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# SAHANA H. BALASUBRAMANYA

Department of Mathematics & Statistics, UNC Greensboro  
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## APPOINTMENTS

- **August 2018** –: Visiting Assistant Professor, UNC Greensboro

## EDUCATION

- **2013 -18:** Ph.D. Mathematics, Vanderbilt University, Nashville, TN, USA  
(Master of Science degree earned in passing, 2015)  
Thesis advisor: Denis Osin  
Thesis title : *Hyperbolic structures on groups*  
<https://etd.library.vanderbilt.edu/available/etd-05252018-123711/>
- **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 (Honours) Mathematics, Lady Shri Ram College for Women, University of Delhi, New Delhi, India  
Result: First Division with Distinction

## RESEARCH AREAS

Geometric Group Theory, Acylindrical actions, Actions on hyperbolic spaces

## ACADEMIC AWARDS & HONORS

- B.F. Bryant Prize for Excellence in Teaching, Department of Mathematics, Vanderbilt University (2018)
- Awarded 3 graduate student travel grants by the Graduate school, Vanderbilt University (2017, 2016, 2015)
- 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 (2011-12)
- South Campus Endowment Scholarship for academic excellence, University of Delhi (2010-12)
- Best Student in Mathematics, Semesters I & II for M.A. Mathematics, South Campus, University of Delhi (2010-11)
- Scored among top 1% of students in B.A. Mathematics, University of Delhi (2010)
- Anupama Dua Scholarship for academic excellence in B.A. Mathematics, Lady Shri Ram College, University of Delhi (2008-09)

## PUBLICATIONS

- S. H Balasubramanya, Hyperbolic structures of wreath-products, arXiv:1809.00776v1, Submitted.
- C. Abbott, S. Balasubramanya, D. Osin; Hyperbolic structures on groups, arXiv:1710.05197, Submitted.
- S. H Balasubramanya; Acylindrical group actions on quasi-trees, Algebraic & Geometric Topology 17 (2017) 2145 - 2176.

## TALKS

- Summer Conference on Topology and its Applications, Session on Topological methods in Geometric Group Theory, Western Kentucky University, July 2018
- AMS Sectional Meeting, Vanderbilt University, Special Session on Boundaries and Non-positive Curvature in Group Theory, II, April 2018
- Gettysburg College Colloquium Series, March 2018
- Joint Mathematics Meeting, AMS Special Session on Boundaries for Groups and Spaces, II, San Diego, January 2018
- Joint Mathematics Meeting, AMS Contributed Paper Session on Groups , San Diego, January 2018
- Geometric Group Theory seminar, Ohio State University, November 2017

- Algebra seminar, Loyola University, Chicago, October 2017
- Geometry and Topology seminar, Graduate Centre, CUNY, September 2017
- Wasatch Topology Conference, Midway, Utah, August 2017
- yGAGTA 2017, Bilbao, Spain, June 2017
- Research Seminar, Women and Math program, IAS, Princeton, NJ, May 2017
- 51st Spring Topology and Dynamics Conference, New Jersey City University, March 2017
- Geometric group theory on the gulf ( $G^3$ ) conference, Pensacola, Florida, March 2017
- Group theory and Topology seminar, Vanderbilt University, March 2017
- Group theory and Topology seminar, Vanderbilt University, April 2016
- Poster presentation, YGGT V, KIT, Karlsruhe, Germany, February 2016

### **OTHER SUMMER SCHOOLS /CONFERENCES ATTENDED**

- GAGTA, Bilbao, Spain, June 26 July 7, 2017
- Beyond Hyperbolicity, Cambridge University, UK, June 20 - 24, 2016
- Shanks workshop on Geometric Group Theory, Vanderbilt University, April 24-26, 2016
- Summer school at EPFL, CIB, Lausanne, Switzerland : Probability on graphs and random walks, August 3 - 7, 2015
- MSRI -Geometric Group Theory Summer Graduate School; June 15-26, 2015, MSRI Berkeley

### **TEACHING EXPERIENCE**

- **UNC Greensboro**
  - Fall 2018 : Pre-Calculus (2 sections), Calculus I (1 section)
- **Vanderbilt University**
  - 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**

- **UNC Greensboro**
  - House calls Volunteer, Housing and Residence Living (August 2018)
  - Chair, Diversity Committee, Department of Mathematics and Statistics (2018 - 2019)
- **Vanderbilt University**
  - Vanderbilt Global Ambassador (2013 – 2018)
  - Instructor in Bharatanatyam, Vanderbilt Dance Program (2014 - 2018)
  - Helped organize several conferences at Vanderbilt University (2013- 2018)

#### **University of Delhi**

- Helped organize seminars at Department of Mathematics, University of Delhi, South Campus (2010-12)
- Honorary Member, Editorial Board, ‘Quantum- A Mathematical Gazette’, Lady Shri Ram College, University of Delhi (2008-10)
- Helped organize seminars at Department of Mathematics, Lady Shri Ram College, University of Delhi (2007-10)

## TECHNICAL SKILLS

- R
- LaTeX
- C++, Qbasic
- FORTRAN

## LANGUAGES

- English, Hindi (Fluent)
- Studied German for seven years (Grade 4 - Grade 10)

## REFERENCES

- Denis Osin, Professor, Vanderbilt University  
Email : denis.osin@gmail.com, denis.v.osin@vanderbilt.edu
- Prof. Mike Mihalik, Professor, Vanderbilt University  
Email : michael.l.mihalik@vanderbilt.edu
- Jason Behrstock, Associate Professor, CUNY  
Email : jason.behrstock@gmail.com
- Kim Ruane, Associate Professor, Tufts University  
Email : Kim.Ruane@tufts.edu
- Alexander Powell (Teaching), Associate Professor, Vanderbilt University  
Email : alexander.m.powell@vanderbilt.edu
- Doug Hardin (Teaching), Professor, Vanderbilt University  
Email : doug.hardin@vanderbilt.edu