

Alessandro Epasto

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CURRENT POSITION

Present **Senior Staff Research Scientist** at Google, New York. Tech lead of a privacy team in the [Google Research's Algorithms And Optimization](#) group led by Vahab Mirrokni (mirrokni@google.com). Formerly Staff Research Scientist (2021-2024), Senior Research Scientist (2018-2021), Research Scientist (2016-2021).

ACADEMIC EXPERIENCE

Feb 2016 **Postdoctoral Researcher** at Brown University. Advised by Prof. Eli Upfal (eli@cs.brown.edu). Research area: Algorithmic problems in the analysis of very large datasets.

Jan 2015

Feb 2015 **Ph.D. in Computer Science** at the Sapienza University of Rome. Supported by the "Google European Doctoral Fellowship 2011 in Algorithms" for three years. Supervisor: Prof. Alessandro Panconesi (ale@di.uniroma1.it).

Nov 2011 Thesis title: "*Mining Large-Scale Graphs*." Research area: Algorithmic problems in large-scale graph mining and social networks analysis.

Sep 2011 **Master of Science in Computer Science** at the Sapienza University of Rome, Thesis title: "*Community Detection and Sybil Defense*." Grade average: 29.89/30. Final grade: 110/110 *cum laude*. Thesis advisor: Prof. Alessandro Panconesi.

Oct 2009

Jul 2011 **Erasmus exchange program**. Participation for a semester in the European student exchange program *Erasmus* at the University of Leicester (UK).

Jan 2011

Oct 2009 **Bachelor of Science in Computer Science** at the University of Rome "Tor Vergata." Thesis title: "*Integrated Information in Probabilistic Boolean Networks*." Grade average: 29.87/30. Final grade: 110/110 *cum laude*. Thesis advisor: Prof. Enrico Nardelli (nardelli@mat.uniroma2.it).

Oct 2006

RESEARCH

Publications

- 2024** M.H. Bateni, V. Cohen-Addad, A. Epasto, S. Lattanzi, "A Scalable Algorithm for Individually Fair K-means Clustering". In Proceedings of 27th International Conference on Artificial Intelligence and Statistics (AISTATS 2024).
- 2023** A. Epasto, V. Mirrokni, S. Narayanan, P. Zhong, "k-Means Clustering with Distance-Based Privacy". In Proceedings of the 36th Advances in Neural Information Processing Systems (Neurips 2023).
- 2023** H. Chen, V. Cohen-Addad, T. d'Orsi, A. Epasto, J. Imola, D. Steurer, S. Tiegel, "Private estimation algorithms for stochastic block models and mixture models". In Proceedings of the 36th Advances in Neural Information Processing Systems (Neurips 2023).
- 2023** C.J. Carey et al., "Measuring Re-identification Risk". In of Proceedings of the ACM on Management of Data Volume 1 Issue 2, SIGMOD 2023,
- 2023** J. Imola, A. Epasto, M. Mahdian, V. Cohen-Addad, V. Mirrokni "Differentially-Private Hierarchical Clustering with Provable Approximation Guarantees". In Proceedings of the Proceedings of the 40th International Conference on Machine Learning, ICML2023.
- 2023** A. Epasto, J. Mao, A. M. Medina, V. Mirrokni, S. Vassilvitskii, P. Zhong, "Differentially Private Continual Releases of Streaming Frequency Moment Estimations", In Proceedings of 14th Innovations in Theoretical Computer Science Conference, ITCS2023.

- 2022 V. Cohen-Addad, A. Epasto, S. Narayan, P. Zhong, "Near-Optimal Private and Scalable k-Clustering". In Proceedings of 36th Conference on Neural Information Processing Systems (NeurIPS 2022).
- 2022 A. Epasto, V. Mirrokni, B. Perozzi, A. Tsitsulin, P. Zhong, "Differentially Private Graph Learning via Sensitivity-Bounded Personalized PageRank". In Proceedings of 36th Conference on Neural Information Processing Systems (NeurIPS 2022).
- 2022 V. Cohen-Addad, A. Epasto, S. Lattanzi, V. Mirrokni, A. M. Medina, D. Saulpic, C. Schlegelshohn, S. Vassilvitskii "Scalable Differentially Private Clustering via Hierarchically Separated Trees" In Proceedings of 28th ACM SIGKDD Conference on Knowledge Discovery and Data Mining, KDD, 2022
- 2022 A. Epasto, M. Mahdian, V. Mirrokni, P. Zhong "Massively Parallel and Dynamic Algorithms for Minimum Size Clustering" In Proceedings of Proceedings of the 2022 Annual ACM-SIAM Symposium on Discrete Algorithms (SODA 2022).
- 2022 A. Epasto, M. Mahdian, V. Mirrokni, P. Zhong, "Improved Sliding Window Algorithms for Clustering and Coverage via Bucketing-Based Sketches" In Proceedings of Proceedings of the 2022 Annual ACM-SIAM Symposium on Discrete Algorithms (SODA 2022).
- 2022 M. Almanza, A. Epasto, A. Panconesi, G. Re, "k-Clustering with Fair Outliers". In Proceedings of 15th ACM International WSDM Conference, (WSDM2022).
- 2021 A. Epasto, A. Muñoz Medina, et al. "Clustering for Private Interest-based Advertising". In Proceedings of the 27th ACM SIGKDD Conference on Knowledge Discovery and Data Mining, KDD Ads Track, Virtual, 2021
- 2020 M. Borassi, A. Epasto, S. Lattanzi, S. Vassilvitskii, M. Zadimoghaddam, "Sliding Window Algorithms for k-Clustering Problems". In Proceedings of the 34th Conference on Neural Information Processing Systems, NeurIPS, Vancouver, Canada, 2020
- 2020 S. Ahmadian, A. Epasto, M. Knittel, R. Kumar, M. Mahdian, B. Moseley, P. P., S. Vassilvitskii, Y. Wang, "Fair Hierarchical Clustering". In Proceedings of the 34th Conference on Neural Information Processing Systems, NeurIPS, Vancouver, Canada, 2020
- 2020 A. Epasto, M. Mahdian, V. Mirrokni, E. Zampetakis "Optimal Approximation - Smoothness Tradeoffs for Soft-Max Functions". In Proceedings of the 34th Conference on Neural Information Processing Systems, NeurIPS, Vancouver, Canada, 2020
- 2020 A. Epasto, M. Mahdian, J. Mao, V. Mirrokni, L. Ren "Smoothly Bounding User Contributions in Differential Privacy". In Proceedings of the 34th Conference on Neural Information Processing Systems, NeurIPS, Vancouver, Canada, 2020
- 2020 S. Ahmadian, A. Epasto, M. Mahdian, R. Kumar, "Fair Correlation Clustering". In Proceedings of the 23rd International Conference on Artificial Intelligence and Statistics, AISTATS, Palermo, Italy, 2020
- 2020 S. Ahmadian, V. Chatziafratis, A. Epasto, E. Lee, M. Mahdian, K. Makarychev, G. Yaroslavtsev, "Bisect and Conquer: Hierarchical Clustering via Max-Uncut Bisection". In Proceedings of the 23rd International Conference on Artificial Intelligence and Statistics, AISTATS, Palermo, Italy [pre-print], 202
- 2019 S. Ahmadian, A. Epasto, M. Mahdian, R. Kumar "Clustering without Over-Representation". In Proceedings of 25th ACM SIGKDD Conference on Knowledge Discovery and Data Mining, KDD, Anchorage, AK
- 2019 M. Borassi, A. Epasto, S. Lattanzi, S. Vassilvitskii, M. Zadimoghaddam "Better Sliding Window Algorithms to Maximize Subadditive and Diversity Objectives". In Proceedings of the 38th Symposium on Principles of Database Systems, PODS, Amsterdam, The Netherlands, 2019
- 2019 A. Epasto, V. Mirrokni, M. Zadimoghaddam "Scalable diversity maximization via small-size composable core-sets". In Proceedings of the 31st ACM Symposium on Parallelism in Algorithms and Architectures, brief announcement, SPAA, Phoenix, AZ, 2019
- 2019 A. Epasto, H. Esfandiari, V. Mirrokni, "On-Device Algorithms for Public-Private Data with Absolute Privacy". To appear in Proceedings of The Web Conference 2019, WWW, San Francisco, 2019

- 2019 A. Epasto, B. Perozzi, “*Is a Single Embedding Enough? Learning Node Representations that Capture Multiple Social Contexts*”. To appear in Proceedings of The Web Conference 2019, WWW, San Francisco 2019
- 2018 A. Epasto, E. Upfal, “*Efficient Approximation for Restricted Biclique Cover Problems*”. Algorithms, issue 11, p. 84, 2018
- 2018 A. Epasto, M. Mahdian, V. Mirrokni, S. Zuo, “*Incentive-aware learning for large markets*”. In Proceedings of the 27th International Conference on World Wide Web, WWW, Lyon, France, 2018
- 2017 A. Epasto, S. Lattanzi, and R. P. Leme, “*Ego-splitting Framework: from Non-Overlapping to Overlapping Clusters*.” In Proceedings of 23rd ACM SIGKDD Conference on Knowledge Discovery and Data Mining, KDD, Halifax, Canada
- 2017 A. Epasto, A. Mahmoody and E. Upfal “*Real-Time Targeted-Influence Queries over Large Graphs*.” In Proceedings of the IEEE/ACM International Conference on Advances in Social Networks Analysis and Mining, ASONAM, Sydney, Australia, 2017
- 2017 A. Epasto, V. Mirrokni and M. Zadimoghaddam, “*Bicriteria Distributed Submodular Maximization in a Few Rounds*.” In Proceedings of 29th ACM Symposium on Parallelism in Algorithms and Architectures, SPAA, Washington DC, USA.
- 2017 L. De Stefani, A. Epasto, M. Riondato, E. Upfal “*TRIÈST: Counting Local and Global Triangles in Fully-dynamic Streams with Fixed Memory Size*.” In ACM Transactions on Knowledge Discovery from Data, TKDD.
- 2017 Alessandro Epasto, Silvio Lattanzi, Sergei Vassilvitskii, Morteza Zadimoghaddam, “*Submodular Optimization over Sliding Windows*” in Proceedings of the 26th International World Wide Web Conference (WWW), Perth, Australia, 2017.
- 2017 David Stück, Haraldrur Tómas Hallgrímsson, Greg Ver Steeg, Alessandro Epasto, Luca Foschini, “*The Spread of Physical Activity in Social Networks*,” in Proceedings of the 26th International World Wide Web Conference (WWW), Perth, Australia, 2017.
- 2016 Lorenzo De Stefani, Alessandro Epasto, Matteo Riondato, Eli Upfal “*TRIÈST: Counting Local and Global Triangles in Fully-dynamic Streams with Fixed Memory Size*,” In Proceedings of the 22nd ACM SIGKDD Conference on Knowledge Discovery and Data Mining (KDD), San Francisco, 2016. **Best student paper award.**
- 2016 Lorenzo De Stefani, Alessandro Epasto, Eli Upfal, Fabio Vandin “*Reconstructing Hidden Permutations Using the Average-Precision (AP) Correlation Statistic*,” In Proceedings of the 30th AAAI Conference on Artificial Intelligence (AAAI), Phoenix, Arizona, USA, 2016.
- 2016 Alessandro Epasto, Silvio Lattanzi, Vahab Mirrokni, Ismail Sebe, Ahmed Taei and Sunita Verma, “*Ego-net Community Mining Applied to Friend Suggestion*,” in Proceedings of the 42nd International Conference on Very Large Data Bases (VLDB), New Delhi, India, 2016.
- 2015 Flavio Chierichetti, Alessandro Epasto, Ravi Kumar, Silvio Lattanzi and Vahab Mirrokni, “*Efficient Algorithms for Private-Public Graphs*,” In Proceedings of the 21st ACM SIGKDD Conference on Knowledge Discovery and Data Mining (KDD), Sydney, Australia, 2015. **Best paper award.**
- 2015 Alessandro Epasto, Silvio Lattanzi, Mauro Sozio, “*Efficient Densest Subgraph Computation in Evolving Graphs*,” in Proceedings of the 24th International World Wide Web Conference (WWW), Florence, Italy, 2015.
- 2014 Pawel Brach, Alessandro Epasto, Alessandro Panconesi, Piotr Sankowski, “*Spreading Rumors without the Network*,” in Proceedings of the 2nd ACM Conference on Social Networks (COSN), 2014.
- 2014 Lorenzo Alvisi, Allen Clement, Alessandro Epasto, Silvio Lattanzi, Alessandro Panconesi, “*Communities, Random Walks and Sybil Defense*.” Journal of Internet Mathematics, 2014.
- 2014 Alessandro Epasto, Jon Feldman, Silvio Lattanzi, Stefano Leonardi, Vahab Mirrokni, “*Reduce and Aggregate: Similarity Rankings in Multi-Categorical Bipartite Graphs*.” In Proceedings of the 23rd International World Wide Web Conference (WWW), Seoul, Korea, 2014.
- 2013 Marco V. Barbera, Alessandro Epasto, Alessandro Mei, Vasile C. Perta, and Julinda Stefa, “*Signals from the Crowd: Uncovering Social Relationships through Smartphone Probes*.” In Proceedings of the 13th ACM/SIGCOMM Conference on Internet Measurement (IMC), Barcelona, Spain, 2013.

- 2013 Lorenzo Alvisi, Allen Clement, Alessandro Epasto, Silvio Lattanzi, Alessandro Panconesi, “*SoK: The Evolution of Sybil Defense via Social Networks*.” In Proceedings of the 34th IEEE Symposium on Security and Privacy (S&P), pp. 382-396, San Francisco, USA, 2013.

Patents and Patent Applications

- 2022 A. Epasto, H. Esfandiari, V.S. Mirrokni, A.M. Medina, U. Syed, S. Vassilvitskii “*Systems and Methods for Anonymizing Large Scale Datasets*”, US Patent App. 17/016,788
- 2021 A Epasto, B Perozzi. “Methods and systems for encoding graphs”, US Patent 11,100,688.
- 2020 Epasto, Esfandiari, Mirrokni, “*Efficient On-Device Public-Private Computation*”, United States Patent Application 2020/0242268 A1, published in 2020.
- 2020 Epasto, Leme Lattanzi, “*Systems and methods to detect clusters in graphs*”, US Pub. No.: WO/2018/203956 International Application No. PCT/US2018/018120, Published on Date: 08.11.2018 United States Patent Application 16/523,612, published 2020.
- 2018 Vahab Mirrokni, Silvio Lattanzi, Jon Feldman, Alessandro Epasto, Stefano Leonardi, Hugh Lynch, Varun Sharma, “*Efficient Similarity Ranking For Bipartite Graphs*,” US Patent 10,152,557 B2, granted on Dec 11, 2018, Application 20150220530, filed in 2014.
- 2015 Alessandro Epasto, Alon Altman, “*Systems and Methods for Detecting Online Attacks*,” US Patent 9,183,387, granted on Nov 10, 2015

Selected Talks

- 2024 “*Privacy for Graphs and Graphs for Privacy: Measuring and Mitigating Privacy Risk via Graphs*”, Long Island University, Brooklyn.
- 2024 “*Efficient and Private Graph Algorithms*”, Spring NYC Privacy Day, NYU Center for Data Science.
- 2023 “*Differentially Private Hierarchical Clustering with Provable Approximation Guarantees*”, Fall NYC Privacy Day, Columbia University.
- 2023 “*Measuring Re-identification Risk*”, SecWeb Workshop at S&P 2023, San Francisco.
- 2023 “*Measuring Re-identification Risk*”, Polytechnic University of Turin.
- 2023 “*Privacy in Clustering*”, ALACARTE’23 Workshop on Algorithmic Aspects of Clustering, Bertinoro, Italy.
- 2022 “*Scalable Differentially Private Clustering via Hierarchically Separated Trees*” SIGKDD 2022.
- 2020 “*Fair Algorithms for Data Clustering*”, INFORMS 2020 Annual Meeting, Virtual.
- 2020 “*Fair Correlation Clustering*”, AISTATS 2020 Conference, Virtual.
- 2019 “*Mining Graphs At Scale: Ego-networks, Clusters and Embeddings*” INFORMS 2019 Annual Meeting, Seattle.
- 2019 “*Sliding Window Algorithms for k -Clustering Problems*”, Workshop on Recent Trends in Clustering and Classification, Toyota Technological Institute at Chicago.
- 2019 “*Scalable diversity maximization via small-size composable core-sets*”, 31st ACM Symposium on Parallelism in Algorithms and Architectures, brief announcement, SPAA, Phoenix, AZ.
- 2018 Panelist at “*What's next after PhD?*”, Google PhD Fellowship Summit, 2018.
- 2018 “*A Simple Framework for Optimization over Sliding Windows*”, Workshop on Foundations of Learning from Data, Bertinoro, Italy, 2018.

- 2017 *"Mining Graphs at Scale: Ego-Networks, Clusters and Privacy"*, UMass Amherst Data Science Talk, Amherst, MA, 2017
- 2017 *"Ego-splitting Framework: from Non-Overlapping to Overlapping Clusters"*. KDD, Halifax, Canada, 2017.
- 2017 *"Submodular Optimization over Sliding Windows"*. WWW, Perth, Australia, 2017.
- 2017 *"Submodular Optimization over Sliding Windows"* in Brown University, Computer Science Department, Providence, RI, 2017.
- 2016 *"Submodular Optimization over Sliding Windows"* in Boston University in Data Management Group.
- 2016 *"Ego-net Community Mining Applied to Friend Suggestion"* in VLDB2016, New Delhi, India, 2016.
- 2016 *"TRIEST: Counting Local and Global Triangles in Fully-dynamic Streams with Fixed Memory Size,"* in SINS2016 Workshop Venice, 2016.
- 2015 *"Efficient Algorithms for Private-Public Graphs,"* in ACM SIGKDD Conference on Knowledge Discovery and Data Mining (KDD) 2015, Sydney, Australia, 2015.
- 2015 *"Efficient Densest Subgraph Computation in Evolving Graphs,"* in World Wide Web Conference, Florence, Italy, 2015.
- 2015 *"Efficient Densest Subgraph Computation in Evolving Graphs,"* Brown U. C.S. Theory meetings, 2015.
- 2014 *"Spreading Rumors without the Network,"* ACM Conference on Social Networks COSN, Dublin, Ireland, 2014.
- 2014 *"Reduce and Aggregate: Similarity Rankings in Multi-Categorical Bipartite Graphs."* In International World Wide Web Conference, Seoul, 2014.
- 2014 *"Random Walks on Bipartite Graphs."* ICERM Workshop on Stochastic Graph Models, Brown University, Providence, RI USA, 2014.
- 2013 *"Ranking Advertisers and Queries,"* Google Algorithm Seminars, Google New York, 2013.
- 2013 *"SoK: the Evolution of Sybil Defense via Social Network,"* IEEE Symposium on Security and Privacy, San Francisco, 2013.
- 2013 *"Spreading Rumors without the Network,"* Workshop SINS 2013, Synergic Investigations in Network Science, Bertinoro International Center for Informatics, Bertinoro, Italy, 2013.

Selected Poster Presentations

- 2019 *Anonymizing List Data.* To be presented at NeurIPS 2019 Workshop Privacy in Machine Learning PiML, Vancouver, Canada.
- 2019 *Sliding Window Algorithms for k -Clustering Problems.* To be presented at NeurIPS 2019 Workshop Sets & Partitions, Vancouver, Canada
- 2019 *Fair Hierarchical Clustering* To be presented at NeurIPS 2019 Workshop Sets & Partitions, Vancouver, Canada
- 2019 *Fair Correlation Clustering* To be presented at NeurIPS 2019 Workshop Sets & Partitions, Vancouver, Canada
- 2019 *Is a Single Embedding Enough? Learning Node Representations that Capture Multiple Social Contexts",* 15th International Workshop on Mining and Learning with Graphs (MLG'19), Anchorage, AK 2019.
- 2019 *"On-Device Algorithms for Public-Private Data with Absolute Privacy",* 15th International Workshop on Mining and Learning with Graphs (MLG'19), Anchorage, AK 2019.
- 2019 *"On-Device Algorithms for Public-Private Data with Absolute Privacy",* 13th Annual Machine Learning Symposium, New York Academy of Sciences, 2019. **(best poster award honorable mention.)**
- 2017 *"Submodular Optimization over Sliding Windows",* 11th Annual Machine Learning Symposium, New York Academy of Sciences, 2017.

Awards, Grants and Fellowships

2019-2022	Reviewers awards. Senior PC Honorable Mention at The Web Conference 2022. Top reviewer at NeurIPS 2019 (the best 400 reviewers of the conference)
2019	Best poster award honorable mention at the 13th Annual Machine Learning Symposium, New York Academy of Sciences, for “ <i>On-Device Algorithms for Public-Private Data with Absolute Privacy</i> ”,
2016	Best Student Paper Award (as coauthor) at ACM SIGKDD Conference on Knowledge Discovery and Data Mining (KDD) 2016 for the paper “ <i>TRIEST: Counting Local and Global Triangles in Fully-dynamic Streams with Fixed Memory Size</i> ,” San Francisco, USA, 2016.
2015	Best Paper Award at ACM SIGKDD Conference on Knowledge Discovery and Data Mining (KDD) 2015 for the paper “ <i>Efficient Algorithms for Private-Public Graphs</i> ,” Sydney, Australia, 2015.
2013	Research Grant “ <i>Starting Grant</i> ” (Italian: “Avvio alla Ricerca”) from Sapienza U. for the research project: “Uncovering the hidden differences among real network classes: sybil defense and graph compression” offered by Sapienza U. of Rome.
2013	Student Award “ <i>Excellent Graduate</i> ” (Italian: “Laureato Eccellente Sapienza”) from Sapienza U. of Rome academic year 2011/2012.
2012	Research Grant “ <i>Caspur HPC standard grant</i> ” for the research project: “Diffusion processes on real graphs,” recipient of 80,000 hours of high performance computing at Caspur facility.
2011	Ph.D. Fellowship “ <i>Google European Doctoral Fellowship 2011 in Algorithms</i> .” Recipient of a competitive international scholarship for the attendance of a Ph.D. course, sponsored by Google, which entails: 3 years full tuition fees, salary, research and travel funding.
2011	Student Award “ <i>Percorso di Eccellenza</i> ,” Sapienza University for the Master degree course.
2009	Research Grant “ <i>Caspur HPC standard grant 2009</i> ” for the research projects: “Graphs with high casual integration,” recipient of 80,000 hours of high performance computing at Caspur facility.
2009 – 2007	Student Awards: “ <i>Wanted the Best</i> ” from Sapienza University of Rome in association with Wind s.p.a., for 2009/10 academic year; Previous awards from University of Rome “ <i>Tor Vergata</i> ” for both 2007/08 and 2008/09 academic years.
2006	Gold medal at Italian Computer Olympiads, national qualification contest to the IOI (International Olympiads in Informatics), Milan Mar 9–11.

Teaching

2014	Lecturer at a postgraduate course in Big Data part of the “Information Security Master” at the Sapienza University of Rome. My activities included 16 hours of formal lectures and laboratory experiences. Topics: MapReduce; frequent itemsets algorithms; random walks method (PageRank, Personalized PageRank); graph clustering techniques, laboratory experiences in Python.
2012–2014	Tutor at Python programming course offered by the Sapienza University of Rome to high school students in preparation for the Computer Science Olympics.

Service to the Scientific Community

I served (or I will serve) as Program Committee member of the following conferences: WWW24, WSDM24 (SPC), KDD2023 (SPC), WWW2023 (SPC), WSDM2022 (Metareviewer), KDD2022, WWW2022 (Senior PC), KDD2021, WWW2021, WSDM2020, KDD2020, WWW2020, AAAI2020, WSDM2019, KDD2019, AAAI2019, WWW2019, CIKM2018, ASONAM2018, ICWSM2018, WebSci2018, KDD2018, WWW2018, AAAI2018, WSDM2018, CIKM2017, WebSci2017, KDD2017, ASONAM2017, ICWSM2017, AAAI2017, WWW2017, WSDM2017, IEEE SITIS 2016, DSAA2016, ASONAM2016, WebSci2016, KDD2016, AAAI2016, WSDM2016, ASONAM2015; and for the workshops TAGML23, TSRML22, MLG2022, MLG2019, MLG2018, MLG2017; and as a reviewer for the following conferences: ICML24, Neurips2023, ICML23, Neurips2022, ICML2022, ESA2021, NeurIPS2021, ICML2021, NeurIPS2020, ICML2020, ICML2019, ESA2019, NeurIPS2019, SODA2018, SPAA2017, ICDM2017, SODA2017, WWW2016, ESA2015, ICWSM2015, WWW2015, IPDPS 2015, WSDM2015, WWW2014, WSDM2014, ESORICS2013;

Co-organizer of the Google Scalable Algorithms for Semi-supervised and Unsupervised Learning Workshop 2021.

Session Chair at WWW2018 “Social Network Analysis and Graph Algorithms for the Web.”

I served as a reviewer of the following journals: “Journal of Parallel and Distributed Computing,” “IEEE Internet Computing,” “Transactions on Knowledge Discovery from Data,” “Journal of Machine Learning Research,” “Computer Journal,” “ACM Transactions on the Web.” “Transactions on Knowledge and Data Engineering,” “Journal of Graph Algorithms and Applications”, “IEEE Transactions On Mobile Computing”.

I served on the review panel for grants proposals at the United States National Science Foundation (NSF) for the Information & Intelligent Systems Division (IIS) in 2016 and 2018.

I served as a reviewer for the Google Faculty Research Awards in 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023 and as reviewer for the Google Ph.D. Fellowship in 2020, 2021, 2022, 2023, 2024, as a mentor for the Google Faculty Award 2020 and as Google Scientific Advisor for 2022, 2023, 2024.

Served as mentor for the Computing Alliance of Hispanic-Serving Institutions (CAHSI) - Google Institutional Research Program (IRP) partnership in 2024. CAHSI addresses the underrepresentation of Hispanics in computing and fosters the development of future Hispanic leaders Artificial Intelligence, Responsible Artificial Intelligence, and Cybersecurity and Privacy. Reviewer for the Google Ph.D. Fellowship Latin America 2022, 2023.

I served on a Ph.D. dissertation committee at the Computer Science Department of Brown University in 2017.

The code produced during many of my research projects is available open source online at [github.org/aepasto](https://github.com/aepasto) and at <https://github.com/google-research/>

Member of the World Wide Web Consortium (W3C) Private Advertisement Technology Community Group (PATCG).

PREVIOUS WORK EXPERIENCE

Google, Inc.

- Aug 2014**

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May 2014

Software Engineering Intern at Google, Mountain View (CA), USA. Under the supervision of Sunita Verma in collaboration with the Google Research team.

Objective: design, implementation and evaluation of novel link prediction methods based on large-scale ego-net graph mining. Technology involved: C++, MapReduce, Flume, Bigtable, etc. Reference: Sunita Verma. (sunitav@google.com).
- Aug 2013**

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May 2013

Software Engineering Intern at Google, New York (NY), USA. Under the supervision of Jon Feldman (Google Research) in collaboration with the AdWords team.

Main achievements: design, implementation and evaluation of large-scale bipartite graph mining algorithms for the identification of top competitors and suggestion of related queries for Google AdWords advertisers. Academic paper accepted for publication in the WWW 2014 conference and patent application filed in U.S. patent office. Reference: Jon Feldman, Ph.D. Researcher (jonfeld@google.com).
- Sep 2012**

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Jun 2012

Software Engineering Intern at Google, Mountain View (CA), USA. Worked under the supervision of Alon Altman in the spam and abuse fighting team.

Main achievements: design, implementation and evaluation of a MapReduce-based framework for the analysis of abusive content propagation in social networks. Design of scalable algorithms for the analysis of very large-scale graphs. A patent application has been filed for the framework. Reference: Alon Altman. Software engineer (epsalon@google.com).

GRIN, Gruppo Informatica

Dec 2010	Web Developer at GRIN: re-engineering the architecture of the web-based application, for the certification process of the degree courses, in computer science, in Italy.
Apr 2010,	Main achievements: Simplification of the periodical process of maintenance, handling of the system reliability, internationalization, and changes management. Switching from a single-layered PHP-based application to a multi-tier (MVC) Java one.
Jul 2009	Realized website (in Italian): http://grin.informatica.uniroma2.it/certificazione/2010
Sep 2008	Technology involved: Java, JSP, JavaScript, HTML, Spring framework, Hibernate, MySQL, Apache/Tomcat. Reference: Prof. Enrico Nardelli, past president of GRIN, nardelli@mat.uniroma2.it .
Jul 2008	Web Developer at GRIN: maintenance and revision of the code of the web-based platform for adequacy with 2008 GRIN standards.
Feb 2008	Technology involved: PHP, HTML, MySQL, Apache. Other info: (See above).

COMPUTER SKILLS

Programming	C/C++ (professional), Python (intermediate), Java (intermediate).
Database	Experience in the design and development of database-based applications. Good level of command of MySQL database management system and SQL language.
Operating Systems	Good command of Windows, Linux, Mac Operating Systems. Some system administration and configuration experience in Linux environment.
Office Automation	Good knowledge of the main productivity tools such as "Microsoft Office" (Word, Excel, Access, etc).
Other	Some experience with the use of scientific environments such as MATLAB. Good use of Latex.

LANGUAGES

Italian	Mother tongue.
English	Fluent English.
Spanish	Basic level of Spanish.

PROFESSIONAL MEMBERSHIP

Association for Computing Machinery (ACM)—Since 2008

Institute of Electrical and Electronic Engineers (IEEE)—Since 2009

OTHER INFORMATION

I'm fond of scuba diving and I hold a recreational diving certification. I used to practice fencing at a competitive level for several years, and now I enjoy running and backpacking.