Victoria G. Crawford

www.cise.ufl.edu/~crawford/
✉ *vcrawford01@ufl.edu*

Research Interests

Combinatorial optimization problems arising in machine learning, submodular optimization, evolutionary algorithms, approximation algorithms.

Education

Fall 2016– **PhD Student in Computer Science**, University of Florida.
- Includes 2 semesters of parental leave in 2020
- PhD advisor is Dr. Meera Sitharam
- 3.8 GPA

Fall 2012– **Master of Science in Mathematics**, University of Florida.
Spring 2014
- 3.8 GPA

2008–2012 **Bachelor of Science in Mathematics**, University of Florida.
- 3.9 GPA

Awards

- **2019** Scholarship to attend Grace Hopper Celebration
- **2019** IJCAI Travel Award
- **2019** ICML Travel Award
- **2019** Gartner Group Grad Fellowship
- **2017** Invited to Best Papers of ICDM Special Issue
- **2017** Harris Fellowship
- **2016** Graduate School Fellowship from the University of Florida
- **2015** Employee of the Month at Gleim Publications
- **2014** Award for Outstanding Teaching from the University of Florida Department of Mathematics

Preprints

- **Victoria G. Crawford**. Streaming Based Bicriteria Approximation Algorithms for Submodular Optimization. ArXiv, 2021.

Publications

- **Victoria G. Crawford**. Faster Guarantees of Evolutionary Algorithms for Maximization of Monotone Submodular Functions. International Joint Conference on Artifical Intelligence (**IJCAI**), 2021.
- **Victoria G. Crawford**. An Efficient Evolutionary Algorithm for Minimum Cost Submodular Cover. International Joint Conference on Artifical Intelligence (**IJCAI**), 2019.
- **Victoria G. Crawford**, Alan Kuhnle, My T. Thai. Submodular Cost Submodular Cover with an Approximate Oracle. International Conference on Machine Learning (**ICML**), 2019.
- Alan Kuhnle, **Victoria G. Crawford**, My T. Thai. Scalable Approximations to k-Cycle Transversal Problems on Dynamic Networks. Knowledge and Information Systems (**KAIS**). Springer 2018.
- **Victoria G. Crawford***, Alan Kuhnle*, Christina Boucher, Rayan Chikhi, Travis Gagie. Practical Dynamic De Bruijn Graphs. **Bioinformatics**, 2018. *These authors contributed equally to this work.
- Alan Kuhnle, **Victoria G. Crawford**, My T. Thai. Network Resilience and the Length-Bounded Multicut Problem: Reaching the Dynamic Billion-Scale with Guarantees. Journal Proc. ACM Meas. Anal. Comput. Syst., 2018.
- Alan Kuhnle, J. David Smith, **Victoria G. Crawford**, My T. Thai. Fast Maximization of Non-submodular, Monotonic Functions on the Integer Lattice. International Conference on Machine Learning (**ICML**), 2018.
- **Victoria G. Crawford**, Alan Kuhnle, Md Abdul Alim, My T. Thai. Space-Efficient and Dynamic Caching for D2D Networks of Heterogeneous Users. IEEE International Conference on Mobile Adhoc and Sensor Systems (**MASS**), 2018.
- Alan Kuhnle, **Victoria G. Crawford**, My T. Thai. Network Resilience and the Length-Bounded Multicut Problem: Reaching the Dynamic Billion-Scale with Guarantees. International Conference on Measurement and Modeling of Computer Systems (**ACM SIGMETRICS**), 2018.
- Alan Kuhnle, **Victoria G. Crawford**, My T. Thai. Scalable and Adaptive Algorithms for the Triangle Interdiction Problem on Billion-Scale Networks. International Conference on Data Mining (**ICDM**), IEEE 2017 (Invited to KAIS Journal Special Issue: ICDM Best Papers)
- A. Kuhnle, T. Pan, **Victoria G. Crawford**, M. A. Alim, and My T. Thai. Pseudo-Separation for Assessment of Structural Vulnerability of a Network. International Conference on Measurement and Modeling of Computer Systems (**ACM SIGMETRICS**), Extended abstract, 2017.

Teaching

Fall 2019	**Teaching Assistant**, Computer Science Department, University of Florida.
	○ Supervisor Dr. Ahmed Helmy
	○ Teaching Assistant for Computer Networking Fundamentals problems.
Fall 2012 – Spring 2014	**Teaching Assistant**, Mathematics Department, University of Florida.
	○ Lecturer for Calculus 1 course Summer 2013
	○ Led discussion sections for Precalculus, Calculus 1, and Calculus 2. Held office hours to help students with the class.

Professional Service

Summer 2021	**Program Committee of NeurIPS 2021**.
Spring 2021	**Program Committee of ICML 2021**.
Fall 2020	**Program Committee of AAAI 2021**.
Summer 2020	**Program Committee of NeurIPS 2020**.
Summer 2020	**Reviewer for JAIR**.
Summer 2019	**Reviewer for IEEE/ACM ASONAM**.
Fall 2017	**Reviewer for IEEE INFOCOM**.
Spring 2017	**Reviewer for IEEE Transactions on Networking**.
Fall 2012 – Spring 2014	**Society of Industrial and Applied Mathematics(SIAM)**, Secretary.