ISAAC GROSOF

Computer Science Department
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RESEARCH INTERESTS

Design and performance analysis of stochastic computer systems, including theory and implementation.
Queueing behavior and scheduling policies for resource allocation, especially in multicore systems.

CURRENT RESEARCH

Multiserver scheduling policies, Scheduling policies for tail metrics, Redundancy queueing systems.

EDUCATION

2017 - pres: Pursuing PhD in Computer Science. Carnegie Mellon University, Pittsburgh, PA.
Advisor: Prof. Mor Harchol-Balter

2013 - 2017: M.E. and B.S. in Computer Science. Massachusetts Institute of Technology, Cambridge, MA. GPA 4.96/5
Master's Thesis in information-theoretic cryptography: "Secure communication: CDS, PIR, PSM"
Master's Advisor: Prof. Vinod Vaikunatanathan
Bachelor's Advisor: Prof. Frans Kaashoek

PUBLICATIONS

Isaac Grosof, Mor Harchol-Balter, Ziv Sculy. "SRPT for Multiserver Systems." Performance Evaluation, Nov. 2018.
Also appeared in the following conference: *36th International Symposium on Computer Performance, Modeling, Measurements, and Evaluation (Performance 2018)*, Toulouse, France, December 2018.
Winner of Performance Best Student Paper Award.

Erik D. Demaine, Isaac Grosof, Jayson Lynch, and Mikhail Rudoy. "Computational Complexity of Motion Planning of a Robot through Simple Gadgets." Ninth International Conference on Fun with Algorithms. La Maddalena, Italy. 2018.

Erik D. Demaine, Isaac Grosof, and Jayson Lynch. "Push-Pull Block Puzzles are Hard." International Conference on Algorithms and Complexity. Athens, Greece. 2017.

Benjamin Grosof, Janine Bloomfield, Paul Fodor, Michael Kifer, Isaac Grosof, Miguel Calejo, and Terrance Swift. "Automated Decision Support for Financial Regulatory/Policy Compliance, using Textual Rulelog." RuleML 2015. Berlin, Germany. 2015.

EMPLOYMENT

Summer 2016: Jane Street Capital, LLC, New York City, NY.
- Software developer for non-obtrusive data collection about in-house trading.
- Software developer responsible for updating trading simulation package to accommodate new trade specification format.

Summer 2015: Coherent Knowledge, Seattle, WA.
- Knowledge Engineer to build demonstrations for the financial and natural language domains using the declarative logic programming language Ergo.

2013 - 2014: MIT Undergraduate Research Opportunities Program, Cambdridge, MA.
- Researcher in Complexity Theory proving computational hardness of block puzzles and related agent motion problems.

Summer 2014: EMC Isilon, Seattle, WA.
- Software developer to replace the previous ad-hoc build platform with a modern Jenkins-based build platform.

PROJECTS

2014 - pres: Author of new programming language: *Pyth*
- Pyth is one of the best programming languages for solving tasks with the shortest possible programs.

- Pyth is an open-source language written in Python which has an online interpreter and detailed documentation.
- Available at `https://github.com/isaacg1/pyth`

SKILLS

Strong mathematical background, including abstract logic, probability, and mathematical proofs.
Proficient with Python, Java, OCaml.
Experience with Haskell, C, Rust.
Experience in functional programming (e.g., Scheme) and logic programming (e.g., Prolog).
Experience with Linux, Linux shell scripting.