

# Alexandra Papoutsaki

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## Education

- 2017 **Ph.D. in Computer Science**  
Brown University  
Dissertation: Democratizing Eye Tracking  
Advisor: Jeff Huang
- 2013 **M.Sc. in Computer Science**  
Brown University  
Advisor: Benjamin Raphael
- 2011 **B.Sc. in Computer Science**  
Athens University of Economics and Business

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## Experience

- June 2020 – **Visiting Assistant Researcher**  
Present Department of Informatics, University of California Irvine
- 2017 – **Assistant Professor**  
Present Department of Computer Science, Pomona College

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## Honors & Awards

- 2020 **Research Experiences for Undergraduates Supplement**, NSF CRII: CHS: RUI: Gaze Sharing to Support Remote Collaboration (\$16,000)
- 2020 **Teaching Award**, Pomona Wig Distinguished Professor award for excellence in teaching
- 2020 **Research Grant**, NSF CRII: CHS: RUI: Gaze Sharing to Support Remote Collaboration (\$105,572)
- 2017 **Prize**, Brown Chapter Of Sigma Xi
- 2017 **Best Paper Award Runner Up**, ACM SIGIR Conference on Human Information Interaction & Retrieval (CHIIR)
- 2015 **Best Paper Award Runner Up**, Best Paper award, AAAI Conference on Human Computation and Crowdsourcing (HCOMP)
- 2013 **Best Paper Award**, Annual International Conference on Research in Computational Molecular Biology (RECOMB)

- 2012 **Scholarship** Gerondelis Foundation(\$4000)  
2011, 2016 Kanellakis Fellowship  
Travel Funds: WIT 2012, CHI 2015, HCOMP 2015, GHC 2016

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## Teaching Experience

- Spring 2020 **Co-Instructor** - Data Structures and Advanced Programming (CS 062)  
Pomona College, students: 33
- 2019–2020 **Instructor** - Computer Science Senior Seminar (CS 190, Sections 1–4)  
Pomona College, students: 41
- 2019–2020 **Instructor** - Computer Science Colloquium (CS 188)  
Pomona College, students: 42
- Fall 2019 **Co-Instructor** - Data Structures and Advanced Programming (CS 062)  
Pomona College, students: 38
- Spring 2019 **Instructor** - User Interfaces and User Experience (CS 124)  
Pomona College, students: 23
- Spring 2019 **Co-Instructor** - Introduction to Computer Science with Topics in Artificial Intelligence (CS 051-A)  
Pomona College, students: 23
- Spring 2019 **Co-Instructor** - Data Structures and Advanced Programming (CS 062)  
Pomona College, students: 32
- 2018–2019 **Instructor** - Computer Science Senior Seminar (CS 190, Sections 4 and 5)  
Pomona College, students: 20
- Fall 2018 **Co-Instructor** - Data Structures and Advanced Programming (CS 062)  
Pomona College, students: 27
- Spring 2018 **Instructor** - User Interfaces and User Experience (CS 124)  
Pomona College, students: 24
- Spring 2018 **Co-Instructor** - Data Structures and Advanced Programming (CS 062)  
Pomona College, students: 29
- Fall 2017 **Instructor** - User Interfaces and User Experience (CS 124)  
Pomona College, students: 18
- Fall 2017 **Co-Instructor** - Data Structures and Advanced Programming (CS 062)  
Pomona College, students: 36
- Fall 2016 **Co-Instructor** - Topics in 2D Game Engines (CSCI 1950N)  
Brown University, students: 16
- Fall 2015 **Instructor** - Intro to Computation for Humanities and Social Sciences (CSCI 0931)  
Brown University, students: 17
- Spring 2015 **Teaching Assistant** - Human Computer Interaction Seminar (CSCI 2300)  
Brown University, students: 21

- Spring 2014 **Teaching Assistant** - Human Computer Interaction Seminar (CSCI 2951-L)  
Brown University, students: 19
- 2012–2013 **Teaching Assistant** - Android Development Workshop for High School Students  
Brown Computer Science without Borders Teaching & Providence After School Alliance

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## Teaching Development

Movement Consulting

- 2020 **Collective Learning Workshop Series**  
Center for Teaching & Learning, Pomona College.
- 2017–now **First5** Faculty Learning Community, various workshops  
Teaching Certificates by the Sheridan Center for Teaching & Learning, Brown University.
- 2015–2016 **Certificate II:** The Course Design Seminar - Principles + Practice
- 2014–2015 **Certificate III:** The Professional Development Seminar
- 2012–2014 **Certificate I:** Sheridan Teaching Seminar - Reflective Teaching

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## Advising

### Summer Research Students

- 2020 David Carroll, Georgia Kenderova, Alexander Koo, Maxwell Rose, Samuel So
- 2019 Bernardo Moyza, Jay Rodolitz
- 2018 Ethan Hardacre, Grete Helena Kütt, Kevin Lee

### Senior Theses/Projects Advising

- 2018–2019 Zihao Xu - Math Thesis - First reader
- 2018–2019 Ieva Burk - CMC Math Thesis - Second reader
- 2018–2019 Amy Buswell, Caroline Chou - Senior Project - First reader
- 2017–2018 Alexander Clemens, Chinasa Okolo - Senior Project - First reader

### Independent Studies

- RAISE 2020 Stefanos Stoikos, Ino Tsihrintzi
- Spring 2020 Samuel So
- Spring 2019 Isys Johnson, Emma Sheridan, Mui Tanprasert
- Fall 2018 Lemuel Lan, Matthew Paik
- Spring 2018 Elvis Kahoro

### Academic Advising

- 2019–2020 19 students
- 2018–2019 23 students

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## Publications

### Peer-reviewed Articles

- [C.6] Grete Helena Kütt\*, Kevin Lee\*, Ethan Hardacre\*, **Alexandra Papoutsaki**. (2019). Eye-Write: Gaze Sharing for Collaborative Writing. *Proceedings of the 2019 CHI Conference on Human Factors in Computing Systems (CHI)*.
- [C.5] **Alexandra Papoutsaki**, Aaron Gokaslan\*, James Tompkin, Yuze He, Jeff Huang. (2018). The Eye of the Typer: A Benchmark and Analysis of Gaze Behavior during Typing. *Proceedings of the Tenth Biennial ACM Symposium on Eye Tracking Research & Applications (ETRA)*.
- [C.4] **Alexandra Papoutsaki**, James Laskey\*, Jeff Huang. (2017). SearchGazer: Scalable Webcam Eye Tracking for Remote Studies of Web Search. *Proceedings of the ACM SIGIR Conference on Human Information Interaction & Retrieval (CHIIR)*.  
**Best Paper Award Runner Up**
- [C.3] **Alexandra Papoutsaki**, Patsorn Sangkloy, James Laskey\*, Nediya Daskalova, Jeff Huang, James Hays. (2016). WebGazer: Scalable Eye Tracking Using User Interactions. *Proceedings of the 25th International Joint Conference in Artificial Intelligence (IJCAI)*.
- [C.2] **Alexandra Papoutsaki**, Hua Guo, Danae Metaxa-Kakavouli\*, Connor Gramazio, Jeff Rasley, Wenting Xie\*, Guan Wang, Jeff Huang. (2015). Crowdsourcing from Scratch: A Pragmatic Experiment in Data Collection by Novice Requesters. *Proceedings of the 3rd AAAI Conference on Human Computation and Crowdsourcing (HCOMP)*.  
**Best Paper Award Runner Up**
- [C.1] Fabio Vandin, **Alexandra Papoutsaki**, Benjamin J. Raphael, Eli Upfal. (2013). Genome-Wide Survival Analysis of Somatic Mutations in Cancer. *Proceedings of the 17th Annual International Conference on Research in Computational Molecular Biology (RECOMB)*.  
**Best Paper Award**
- [Journal Articles](#)
- [J.5] Grete Helena Kütt\*, Teerapaun Tanprasert\*, Jay Rodolitz\*, Bernardo Moyza\*, Samuel So\*, Georgia Kenderova\*, **Alexandra Papoutsaki**. (2020) Effects of Shared Gaze on Audio- Versus Text-Based Remote Collaborations. *Proc. ACM Hum.-Comput. Interact.* 4, CSCW2, Article 136 (October 2020), 25 pages
- [J.4] Jing Qian, Arielle Chapin\*, **Alexandra Papoutsaki**, Fumeng Yang, Klaas Nelissen, Jeff Huang. (2018) Remotion: A Motion-Based Capture and Replay Platform of Mobile Device Interaction for Remote Usability Testing. *ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies*, 2(2), 77
- [J.3] Nediya Daskalova, Karthik Desingh, **Alexandra Papoutsaki**, Diane Schulze\*, Han Sha, Jeff Huang. (2017) Lessons Learned from Two Cohorts of Personal Informatics Self-Experiments. *ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies*, 1(3), 46
- [J.2] Fabio Vandin, **Alexandra Papoutsaki**, Benjamin J. Raphael, Eli Upfal. (2015). Accurate Computation of Survival Statistics in Genome-Wide Studies. *Plos Comput Biol*, 11(5) e1004071

- [J.1] Mark D.M. Leiserson, Fabio Vandin, Hsin-Ta Wu, Jason R. Dobson, Jonathan V. Eldridge\*, Jacob L. Thomas\*, **Alexandra Papoutsaki**, Younhun Kim, Beifang Niu, Michael McLellan, Michael S. Lawrence, Abel Gonzalez-Perez, David Tamborero, Yuwei Cheng, Gregory A. Ryslik, Nuria Lopez-Bigas, Gad Getz, Li Ding, Benjamin J. Raphael. Pan-cancer network analysis identifies combinations of rare somatic mutations across pathways and protein complexes. (2015). *Nature Genetics*. 47(2): 106-114

#### Doctoral Consortiums

- [D.1] **Alexandra Papoutsaki**. (2015). Scalable Webcam Eye Tracking by Learning from User Interactions. *Proceedings of the 33rd Annual ACM Conference Extended Abstracts on Human Factors in Computing Systems (CHI)*

\* Undergraduate student co-author

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## Leadership

### Program Committees

- CHI ACM CHI Conference on Human Factors in Computing Systems, 2021  
CHIIR ACM SIGIR Conference on Human Information Interaction and Retrieval, 2018–2021  
CSCW ACM Conference on Computer-Supported Cooperative Work and Social Computing, 2021  
CWIC-SoCal SoCal Celebration of Women in Computing, 2018, 2020  
ETRA ACM Symposium on Eye Tracking Research and Applications (Eye Tracking for the (ETWEB) Web track), 2019–2020  
WWW ACM The World Wide Web Conference, 2020  
SIGIR ACM SIGIR Conference on Research and Development in Information Retrieval, 2018–2019  
HCOMP AAAI Conference on Human Computation and Crowdsourcing, 2016

### Reviewing

- CSCW ACM Conference on Computer-Supported Cooperative Work and Social Computing, 2020  
NSF Anonymized panel, 2020  
CHI ACM CHI Conference on Human Factors in Computing Systems, 2015–2017, 2020  
TAPIA Richard Tapia Celebration of Diversity in Computing, 2019–2020  
UIST ACM Symposium on User Interface Software and Technology, 2019  
CHIIR ACM SIGIR Conference on Human Information Interaction and Retrieval, 2017  
WWW International World Wide Web Conference, 2015  
HCOMP AAAI Conference on Human Computation and Crowdsourcing, 2014  
IJHCI International Journal of Human-Computer Interaction, 2014

## Service

- 2018–2020 Teaching and Learning Committee, Pomona College
- 2018–2020 Coordination of Tech for Good chapter, Pomona College
- 2016–2017 Diversity Committee Representative, Brown University
- 2015–2017 Mentor for undergraduate female CS students, Brown University
- 2015–2017 Sheridan Center for Teaching and Learning, Departmental Liaison, Brown University
- 2015 Computer Science Graduate Student Recruitment, Coordinator, Brown University
- 2012–2014 President of the Hellenic Students Association, Brown University
- 2012–2013 Brown Computer Science without Borders Teaching, Brown University & Providence After School Alliance

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## Open-Source Software and Public Datasets

- 2018 *Eye of The Typer: A Benchmark and Analysis of Gaze Behavior during Typing* [C.5]  
Website: <https://webgazer.cs.brown.edu/data/>
- 2017 *SearchGazer: Webcam Eye Tracking for Remote Studies of Web Search* [C.4]  
Source: <https://github.com/brownhci/searchgazer/>
- 2016 *WebGazer.js: Democratizing Webcam Eye Tracking on the Browser* [C.3]  
Source: <https://github.com/brownhci/WebGazer>
- 2015 *Computer Science Faculty Dataset: Academic development of 3600 faculty from 100 top US and Canadian Universities* [C.2]  
Dataset: <http://drafty.cs.brown.edu/professors>
- 2013 *Exalt: Accurate Genome-Wide Survival Analysis* [C.1]  
Source: <http://compbio.cs.brown.edu/projects/survival>

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## Press and Media Coverage

### Eye-Write [C.6]

- May 2019 **FastCompany** -The mouse of the future? Your eyeballs. <https://bit.ly/2VEiJGXs>  
[WebGazer.js](#) [C.3]
- March 2018 **Fortune** -This Scientist Wants to Democratize Eye Tracking. <https://bit.ly/2Hx8BWW>
- June 2016 **HackerNews** - WebGazer.js: Eye Tracking on the Browser. <https://goo.gl/Kk0V86>
- June 2016 **PCWorld** - Web developers, meet WebGazer: software that turns webcams into eye-trackers. <http://goo.gl/m0U090>
- June 2016 **Reddit** - Webgazer.js, eye tracking library using the webcam that can be put on any website. <https://goo.gl/ebUZU6>
- June 2016 **Softpedia** - WebGazer Uses JavaScript and Your Webcam to Track Eye Movements. <http://goo.gl/PLeHKV>
- June 2016 **TechXplore** - Software turns webcams into eye-trackers. <http://goo.gl/1aNiGR>

- June 2016 **The Register** - Brown boffins brew eye-tracking Javascript.  
<https://goo.gl/sy1JgC>  
[Faculty Dataset \[C.2\]](#)
- June 2016 **Computer Science Rankings** <http://csrankings.org>
- June 2014 **CSAIL MIT** - Ranking of CS Departments based on the Number of Papers in Theoretical Computer Science. <http://projects.csail.mit.edu/dnd/ranking>
- June 2014 **Keshif** - Faculty in 50 Top US Computer Science Departments.  
[http://keshif.me/demo/cs\\_faculty](http://keshif.me/demo/cs_faculty)
- May 2014 **Reddit** - Brown's Jeff Huang And 19 Students Crowdsource A Dataset Of 2,200 CS Faculty In 16 Days. <https://goo.gl/WIrJKN>