

WASIM AKRAM

Curriculum Vitae

CONTACT

Department of Mathematics
Indian Institute of Technology, Bombay
Mumbai, Maharashtra - 400076

Email: wakram@math.iitb.ac.in
Office: 06/RS - 103
Phone: (+91) 9716229956

EDUCATION

- July 2017 - July 2023 **Ph.D. in Mathematics** — Department of Mathematics, Indian Institute of Technology Bombay
Thesis title : Feedback Stabilization of Certain Evolution Equations and Its Numerical Study
Advisor(s) : Prof. Debanjana Mitra and Prof. Neela Nataraj
CPI: 8.14/10
- July 2015 - May 2017 **M.Sc. in Mathematics** — Department of Mathematics, Indian Institute of Technology Bombay
CPI: 8.3/10
- July 2012 - May 2015 **B.Sc.(H) in Mathematics** — Department of Mathematics, Jamia Millia Islamia, New Delhi
CGPA: 9.29/10

PROFESSIONAL EXPERIENCE

- July 2023 - Present **Assistant Professor** — Department of Mathematics, Visvesvraya National Institute of Technology, Nagpur
- Mar 2023 - July 2023 **Research Associate** — Department of Mathematics, Indian Institute of Technology Bombay
Mentor(s): Prof. Debanjana Mitra and Prof. Neela Nataraj

RESEARCH AREA

Stabilizability of PDEs, Optimal control problems, FEM for control problems.

PUBLICATIONS

1. *Local stabilization of viscous Burgers equation with memory*, with Debanjana Mitra, Evolution Equations and Control Theory 11 (2022), no. 3, 939 - 973.
2. *Feedback stabilization of parabolic coupled system and its numerical study*, with Debanjana Mitra, Neela Nataraj and Mythily Ramaswamy, (2023) to appear in Math. Control Relat. Fields.
3. *Feedback stabilization of viscous Burgers equation around non-constant steady state and its finite element analysis*, (in preparation) 2023.

CONFERENCE/SEMINAR TALKS

- 6 Dec - 8 Dec 2022 Presented a talk (invited) in the **37th Annual Conference of Ramanujan Mathematical Society** held at Sri Sivasubramaniya Nadar College of Engineering, Chennai, Tamil Nadu, India.
- 6 Sept - 8 Sept 2022 Presented a talk in **International Conference on Computational Partial Differential Equations and Applications (ICCPDEA-2022)**, held at BML Munjal University, Haryana, India.
- 7 Dec - 10 Dec 2021 Presented a talk in **The fourth BRICS Mathematics conference** held at IISER Thiruvananthapuram, Kerala, India.

EXPERIENCE

- July 2016 - Nov 2016 **Wave propogation in shallow water (M.Sc. Project).**
 Guide: Prof. Vishnu D Sharma
 In this project we reviewed the literature about derivation of wave propogation in shallow water and its solution using Hodograph transformation and Riemann Invariants.

ACADEMIC ACHIEVEMENTS

- June 2017 Achieved All India Rank 120 in CSIR NET-JRF in Joint CSIR-UGC test.
- 2012 - 2017 Granted INSPIRE (SHE) Scholarship from Department of Science and Technology, Government of India, for being the top 1% candidates in +2 level board examination.
- December 2016 Achieved All India Rank 138 in UGC NET-JRF in Joint CSIR-UGC test.
- June 2016 Achieved All India Rank 120 in CSIR NET-JRF in Joint CSIR-UGC test.
- June 2015 Awarded the GOLD MEDAL for securing first position in B.Sc.(H) Mathematics from the University Jamia Millia Islamia, New Delhi.
- March 2015 Achieved All India Rank (AIR) 35 in Joint Admission Test for Masters (JAM) conducted by Indian Institute of Technology.
- 2013 - 2014 Awarded the Merit Scholarship for securing first position in Class B.Sc.(H) Mathematics, 2nd year from the university Jamia Millia Islamia, New Delhi.
- 2012 - 2013 Awarded the Merit Scholarship for securing first position in Class B.Sc.(H) Mathematics, 1st year from the university Jamia Millia Islamia, New Delhi.

ACADEMIC ACTIVITIES

- 28 Feb - 4 March 2023 Participant and Volunteer, Discussion meeting 'Control Theory meets Theory of Homogenization' held at Dept. of Mathematics, Indian Institute of Technology Bombay.
- 28 Nov - 3 Dec 2022 Teaching Assistant, NCM Workshop on 'Control Theory for Differential Equations' held at IISER, Kolkata, India.
- 2 July - 7 July 2021 Volunteer and Participant, SPARC Workshop on 'Adaptive Finite Element Methods' by Indian Institute of Technology Bombay and Scheme for Promotion of Academic and Research Collaboration. (Online Event).

28 Feb - 3 March 2020	Participant, Workshop on Finite Elements for Nonlinear and Multiscale Problems, Department of Mathematics, Indian Institute of Science, Bangalore.
21 Feb - 23 Feb 2020	Volunteer and Participant, Conference on ‘Differential Equations and Homogenization’, Department of Mathematics, Indian Institute of Technology Bombay.
9 Dec - 28 Dec 2019	Participant, Advance Instructional Schools (AIS) on Geometric Analysis, Department of Mathematics, Indian Institute of Technology Bombay.
29 Aug - 3 Sept 2019	Participant, West Asian Mathematical School (WAMS), Department of Mathematics, Indian Institute of Technology Roorkee.
10 June - 12 June 2019	Volunteer and Participant, Annual Conference 2019, Indian Women and Mathematics (IWM), Department of Mathematics, Indian Institute of Technology Bombay.
16 Feb - 17 Feb, 2019	Participant, Regional Workshop on Research and Opportunities, IWM, Homi Bhabha Centre for Science Education TIFR,
4 Jan - 6 Jan 2019	Participant, Diamond Jubilee Symposium, Department of Mathematics, Indian Institute of Technology Bombay.

TEACHING ASSISTANTSHIP

Spring 2021	MA 214, Numerical Analysis, B.Tech second year course (IIT Bombay)
Autumn 2020	MA 5102, Basic Algebraic Topology, M.Sc. second year course (IIT Bombay)
Spring 2020	MA 214, Numerical Analysis, B. Tech third year course (IIT Bombay)
Autumn 2019	SI 425, Basic Real Analysis, M.Sc. first year course (IIT Bombay)
Spring 2019	MA 214, Numerical Analysis, B. Tech third year course (IIT Bombay)
Autumn 2018	MA 105, Calculus, B. Tech first year course (IIT Bombay)

DEPARTMENTAL ACTIVITIES

2020 - 2021	Research Scholar Representative, Department of Mathematics, Indian Institute of Technology, Bombay.
2019 - 2020	Student Coordinator, Graduate Seminar on Partial Differential Equations, Department of Mathematics, Indian Institute of Technology, Bombay.
2016 - 2017	Led the Registration team of 36th Mathematics Olympiad 2017, Department of Mathematics, Indian Institute of Technology, Bombay.
2016 - 2017	Student Companion, Institute Student Companion Programme, Indian Institute of Technology, Bombay.
2015 - 2016	Member, Logistic and Registration team of 35th Mathematics Olympiad 2016, Department of Mathematics, Indian Institute of Technology, Bombay.

TECHNICAL STRENGTHS

Computer Languages	C/C++, MATLAB, Python (FEniCS)
Software & Tools	LaTeX, Excel

REFERENCES

Prof. Debanjana Mitra

Department of Mathematics
Indian Institute of Technology, Bombay
Mumbai, Maharashtra - 400076
Email: deban@math.iitb.ac.in
Telephone: 022 2576 9471

Prof. Neela Nataraj

Department of Mathematics
Indian Institute of Technology, Bombay
Mumbai, Maharashtra - 400076
Email: neela@math.iitb.ac.in
Telephone: 022 2576 7468

Prof. Mythily Ramaswamy

International Centre for Theoretical Sciences,
Bengaluru, Karnataka - 560 089
Email: mythily.r@icts.res.in
Telephone: +91 80 4653 6150