## Krishna Vaidyanathan


**Contact Information**

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**Current Position** First year student of the M.Math program at the Cheriton School of Computer Science, University of Waterloo.

**Academic Interests** Reconfiguration problems, parametrized 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 - 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**

- **Janaury - 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 - 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 - November, 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 - 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**

- **March 3rd - 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 - 31st, 2012:** Attended the workshop **"Network Optimization and Security"** conducted by *IMSc, Chennai*.

## Computer Proficiency

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|---|---|---|
| **Languages** | : | OCaml, Python. |
| **Backend** | : | MySQL. |
| **Platform** | : | Linux, Windows. |
| **Tools** | : | MATLAB, LaTex. |

## Extracurricular Activites

- Completed levels N5 and N4 in the "Japanese Language Proficiency Test" and pursuing level N3.
- Active Toastmaster at the *Coimbatore Toastmasters Club*.

## Links

- Github: `https://github.com/krishnavaidy`
- LinkedIn: `https://www.linkedin.com/in/krishna-vaidyanathan-07663636`