

**Vaishali Surianarayanan**  
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## EDUCATION

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**University of California, Santa Barbara** (Sept 2019 - Current)  
Ph.D. Candidate, Computer Science (GPA: 4.0/4.0)  
**Area:** Graph and Geometric Algorithms

**PSG College of Technology, India** (July 2014 - May 2019)  
Integrated M.Sc, Theoretical Computer Science (GPA: 9.9/10.0)

## RESEARCH EXPERIENCE

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**Visiting Researcher - Tata Institute of Fundamental Research, Mumbai, India** (Aug 2019)  
◦ Worked on a variant of shortest path problem having ties to Graph Theory and Computational Geometry.

**Research Intern - Institute of Mathematical Sciences, Chennai, India**  
◦ Explored the domain of Parameterized Approximation and gave a series of talks on it. (Dec 2018 - April 2019)  
◦ Developed algorithms and hardness results for graph partition and edge deletion problems. (May - Dec 2017)

## INDUSTRY EXPERIENCE

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**Engineering Intern - Cisco Systems, Chennai** (May - July 2018)  
◦ Developed an application module for an existing internal Cisco application to support multiple languages such as Python, Ruby, and, JS, by using Script Engines in Java.

## PUBLICATIONS

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- Daniel Lokshtanov, Saket Saurabh, and Vaishali Surianarayanan. **A Parameterized Approximation Scheme for Min k-Cut**. Accepted for publication at Foundations of Computer Science (FOCS) 2020.
- Majumdar Diptapriyo, Rian Neogi, Venkatesh Raman, S. Vaishali. **Tractability of König Edge Deletion Problems**. Theoretical Computer Science 796 (2019): 207-215.

## OTHER PROJECTS

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- **Fires *increase* Covid'19!** Ongoing data analysis in Python using *Pandas* to establish a causality relationship between the Amazon fires and increase in Covid'19 in Brazil (can be extended to the California fires).
- **Computational Geometry Challenge '20:** Developed algorithms for minimum convex partition problem.
- Designed anonymization algorithms to achieve privacy on structured data by minimum feature removal.
- Augmented an existing C++ interpreter *Picoc* with *Coroutine* support (functions that can be suspended).

## SKILLS AND COURSEWORK

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**Languages:** C++, Python, C, Java, R | **Tools & Technologies:** Latex, Matlab, Unity, HTML, SQL  
**Courses:** Randomized Algorithms, Computational Geometry, Runtime Systems, VR, Quantum Cryptography.

## OTHER EXPERIENCES AND ACHIEVEMENTS

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- **Teaching Assistant** (UCSB, Oct 2019-Current): CS 8(Python), CS 24(Data Structures), 130B(Algorithms).
- Current **Vice President** Alumni, Women In Computer Science (WICS) UCSB.
- **Scholarships:** GHCI Scholar, 2018; Selected for Women In Theory Conference 2018 (Harvard Univ)
- **Awards (Undergrad):** Gold medals for **Best Outgoing Student** and **Academic Excellence**.
- **Coding Contests:** ACM Lady Ada Contest, India 2018 (National Finalist), ACM ICPC (Regionals 2016).