Krishna Vaidyanathan

CONTACT INFORMATION

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CURRENT POSITION

Second year student of the M.Math program at the Cheriton School of Computer Science, University of Waterloo.

ACADEMIC INTERESTS

Reconfiguration problems, parameterized algorithms, and graph coloring.

EDUCATION

University of Waterloo, Canada — September, 2015 - May, 2017 (expected)
(M.Math Computer Science) — **(88.75/100)**
PSG College of Technology, Coimbatore — June, 2010 - May, 2015
(M.Sc. Theoretical Computer Science) — **(8.62/10)**

INDUSTRY EXPERIENCE

- **Jan, 2015 - July, 2015:** SDE Intern, *Amazon Development Center, Chennai*, India. Worked on an internal tool to static analyze codebases by generating a graph of dependencies and isolates sections of the code that is affected by check-ins. Worked extensively on Facebook's pfff adding features relevant to the project, which was used to static code analyze. Also ported the graph from facebook/pfff to TitanDB, and wrote queries to derive insights from the graph.
  Code: `https://github.com/krishnavaidy/pfff`

RESEARCH EXPERIENCE

- **Jan, 2016 - July, 2016:** Extended a course project on Opinion Dynamics in Agent Research to a paper collaborating with **Prof. Robin Cohen**.
- **Sep, 2015 - present:** Research Assistant, *University of Waterloo, Canada.* Working on reconfiguration problems in graph coloring with **Prof. Naomi Nishimura**.
- **May, 2014 - July, 2014:** Summer Intern, *Indian Statistical Institute Chennai*, India. Worked under the guidance of **Dr. Mathew C. Francis**. Worked on a few problems in contact graphs of L-shapes in the plane and B_k-VPG graphs.
- **May, 2013 - Nov, 2013:** Research Intern, *Indian Institute of Science, Bangalore*, India. Worked under the guidance of **Prof. L. Sunil Chandran**. Investigated rainbow matchings in the class of strongly edge-colored graphs and found a bound on the maximum rainbow matchings in terms of its minimum degree.
- **Jan, 2013 - April, 2014:** Worked on the problem of counting triangulations in non convex polygons with **Prof. R.S. Lekshmi** (*PSG College of Technology*).
- **May, 2012 - June, 2012:** Summer Intern, *Institute of Mathematical Sciences, Chennai*, India. During this period, attended lectures and programming classes on various important topics of Theoretical Computer Science.

PUBLICATIONS

- Jasine Babu, L. Sunil Chandran, Krishna Vaidyanathan. *"Rainbow matchings in strongly edge-colored graphs."* Discrete Mathematics 338.7 (2015): 1191-1196.
- Robin Cohen, Alan Tsang, Krishna Vaidyanathan, Haotian Zhang. *"Analyzing Opinion Dynamics in Online Social Networks". Submitted to BigDIA (Big Data and Information Analytics).*

WORKSHOPS ATTENDED

- **Jan 23rd, 2017 - 27th, 2017 (planned):** I plan to attend the **"Combinatorial Reconfiguration"** workshop organized by Takehiro Ito (Tohoku University), Amer E. Mouawad (University of Bergen), and Naomi Nishimura (University of Waterloo).

- **March 3rd, 2014 - 8th, 2014:** Attended the **"Advanced School on Parametrized Algorithms and Kernelizations"** (ASPAK), a one week intensive school on parametrized algorithms and kernelization at the *Institute of Mathemtatical Sciences (IMSc), Chennai.*
- **May 21st, 2012 - 31st, 2012:** Attended the workshop **"Network Optimization and Security"** conducted by *IMSc, Chennai.*

Courses Credited

- **CS 666:** Design and Analysis of Algorithms
- **CS 798:** Algorithmic Spectral Graph Theory
- **CS 854:** Advanced Topics in Computer Systems: Experimental OS Techniques
- **CS 886:** Trust Modeling and Online Social Networks
- **CS 798:** Software Foundations (Coq)

Computer Proficiency

Languages	:	OCaml, Python.
Backend	:	MySQL.
Platform	:	Linux, Windows.
Tools	:	MATLAB, LaTex, Coq.

Extracurricular Activities

- "Graduate Ambassador" for the Cheriton School of Computer Science, University of Waterloo. I answered queries from prospective graduate students about course load, research areas, student life, etc.
- Completed levels N5 and N4 in the "Japanese Language Proficiency Test".
- Certified by the Lifesaving Society to perform "Emergency First Aid".

Links

- Github: `https://github.com/krishnavaidy`
- LinkedIn: `https://www.linkedin.com/in/krishna-vaidyanathan-07663636`
- Personal Webpage: `https://cs.uwaterloo.ca/~kvaidyan`