

EDUCATION

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| Washington University in St.louis Ph.D. in Mathematics, Advisor: Dr. Brett D. Wick | Saint Louis, MO Fall 2016–Current |
| Washington University in St.louis Masters in Mathematics | Saint Louis, MO Fall 2016–Fall 2018 |
| Indian Statistical Institute Masters in Mathematics | Kolkata, India Fall 2014–Fall2016 |
| Indian Statistical Institute Bachelors in Mathematics | Bangalore, India Fall 2011–Fall 2014 |

RESEARCH INTERESTS

Harmonic Analysis, Complex Analysis of Several Variables , Functional Analysis and (nonlinear) Partial Differential Equations.

TEACHING EXPERIENCE

- **Instructor - University College, Washington University in Saint Louis**
 - Math 2200 Elementary Probability and Statistics (Online Class) Summer 2020
 - Math 1011 Introduction to Statistics (Online Class) Summer 2020
 - Math 2200 Elementary Probability and Statistics Summer 2019
 - Math 217 Differential Equations Summer 2017
- **Teaching Assistant - Washington University in Saint Louis**
 - Math 217 Differential Equations Spring 2020
 - Math 217 Differential Equations Fall 2019
 - Math 132 Calculus II Spring 2019
 - Math 132 Calculus II Fall 2017

PUBLICATIONS

1. A Two weight inequality for Calderón-Zygmund operators on spaces of homogeneous type with applications
X. T. Duong, J. Li, E. T. Sawyer, M. N. Vempati, B. D. Wick and D. Yang,
[arXiv:2006.05628](#), submitted to: Journal of Functional Analysis .
2. Boundedness and Compactness of Cauchy-Type integral commutator on weighted Morrey spaces
R. Gong, M. N. Vempati, Q. Wu and P. Xie
[arXiv:2007.10157](#) , submitted to: Journal of the Australian Mathematical Society.
3. A metric approach to sparse domination,
J. M. Conde-Alonso, F. Di Plinio, I. Parissis and M. N. Vempati
[arXiv:2009.00336](#), submitted to: Annali di Matematica Pura ed Applicata.

4. A note on commutators on weighted Morrey spaces on spaces of homogeneous type,
R. Gong, J. Li, E. Pozzi and M. N. Vempati
Invited Submission to : Analysis and Geometry in Metric Spaces.
5. A note on two weight commutators of maximal functions on spaces of homogeneous type
R. Gong, J. Li and M. N. Vempati,
In preparation for submission.

TALKS

- **Invited talk in Spring 2021** - AMS Special Session on Operator Theory
 - A metric approach to sparse domination Spring 2021
- Analysis working Group Seminar, Washington University in Saint Louis
 - Dyadic product H^1 , BMO, and Carleson's counterexample Fall 2019
- Analysis Seminar, Washington University in Saint Louis
 - Two weight inequality for a Calderón-Zygmund operator on spaces of homogeneous type Spring 2018
- Analysis working Group Seminar, Washington University in Saint Louis
 - A $T(b)$ theorem on spaces of homogeneous type Spring 2018
- Math Circle, Washington University in Saint Louis
 - Lebesgue Measures (part of community outreach program for middle and high school students) Fall 2017
- Szegő Graduate Seminar, Washington University in Saint Louis
 - Two weight inequality for the Hilbert Transform Spring 2017

SCHOLARSHIPS

- University dissertation Fellowship Fall 2020–current
- Graduate Teaching assistant Fellowship Fall 2017–Spring 2020
- Washington University Fellowship Fall 2016–Spring 2017
- Scholarship of 2500 USD to visit University of Kansas
For Excellent performance in M.S Mathematics
(Indian statistical Institute) Fall 2015
- Indian Statistical Institute Fellowship
For Bachelors and Masters in Mathematics Fall 2011 –Spring 2016

PROFESSIONAL MEMBERSHIPS

- Association For Women in Mathematics (Washington University Student Chapter)
- American Mathematical Society

COMPUTER SKILLS

- **Basic Knowledge:** C, C++
- **Statistical Knowledge:** R, Matlab