NADA ATTAR

Computer Science Department, SJSU One Washington Square, San Jose, CA 95192-0249

ACADEMIC POSITIONS

8/2018 – current SAN JOSE STATE UNIVERSITY San Jose, CA Assistant Professor of Computer Science, Dept. of Computer Science, School of Science Research in eye-movement, human-computer interaction, user experience, data science, computer vision, machine learning, mobile interfaces, pattern recognition, cognitive load Director of Computer-Human Accessibility & Interaction lab 7/2017 - 6/2018SAINT MARY'S COLLEGE OF CALIFORNIA Moraga, CA Assistant Professor of Computer Science, Dept. of Math & Computer Science, School of Science Spearheaded design & successful launch of Computer Science minor at College Organized student field trips to high-tech firms such as Google for student mentorship & career planning 1/2016 - 5/2016University of Massachusetts Boston Boston, MA Lecturer, Department of Computer Science Taught Computing with Data Structures. **EDUCATION** 3/2017 - 8/2017HARVARD UNIVERSITY Boston, MA Post-Doctoral Research Fellow, Bowers Lab, Schepens Eye Research Institute, Mass. Eye & Ear Institute Measured the effects of age, cognitive load, & visual impairment in peripheral detection performance in vehicle driving in old age 2010 - 2016University of Massachusetts Boston, MA Doctor of Philosophy in Computer Science, Visual Attention Laboratory Thesis: Enhancing Cognitive Load Measurement & User Performance in Human Computer Interaction Patent: Nada Attar. Apparatus, method and computer-readable medium that assign measure to an item and assist location. Publication No. US-2017-0249364-A1, Publication Date: 8/31/2017 2010 - 2013HARVARD UNIVERSITY Cambridge, MA Fellow, Harvard College Observatory, Faculty of Arts and Sciences, Laboratory of Visual Learning, Harvard-Smithsonian Center for Astrophysics Built interfaces to improve reading for dyslexia & special needs measuring memory load in visual search 2007 - 2009**TUFTS UNIVERSITY** Medford, MA Master's in Computer Science Select coursework in Algorithms, Object-Oriented Programming, Theory of Computation, Networking 2001 - 2005KING ABDUL AZIZ UNIVERSITY Jeddah, Saudi Arabia Bachelor's in Computer Science, Magna Cum Laude 1st place for LAN-based scheduling system senior project; 1st place for app to help homeless in the city PROFESSIONAL EXPERIENCE Summer 2019 GOOGLE COMPUTER SCIENCE SUMMER INSTITUTE EXTENSION PROGRAM (CSSI-EXTENSION) Instructor Lead, San Jose State University Mountain View & San Jose, CA Helped launch inaugural CSSI program in collaboration with Google to increase the representation of women, minorities, and first-generation students in STEM and Computer Science

https://blogs.sjsu.edu/newsroom/2019/sjsu-and-google-offer-computer-science-summer-institute-extension/

Underwent one-week intensive training at Google on interactive teaching and facilitation skills

IBM RESEARCH THOMAS J. WATSON RESEARCH CENTER Research Intern, Customer Experience Lab & THINK Lab

Summer 2014

Yorktown Heights, NY

Office: MH218

nada.attar@sisu.edu

- Developed app presented to Ginni Rometty the CEO of IBM which collects data and provides visualizations on client interactions to drive customer experience and engagement & better position IBM products
- · Developed "help" functionality for researcher interaction portal using jQuery, and HTML

LEADERSHIP, SKILLS, HOBBIES

2015-2016 COMPUTER SCIENCE GRADUATE STUDENT ASSOCIATION, UMASS BOSTON

Boston, MA

San Iosa CA

Founder & President

SAN LOCE STATE UNIVERSITY

Technical Skills: C++, Objective C, Java, Python, MATLAB, Cocoa, iOS/Android development, JS, jQuery, HTML, etc. **Hobbies / Passions:** Equestrianism, cooking, women & minority representation in computer science

TEACHING EXPERIENCE

SAN JOSE STATE UNIVERSITY	San Jose, CA
CS-151: Object-Oriented Design	
CS-146: Data Structures and Algorithms	
CS-151: Object-Oriented Design	
CS-046B: Data Structures	
CS-255: Analysis and Design of Algorithms	
CS-151: Object-Oriented Design	
SAINT MARY'S COLLEGE OF CALIFORNIA	Moraga, CA
MA/CS-190: Computer Vision	
MA/CS-021: Programming I (Python)	
MA/CS-002: Digital Literacy: Introduction to Web Design	
MA/CS-174: Algorithms	
MA/CS-102: Programming II (using C++)	
University of Massachusetts	Boston, MA
Lecturer, CS-210: Intermediate Computing with Data Structures	
Instructor, Navitas Program for Masters' Students (foundational computer science principal	es for new students)
TUFTS UNIVERSITY	Medford, MA
Teaching Assistant, C++ Lab	•
	CS-151: Object-Oriented Design CS-146: Data Structures and Algorithms CS-151: Object-Oriented Design CS-046B: Data Structures CS-255: Analysis and Design of Algorithms CS-151: Object-Oriented Design SAINT MARY'S COLLEGE OF CALIFORNIA MA/CS-190: Computer Vision MA/CS-021: Programming I (Python) MA/CS-002: Digital Literacy: Introduction to Web Design MA/CS-174: Algorithms MA/CS-102: Programming II (using C++) UNIVERSITY OF MASSACHUSETTS Lecturer, CS-210: Intermediate Computing with Data Structures Instructor, Navitas Program for Masters' Students (foundational computer science principle TUFTS UNIVERSITY

ACADEMIC ACTIVITIES

Conference Paper Reviewing

- · ACM Symposium on Eye Tracking Research & Applications (ETRA), 2018, 2019
- · 20th International Conference on Human-Computer Interaction with Mobile Devices and Services (MobileHCI), 2018
- · ACM Conference on Knowledge Discovery & Data Mining (SIGKDD), 2016
- · Cognitive Science Society, 2016, 2017, 2018, 2019

Conference Adjudicating & Women in Science

- · Speaker at CRA-W: Grad Cohort for Women in Computer Science. Session 1: "Master's vs. Ph.D." Session 2: "Perspectives from Grad Cohort Alums". Chicago, IL, 2019
- · Poster Judge at ACM Final Poster Presentation Competition, Grace Hopper Celebration of Women in Technology (GHC), TX, 2018
- · Mentor at Research Career One-to-One Mentor at Bees Speed Mentors. Grace Hopper Celebration of Women in Technology (GHC), TX 2018
- · Mentor/Programmer at Open Source Day. Grace Hopper Celebration of Women in Technology (GHC), TX, 2018
- · Guest at poster session at CRA-W: Grad Cohort for Women in Computer Science. San Francisco, CA 2018

- · Panelist at New England Celebration of Women in Computing (NECWIC), session title: "Why Graduate School in a computing discipline is for you", the session was sponsored by CRA-W (Computing Research Association Women). Portland, ME, 2017
- · Panelist at 8th annual SET in the City day in Merck Research Laboratories, session title: "graduate school experiences", sponsored by Boston Area Girls' STEM Collaborative, Boston. April 2nd, 2016
- · Technical Assistant at Black Girls CODE, Boston, 2016.
- · Session Chair for IEEE 82nd Vehicular Technology Conference Boston, 2015
- Judge at a poster session for 2nd Annual Intercollegiate Scientista Symposium Microsoft NY, 2015
- · Mentor for undergrad students, WeCode Conference at Harvard University, 2014

University Service

2018-current SAN JOSE STATE UNIVERSITY

San Jose, CA

· Computer Science Undergraduate Committee

MS. Thesis Committee Member (Department of Computer Science):

- · Ishan shinde "Nitrogenase Iron Protein Detection using Neural Network", May 3rd, 2019
- · Rashmeet Kaur Khanuja, "Optimizing E-Commerce Product Classification Using Transfer Learning", May 6th, 2019
- · Mustafa Badshah, "Sensor Based Human Activity Recognition Using Smartphones", May 8th, 2019
- · Kunal Rajan Deshmukh "Image Compression Using Neural Networks", May 9th, 2019
- · Sonali Mishra, "SQL Injection Detection Using Machine Learning", May 20th, 2019

2017-2018 SAINT MARY'S COLLEGE OF CALIFORNIA

Moraga, CA

- · Organized first field trip to Google for Math/CS and Physics majors, Dec 1st, 2017 (featured on school's website)
- · Spearheaded and collaborated with department chair to launch a new minor in computer science at the College

2010-2016 University of Massachusetts

Boston, MA

- · Advising: Co-supervised ~10 Master's and undergraduate students in their thesis and senior projects & assisted with their research projects at the Visual Attention Laboratory, UMass Boston, 2010-2016
- · Career Mentoring: Served as a graduate mentor for new Master's and Ph.D. students; helped students with resume and cover letter writing, UMass Boston 2013-2016.
- · Students Representative: Selected 5 times by faculty to present my research to faculty candidates; attended talks, conducted interviews, & provided feedback on faculty candidates, UMass Boston, 2013-2016

GRANTS & AWARDS

- · CSU Chancellor's Office Grant Proposal Development Pilot Program, Spring s2019
- · Grace Hopper Celebration Faculty Scholarship Award, 2018
- · CRA-W Early Career Mentoring Scholarship Award, sponsored by NSF, Nov 2018
- · Faculty Research Award, Saint Mary's College of California, Office of the Provost. Role: PI. 7/1/2018-6/30/2019, \$9000.
- · Summer Research Award-School of Science Scholarship, Office of the Dean of Science, Saint Mary's College of California, 2018. \$2000

PUBLICATIONS & PATENTS

Journal Articles

- · Chia-Chien Wu, **Nada Attar** and Marc Pomplun. Involuntary semantic bias in visual working memory and search efficiency, *In Progress*
- · **Nada Attar**, Matthew Schneps and Marc Pomplun. Working Memory Load Predicts Visual Search Efficiency: Evidence from a Novel Pupillary Response Paradigm. *Memory and Cognition*, 44(7), pp.1038-1049, 2016 [Impact Factor: 2.457]

Dissertation

 Nada Attar. Enhancing Cognitive Load Measurement & User Performance in Human Computer Interaction. University of Massachusetts Boston – Computer Science Department. Dec 2016

<u>Summary</u>: The thesis focused on user experience and user performance optimization via measurement of the user's cognitive state. This was achieved by leveraging tools such as psychophysical measurement, machine learning, neural networks, and statistical analysis. There are two problems that particularly solved in this thesis: i) how to enhance interface design using cognitive measurement, and ii) how to improve the measurement of user efficiency.

Patent

· **Nada Attar**, inventor; Apparatus, method and computer-readable medium that assign measure to an item and assist location. **Publication No.** US-2017-0249364-A1, **Publication Date:** 8/31/2017.

Proceedings

https://patents.google.com/patent/US20170249364

- · Sudeep Raj, Chia-Chien Wu, Shreya Raj, **Nada Attar**. Understanding the Relationship between Microsaccades and Pupil Dilation, ACM ETRA: 2019 Symposium on Eye Tracking Research & Applications, article No. 67, 2019
- Nada Attar and Marc Pomplun. Enhancing Reading Interfaces and Comprehension Measurement with Eye Tracking Data. Proceedings of 2nd IEEE International Conference on Human Computer Interactions (ICHCI'16), pp. 124-129. 2016 [Acceptance rate: 12.28% (135/1099)]
- Nada Attar, Chia-Chien Wu, Djamel-Eddine Sia and Marc Pomplun. A Deeper Understanding of Optimal Viewing Position Using Eye Fixations and Character Recognition on Text-Viewing and Reading Tasks. ACM ETRA: 2016 Symposium on Eye Tracking Research & Applications, pp. 209-212, ACM, Charleston, SC, USA, 2016 [Acceptance rate 34%]
- · Nada Attar, Paul Fomenky, Wei Ding and Marc Pomplun. Improving Cognitive Load Level Measurement through Preprocessing of Psychophysical Data by Random Subspace Time-Series Method. Proceedings of 2nd IEEE International Conference on Human Computer Interactions (ICHCI'16), pp. 80-84. 2016 [Acceptance rate: 12.28% (135/1099)]
- Nada Attar, Chia-Chien Wu and Marc Pomplun. The Effect of Immediate Accuracy Feedback in a Multiple-Target Visual Search Task. In Proceedings of the 36th annual meeting of the cognitive science society, pp. 1868-1873, Quebec, Canada, 2014 [Acceptance rate: 41%]

Abstract Presentations

- Nada Attar, Paul Fomenky, Wei Ding and Marc Pomplun. Modeling an Unsupervised Time-Series Learning Method for Visual Search Leveraging Preprocessed Cognitive Load Pupil Data. The 45th Annual Meeting of the Society for Computers in Psychology (SCiP), Chicago, USA, 2015
- · Chia-Chien Wu, **Nada Attar** and Marc Pomplun. Involuntary semantic bias during search for words and word pairs. The Meeting of Visual Sciences Society 2015, Journal of Vision, 15 (12), pp. 1367-1367, 2015
- Nada Attar, Chia-Chien Wu and Marc Pomplun. Immediate Feedback During Multiple-Target Visual Search Improves Accuracy. The Meeting of the Visual Sciences Society 2014, Journal of Vision, 14 (10), pp. 1195-1195, 2014
- · Nada Attar, Matthew Schneps and Marc Pomplun. Pupil Size as Measure of Working Memory Load during Visual Search. The Meeting of the Visual Sciences Society 2013, Journal of Vision, 13 (9), pp. 160-160, 2013
- · Nada Attar, Matthew Schneps and Marc Pomplun. Working Memory Load Increase Predicts Visual Search Efficiency. The Meeting of the Visual Sciences Society 2012, Journal of Vision, 12 (9), pp. 291-291, 2012

Press

Atlas of Science: A Novel Approach to Reliability Predicting Efficient Visual Search, September 27, 2016. http://atlasofscience.org/a-novel-approach-to-reliably-predicting-efficient-visual-search/

INVITED TALKS

- · Speaker at the 35th Bay Area Discrete Math Day (BAD Math Day)- Saint Mary's College, "Working Memory Load Predicts Visual Search Efficiency: Evidence from a Novel Pupillary Response Paradigm", Oct 7th, 2017
- · Speaker at Math Day Saint Mary's College, "Why Computer Science". Sep 11th, 2017
- · Speaker at Boston College, "Enhancing Interfaces with Eye Tracking in HCI". Jan 25th, 2017

- · Speaker at VIVO Colloquium Schepens Eye Research Institute, Massachusetts Eye and Ear, Harvard Medical School, Boston, "Enhancing User Working Memory Load Measurement". Jan 18th, 2017
- · Speaker at CS 188SL-01 Science Gateway Seminar UMass Boston, "Cognitive Load Measurements in Human Computer Interaction". Feb 9th, 2016
- · UMass Boston Ph.D. Symposium Colloquium Talk, "Modeling an Unsupervised Time-Series Learning Method for Visual Search Leveraging Preprocessed Working Memory Pupil Data". May 28th, 2015
- · UMass Boston Ph.D. Symposium Colloquium Talk, "The Effect of Immediate Accuracy Feedback in a Multiple-Target Visual Search Task". May 14th, 2014
- UMass Boston Ph.D. Symposium Colloquium Talk, "Working Memory Load Increase Predicts Visual Search Efficiency".
 May 3rd, 2013