

#### Contact

Bronx Community
College, CUNY
Department of
Mathematics and
Computer Science
2155 University
Avenue
Bronx, NY 10453

(215) 882-2517

parul.laul@bcc.cuny.edu bcc.cuny.edu/parul.laul/

### **Research Interests**

General relativity, Partial Differential Equations, Mathematical Physics

### **Education**

2006–2011 PhD in Mathematics University of North Carolina, Chapel Hill

Localized Energy Estimate for Solutions to the Wave Equation on the (n+1)-dimensional

Schwarzschild Manifold Advisor: Dr. Jason Metcalfe

2005–2006 **Masters** in Mathematics University of Toronto

Symmetry in Mechanics Advisor: Dr. Yael Karshon

2001–2005 **Bachelors** in Mathematics and Biochemistry University of Toronto

### **Academic Employment**

| 2013–Now  | <b>Bronx Community College, Department of Mathematics</b> Assistant Professor           | New York, New York          |
|-----------|-----------------------------------------------------------------------------------------|-----------------------------|
| 2012–2013 | <b>Drexel University, Department of Mathematics</b> <i>Visiting Assistant Professor</i> | Philadelphia, Pennsylvania  |
| 2011–2012 | University of Cambridge, DPMMS Post-doctoral Research Fellow                            | Cambridge, United Kingdom   |
| 2006–2011 | University of North Carolina, Department of Mathematics  Graduate Teaching Assistant    | Chapel Hill, North Carolina |

### **Pre-Prints and Publications**

Localized energy estimates for wave equations on (1 + 4)-dimensional Myers-Perry spacetimes. SIAM J. Math. Anal. 47.3 (2015) pp. 1933–1957. 2015

Parul Laul, Jason Metcalfe, Shreyas Tikare, Mihai Tohaneanu

Localized energy estimates for wave equations on high-dimensional Schwarzschild spacetimes. Proc. Amer. Math. Soc. 140.9 (2012) pp. 3247–3262. 2012 Parul Laul, Jason Metcalfe

#### **Talks**

| May 2015  | Department Research Seminar, (Mathematics)            | Pomona College                |
|-----------|-------------------------------------------------------|-------------------------------|
| Nov. 2013 | Department Research Seminar, (Mathematics and Compo   | uter Science)                 |
|           | E                                                     | Bronx Community College, CUNY |
| Mar. 2012 | Analysis Seminar, (Mathematics)                       | University of Edinburgh       |
| Oct. 2011 | Geometric Analysis and Partial Differential Equations | Seminar, (DPMMS)              |
|           |                                                       | University of Cambridge       |

| Jul. 2011 | International Congress on Industrial & Applied Mathema | tics Vancouver, Canada       |
|-----------|--------------------------------------------------------|------------------------------|
| Jan. 2011 | Ohio River Analysis Meeting, (Mathematics)             | University of Cincinnati     |
| Nov. 2010 | Scattering Theory Seminar, (Mathematics)               | Purdue University            |
| Oct. 2010 | Analysis Seminar, (Mathematics)                        | Northwestern University      |
| Sep. 2010 | Analysis/PDE Seminar, (Mathematics)                    | University of North Carolina |
| Sep. 2010 | Analysis Applied Math Seminar, (Mathematics)           | University of Toronto        |
| Mar. 2010 | Graduate Student Analysis Seminar, (Mathematics)       | University of North Carolina |
| Sep. 2009 | GMA Visions Seminar, (Mathematics)                     | University of North Carolina |
| Aug. 2008 | Graduate Student Analysis Seminar, (Mathematics)       | University of North Carolina |

### **Poster Presentations**

| May 2014  | Faculty Day                                     |                   | Bronx Community College, CUNY    |
|-----------|-------------------------------------------------|-------------------|----------------------------------|
| Jul. 2011 | Women in Mathematics Workshop                   |                   |                                  |
|           | (International Congress on Industrial & Applied | Mathematics)      | Vancouver, Canada                |
| Feb. 2011 | Women in Mathematics Symposium                  | Institute for Pur | re and Applied Mathematics, UCLA |

# **Research Supervision**

Spring 2015 NYC Louis Stokes Alliance for Minority Participation

(Undergraduate Research Project) Bronx Community College, CUNY

## **Courses Taught**

| MATH01  | Fundamental Concepts and Skills in Arithmetic and Algebra: (F2013)                |                               |  |
|---------|-----------------------------------------------------------------------------------|-------------------------------|--|
|         |                                                                                   | Bronx Community College, CUNY |  |
| MATH05  | Elementary Algebra: (F2014, S2014)                                                | Bronx Community College, CUNY |  |
| MATH23  | Probability and Statistics: (F2013, F2015)                                        | Bronx Community College, CUNY |  |
| MATH30  | Pre-Calculus: (F2014)                                                             | Bronx Community College, CUNY |  |
| MATH31  | Analytic Geometry and Calculus I: (F2013)                                         | Bronx Community College, CUNY |  |
| MATH33  | Analytic Geometry and Calculus III: (F2015)                                       | Bronx Community College, CUNY |  |
| MATH42  | Linear Algebra: (S2015)                                                           | Bronx Community College, CUNY |  |
| MATH123 | Calculus III: (F2012, W2013)                                                      | Drexel University             |  |
| MATH201 | Linear Algebra: (S2013)                                                           | Drexel University             |  |
| MATH285 | Differential Equations II: (S2013)                                                | Drexel University             |  |
| MATH323 | Partial Differential Equations: (W2013)                                           | Drexel University             |  |
| MATH231 | Calculus I - Functions of One Variable I: (Su2007, F2007, Su2008, Su2009)         |                               |  |
|         |                                                                                   | University of North Carolina  |  |
| MATH232 | 2 Calculus II - Functions of One Variable II: (S2008, F2008, S2009, F2009, F2010) |                               |  |
|         |                                                                                   | University of North Carolina  |  |
| MATH233 | Calculus III - Multivariable Calculus: (S2010, Su2010                             | University of North Carolina  |  |
| MATH521 | Advanced Calculus: (Su2011)                                                       | University of North Carolina  |  |

# **Honours, Grants and Scholarships**

| 2014, 2015 | PSC-CUNY Research Award                              | City University of New York  |
|------------|------------------------------------------------------|------------------------------|
| 2014       | BCC Presidential Teaching Grant                      | City University of New York  |
| 2010       | Future Faculty Fellowship Award                      | University of North Carolina |
| 2009, 2010 | Lottie Wilson Fund Scholarship                       | University of North Carolina |
| 2005       | City of Toronto Graduate Scholarship                 | University of Toronto        |
| 2004       | NSERC Summer Research Assistantship Award            | University of Toronto        |
| 2004       | New College Raptors Foundation In Course Scholarship | University of Toronto        |
| 2003       | New College Council Scholarship                      | University of Toronto        |
| 2002       | New College Rhea V. Scott Scholarship                | University of Toronto        |
| 2002       | S. and W. Gollop Memorial Scholarship in Chemistry   | University of Toronto        |

## **Conferences Attended**

| Jun. 2015 | Nonlinear Wave Equations and Their Numerical Study |                                                            |  |
|-----------|----------------------------------------------------|------------------------------------------------------------|--|
|           |                                                    | Fields Institute, Toronto Canada                           |  |
| Mar. 2015 | AMS Central Spring Sectional Meeting               | Michigan State University                                  |  |
| Mar. 2014 | Council on Undergraduate Research Summit for       | State Systems and Consortia Alexandria, Virginia           |  |
| Apr. 2012 | 27 <sup>th</sup> Annual Geometry Festival          | Duke University                                            |  |
| Jul. 2011 | SIAM International Congress on Industrial & Appli  | ied Mathematics                                            |  |
|           |                                                    | Vancouver, Canada                                          |  |
| Jun. 2011 | CBMS Global Harmonic Analysis Conference           | Kentucky University                                        |  |
| Mar. 2011 | JAMI Analysis of PDEs Conference                   | John Hopkins University                                    |  |
| Feb. 2011 | Women in Mathematics Symposium                     | University of California, Los Angeles                      |  |
| Jan. 2011 | Ohio River Analysis Meeting                        | University of Cincinnati                                   |  |
| Apr. 2010 | Spring's Rivière Fabes Symposium                   | University of Minnesota                                    |  |
| Sep. 2009 | Hot Topics: Black Holes in Relativity              | MSRI, University of Berkeley                               |  |
| Jun. 2009 | Nonlinear Waves and Dispersion                     | Poincaré Institute, Paris, France                          |  |
| Jan. 2009 | Carolina Meeting on Harmonic Analysis and PDE      | University of North Carolina                               |  |
| Jul. 2008 | The 3 <sup>rd</sup> Symposium on Analysis and PDEs | Purdue University                                          |  |
| May. 2007 | Women and Mathematics                              | IAS, Princeton University                                  |  |
| Jun. 2006 | Summer Graduate Workshop, Mathematical Aspe        | ects of Computational Biology MSRI, University of Berkeley |  |
| Jun. 2005 | PIMS-MITACS Mathematical Biology Summer Wo         | orkshop University of Alberta                              |  |

# Memberships

| 2013-Now  | American Mathematics Society                     | Bronx Community College, CUNY              |  |
|-----------|--------------------------------------------------|--------------------------------------------|--|
| 2006-2001 | Association of Women in Mathematics, (UNC Studen | omen in Mathematics, (UNC Student Chapter) |  |
|           |                                                  | University of North Carolina               |  |

## Service

| 2015-Now    | Department Senate Representative (alternate) | Bronx Community College, CUNY |
|-------------|----------------------------------------------|-------------------------------|
| 2015-Now    | WebWork Committee                            | Bronx Community College, CUNY |
| 2014-Now    | Math Meetings Co-Organizer                   | Bronx Community College, CUNY |
| 2014-Now    | Open Source Textbooks Committee              | Bronx Community College, CUNY |
| 2014-Now    | Academic Advisement                          | Bronx Community College, CUNY |
| Spring 2015 | MATH05 CEAFE Committee                       | Bronx Community College, CUNY |
| 2014        | Open Source Textbooks Committee              | Bronx Community College, CUNY |
| 2013-Now    | Probability and Statistics Course Committee  | Bronx Community College, CUNY |
| 2013-2014   | Remediation Committee                        | Bronx Community College, CUNY |
| Fall 2013   | Exam Study-a-Thon Tutoring                   | Bronx Community College, CUNY |