

# Shambhavi Singh

2<sup>nd</sup> Year Graduate Student  
Department of Mathematics  
University of British Columbia, Okanagan

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## EDUCATION

University of British Columbia, Okanagan <i>P.hD in <b>Mathematics</b></i>	Ongoing
University of British Columbia, Okanagan <i>M.Sc in <b>Computer Science</b></i> <ul style="list-style-type: none"><li>Average of <b>96%</b></li></ul>	2019
Indian Institute of Technology, Kanpur <i>B.S. in <b>Mathematics &amp; Scientific Computing</b> minor in <b>English Literature</b></i> <ul style="list-style-type: none"><li>Cumulative Performance Index (CPI) of <b>8.9</b> (on a scale of 10)</li></ul>	2017

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## RESEARCH INTERESTS

Convex Optimization, Convex Analysis.

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## PUBLICATIONS

### Papers

- H. H. Bauschke, S. Singh, X. Wang, *Projecting onto rectangular matrices with prescribed row and column sums.* Submitted to JFPT (2021)
- H. H. Bauschke, S. Singh, X. Wang, *Finding best approximation pairs for two intersections of closed convex sets.* Submitted to COAP (2020)
- S.Singh, Y.Lucet, *Linear-time convexity test for low-order piecewise polynomials.* Accepted by SIAM (2020)
- G.Jarry-Bolduc, P.Nadeau, S.Singh, *Uniform Simplex of an Arbitrary Orientation.* Optimization Letters 14, 1407–1417 (2020)

### Thesis

- S. Singh, *Convexity, and structure of piecewise polynomial functions on polyhedral domains,* Master's Thesis, University of British Columbia (2019)

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## CONFERENCES

- Finding best approximation pairs for two intersections of closed convex sets.* Presented at
  - West Coast Optimization Meeting 2021 (WCOM 2021)
  - Canadian Mathematical Society Summer Meeting 2021 (CMS 2021)
  - Society for Industrial and Applied Mathematics 2021 (SIAM 2021)

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## AWARDS AND RECOGNITION

- Won Best PhD Student Talk Award at WCOM 2021
- Won Best Presentation at CMPS Student Research Topic Presentation organized by the Quantitative Science Course Union at UBC Okanagan
- Recipient of the University Graduate Fellowship for 2020.
- Recipient of the International Four-Year Doctoral Partial Tuition Award in 2020 and 2019
- Recipient of the Graduate Dean's Entrance Scholarship in 2019.
- Recipient of MITACS Graduate Scholarship for pursuing graduate studies in Canada in 2017

## Undergraduate

- Selected by MITACS from among 10000 students for a Research Internship in Canada
- Awarded Bhagwan Das Sanghi Memorial Scholarship to sophomore girl with highest GPA in Mathematics
- Received Academic Excellence Award for distinctive performance in the term 2013-14
- Selected for an 8-week Research Internship at ISI, Bangalore by the Indian Academy of Sciences in 2015
- Awarded Outstanding Freshman of 2013 by the Student Gymkhana, IIT Kanpur for all-round performance
- Awarded the Inspire Scholarship for securing rank under 10000 in JEE and pursuing a degree in sciences
- Secure All India Rank 1995 amongst 126,749 students in JEE Advanced 2013