

# Ahmad Mokhtar - CV

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Graduate Student  
Department of Mathematics  
Simon Fraser University, Canada

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Education	<p><b>Ph.D.</b> in Mathematics, Simon Fraser University, Canada (2020-current) Field: Algebraic Geometry Supervisor: Dr. Nathan Ilten</p> <p><b>M.Sc.</b> in Mathematics, Simon Fraser University, Canada (2018-2020) Field: Algebraic Geometry M.Sc. Thesis: Toric degenerations of rational curves of degree <math>n + 2</math> in <math>\mathbb{P}^n</math> Supervisor: Dr. Nathan Ilten</p> <p><b>M.Sc.</b> in Mathematics, Shiraz University, Shiraz, Iran (2016-2018) Field: Coding Theory Supervisor: Dr. Shohreh Namazi</p> <p><b>B.Sc.</b> in Electrical Engineering, Shiraz University, Shiraz, Iran (2007-2011) Field: Telecommunications</p>
Interests	Algebraic geometry, Fano schemes, Toric degenerations, Computational algebraic geometry
Honors	<p>The certificate “With Distinction” for Master’s thesis (Simon Fraser University)</p> <p>First rank in GPA in B.Sc (among co-entry students, Shiraz University)</p> <p>First rank in GPA in M.Sc (among co-entry students, Shiraz University)</p> <p>21st rank in Iran’s National University Entrance Exam for Graduate Studies in Math (2014)</p> <p>18th rank in Iran’s National Olympiad in Electrical Engineering (2010)</p> <p>First rank in Iran’s National Programming Contest for high school students (2006)</p>
Awards	SFU Graduate Dean’s Entrance Scholarship (2018-2022)
Publications	<p>N. Ilten, A. Mokhtar. Khovanskii-Finite Rational Curves of Arithmetic Genus 2. <i>Michigan Math. J. Advance Publication</i>. 1-24 (2022).</p> <p>B. Ahmadi, M. H. Shirdareh Haghighi, A. Mokhtar. Perfect quantum state transfer on the Johnson scheme. <i>Linear Algebra and its Applications</i>. <b>584</b>, 326–342 (2020).</p>
Talks	<p>Fano schemes of singular symmetric matrices, University of British Columbia AG seminar, March 2023</p> <p>Fano schemes of singular symmetric matrices, Simon Fraser University NTAG seminar, February 2023</p>

	Intro to moduli spaces through Grassmannians and Fano schemes, SFU gradieNTAG seminar, January 2023
	Toric degenerations of quintic rational space curves, Simon Fraser University NTAG seminar, January 2020
	Toric degenerations of quintic rational space curves, 2nd Biennial Meeting of SIAM Pacific Northwest Section, Seattle University, October 2019 (canceled due to visa issues)
Teaching	<p>Teaching Assistant:   Calculus Workshop, Fall 2021-23, Simon Fraser University                                          Galois Theory, Spring 2021                                          Algebra Workshop, Fall 2020                                          Commutative Algebra and Algebraic Geometry, Spring 2020                                          Applied Calculus Workshop, Spring 2019                                          General Topology, Fall 2017, Shiraz University, Iran</p> <p>Instructor:               Calculus, Geometry, Algebra &amp; Probability                                          Im. Hossein High School, Hormozgan, Iran (2014-2016)                                          Al Zahra High School, Hormozgan, Iran (2014-2016)</p>
Services	<p>Co-organizer of the SFU graduate seminar in algebraic geometry (gradieNTAG), Spring 2023, Simon Fraser University, Canada</p> <p>Co-organizer of the 5-minute talk session in the <i>Toric Degenerations</i> workshop, Dec 2022, Banff International Research Station (BIRS), Canada</p> <p>Organizer, Problem solving workshop (part of Simons Semester), Fall 2018, Banach Center, Warsaw, Poland</p> <p>Volunteer tutor at <i>Native Education College</i>, Summer 2022, Vancouver, Canada</p> <p>Tutor, SFU Academics First (tutoring services for athletes), 2022, Canada</p> <p>Steward in the Teaching Support Staff Union (TSSU), 2019-2023, Canada</p>
Languages	Persian (native), English, French
Skills	Programming in MATLAB, Java, C, C++, Macaulay2