

CURRICULUM VITAE

KARAN MOHAN PURI

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Department of Mathematics & Computer Science
Queensborough Community College-CUNY
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EDUCATION

Ph. D. Mathematics Rutgers University May 2009
Newark, NJ
B.A. Mathematics Sri Venkateswara College June 2002
with first class honors Delhi University

Ph. D. Thesis: *Factorization of Isometries of Hyperbolic 4-space and a Discreteness Condition*

Advisor: Dr. Jane Gilman, Professor of Mathematics, Rutgers-Newark

Research Interests

Remedial Mathematics Education, Acceleration, Mainstreaming, Hyperbolic Geometry

PEER REVIEWED PUBLICATIONS

Guy, G. M., Puri, K., and Cornick, J. Forthcoming. "A look at the impact of raising standards in developmental mathematics", *Community College Journal of Research and Practice*.

Puri, K., Cornick, J., & Guy, G. M. 2014. "An analysis of the impact of course elimination via contextualization in developmental mathematics", *MathAMATYC Educator*, 5(2), 4-10.

Basmajian, A. and Puri, K. 2012., “Generating the Möbius group with involution conjugacy classes”, *Proc. Amer. Math. Soc.* 140, no. 11, 4011-4016 (equal authorship).

BOOKS

Cornick, J., Guy G. M., & Puri, K. 2013. “My Math GPS: Elementary Algebra Guided Problem Solving.” Textbook for Elementary Algebra, *Open Educational Resource published under the Creative Commons License, QCC Press, 2013* (equal authorship, revised editions published in 2014 and to appear in 2015).

RESEARCH IN PROGRESS

“Design Principles for Contextualizing Basic Skills for Acceleration” (with Jonathan Cornick and G. Michael Guy)

GRANTS

2013-14 Co-PI on a successful proposal for CUNY’s Office of Academic Affairs RFP: Improving Outcomes in High Enrollment Remedial and Gateway Courses. Proposal titled My Math GPS: Elementary Algebra. Guided Problem Solving. MapleTA Development. (with G. Michael Guy and Jonathan Cornick). (\$49,500).

2012-13 Co-PI on Minority Science and Engineering Improvement Program (MSEIP) Grant #P120A100065, “Learning Environment Advancing Development (LEAD) in Mathematics - A Cooperative Project in Mathematics”. (\$400,000).

AWARDS

2008-10 Binghamton University travel grants for presented research at the Graduate Conference in Algebra & Topology, SUNY Binghamton.

2008-09 AMS travel grant to attend AMS/MAA Joint Mathematics Meeting in Washington, DC.

2008-09 Dissertation Fellowship, The Graduate School, Rutgers-Newark

PRESENTATIONS

“From many to one: Scaling change at Queensborough Community College”, National Conference on Acceleration in Developmental Education, Community College of Baltimore County, Baltimore, MD, June 2014.

“Redefine and Reform: Remedial Mathematics Education at CUNY”, The CUNY Mathematics Conference: Effective Instructional Strategies, The CUNY Graduate Center, New York, NY, May 2014.

“Publishing your Pedagogical Project: Faculty Experiences with SoTL Publishing”, invited panelist, Queensborough Community College, CUNY, Queens, NY, April 2014.

“An analysis of the impact of course elimination via contextualization in developmental mathematics”, NYSMATYC Region IV Fall Conference, New York City College of Technology, CUNY, Brooklyn, NY, October 2013.

“Bringing writing into the College Algebra curriculum”, invited speaker, Writing Intensive Faculty Training Workshop, Queensborough Community College, CUNY, Queens, NY, October 2012.

“Writing in Mathematics, an advanced course approach” invited speaker, Writing Intensive Faculty Training Workshop, Queensborough Community College, CUNY, Queens, NY, October 2011.

“Bounds on the involution length of the Möbius group”, Graduate Conference in Algebra & Topology, Binghamton University, Binghamton, NY, November 2010.

“Generating the Möbius group with involution conjugacy classes” (two-part series), The Hyperbolic Geometry Seminar, Department of Mathematics, The CUNY Graduate Center, New York, NY, October 2010.

“Euclidean Steps to Hyperbolic Space”, The QCC Mathematics Seminar, Queensborough Community College, CUNY, Queens, NY, April 2010.

“Half-Turns in Hyperbolic Space”, Graduate Conference in Algebra & Topology, Binghamton University, SUNY, November 2009.

“Discrete Subgroups and Factorization of Isometries of Hyperbolic Space in higher dimensions”, Complex Analysis & Dynamics Seminar, Department of Mathematics, The CUNY Graduate Center, New York, NY, February 2009.

“A Discreteness Condition for Groups of Isometries of Hyperbolic n -space”, Graduate Conference in Algebra & Topology, Binghamton University, Binghamton, NY, November 2008.

“A Discreteness Condition for Groups of Isometries of Hyperbolic n -space”, The Mathematics Colloquium at Rutgers-Newark, Department of Mathematics, Rutgers University, Newark, NJ, October 2008.

“A Background for Higher Dimensional Hyperbolic Geometry”, The Mathematics Colloquium at Rutgers-Newark, Department of Mathematics, Rutgers University, Newark, NJ, October 2008.

TEACHING EXPERIENCE

Courses

Queensborough Community College

Basic Mathematics & Problem Solving (one semester)
 Elementary Algebra (eight semesters)
 College Algebra & Trigonometry (three semesters)
 College Algebra (three semesters)
 Foundations of Mathematics (one semester)
 Computer-Assisted Statistics (one semester)
 Pre-Calculus Mathematics (three semesters)
 Honors Workshops for Pre-Calculus Mathematics (nine semesters)
 Analytic Geometry and Calculus I (five semesters)
 Analytic Geometry and Calculus II (one semester)
 Analytic Geometry and Calculus III (one semester)
 Linear Algebra (one semester)
 Discrete Mathematics (two semesters)

Rutgers University

College Algebra (teaching assistant, six semesters)
 College Algebra (one semester)
 Pre-calculus (two semesters)
 Basic Calculus (six semesters)
 Calculus I (two semesters)
 Calculus III (one semester)

Student Advising

- Fall 2014 Research student Adebisi Adewole.
Project: “Dissection: An axiomatic development”,
in progress.
- Summer 2013 Research students Yecenia Congote, Alester Lewis
and Alexandre Sajous.
Paper: “Characterization of Rational Right Triangles”.
- Spring 2013 Research students Keyla Jimenez, Kimberlyn Rowe
and Elsa Rosario.
Project: “Modeling continental drift and earthquakes.”
Presentation at the Honors Conference,
Queensborough Community College, May 2013.
- Summer 2012 Research students Melbourne Henry and Messan Adelan
Paper: “Lattice Point Geometry”,
Presentation in the Department of Mathematics,
Queensborough Community College, September 2012.
- Summer 2011 Research students Xi Feng, Ling Jin and Salma Sirajee.
Paper: “The Unity of Circles and Lines”,
Presentation in the Department of Mathematics,
Queensborough Community College, September 2011.

UNIVERSITY AND DEPARTMENTAL SERVICE

- 2012-14 Chair of the college-wide WID/WAC Committee (elected).
(Writing in the discipline/Writing across the curriculum)
- 2012-13 Co-Chair: Assistant Professor Search Committee (Mathematics).
- 2012 Created Writing Assignments for use in targeted College Algebra sections.
- 2012 Chair of the Department Algebra Revision Committee.
- 2012 Organizer of Minority Student Research Program, set up
to promote STEM disciplines amongst underrepresented minorities.
- 2012 Organizer of the Minority Student Mentoring Program, set up
to promote STEM disciplines amongst underrepresented minorities.
- 2012 Conducted training sessions for close to one hundred
mathematics faculty members, making the transition to the
uniform multiple-choice final examination Elementary Algebra.
- 2012 Participated in experimental student-centered learning strategy
implementation for Elementary Algebra, using new techniques
of instruction.
- 2011-12 Secretary of the college-wide WID/WAC Committee (elected).
- 2010-present Running Pre-Calculus Honors workshops as part of
the NIH Bridges to Baccalaureate Program.
- 2010-12 Created a Mathematics Research Seminar
- 2009-12 Chair of the Mathematics Department Final Examination Committee,
responsible for making uniform departmental final exams
for use in several hundred sections.
- 2009-present Mathematics Department Curriculum Committee (elected).
- 2009-10 Mathematics Cohort for Rubric Development.
- 2009-10 Elementary Algebra Revision subcommittee.

References

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Ara Basmajian
Hunter College & The Graduate Center
Department of Mathematics
Room 907 East
695 Park Avenue
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Languages

- English (native)
- Hindi (native)
- Punjabi (fair)