
DR. SAHANA H. BALASUBRAMANYA

Webpage : <http://hbsahana.com/math/index.htm>

PERSONAL INFORMATION

Date of Birth: 16 October, 1989
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APPOINTMENTS

2019– *Postdoctoral Research Associate*, Cluster of Excellence
Westfälische Wilhelms- Universität Münster, Germany
2018–19 *Visiting Assistant Professor*, Department of Mathematics
The University of North Carolina at Greensboro, USA

EDUCATION

2013–18 *Ph.D. Mathematics*, Vanderbilt University, Nashville, TN, USA
Thesis advisor: Dr. Denis Osin
Thesis title : Hyperbolic structures on groups
2013–15 *Master of Science Mathematics*, Vanderbilt University, Nashville, TN, USA
2010–12 *M.A. Mathematics*, Lady Shri Ram College for Women, University of Delhi, New Delhi, India
Result: First Division with Distinction
2007–10 *B.A. Mathematics*, Lady Shri Ram College for Women, University of Delhi, New Delhi, India
Result: First Division with Distinction

RESEARCH AREAS

- *Geometric Group Theory* : Isometric group actions on hyperbolic spaces, actions on products of hyperbolic spaces, quasi-parabolic actions, acylindrical actions and acylindrically hyperbolic groups
- *Sharply 3-transitive actions*

ACADEMIC AWARDS & HONORS

2021 Selected for the ‘Erstklassig!’ mentoring program for postdoctoral researchers, University of Münster
2020 Awarded Oberwolfach Leibniz Graduate (OWLG) Travel Grant, MFO
2018 B.F. Bryant Prize for Excellence in Teaching, Department of Mathematics, Vanderbilt University
2017 Awarded Graduate student travel grant by the Graduate school, Vanderbilt University
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2015 Awarded Graduate student travel grant by the Graduate school, Vanderbilt University
2012 Highest scorer in University of Delhi, South Campus for M.A.Mathematics, University of Delhi
2012 Best Student in Mathematics, Semesters III & IV for M.A. Mathematics, University of Delhi
2011 South Campus Endowment Scholarship for academic excellence, University of Delhi
2011 Best Student in Mathematics, Semesters I & II for M.A. Mathematics, South Campus, University of Delhi
2010 Scored among top 1% of students in B.A. Mathematics, University of Delhi
2009 Anupama Dua Scholarship for excellence in B.A. Mathematics, Lady Shri Ram College, University of Delhi

PUBLICATIONS

- C.Abbott, S. Balasubramanya, A.J.Rasmussen; Valuations, completions and hyperbolic actions of solvable groups, *In preparation*.
- C.Abbott, S. Balasubramanya, A.J.Rasmussen; Higher rank confining subsets and actions of solvable groups, arXiv:2108.08175 (2021, Submitted).
- S. H Balasubramanya; Finite extensions of \mathcal{H} - and \mathcal{AH} -accessible groups, *Topology Proceedings* Volume 56 (2020), pg 297-304 .
- S. H Balasubramanya; Hyperbolic structures on wreath products, *Journal of Group Theory* (2019), ISSN (Print) 1433-5883.
- C. Abbott, S. Balasubramanya, D. Osin; Hyperbolic structures on groups, *Algebraic & Geometric Topology* 19-4 (2019), pg 1747-1835.
- S. H Balasubramanya; Acylindrical group actions on quasi-trees, *Algebraic & Geometric Topology* 17 (2017) pg 2145 - 2176.

NON-MATHEMATICAL PAPERS ASSISTED WITH

- S. Balasubramanya, J. Price, T. Horbulyk; Impact assessments without true baselines: assessing the relative effects of training on the performance of water user associations in Southern Tajikistan. *Water Economics and Policy* (2017), 4(3), pp. 1850007.

LANGUAGES

- Programming languages: R, LaTeX, C++, Qbasic, FORTRAN
- Fluent in English and Hindi, German (B1 level)

TEACHING EXPERIENCE

<i>Summer School</i>	<i>Geometric group theory without boundaries</i> June 2020 : Instructor, Mini-course on Acylindrically and Relatively hyperbolic groups
<i>UNC Greensboro</i>	Spring 2019 : Instructor, Calculus I (1 section), Calculus II (2 sections) Fall 2018 : Instructor, Pre-Calculus (2 sections), Calculus I (1 section)
<i>Vanderbilt University</i>	Spring 2018 : Instructor, Calculus 1301 Spring 2017 : Teaching Assistant, Calculus 1301 Fall 2016 : Instructor, Calculus 1200 Spring 2016: Teaching Assistant, Calculus 1301 Fall 2015: Instructor, Statistics Laboratory Spring 2015: Teaching Assistant, Probability and Statistics Fall 2014: Teaching Assistant, Calculus 1200 Spring 2014: Teaching Assistant, Linear Algebra Fall 2013: Grader, Calculus 1301

SERVICE-LEADERSHIP-TEAM EXPERIENCE

<i>Served as a Referee</i>	Michigan Math Journal
<i>University of Münster</i>	Member, W2 Appointment Committee, Dept. of Mathematics, 2021 Organizer, MM Buddy Program, 2020 Organizer, MM Connect sessions, 2020 – <i>present</i> Organizer, Welcome Center Event meets MM, 2020 Talk on ‘Preparing for the academic postdoctoral job market’, MMGS Retreat 2020 Organizer, MMGS Retreat for PhD students, 2020– <i>present</i> MM Impulse talk on postdoctoral job market preparation in academia, 2019
<i>UNC Greensboro</i>	Academic career panel member, AWM conference, Wake Forest University, 2019 House calls Volunteer, Housing and Residence Living, 2018 Chair, Diversity Committee, Department of Mathematics and Statistics, 2018–19 Organizer, Ping-Pong seminar between UNCG and Wake Forest University, 2018–19
<i>Vanderbilt University</i>	Vanderbilt Global Ambassador, 2013–18 Graduate student teaching assistant panel member, 2016–18 Instructor in Bharatanatyam, Vanderbilt Dance Program, 2014–18 Helped organize several conferences, 2013–18
<i>University of Delhi</i>	Talk on ‘Career prospects in Mathematics’, Lady Sri Ram College, 2021 Organized several seminars at Department of Mathematics, 2007–12 Editorial Board, ‘Quantum- A Mathematical Gazette’, Lady Shri Ram College, 2008–10

SUMMER SCHOOLS, WORKSHOPS & CONFERENCES ATTENDED

- 2021 ◦ YGGT X, Newcastle University (*Virtual*)
- Modern Leadership is Female, WWU, Germany
- 2020 ◦ Topology Postdoc Workshop, Georgia Tech, USA
- BiMs Seminar, Bielefeld Universität, Germany
- 2019 ◦ LMU Miniworkshop - Geometric Group Theory, München, Germany
- 2017 ◦ GAGTA, Spain
- 2016 ◦ ‘Beyond Hyperbolicity’, Cambridge University, UK
- Shanks workshop on Geometric Group Theory, Vanderbilt University, USA
- 2015 ◦ Summer school at EPFL -CIB: Probability on graphs and random walks, Switzerland
- MSRI Geometric Group Theory Summer Graduate School, MSRI Berkeley, USA

LIST OF TALKS

- 2021
 - Geometry and Topology Seminar, Rice University, USA (*Invited, Virtual*)
 - Post Graduate Topology Conference, University of Southampton, UK (*Invited, Virtual*)
- 2020
 - Advanced seminar on Model Theory and Groups, WWU Münster, Germany
 - Geometric Structures in Group Theory workshop, MFO Oberwolfach, Germany (*Invited, Virtual*)
 - Geometric Group Theory conference, CIRM, Luminy France (*Invited*)
 - Lightning talk, YGGT IX, Saint Jacut-de-la-mer, France
- 2019
 - Advanced seminar on Model Theory and Groups, WWU Münster, Germany
 - Geometric Group Theory Seminar, WWU Münster, Germany
 - WWU Münster Mathematics department colloquium “Meet the postdocs”, Germany
 - Spring Topology and Dynamics Conference, University of Alabama at Birmingham, USA (*Invited*)
 - Seminar talk, Spelman College, USA (*Invited*)
 - Geometry Seminar, University of Virginia, USA (*Invited*)
 - Seminar talk, Furman University, USA (*Invited*)
 - Topology and Geometric Group Theory Seminar, Cornell University, USA (*Invited*)
 - Group Theory and Topology seminar, Vanderbilt University, USA (*Invited*)
- 2018
 - Lightning Talk, TechTopology Conference, Georgia Tech University, USA
 - AMS Sectional meeting, University of Arkansas, USA (*Invited*)
 - Geometry–Topology seminar, Duke University, USA (*Invited*)
 - GANTC (Geometry, Algebra, Number Theory and Combinatorics) seminar, UNC Greensboro, USA
 - WINRS symposium - Mid Atlantic Region, University of Virginia, USA (*Invited*)
 - Summer Conference on Topology and its Applications, Western Kentucky University, USA (*Invited*)
 - AMS Sectional Meeting, Vanderbilt University, USA (*Invited*)
 - Colloquium Series, Gettysburg College, USA (*Invited*)
 - AMS Special Session on Boundaries for Groups and Spaces, Joint Mathematics Meeting, USA (*Invited*)
 - AMS Contributed Paper Session on Groups, Joint Mathematics Meeting, USA
- 2017
 - Geometric Group Theory seminar, Ohio State University, USA (*Invited*)
 - Algebra seminar, Loyola University, USA (*Invited*)
 - Geometry and Topology seminar, Graduate Centre, CUNY, USA (*Invited*)
 - Wasatch Topology Conference, Utah, USA (*Invited*)
 - yGAGTA Conference, Spain
 - Research Seminar, Women and Math program, IAS, Princeton, USA (*Invited*)
 - 51st Spring Topology and Dynamics Conference, New Jersey City University, USA (*Invited*)
 - Geometric group theory on the gulf (G^3) conference, Florida, USA (*Invited*)
 - Group theory and Topology seminar, Vanderbilt University, USA
- 2016
 - Group theory and Topology seminar, Vanderbilt University, USA
 - Poster presentation, YGGT V, KIT, Karlsruhe, Germany