Krishna Vaidyanathan

DC 2569
University of Waterloo
200 University Avenue W, Waterloo ON N2L 3G1

kvaidyan@uwaterloo.ca
https://cs.uwaterloo.ca/~kvaidyan

Current Position

Second year student of the Master of Mathematics (Thesis) program at the Cheriton School of Computer Science, University of Waterloo, Canada.

Education

University of Waterloo, Waterloo, Canada — Sep 2015 – Aug 2017 (expected)
M.Math (Thesis), Computer Science — CGPA: 90.20/100

PSG College of Technology, Coimbatore, India — Jun 2010 – May 2015
Integrated M.Sc, Theoretical Computer Science — CGPA: 8.62/10

Research Experience

Research Assistant - University of Waterloo, Canada — Sep, 2015 – present
Supervisor: Prof. Naomi Nishimura

- Working on reconfiguration problems in graph coloring.

Summer Intern - Indian Statistical Institute, Chennai, India — May, 2014 – July, 2014
Supervisor: Dr. Mathew C. Francis

- Worked on a few problems in contact graphs of L-shapes in the plane and B_k-VPG graphs.

Research Intern - Indian Institute of Science, Bangalore, India — May, 2013 – Nov, 2014
Supervisor: 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.

Industry Experience

Software Development Engineer Intern - Amazon Development Center, Chennai — Jan 2015 – July, 2015

- Developed an internal tool to static analyze codebases by generating a graph of dependencies and isolating sections of the code that is affected by check-ins.
- Worked extensively on Facebook's pfff tool and added features to enrichen the graph generated by pfff.
- Ported the graph from pfff to TitanDB, a graph database, and wrote queries to derive insights from it.
- Code: https://github.com/krishnavaidy/pfff

Publications

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

Technical Skills

Languages	:	C++, Python, Java, OCaml
Platforms	:	Linux, Windows
Tools	:	MATLAB, LaTeX, Coq, MySQL

Awards

- Recipient of the *University of Waterloo Graduate Scholarship*.
- Adjudged the *Best All Rounder* for the class of 2015 by PSG College of Technology.
- Selected for the *Indian Academy of Science Summer Research Fellowship*.

Extra Curricular 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*.