

Working Experience

- May 2020–Present **Olympiad algebra Spring 2020 classes, Remote.**
Teaching three online olympiad algebra classes (inequalities, functional equations, and polynomials) based on my designed curriculum to students from around the world.
[Spring 2020 Algebra Curriculum](#)
- September 2019–Present **Math olympiad teacher at Vancouver Olympiad School, Vancouver, BC.**
Teaching mathematics to high school students preparing for Canadian and USA competitions such as AMC 10, CMO, USAMO, and Team Selection Tests.
- August 2019–December 2019 **Math olympiad instructor and assistant for AoPS online classes.**
Teaching/assisting various online classes on algebra and number theory and helping students on online message boards (forums)
[Art of Problem Solving](#)
- Summer 2019 **Math olympiad instructor at Olympiads School, Toronto, ON.**
Taught CMO/Enhanced COMC level number theory and algebra as well as a grade 12 curriculum vectors and calculus class course
[Olympiads School](#)
- Fall 2017 – Summer 2019 **Research assistant in the math department, University of British Columbia, Vancouver, BC.**
Thesis: Various Problems on Subproducts of Residue Classes Modulo a Prime
Advisor: [Greg Martin](#), Thesis at [UBC library](#)
- Fall 2017 – Summer 2019 **Teaching assistant in the math department, University of British Columbia, Vancouver, BC.**
Differential Calculus (MATH 110, [Costanza Piccolo](#)), Mathematical Proof (MATH 220, [Andrew Rechnitzer](#) and [Seckin Demirbas](#)), Real Variables I (MATH 320, [Joshua Zahl](#))
- Summer 2018 **Online advanced number theory class for high school olympiad students, Remote.**
Designed a curriculum for solving IMO-level number theory problems, assigned biweekly homeworks, and held problem-solving sessions. My students were from Bangladesh, Canada, US, Indonesia, Romania, Vietnam, and USA, and gained colourful medals in national and international math competitions.
[Summer 2018 Number Theory Curriculum](#)
- Summer 2015 & 2016 **Invited to teach number theory at Astana Summer olympiad camp.**
Teaching a beginner and an advanced level class for two weeks in NurOrda Educational Complex, Astana, Kazakhstan
- Summer 2015 **Internship at Moshanir Power Engineering Consultants.**
Instrument Installation and Hook-up
Supervisor: [Farrokh Aminifar](#)

Education

- 2017–2019 **M.Sc. in Mathematics, The University of British Columbia, Vancouver, Canada.**
Thesis: Various Problems on Subproducts of Residue Classes Modulo a Prime
Advisor: [Greg Martin](#)
- 2012–2017 **B.Sc. in Electrical Engineering (Control), University of Tehran, Tehran, Iran.**
Thesis: Generator Strategic Bidding in Electricity Markets: A Mean Field Solution Approach
Advisor: [Hamed Kebriaei](#)

Publications

Books

- [1] M. Billal and A. Parvardi. *Topics in Number Theory, An Olympiad Oriented Approach*. Self-published in [Amazon](#), 2018.

- [2] A. Parvardi. *Functional Equations in Mathematical Olympiads (2017 - 2018): Problems and Solutions (Vol. I)*. Self-published in [Amazon](#), 2018.

Articles

- [3] P. Nasehpour and A. Parvardi. Finitely additive, modular, and probability functions on pre-semirings. *Communications in Algebra*, 46(7):2968–2989, 2018.

- [4] A. Parvardi. Lifting The Exponent Lemma. *Published in Art of Problem Solving*, selected as a featured article of the website, 2011.

Problem Sets

- [5] A. Parvardi. Problem Sets on Number Theory, Combinatorics, Geometry, and Algebra for Math Olympiad Preparation. *Published in AoPS math olympiad forums*, 2011-2018. More details: <https://parvardi.com/olympiad-stuff/>.

Honors and Awards

- Summer 2018 Awarded a certificate upon completion of a twenty-four hour Instructional Skills Workshop in the mathematics department at University of British Columbia.
- Summer 2012 Ranked 197 among 103,256 (top 0.2%) in Iranian University Entrance Exam (Konkour) in math and engineering sciences. Also ranked 164 among 35,938 (top 0.4%) in Konkour of foreign languages
- 2005–2012 Studied in NODET (National Organization for Development of Exceptional Talents) middle school and high school in Arak, Markazi, Iran

Volunteer Work

- 2010 – Present **Moderating AoPS Fora**. I was a global moderator at AoPS (2010 – 2014). I am now in charge of the olympiad community moderation at AoPS, starting 2010.
- 2010 – 2014 **Resource Manager at AoPS**. I was the chief manager of AoPS Olympiad Resources. In 2012, I collected problems of almost all mathematical Olympiad competitions around the world from 1959 to 2012 and published them [here](#).
- January 2011 **Translating and Publishing Iran Olympiad Problems**. I translated and posted problems of Iranian Mathematical Olympiad from 1983 to 2010 to AoPS fora. The problems can be found in [this](#) link.
- September 2010 **Manager of ISL–ILL Project**. I posted (and partially solved) problems of Short-List and Long-List of International Mathematical Olympiad (ISL and ILL, respectively) along with my friends [Orlando Doehring](#), [Andrew Kirk](#), [Goutham Rajendran](#), and [Sameer Seraj](#). The details of this huge project (containing over 1000 problems) might be found [here](#).

Research Interests

- Algebraic Number Theory
- Multiplicative Number Theory
- Diophantine Equations
- Abstract Algebra

Technical Skills

- Engineering MATLAB, Pspice
- Programming C, HTML, Assembly
- Typesetting LaTeX, Microsoft Office