

CURRICULUM VITAE

Dr. Piu Samui (Ph. D.)

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Swami Vivekananda University,
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Personal Profile

Father's Name: **Kanailal Samui**
Date of Birth: **April 28, 1996**
Marital Status: **Unmarried**
Category: **General**
Nationality: **Indian**
Sex: **Female**
Language proficiency: **Bengali, English, Hindi**



Professional Experiences

- As an Assistant Professor in **Swami Vivekananda University**, Barrackpore, Kolkata-700121, West Bengal, India.
 - **Date of Joining: 01.02.2024**
 - **Experience: From 01.02.2024 to Till Date.**

Academic Qualifications

- **Diamond Harbour Women's University**, West Bengal, India.
 - **Ph.D. in Mathematics (Mathematical Biology) (Date of Ph.D.: 07. 08. 2023).**
 - **Thesis Title: "Mathematical study of Infectious diseases and its Control".**
 - **Thesis Supervisor: Dr. Jayanta Mondal.**
- **Diamond Harbour Women's University**, West Bengal, India.
 - **Master of Science in Mathematics (2016 - 2018) with 85.80 % (1st Class).**
- **The University of Burdwan**, Burdwan, West Bengal, India.

- Institute's Name: M. U. C. Women's College, B. C. Road, Burdwan.
- **Bachelor of Science in Mathematics (Hons.) (2013 - 2016), Physics & Chemistry with 60.0% (1st Class).**
- **W. B. C. H. S. E.,** West Bengal, India.
 - Institute's Name: Parul Ramkrishna Sarada High School, Arambagh, Hooghly.
 - **Higher Secondary (H. S.) (2013): Bengali, English, Physics, Chemistry, Mathematics, Biology with 82.80% (1st Class).**
- **W. B. B. S. E.,** West Bengal, India.
 - Institute's Name: Parul Ramkrishna Sarada High School, Arambagh, Hooghly.
 - **Madhyamik (2011): Bengali, English, Physical & Life Science, History, Geography, Mathematics with 83.50% (1st Class).**

Research Interests

Mathematical Epidemiology, Infectious Disease Modeling, Ecological Modeling, Optimal Control Theory, Bifurcation Theory, Stochasticity, Numerical Simulation

- Modeling of Infectious Disease - COVID-19, HIV/AIDS, HCV, HBV, Anthrax, Mpox, Lassa Fever, Chickenpox, Typhoid Fever, Q Fever, Nipah, Zika (up to now)
- Ecological Modeling

List of Publications (Journals)

1. **Samui, Piu**, Mondal J, Chatterjee, A. N., Basir, F. A. (2025), Impact of awareness in self-monitoring of COVID-19: an optimal control approach with cost-effective strategy, **Results in Control and Optimization**, (IF: 4. 04) (Q2), E-ISSN: 2666-7207, (2025), 100513. <https://doi.org/10.1016/j.rico.2024.100513>
2. Mondal, J., Mondal S., **Samui, Piu***(2025), Impact of vaccination and awareness campaign in reducing Mpox transmission: A fractional mathematical study, **Journal of Applied Nonlinear Dynamics**, Manuscript ID: JAND-D-24-00022 (IF: 0.71) (Q4), ISSN: 2164-6457(Accepted).
3. Mondal, J., **Samui, Piu**, Chatterjee, A. N., Ahmad, B. (2024), Modeling hepatocyte apoptosis in chronic HCV infection with impulsive drug control, **Applied Mathematical Modelling**, (IF: 5.46) (Q1), ISSN: 0307-904X 136 (2024), 115625. <https://doi.org/10.1016/j.apm.2024.07.032> (Citation - 1)
4. Mondal, J., Mondal S., **Samui, Piu***(2023), Simulation and forecasting CTLs response effectualness against global dynamics of SARS-CoV-2/HIV coinfection, **Results in Control and Optimization**, (IF: 4. 04) (Q2), E-ISSN: 2666-7207, 13(2023), 100323. <https://doi.org/10.1016/j.rico.2023.100323> (Citation - 1)
5. Chatterjee, A. N., Mondal, J., **Samui, Piu** (2023), A delay differential equation model of SEIV in presence of media coverage, **International Journal of Nonlinear Analysis and Applications**, (IF: 0.658), ISSN: 20086822, <https://doi.org/10.22075/IJNAA.2023.23412.2535>
6. **Samui, Piu**, Mondal, J., Ahmad, B., Chatterjee, A. N. (2022), Clinical effects of 2-DG drug restraining SARS-CoV-2 infection: A fractional order optimal control study, **Journal of Biological Physics**, (IF: 1.86), (Q3) E-ISSN: 1573-0689, ISSN: 0092-0606, 48(4), 415 - 438. <https://doi.org/10.1007/s10867-022-09617-9> (Citation - 5)
7. Mondal, J., Khajanchi, S., **Samui, Piu** (2022), Impact of media awareness in mitigating the spread of an infectious disease with application to optimal control, **The European Physical Journal Plus**, (IF: 3.911), (Q2) E-ISSN: 2190-5444, 137(8), 1 – 18. <https://doi.org/10.1140/epjp/s13360-022-03156-x> (Citation - 20)

- 8. Mondal, J., **Samui, Piu**, Chatterjee, A. N. (2022), Modelling of contact tracing in determining critical community size for infectious diseases, **Chaos, Solitons & Fractals**, (IF: 9.922), (Q1) ISSN: 0960-0779, E-ISSN: 1873-2887, 159, 112141. <https://doi.org/10.1016/j.chaos.2022.112141> (Citation - 2)
- 9. Wang B., Mondal, J., **Samui, Piu**, Chatterjee, A. N., Yusuf, A. (2022), Effect of an Antiviral Drug Control and its Variable Order Fractional Network in Host COVID-19 Kinetics, **The European Physical Journal Special Topics**, (IF: 2.8), (Q2) E-ISSN: 1951-6401, ISSN: 1951-6355, 231(10): 1915 – 1929. <https://doi.org/10.1140/epjs/s11734-022-00476-y> (Citation - 14)
- 10. Mondal, J., **Samui, Piu**, Chatterjee, A. N. (2022), Dynamical demeanour of SARS-CoV-2 virus undergoing immune response mechanism in COVID-19 pandemic, **The European Physical Journal Special Topics**, (IF: 2.8 (SCI)), E-ISSN: 1951-6401, ISSN: 1951-6355, 231(18-20), 3357-3370. <https://doi.org/10.1140/epjs/s11734-022-00437-5> (Citation - 31)
- 11. Mondal, J., **Samui, Piu**, Chatterjee, A. N. (2021), Effect of SOF/VEL antiviral therapy for HCV treatment: A control theoretic approach, **Letters in Biomathematics**, (IF: 1.91 (Q3)), E-ISSN: 2373-7867, 8(1): 191-213. <https://doi.org/10.30707/LiB8.1.1682013528.144161> (Citation - 12)
- 12. Mondal, J., **Samui, Piu**, Chatterjee, A. N. (2020), Optimal control strategies of non-pharmaceutical and pharmaceutical interventions for COVID-19 control, **Journal of Interdisciplinary Mathematics (Taylor & Francis)**, (IF: 1.79 (SCI)), ISSN: 0972-0502, E-ISSN: 2169-012X. 24(1): 125 – 153. <https://doi.org/10.1080/09720502.2020.1833459> (Citation - 29)
- 13. **Samui, Piu**, Mondal, J., Khajanchi, S. (2020), A mathematical model for COVID-19 transmission dynamics with a case study of India, **Chaos, Solitons & Fractals**, (IF: 9.922), ISSN: 0960-0779, E-ISSN: 1873-2887. 140, 110173. <https://doi.org/10.1016/j.chaos.2020.110173> (Citation - 315)
- **Communicated Works:**
 - 1. Mondal, J., Mandal, S., **Samui, Piu*** (2024), Effect of biosecurity and immunological memory in ratio-dependent transmission of anthrax disease in livestock, **Mathematical Medicine and Biology**, *Manuscript No.: MMB-24-073* (Under Peer - Review).
 - 2. **Samui, Piu***, Mondal J. (2023), Study of Volterra-Lyapunov stability and immunological memory effect on PrEP linked HIV/AIDS model, **International Journal of Modelling and Simulation**, *Submission ID: 249931644* (Under Peer - Review).
 - 3. Attila Dénes, Jayanta Mondal, **Samui, Piu**, Mahmoud A. Ibrahim (2025), Threshold dynamics in a time-delayed periodic model for measles spread with passive immunity and double-dose vaccination, **Journal of Mathematical Biology**, *Manuscript ID: JOMB-D-25-00104* (Under Peer - Review).

List of Publications (Book Chapters)

- 1. **Samui, Piu**, Mondal J. (2025), Determining pathogenic behaviors of chronic HCV infection in presence of incubation delay, **Mathematical Analysis and Applications in Biological Phenomena through Modelling**, https://doi.org/10.1007/978-981-97-9194-1_13, Chapter No. 13, ISBN: 978-981-97-9194-1

Awards & Fellowships

- “Best Paper Presentation Award” in International Seminar on “Interdisciplinary Scopes of Mathematical and Computational Logic (ISISMCL - 2024)” organized by the Department of Mathematics, Gauhati University held on May 3 - 4, 2024.
- Ph.D. Research Fellowship (“Swami Vivekananda Merit-cum-Means Scholarship”) from the West Bengal Higher Education Department, Govt. of West Bengal, Bikash Bhavan, India with Grant Order No.52-Edn(B)/5B-15/2017 dated 07.06.2017.

- Qualified Research Entrance Test (RET) (2018) organized by Diamond Harbour Women's University (August, 2018).
- Award for "Highest Attendance" in Mathematics (Hons.), 2015 from M. U. C. Women's College, Burdwan.
- "INSPIRE Scholarship for Higher Education (SHE)" by Department of Science & Technology (DST), Govt. of India (2013-2016).
- Award under Scheme of Scholarship for College & University Student reg. of Government of India on the basis of result of Higher Secondary Examination held by West Bengal Council of Higher Secondary Examination held in 2013 (Order No.: L/Secy/Sch/1/2014, dated 24 January, 2014).
- "INSPIRE" Award of Rs. 5000 (INSPIRE Award Warrant) (Currently known as "INSPIRE Awards - MANAK") for preparing a science project/model under the "INSPIRE AWARD SCHEME", Govt. of India in the year 2011 (Class X, Parul R. K. S. High School, West Bengal, India).
- "INSPIRE" Award of Rs. 5000 (INSPIRE Award Warrant) (Currently known as "INSPIRE Awards - MANAK") for preparing a science project/model under the "INSPIRE AWARD SCHEME", Govt. of India in the year 2009 (Class VIII, Parul R. K. S. High School, West Bengal, India).

Seminars, Webinars & Workshops

Oral Presentations:

- International Seminar on "Interdisciplinary Scopes of Mathematical and Computational Logic (ISISMCL - 2024)". Organized by the Department of Mathematics, Gauhati University held on May 03 - 04, 2024. Oral presentation on "Impact of vaccination uptake and awareness campaign in curtailing Mpox transmission: A fractional order approach".
- National Seminar on "Applied Mathematics in Science & Technology 2023 (AMST 2023)", March 21-23, 2023. Organized by the Department of Applied Mathematics, University of Calcutta. Oral presentation on "Determining critical community size for recurrent epidemics".
- "16th International Conference MSAST 2022", December 21-23, 2022. Organized by the Institute IMBIC, India having branches in Japan and Sweden. Oral presentation on "SARS-CoV-2 infection and antiviral effects of 2-DG drug: A fractional order optimal control approach."
- "3rd International Conference on Mathematical Techniques and Applications (e-ICMTA-2022)", March 23-25, 2022. Organized by the Department of Mathematics, SRM Institute of Science and Technology, Tamilnadu, India. Oral presentation on "Dynamical changes of host-immune response in COVID-19 contagion a mathematical framework".
- Webinar on "Recent Advances in Applied Mathematics: Theory & Computation (RAAMTC-2021)", March 27-29, 2021. Organized by the Department of Applied Mathematics, University of Calcutta, India. Oral presentation on "Effect of contact tracing and critical community size in infectious diseases: A mathematical study".
- "International Conference on Mathematical Sciences and Applications (ICMSA 2020)", February 26-28, 2020. Organized by the Department of Mathematics, the University of Kalyani. Oral presentation on "Chronic hepatitis c virus contagion with intracellular time delay: a mathematical perception".
- "6th India Biodiversity Meet 2019 (IBM-2019)", February 14-16, 2019. Organized by the Agricultural and Ecological Research Unit (AERU), Indian Statistical Institute (ISI), Kolkata. Oral presentation on "A Mathematical Context Of The Dynamics Of Chronic Hepatitis C Virus Contagion".
- "National Seminar On Recent Trends in Mathematical Sciences (RTMS-2019)", February 06 - 07, 2019. Organized by the Department of Mathematics, the University of Burdwan. Oral presentation on "Dynamical Study Regarding Chronic Hepatitis C Virus Transmission: A Mathematical Framework".

Poster Presentations:

- “3rd National Seminar on Nonlinear and Complex Phenomena (NCP– 2020), February 17-19, 2020”. Organized by Jadavpur University. Poster presentation on “Chronic hepatitis c virus contagion: a mathematical context”.

Attended Conferences & Webinars

- “International Webinar on Recent Trends in Mathematical Theory and Applications”, December 14 - 15, 2022. Organized by the Department of Mathematics, West Bengal State University, Barasat, West Bengal, India.
- “National Seminar on Recent Advances in Mathematics and its Applications”, March 10 - 11, 2022. Organized by the Department of Pure Mathematics, University of Calcutta, West Bengal, India.
- “National Webinar on Recent Advances in Mathematical Sciences (NWRAMS-2021)”, September 29-30, 2021. Organized by the Department of Mathematics, Maharaja Bir Bikram University, Tripura, India.
- “An International Level Lecture series on Wavelet Transforms And Image Processing”, August 9 - 12, 2021. Organized by Post Graduate Department of Mathematics, Al Ameen College, Edathala, Kerala, India.
- “Importance of Research Metrics - an Overview of Web of Science and Scopus Database”, July 28, 2021. Organized by the Department of Mathematics, Koneru Lakshmaiah Education Foundation, Andhra Pradesh, India.
- “Three day National level Workshop on MATLAB for beginners”, July 28 - 30, 2021. Organized by the Department of Mathematics, Srimad Andavan Arts and Science College (Autonomous), Tamilnadu, India.
- “International e-conference on mathematics and its applications”, April 10-11, 2021. Organized by the Department of Mathematics, University of Dhaka, Bangladesh.
- “Challenges and Opportunities for Mathematics in the present Global Scenario”, August 30-31, 2020. Organized by the Department of Mathematics, Govt. Shyama Prasad Mukherjee College Sitapur, Surguja and Saraswati Mahavidyalaya, Ambikapur, Chhattisgarh, India.
- “One Day National Webinar on Pure and Applied Mathematics”, August 6, 2020. Organized by the Department of Mathematics, Diamond Harbour Women’s University, West Bengal, India.
- “One Day National Seminar on Pure and Applied Mathematics”, March 27, 2019. Organized by the Department of Mathematics, Diamond Harbour Women’s University, West Bengal, India.

Workshops

- “Two-Week Faculty Development Program on Data Science and Scientific Computing”, January 03 - 16, 2024. Organized by Central University of Punjab, Bathinda, India; Poornima University, Jaipur, India; Nexus University, South Africa; Baba Farid College, Bathinda, India; and MathTech Thinking Foundation, Fazilka, Punjab, India.
- “Workshop on Software in Mathematics and Statistics (WSMS – 2021)”, August 02 – 06, 2021. Organized by the Department of Mathematics, National Institute of Technology Tiruchirappalli.
- “Online Workshop on Emerging Areas in Mathematics (WEAM - 2021) (One Week Faculty Development Programme)”, July 10 - 17, 2021. Organized by Calcutta Mathematical Society.
- “One Week Faculty Development Programme on Recent Trends in Applications of Mathematics (RTAM)”, July 12 - 17, 2021. Organized by the Department of Freshman Engineering, Chadalawada Ramanamma Engineering College (Autonomous), Tirupati.
- “Five Days Short Term Training Program on Modern Mathematical Tools in Calculus and Analytics”, August 10 - 14, 2020. Organized by Department of Science and Humanities (Mathematics), Kumaraguru College of Technology, Coimbatore.
- “Online Summer School - 2020” on Mathematics, June 27 - July 6, 2020. Organized by the Department of Mathematics, Presidency University, Kolkata.

- *Mathematical Programming Software*: R, MATLAB & Mathematica.
- *Computer Programming Languages*: Fortran & C.
- *Typesetting Software*: LaTeX, MS Word, MS Excel & Power Point.

Skills

- Advanced Teaching
- Research and Analysis
- Active and Advanced Communication
- Ability to multitask
- Creative thinking

** It is declared that all the information given above is true to the best of my knowledge and belief.*