



# St. Xavier's College

Dr. Camil Bulcke Path, Ranchi

## **Faculty Profile**

Name of Faculty Member	:	Dr. Pappu Mahto
Gender	:	Male
Email ID	:	pappumahto89@gmail.com
Name of Department	:	Department of Mathematics
Designation	:	Assistant Professor
Level of Teaching	:	Undergraduate and Postgraduate
Academic Qualification	:	M.Sc., Ph.D.
Total Teaching Experience	:	06 Years and 07 Months
UGC NET/SET Qualified	:	Yes

### **Research Papers Published:**

- 1) **"Mathematical Model with variable population size"**, EJMAA, Vol. 9, Issue 1, pp. 310–321, **2021**, ISSN: 2090 – 729X.
- 2) **"Analysis by using a simple mathematical Modeling on Dengue in Odisha"**, EJMAA, Vol. 9, Issue 1, pp. 169–173, **2021**, ISSN: 2090 – 729X.
- 3) **"SIR Model for Dengue outbreak in Burkina Faso"**, IJRAR, Vol. 6, Issue 2, pp. 1–5, **2019**, E-ISSN: 2348 – 1269, P-ISSN: 2349 – 5138.
- 4) **"Equilibrium approach on SEIR Model on Dengue Disease"**, JETIR, Vol. 5, Issue 4, pp. 907–912, **2018**, ISSN: 2349 – 1269.
- 5) **"Equilibrium Analysis of the SEIR Mathematical Model"**, JETIR, Vol. 4, Issue 10, pp. 800–806, **2017**, ISSN: 2349 – 1269.
- 6) **"Equilibrium Analysis of SIRS Epidemic Model"**, IJRAR, Vol. 4, Issue 4, pp. 960–969, **2017**, E-ISSN: 2348 – 1269, P-ISSN: 2349 – 5138.

### Participation in UGC-HRDC Course/FDP/OC/RC:

- 1) Participated in the one-week National Level Faculty Development Programme on **“Recent Development in Pure & Applied Mathematics”**, organized by Department of Engineering Science & Humanities, IIST, Indore in association with Indian Mathematical Society, from 23<sup>rd</sup> -28<sup>th</sup> Dec, 2024.
- 2) Participated in the one-week Faculty Development Programme on **“Mastering AI tools for Faculty Excellence”**, organized in association with IEEE Computer Society Pune, Chapter by Department of CSE – Artificial Intelligence & Department of CSE – Artificial Intelligence and Machine Learning, Vishwakarma Institute of Information Technology, Pune, from 23<sup>rd</sup> December to 27<sup>th</sup> December, 2024.
- 3) Participated in the five days online Faculty Development Programme on **“Next Generation Technologies on Information and Communication”**, organized by Department of IT, CSE, CSE (AI/ML) and CSE (Data Science) at Bengal College of Engineering and Technology in Collaboration with IIC (Institution’s Innovation Council) and EDC (Entrepreneurship Development Cell) from 5<sup>th</sup> to 9<sup>th</sup> November, 2024.
- 4) Participated in the one-week Faculty Development Programme on **“Transforming Innovation into Reality for Future Science and Engineering (TIRFSE 2024)”** organized by Department of Applied Science & Humanities, Haldia Institute of Technology, Haldia in association with Indian JSPS (Japan Society for the Promotion of Science) Alumni Association (IJAA) & Department of Physics, Mohanlal Sukhadia University, Udaipur, during 4<sup>th</sup>-8<sup>th</sup> Nov, 2024.
- 5) Participated in the one-week International Faculty Development Programme on **“AI for Sustainable Development”**, organized by VIIT Pune, IEEE Region 10 Humanitarian Technology activities, IEEE Pune Section, IEEE Pune Section SIGHT Group, IEEE Pune Section SIG on “Energy and Environmental Engineering” and IEEE VIIT Student Branch from 5<sup>th</sup> to 9<sup>th</sup> August 2024.
- 6) Participated in the one-week FDP on **“Methods of Improving Higher Education Teaching Quality Using Outcome Based Education, Pedagogical Approaches and NEP 2020 (OBENEP24)”**, organized by Department of Computer Science and Engineering, in association with IQAC, Haldia Institute of Technology, Haldia, WB from 22<sup>nd</sup> to 26<sup>th</sup> July 2024.
- 7) Participated in the one week FDP on **“Mathematical and Computational Aspects of Industry 4.0”**, organized by Department of Applied Science and Humanities, Haldia Institute of Technology, associated by Department of Computer Application & Department of CSE-Data Science, Haldia Institute of

Technology and the Department of Computer Science & Engineering, O.P. Jindal University, Raigarh, Chhattisgarh from 3<sup>rd</sup> June to 7<sup>th</sup> June 2024.

- 8) Participated in the Swayam Online Course Certification on “**Operation Research**”, organized by University of Calcutta and offered by Prof. Bibhas Chandra Giri, in the month of May 2024.
- 9) Participated in the FDP on “**Cognitive Computing for Smart Applications**”, organized by Department of Artificial Intelligence and Data Science, Vishwakarma Institute of Information Technology, Savitribai Phule Pune University from 18<sup>th</sup> March to 22<sup>nd</sup> March 2024.
- 10) Participated in the FDP on “**Next generation Artificial Intelligence**”, organized by Department of Artificial Intelligence and Data Science, Vishwakarma Institute of Information Technology, Savitribai Phule Pune University from 11<sup>th</sup> March to 16<sup>th</sup> March 2024.
- 11) UGC Sponsored Inter/Multi-Disciplinary Refresher Course in “**MOOCs Development and Delivery**” from 06/02/2024 to 19/02/2024.
- 12) UGC Sponsored Inter/Multi-Disciplinary Refresher Course in “**Applied Mathematics**” from 16/09/2021 to 29/09/2021.
- 13) UGC Sponsored Refresher Course in “**Environmental Science & Disaster Management**” from 12/09/2019 to 25/09/2019.
- 14) UGC Sponsored “91<sup>st</sup> Orientation Programme” from 04/06/2018 to 01/07/2018.
- 15) “**Latest Trends on Computational Mathematics: Theory, Methods & Applications**” conducted by Department of Mathematics, JIS University, during 26/02/2024 to 01/03/2024.
- 16) “**NEP 2020 Orientation & Sensitization programme**” under Malaviya Mission Teacher Training Programme (MM-TTP) of UGC organized by Mahatma Gandhi Antarrashtriya Hindi Vishwavidyalaya, Wardha, Maharashtra from 22/01/2024 to 31/01/2024.
- 17) “**Mathematical Modelling on Biological & Physical system with different Simulation Techniques**” organized by the Department of Mathematics, Mahadevananda Mahavidyalaya from 04/01/2024 to 09/01/2024.
- 18) “**Faculty Development Programme**” organized by the Department of Geography in association with IQAC, St. Xavier’s College (Autonomous), Ranchi, Jharkhand from 12/04/2021 to 18/04/2021.

- 19) **“Online Summer School – 2020 on Mathematics”** organized by the Department of Mathematics, Presidency University, Kolkata during 27/06/2020 to 06/07/2020.

**Paper Presented in Seminar/Conference (National/International):**

- 1) Presented a paper titled **“Analysis of Mathematical Model with Variable Population Size”** in the National Conference on Recent Trends in Computation and Mathematical Analysis in Engineering & Science (CMAES-2024), organized by Silli Polytechnic, Ramdera, Silli, Ranchi held during 11<sup>th</sup> -12<sup>th</sup> May 2024.
- 2) **“Equilibrium Analysis of Mathematical Model”**, in the National Conference on Recent Trends in Mathematics, organized by PG Department of Mathematics, Guru Nanak College, Sri Muktsar Saheb, Amritsar, Punjab on 27<sup>th</sup> March 2024.
- 3) **“Stability Analysis of SIR Model”** in the International Conference on Mathematical Challenges and Novel Applications – 2024, jointly organized by Department of Mathematics, Ayya Nadar Janaki Ammal College, Sivakasi, Ramco Institute of Technology, Rajapalayam and The Standard Framework Rajaratnam College of Womes, Sivakasi on 21<sup>st</sup>-22<sup>nd</sup> March 2024.
- 4) **“Mathematical Model with the no - constant population size”** in International Seminar on Physical and Mathematical Science (ISPMS-2024) Organized by The Culcutta Mathematical Society on March 02 – 03, 2024.
- 5) **“Study of a Simple Mathematical Model”** in the International conference in “Recent Trends in Mathematics and its Applications (ICRTMA’24)” Organized by the Department of Mathematics on 23<sup>rd</sup> February 2024 in AIMAN College at Trichi – 620021.
- 6) **“Analysis of SEIR type epidemic model”** in Contributory session – I C Applied Mathematics at the International Conference on Emerging trends in Mathematical Sciences & Management (IEMSC - 24), held in Institute of Engineering & Management, Kolkata During 2<sup>nd</sup> to 4<sup>th</sup> February, 2024.
- 7) **“Analysis of the SIR type Epidemic Model”** in the 1<sup>st</sup> International conference on Advances in Novel Materials: Towards Sustainable Future (ICAN - 2024) from 20<sup>th</sup> – 22<sup>nd</sup> January 2024 at St. Xavier’s College, Ranchi Jharkhand, India.
- 8) **“Stability analysis of the SIRS Model in the presence of vaccination at the susceptible class”** in the 2 – Day National conference on Mathematical and Statistical modeling in innovative Areas (MASTMIN - 2023) held at RTCIT, Ranchi during February 03 – 04, 2023.

- 9) **“Transmission of Dengue Disease in Jharkhand”** in A one day National seminar on Interdisciplinary Mathematics: An evaluation on 17 April 2019, Sponsored by Achhruram Memorial College, Jhalida, Purulia (W. B.), India.
- 10) **“Equilibrium Approach on SEIR Model on Dengue Disease”** in A one day National Seminar on Recent Advances on Mathematical Sciences on 29 November 2016 organized by Achhruram Memorial College, Affiliated to the University of S.K.B.U., Purulia, Jhalida, West Bengal – 723202.

**Participated in Seminar/Conference/Workshop (National/International):**

- 1) Participated in the National Webinar on **“World Labour Day”**, organized by Microbiologists Society, India on 1<sup>st</sup> May 2024.
- 2) Attended Online Workshop on **“Introduction to the UNESCO Open Source Framework”**, organized by UNESCO Chair in Community based Research and Social Responsibility in higher education (CBRSR) and DST-Centre for Policy Research at Indian Institute of Bengaluru, from 1<sup>st</sup>-5<sup>th</sup> April 2024.
- 3) Participated in the One-day Seminar on **Groups and Analysis** organized by TMC and IQAC Cell, Kalna College, West Bangal, on 22<sup>nd</sup> March 2024.
- 4) Participated in the International workshop on **Numerical and Analytical Techniques in Engineering Problems (IWNATEP - 2022)** organized by the Department of Mathematics held on January 19 – 21, 2022 at SRM Institute of Science and Technology, Kattankulathur, Tamil Nadu, India.
- 5) Participated in two – day Enrichment programme for Students & Teachers (1<sup>st</sup> Phase) on **Linear Algebra, Analysis & Differential Equations** from 8<sup>th</sup> – 9<sup>th</sup> September, 2020 organized by Department of Mathematics, Garhbeta College.
- 6) Participated in A two – day International Webinar on **Algebra, Analysis & Topology** from 13<sup>th</sup>–14<sup>th</sup> August, 2020 Organized by Department of Mathematics, Bankura University & Bankura Mathematical Society, Bankura University.
- 7) Participated in National Webinar on **Applications of Mathematics**, organized by Department of Mathematics in collaboration with IQAC, Seth Anandram Jaipuria College, Kolkata on 11<sup>th</sup> August, 2020 (3 Hrs.).
- 8) Participated in two–days National Webinar on **Recent Development in Mathematics & its Social Impact** organized by the Department of Mathematics Sukumar Sengupta Mahavidyalaya, Keshput, Paschim Medinipur, West Bengal, India, held on August 8<sup>th</sup>–9<sup>th</sup>, 2020.

- 9) Participated in the National Webinar on **Machine Learning and Mathematical Modelling** organized by the Department of Mathematics and Statistics, School of Basic Sciences, Manipal University Jaipur on 7<sup>th</sup> August 2020.
- 10) Participated in the State Level Webinar on **ROLE OF MATHEMATICAL MODELING ON COVID-19 PANDEMIC** organized jointly by Department of Mathematics and Physics in association with the Internal Quality Assurance Cell (IQAC) and Science Forum of the college on August 7<sup>th</sup>, 2020.
- 11) Participated in National Webinar on **Spectrum of Mathematics in Nature** organized by Department of Basic Sciences and Humanities – Mathematics, New Horizon College of Engineering, Bangaluru on 1<sup>st</sup> August 2020.
- 12) Participated in One Day Webinar on **Exploring Graph Theory Applications with GRIN (Graph Interface) Software** organized by Math Club, Department of Mathematics, Thiagarajar College of Engineering, Madurai on 15<sup>th</sup> July 2020.
- 13) Participated in Mathophilia 2020, the two – day International Webinar on **Mathematics & Mathematicians: from Vedic to present Pandemic**, organized by Department of Mathematics, Banwarilal Bhalotia College, Asansol, West Bengal, India, Held during July 11 – 12, 2020.

[Dr. Pappu Mahto]