Bishal Deb

(he/him)

bishal@gonitsora.com, bishal.deb.19@ucl.ac.uk

Research Interests

Algebraic, Bijective and Enumerative Combinatorics

Education

2019 - Present – PhD in Mathematics at University College London (UCL) supervised by Prof. Alan D. Sokal.

2018 - 2019 – LabEx Bezout M2 student at Université Paris-Est Marne-la-Vallée (UPEM) with 16.177/20.

2017 - 2018 – First year of masters in Computer Science at Chennai Mathematical Institute (CMI) with CGPA 9.43/10.

2014-17 – BSc.(Hons) in Mathematics and Computer Science at Chennai Mathematical Institute with CGPA 8.89/10.

Research Work

- **X. Chen, B. Deb, A. Dyachenko, T. Gilmore, A. D. Sokal**, *Coefficientwise total positivity of some matrices defined by linear recurrences* - Proceedings of the 33rd International Conference on "Formal Power Series and Algebraic Combinatorics", January 10 - 13, 2022, Séminaire Lotharingien de Combinatoire, Issue 85B.30 (2021)
  arXiv preprint : https://arxiv.org/abs/2012.03629

- **B. Deb, A. Sarkar, N. Kumari, A. Rupela, P. Gupta, Balaji K.**, *Multimapper: Data Density Sensitive Topological Visualization*; 2018 IEEE International Conference on Data Mining Workshops (ICDMW)
  DOI : https://doi.org/10.1109/ICDMW.2018.00153
  arXiv preprint : https://arxiv.org/abs/1903.02755

Talks Given

- British Early Career Mathematicians' Colloquium 2021, online conference organised by University of Birmingham, July 2021. (Contributed)

- Young Researchers in Mathematics 2021, online conference organised by University of Bristol, June 2021. (Contributed)

- Graduate Students' Combinatorics Conference 2021, online conference organised by University of Minnesota, April 2021. (Contributed)

- Postgraduate Seminar, Department of Mathematics, University College London, November 2020. (Contributed)

- Online Weekly Research Seminar for Early Career Mathematicians from India, July 2020. (Invited)

- GT Combinatoire Énumérative et Algébrique, Laboratoire Bordelais de Recherche En Informatique, Université de Bordeaux, May 2019. (Invited)

- Department of Mathematics, Tezpur University, April 2013. (Invited)

Teaching Experience

- Developer for UCL's STACK (System for Teaching and Assessment using a Computer algebra Kernel) question bank.
- Moderator for online problem sessions for Mathematical Methods 3 (MATH0016), tutor for MATH0016, demonstrator for Combinatorial Optimisation (MATH0028), demonstrator for An Introduction to Mathematica (MATH0032) in 2020-21 at UCL.
- Tutor at UCL for Analysis 1 and 2 (MATH0003 and MATH0004), Algebra 1 and 2 (MATH0005 and MATH0006) in 2019-20.
- Teaching Assistant of the course Topics in Combinatorics taught in Spring 2018 at CMI.

Skills

- **Programming Languages** - `Haskell, Java, Python, Sage`
- **Typesetting Languages** - LaTeX
- **Web designing** - *HTML, CSS*
- **Languages** : English (Fluent), Bengali (Native tongue), Hindi (Working proficiency), Assamese (Can read and speak).

Other Activities

- Research Student Representative at Department of Mathematics, UCL.
- Product Intern at Adobe Systems, Noida in May-July 2017 and May-June 2018.
- Editor of Gonit Sora, a bilingual web magazine.
- Organised several webinars on behalf of Gonit Sora (Gonit Sora webinar page)
- Joint Event Co-ordinator of Tessellate 2018, the academic and cultural festival of CMI.
- Organiser of Student Talks at CMI (2017-18).
- Visharad (Graduate) in Tabla (Indian Percussion Instrument) from Bhatkhande Sangit Vidyapith, Lucknow, India. Senior Diploma in Art & Craft from Society of Art and Craft, West Bengal, India.

Achievements

- One of the seven students selected for the LabEx Bezout scholarship for the M2 program at UPEM for the academic year 2018-19.
- Qualified the national level entrances of undergraduates programmes in CMI, Indian Statistical Institute written stage, Joint Entrance Examinations (Mains). Came second at entrance exam of Tezpur University for Integrated M.Sc in Mathematics.
- Recipient of INSPIRE SHE scholarship for being in the top 1% of Assam State board in class 12 exams.

References

Available on request