

JOHN MATTA

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EDUCATION

- 2014-present* **Southern Illinois University Edwardsville/Carbondale**
Ph.D. Computer Science, anticipated Summer 2018. GPA 4.0/4
First participant in joint program with SIUE and SIUC.
- 2012-2014* **Southern Illinois University Edwardsville**
Master of Science, Computer Science. GPA 4.0/4
- 1986-1988* **Washington University, St. Louis, MO**
Master of Business Administration. GPA 3.5/4
- 1981-1985* **McGill University, Montreal, Quebec**
Bachelor of Arts, Economics. GPA 3.1/4

PUBLICATIONS

- 2017* John Matta, Gunes Ercal, and Jeffrey Borwey, “The Vertex Attack Tolerance of Complex Networks,” *RAIRO Operations Research* 51 (4), p1055-1076, 2017. <http://doi.org/10.1051/ro/2017008>
- 2016* John Matta, Gunes Ercal, and William Stimson. “The Quality of Sampling from Geographic Networks,” *International Journal of Distributed Sensor Networks*, 2016. <http://dsn.sagepub.com/content/12/4/7379030.full>

CONFERENCE PROCEEDINGS

- 2017* John Matta, “A Comparison of Approaches to Computing Betweenness Centrality for Large Graphs,” *International Workshop on Complex Networks and their Applications*, Lyon, France. Springer, Cham, 2017.
- 2017* John Matta, Thy Nguyen, Gunes Ercal and Tayo Obafemi-Ajayi, “Applications of Novel Graph Theoretic Methods to Clustering Autism Spectrum Disorders Phenotypes,” 9th International Conference on Bioinformatics and Computational Biology (BICOB), Honolulu, Hawaii, USA, March 2017.
- 2017* Ellie Lovellette, John Matta, Dennis Bouvier and Roger Frye, “Just the Numbers: An Investigation of Contextualization of Problems for Novice Programmers,” SIGCSE, Seattle, Washington, March 2017.
- 2016* John Matta, Tayo Obafemi-Ajayi, Jeffrey Borwey, Donald C. Wunsch, and Gunes Ercal, “Robust Graph-theoretic Clustering Approaches Using Node-Based Resilience Measures,” *IEEE Conference on Data Mining*, Barcelona, Spain, December 2016.
- 2016* Dennis Bouvier, Ellie Lovellette, John Matta et al. “Novice Programmers and the Problem Description Effect,” *ACM Digital Library/SIGCSE Proceedings*, 2017.

- 2013* Gunes Ercal, John Matta, “Resilience Notions for Scale-Free Networks,” Proceedings of Complex Adaptive Systems 2013.
- 2013* Gunes Ercal, John Matta, William Stimson, and Dominic Eccher, “On the Quality of Sampling from Geographic Networks,” Proceedings of Complex Adaptive Systems 2013.

CONFERENCE PARTICIPATION

- Nov. 2017* International Workshop on Complex Networks and their Applications,
Lyon, France, November 2017
A Comparison of Approaches to Computing Betweenness Centrality for Large Graphs
- July 2016* Innovation and Technology in Computer Science Education,
Arequipa, Peru, July 2016
Working group participation
- April 2014* SIUE Graduate School Spring Research Symposium
Poster on graduate research and graph theory
- Nov. 2013* Complex Adaptive Systems, Baltimore, MD, November 2013
Resilience Notions for Scale-Free Networks
On the Quality of Sampling from Geographic Networks

WORKING PAPERS

John Matta, Tayo Obafemi-Ajayi, Jeffrey Borwey, Koushik Sinha, Donald C. Wunsch, and Gunes Ercal, “Node-Based Resilience Measure Clustering with Applications to Noisy and Overlapping Communities,” (Submitted to Data Mining and Knowledge Discovery), 2018.

Jeffrey Dale, John Matta, Susanne Howard, Gunes Ercal, Wenping Qiu, and Tayo Obafemi-Ajayi, “Analysis of Grapevine Gene Expression Data using Node-Based Resilience Clustering,” (Submitted to 2018 IEEE Conference on Computational Intelligence in Bioinformatics and Computational Biology), 2018.

John Matta, Gunes Ercal and Koushik Sinha, “Benchmarking Betweenness Centrality Approximations,” (For submission to Applied Network Science), 2018.

John Matta and Koushik Sinha, “Security in Device to Device Communication in 5G Cellular Networks,” (For submission to IJDSN), 2018.

Ellie Lovellette, John Matta and Dennis Bouvier, “Authenticity and the Problem Description Effect,” (For submission to ACM Transactions on Computing Education), 2018.

John Matta, Lenora Tetzner and Dennis Bouvier, “Student Perceptions of Automated Grading,” (For submission to ITiCSE), 2018

John Matta, Lenora Tetzner and Dennis Bouvier, “Automated Grading Can Improve Student Performance,” (For submission to ITiCSE), 2018

TEACHING

- Fall 2018* CS325 Software Engineering
- Fall 2017* MA224 Discrete Mathematics
- Spring 2016* CS340 Algorithms and Data Structures
- Numerous Semesters* CS140 Introduction to Computing - Taught CS140 lecture sections in Fall 2013, Fall 2014 (2 sections), Spring 2015, Fall 2015, and Fall 2016. Assisted with CS140 labs in Spring 2013, Spring 2014, Summer 2016, Spring 2017, and Summer 2017. CS140 lab experience included writing several new labs and coding unit tests for automated grading. Participated in CS140 redesign committee Summer 2016.

CLASSES TAKEN

Artificial Intelligence
Database Management Systems
Advanced Database Mgmt Systems
Operating Systems
Advanced Algorithms
Data Mining
Computer Architecture
Bioinformatics
Engineering Research Methods
Networks and Data Comms
Network Programming
Advanced Software Engineering
Web Application Development
eLearning Tools and Technologies
Ops Research Deterministic Models
Intelligent Engineering Systems

SERVICE ACTIVITIES

- 2015 & 2016* SIUE Summer Engineering Camp Summer 2015 and 2016
Assisted with Computer Science Workshop
- 2013* Upward Bound Math and Science program at SIUE
Assisted with Graph Theory Workshop, Summer 2013

AWARDS

- 2014* Outstanding Graduate Student, SIUE, 2014