

Ayesha Maliwal

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RESEARCH INTERESTS

Mathematical economics (game theory, optimization), applied microeconomic theory, differential equations, dynamical systems

TEACHING EXPERIENCE

Dept. of Mathematics & Statistics <i>University of Maine, Orono</i>	Lecturer of Mathematics <i>Teaching Algebra for College Math (MAT 111) and Introduction to Calculus (MAT 116) Working as Course Coordinator for MAT 111</i>	2018 - 19
	Adjunct Faculty <i>Courses: Algebra for College Math (MAT 111), Applied Mathematics for Business and Economics (MAT 115), Introduction to Calculus (MAT 116) Instructed 100-200 students each semester Created course material, with learning tools and practice problems Designed and graded quizzes, tests, exams and group assessments Worked with Center for Innovation in Teaching and Learning to develop video lectures and quizzes; incorporated technology (including i-Clickers and Instant Feedback Assessment Technique forms) in teaching pedagogy Mentored two undergraduate teaching assistants in the large 150-student classroom to facilitate student learning</i>	Spring 2018 Fall 2017 Spring 2017
Upward Bound Math Science <i>University of Maine, Orono</i>	Academic Instructor, Project Mentor, Group Facilitator <i>Taught <u>Calculus</u> and <u>Precalculus</u> Mentored four (high school) students for their individual research papers and posters on knot theory, game theory, cryptography and cryptanalysis Facilitated a group project focusing on data literacy on aquaculture in Maine</i>	Summer 2017
TRIO <i>University of Maine, Orono</i>	SSS Tutor <i>Taught <u>Calculus III (MAT 228)</u> and <u>GRE General Preparation</u></i>	Spring 2017
Dept. of Mathematics & Statistics <i>University of Maine, Orono</i>	Graduate Student Instructor <i>Taught <u>Applied Mathematics for Business and Economics (MAT 115)</u> Created course material relevant to business and economics students Designed and graded quizzes, tests, exams and group assessments Worked with Center for Innovation in Teaching and Learning (CITL)</i>	Fall 2016

Dept. of Mathematics & Statistics University of Maine, Orono	Teaching Assistant Met three sections of <u>Calculus I (MAT 126)</u> for recitations, twice a week, in Spring & Fall 2015 and of <u>Calculus II (MAT 127)</u> in Spring 2016; planned lessons, quizzes and worksheets; graded quizzes and exams; held review sessions Assisted the <u>Calculus I (MAT 126)</u> course instructor bi-weekly in the <u>active-learning classroom</u> in Fall 2014; graded quizzes and exams; held review sessions	2014 - 2016
	Math Lab Assisted students with mathematics and statistics undergraduate courses	2014 - 17
Private Tutor	Tutored undergraduate students in Calculus I, Calculus II, Linear Algebra, Real Analysis, Differential Equations, Advanced Microeconomics, PRAXIS Tutored high school students in AP Calculus, AP Statistics, Algebra I and II	2014 - 16
The Magic Years Montessori House of Children, Delhi (India)	Head Montessori facilitator Trained ten co-facilitators to emphasize child-centric learning and the use of Montessori techniques as outlined by Association Montessori International	2011 - 12

EDUCATION

University of Maine, Orono Thesis: Advisor: Courses Include:	M.A. in Mathematics (GPA: 3.93) "Sperner's Lemma, The Brouwer Fixed Point Theorem, The Kakutani Fixed Point Theorem and their applications to social sciences" Dr. Robert Franzoza Topology (I and II), Real Analysis (I and II), Complex Analysis, Advanced Linear Algebra, Abstract Algebra (I and II), Representation Theory	Dec 2016
Amity University, India Thesis: Advisor: Research Papers: Courses Include:	M.A. in Economics (CGPA: 8.93) "A Case Study on Monsanto: The rising giant in agriculture" Dr. Gargi Bandyopadhyay "Economic analysis of medical tourism in India with a special emphasis on opportunity and challenges ahead for the Indian Healthcare Sector" "The Economics of Violence Against Women: A Case Study of India" "The Economics of Water Pollution in River Yamuna" Mathematical Economics, Game Theory, Microeconomics (I and II), Statistics (I and II), Econometrics (I and II), Macroeconomics (I and II), Environmental Economics, International Economics (I and II)	May 2014 Dec 2013 May 2013 Dec 2012
Assoc. Montessori International	Montessori Diploma	Mar 2011
University of Delhi, India Research Paper:	B.A. (Hons.) in Economics (First Class) "A Ricardian Approach to Budget Deficit"	May 2009 May 2008

INTERNSHIP

XL India Private Limited	Playbook Intern, Strategic Research Department	Summer 2013
<i>Research Paper:</i>	<i>"Potential Entry of Non-Life insurers into the Indian Non-Life Market"</i>	

PROFESSIONAL WORKSHOPS AND TRAININGS

University of Maine	Pathways Precalculus Workshop	June 2017
	Faculty Institute for Technology-Enhanced Teaching & Learning	May 2017
	Undergraduate Critical Thinking Across the Disciplines	May 2017

LEADERSHIP AND COMMUNITY EXPERIENCE

Maine State Science Fair	Maine State Science Fair 2018 and 2017	Mar 2018
	<i>Head Judge (2018) and Judge (2017) for the Special Awards category</i>	Mar 2017
University of Maine	March for Science, Maine	Apr 2017
	<i>Helped organize the March for Science at the University of Maine</i>	
	Advancing Women in Academia 2017 by Rising Tide Center	May 2017
	<i>Discussion leader: Experiences of international women in academia</i>	
	UM Graduate and Undergraduate Student Research Symposium	Apr 2018
	<i>Judged graduate (2018) and undergraduate (2016) research presentations</i>	Apr 2016
	<i>Presented on "Sperner's Lemma and Fair Division"</i>	
	Program Director, South Asian Association of Maine	2015 - 16
	<i>Organized various on-campus and off-campus events to create interest in South Asian culture and promote diversity</i>	
	<i>Successfully reached out to a larger student populace to provide a platform for cultural integration and participation in community-based events</i>	
	<i>Co-organized the first Color Fest in the University</i>	
	<ul style="list-style-type: none"> ▪ Collaborated with various student organizations, local businesses ▪ Led a team of 15 volunteers to organize and advertise the event 	
	Member, Operation H.E.A.R.T.S.	2015 - 16
	<i>Organized and participated in medically-based service projects across Maine</i>	
	Dirigo Leadership Conference	Apr 2016
	<i>Participated in a conference promoting leadership in a diverse populace</i>	
	International Student's Association	2014 - 17
	<i>Organized, volunteered and participated every year in various events, including Culture Fest, International Dance Fest and student orientations</i>	
	Out of the Darkness Walk	Oct 2016
	<i>Volunteered with American Foundation for Suicide Prevention</i>	Oct 2015

Conversation Partner 2015 - 16

Volunteered with the Bodwell Center and Literacy Volunteers of Bangor to help international students to adjust to the new culture and language

The Bodwell Centre for Service and Volunteerism 2015 - 16

Participated in various volunteer events, including meal packaging and welcome weekend days of service

Fundraisers

*Organized a week-long fundraiser for **Chennai flood** victims* Dec 2015

*Organized a fundraiser for **Nepal earthquake** victims* Apr 2015

*Participated in a fundraiser for **Relay for Life** to support cancer patients* Apr 2015

Public Cause Research Foundation *Collected and analyzed data on corruption and volunteered at the grassroots* 2011

University of Delhi (DU) **President, Social Service Society** 2008 - 09

Started an outdoor evening school for children of migrant workers

- Organized college student volunteers to teach in the school
- Returned frequently as alumni to ensure the school continues to run
- Currently there are 20+ children; the school has been running for 10+ years

Mobilized 200 students to volunteer and participate in community events, including blood donation drives, increasing voter awareness, rebuilding slums

Launched the first annual newsletter for the society

Led a group of students, in collaboration with an NGO, to clean a major river

Won an award for a short documentary on "AIDS and the Indian scenario"

Organized a musical concert on-campus promoting communal harmony

General Secretary, Students' Union, Sri Venkateswara College 2008 - 09

Elected position (voter population more than 1000)

Worked towards eliminating corruption in college administration

Represented student body at management and administrative committees

Organized the annual college event spanning three days of activities

Member, Economics Association 2005 - 09

Organized the annual intercollegiate economics event that included several competitions, socials, seminar talks, and other activities

HONORS & AWARDS

Amity University	Recognized for the Best Internship Project 2013	2013
CBSE (Central Board for Secondary Education)	Awarded a Merit Certificate for being among top 0.1% students in Mathematics and Science in India	2003
State Government	Awarded an Honor Certificate for scoring 100% in Mathematics in an all-India examination	2003
NCSC (National Children's Science Congress)	Won a national award for a scientific research project on negative effects of carbonated drinks	2001

SKILLS

Languages

Hindi (Native Language), English (Native language), Sanskrit (Intermediate)
German (Beginner)

Computer Skills

Proficient in Microsoft Office, LaTeX, Pearson and Blackboard platforms
Currently learning MATLAB and R