methods, supported by a six-year experience in industrial research. My background puts me in a unique position to carry out work that combines basic research with strong focus on applications.

TEAM LEADING

- Leading the Data Mining group in Aalto University, currently consisting of 2 postdoc, 5 PhD students, and several Master students. All group members are active in research and have already produced several publications in top journals and conferences.
- Led the Web Mining team in Yahoo! Labs, Barcelona (2006 – 2012). The team composed of a mix of research scientists, postdocs, and engineers. The team was highly visible in external academic research and contributed in several internal projects.
- Supervised more than 15 research interns in Aalto and in Yahoo! Labs. The typical internship duration has been 3 months, and almost all internships led to at least one publication in a top-tier venue.

COMPETITIVE FUNDING

(Total of 2.6 m€ raised in external competitive funding)

- coordinator in the Academy of Finland project “AIDA” 2018–2021
- PI in the Academy of Finland project “Agra” 2018–2019
- PI in “Nestor”, project funded by the Academy of Finland 2015 – 2019
- Co-PI in “SoBigData”, project funded by H2020 Research and Innovation Action (RIA) 2015 – 2019
- Co-PI in “Re:Know”, project funded by the Finnish Funding Agency for Innovation (Tekes) 2015 – 2017
- Yahoo! Faculty Research and Engagement Program (FREP) grant 2014 – 2015
- Co-PI in the EC FET Open project 255987 “FOC” 2010 – 2013
- Co-PI in the EC 7th FP project 288024 “LiMoSINE”¹ 2011 – 2014
- Co-PI in the CENIT project CEN-20101037 “Social Media” 2009 – 2012
- Postdoctoral researcher position, funded by the Academy of Finland 2004 – 2007

TEACHING

- Aalto University since 2013
Teaching courses on Data Science, Algorithmic Data Analysis, Database Systems, Graph Mining, Web Mining, and Matrix Analysis
- University of Helsinki 2003 – 2006
Teaching courses on Approximation Algorithms and Computational Complexity, and research seminars on Data Mining and Computational Data Analysis
- Invited lectures at Universitat Pompeu Fabra (UPF), Universitat Politècnica de Catalunya (UPC), and the University of Pisa

INSTITUTIONAL RESPONSIBILITIES

- Aalto BSc programme in Science and Technology in English 2017–present
Programme director
- Aalto BSc major in Data Science 2017–present
Director of the major
- EIT Digital Master School, Data Science major since 2017
Coordinator of the major in Aalto
- Aalto University since 2014
Coordinating the *Big-Data and Large-Scale Computing* track of the *Computer Science* MS major
- Aalto University since 2014
Coordinating a multidisciplinary Master-level minor on Analytics and Data Science
- Helsinki Doctoral Education Network in Information and Communications Technology (HICT) 2016–2017
Executive committee member
- Helsinki Institute for Information Technology (HIIT) 2013–2016
Director of Algorithmic Data Analysis (ADA) programme

PROFESSIONAL ACTIVITIES

- Action editor for Data Mining and Knowledge Discovery (DMKD) 2017 – present
- Managing editor for Internet Mathematics 2015 – present
- Associate editor for the ACM Transactions of Knowledge and Data Discovery (TKDD) 2014 – present
- Associate editor for the IEEE Transactions of Knowledge and Data Engineering (TKDE) 2012 – 2016
- Program chair for the International Conference on Web Search and Data Mining (WSDM 2013)
- Conference and program chair for the European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in Databases (ECML PKDD 2010)
- Chair of the “Social networks and graph analysis” track of the WWW conference, 2014 and 2016
- Area chair or senior program committee member for more than 25 international computer-science conferences, such as KDD, SIGIR, ECML PKDD, ICDM, ICDE and SDM

- Program committee member for more than 90 international computer-science conferences, such as VLDB, SIGMOD, KDD, SIGIR, PODS, ICALP, WWW, ICDM, ICML, and WSDM
- Treasurer of WSDM 2017
- Workshop chair for SIGIR 2016
- Program chair for the ICDM 2013 and 2016 PhD student forum
- Organized the first workshop on social news on the web (SNOW 2013) in conjunction with the WWW 2013 conference

PRIZES AND AWARDS

- Best student paper award: “*The effect of collective attention on controversial debates on social media*” (PhD student Kiran Garimella), Web Science 2017
- Best student paper award: “*Reducing controversy by connecting opposing views*” (PhD student Kiran Garimella), WSDM 2017
- Best student paper award: “*Discovering dynamic communities in interaction networks*” (supervising the summer internship project of Polina Rozenshtein), ECML PKDD 2014
- Best paper award: “*On the feasibility of multi-site web search engines*”, CIKM 2009
- Best student paper award: “*Fast shortest path distance estimation in large networks*” (supervising the summer internship project of Michalis Potamias), CIKM 2009
- Best paper award: “*The discrete-basis problem*”, PKDD 2004
- Microsoft Research Fellowship, 2001 – 2003

INVITED PRESENTATIONS AND KEYNOTE TALKS

- NIPS workshop on prioritising online content, USA, 2017
- University of Rome “Tor Vergata”, Italy, 2016
- Ludwig Maximilians University of Munich, Germany, 2016
- Annual Symposium on String Processing and Information Retrieval (SPIRE) 2015
- Institut de Recherche en Informatique de Toulouse, France, 2011
- Workshop on Large-Scale Distributed Systems for Information Retrieval (LSDS-IR), 2011
- Benelearn Conference, Hague, the Netherlands, 2011
- Technical University of Eindhoven, the Netherlands, 2010
- Workshop on Mining and Learning with Graphs (MLG), Washington DC, 2010
- Workshop on Distributed Agent-based Retrieval Tools (DART), Italy, 2008
- Workshop on Mining Massive Data Sets for Security (MMDSS), Italy, 2007

TUTORIALS IN CONFERENCES AND PhD SCHOOLS

- “*Polarization on social media*”, ICWSM 2017 and WWW 2018
- “*Algorithmic graph mining*”, Estonian Summer School on Computer and System Science 2016
- “*Algorithmic methods for mining large graphs*”, Bertinoro International Spring School (BISS) 2016
- “*Dense-subgraph discovery*”, KDD 2015 and ECML PKDD 2015
- “*Modeling and mining large graphs*”, Summer School on Operational Research and Applications, 2015
- “*Dense-subgraph discovery*”, CSWR 2015 and Network Analysis Summer School 2014
- “*Algorithmic techniques for modeling and mining large graphs*”, KDD and PKDD 2013
- “*Information dissemination in social networks*”, SPIRE 2012
- “*Algorithms for mining large graphs*”, Summer School on Massive Data Mining, 2012
- “*Web mining and next-generation search*”, Summer School in Information Retrieval, 2009
- “*An introduction to web mining*”, ECML PKDD 2008 and WWW 2008
- “*Mining the graph structures of the web*”, summer school on Algorithmic Data Analysis, 2007
- “*Segmentation of sequences*”, SIAM Conference in Data Mining, 2005

GRANTED PATENTS

- Social networking feed delivery system and method, US 8671141
- System and method of matching content items and consumers, US 8660975
- Taxonomy-driven lumping for sequence mining, US 8346686
- Network graph evolution rule generation, US 8204904
- System and methodology for a multi-site search engine, US 8095545
- Method and system for generating a hyperlink-click graph, US 7945565
- System and method for caching posting lists, US 7890488
- Automatically ranking answers to database queries, US 7251648
- Document descriptor extraction method, US 7080314

POSITIONS OF TRUST

- Member of 23 PhD committees in the Institute for Advanced Studies at Lucca, Univ. of Paris Sud XI, Univ. of Rome, Univ. of Pisa, Ramon Llull University, Univ. of Trento, Bristol Univ., Univ. of Potsdam, Technical Univ. of Eindhoven, IT-Univ. of Copenhagen, Paris École Polytechnique, and Universitat Pompeu Fabra.
- Member of the WSDM 2018 best-paper award committee
- Chair of the SDM 2016 best-paper award committee
- Member of the ACM SIGKDD 2015 best-dissertation award committee
- Chair of the KDD 2013 best-paper award committee
- Member of evaluation panel for the Netherlands Organisation for Scientific Research (NWO)
- Member of evaluation panel for the Chilean National Committee of Research and Technology (CONICYT)

PUBLICATIONS SUMMARY

- 2 book chapters, 42 journal articles, and 120 peer-reviewed conference publications
- 20 KDD, 14 ECML/PKDD, 12 CIKM, 10 DMKD, 10 ICDM, 10 WSDM, 5 PVLDB, 5 ICDE, 8 WWW, 6 TKDD, 4 SIGIR, 4 TKDE, 3 SIGMOD, 1 ICML, 1 NIPS, ...
- 146 coauthors

GOOGLE SCHOLAR PROFILE ¹

	All	Since 2013
Number of citations:	13 600	7 616
<i>h</i> -index:	49	40
<i>i</i> 10-index:	101	84

¹Data from Google scholar in January 2018