MAHARAJA BIR BIKRAM UNIVERSITY
AGARTALA, TRIPURA

- **Name of the Faculty:** Dr. Debadatta Adak

- **Designation:** Assistant Professor

- **Date of Joining:** 11/04/2017

- **Address for Communication:** Department of Mathematics, MBB University, College Tilla, P.O. Agartala College, Agartala, Tripura, Pin Code: 799004, India.

- **Mobile No:** 8777385202, 9883895228 (WhatsApp)

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- **Area of Specialization:** Nonlinear Dynamics, Mathematical Biology, Numerical Analysis, Mathematical Programming

- **Research Area:** Nonlinear Dynamics, Mathematical Biology, Mathematical Sociology, Mathematical Modelling.

- **Courses Taught:** Abstract Algebra, Linear Algebra, Classical Mechanics, Continuum Mechanics, Graph Theory, Numerical Analysis, Nonlinear Dynamics, Mathematical Biology, Foundation Course of Advanced Computer Skills, National Services Scheme (NSS) Open Elective Course.

- **PhD Guidance**

Sl. No.	Name of the Research Scholar	Department	Title of the Thesis	Status
1	**Shri Shekhar Das** REGSITRATION NUMBER **MBBU/Ph.D./2022/PMA001/0003** ROLL NUMBER **2104PMA0010003**	Department of Mathematics, MBB University	Mathematical Modelling of Various Socioeconomic Issues and Challenges in Northeast India	On-going

- **Publication Details:**

- **Journal Publications (International):**

	All authors in sequence	Title of the paper	Journal Name	Volume	Year of publication	Impact Factor	ISSN/ ISBN	Peer Reviewed/ UGC Listed (YES/NO)
1	C. Mondal, **D. Adak**, A. Majumder, N. Bairagi	Mitigating the transmission of infection and death due to	ISA Transactions (Elsevier)	124	2022	5.468	0019-0578 (print)/ 1879-2022 (online)	YES

		SARS-CoV-2 through non-pharmaceutical interventions and repurposing drugs					
2	A. Majumder, **D. Adak** and N. Bairagi	Persistence and extinction of species in a disease-induced ecological system under environmental stochasticity	Physical Review E (American Physical Society)	103	2021	2.529	2470-0045 (print) 2470-0053 (online)	YES
3	A. Majumder, **D. Adak** and N. Bairagi	Persistence and extinction criteria of Covid-19 pandemic: India as a case study	Stochastic Analysis and Applications (Taylor & Francis)	10.1080 /073629 94.2021. 1894172	2021	1.53	0736-2994, 1532-9356	YES
4	A. Majumder, **D. Adak**, N. Bairagi	Phytoplankton-zooplankton interaction under environmental stochasticity: Survival, extinction and stability	Applied Mathematical Modelling (Elsevier)	89	2021	5.129	0307-904X / 1872-8480	YES
5	**D. Adak**, A. Majumder, N. Bairagi	Mathematical Perspective of Covid-19 Pandemic: Disease Extinction Criteria in Deterministic and Stochastic Models	Chaos, Solitons and Fractals (Elsevier)	142	2020	5.944	0960-0779 / 1873-2887	YES
6	**D. Adak**, N. Bairagi, R. Hakl	Accounting for multi-delay effects in an HIV-1 infection model with saturated infection rate, recovery and proliferation of host cells	BIOMATH	9	2020	0	ISSN 1314-684X (print) ISSN 1314-7218 (online)	UGC SCOPUS-YES

7	A. Majumder, T. K. Bala, **D. Adak**, G. M. N'Guerekata, N. Bairagi	Evaluating the current epidemiological status of Italy: Insights from a stochastic epidemic model	Nonlinear Studies (Cambridge Scientific Publishers)	27(4)	2020	0.563	1359-8678	Peer Reviewed-YES
8	C. Mondal, **D. Adak,** N. Bairagi	Optimal control in a multi-pathways HIV-1 infection model: A comparison between mono-drug and multi-drug therapies	International Journal of Control (Taylor and Francis)	0.1080/ 00207179.2019.1690694	2019	2.888	0020-7179, 1366-5820	YES
9	**D. Adak**, N. Bairagi, R. Hakl	Chaos in delay-induced Leslie–Gower prey–predator–parasite model and its control through prey harvesting	Nonlinear Analysis: Real World Applications (Elsevier)	51	2020	2.763	1468-1218	YES
10	**D. Adak**, N. Bairagi	Bifurcation analysis of a multi-delayed HIV model in presence of immune response and understanding of in-host viral dynamics	Mathematical Methods in Applied Sciences (Wiley)	DOI: 10.1002 /mma.5645	2019	2.321	0170-4214 / 1099-1476	YES
11	**D. Adak**, N. Bairagi	Analysis and computation of multi-pathways and multi-delays HIV-1 infection model	Applied Mathematical Modelling (Elsevier)	54	2018	5.129	0307-904X / 1872-8480	YES
12	N. Bairagi, **D. Adak**	Dynamics of cytotoxic T-lymphocytes and helper cells in human immunodeficiency virus infection with Hill-type infection rate and sigmoidal CTL	Chaos, Solitons and Fractals (Elsevier)	103	2017	5.944	0960-0779 / 1873-2887	YES

		expansion						
13	N. Bairagi, **D. Adak**	Role of precautionary measures in HIV epidemics: A mathematical assessment	International Journal of Biomathematics (World Scientific)	9(6)	2016	0.688	1793-5245 / 1793-7159	YES
14	N. Bairagi, **D. Adak**	Switching from simple to complex dynamics in a predator-prey-parasite model: an interplay between infection rate and incubation delay	Mathematical Biosciences (Elsevier)	277	2016	2.144	0025-5564 / 1879-3134	YES
15	**D. Adak**, N. Bairagi	Complexity in a predator-prey-parasite model with nonlinear incidence rate and incubation delay	Chaos, Solitons and Fractals (Elsevier)	81	2015	5.944	0960-0779 / 1873-2887	YES
16	N. Bairagi, **D. Adak**	Complex dynamics of a predator–prey–parasite system: An interplay among infection rate, predator's reproductive gain and preference	Ecological Complexity (Elsevier)	22	2015	1.882	1476-945X / 1476-9840	YES
17	N. Bairagi, **D. Adak**	Global analysis of HIV-1 dynamics with Hill type infection rate and intracellular delay	Applied Mathematical Modelling (Elsevier)	38	2014	5.129	0307-904X / 1872-8480	YES
18	**D. Adak**, N. Bairagi	Dynamic behaviour of a predator-prey-parasite model with nonlinear incidence rate	International Journal of Biomathematics and Systems	1(1)	2014	NIL	2394-7772	Peer Reviewed-YES, UGC Listed-NO

| 19 | N. Bairagi, **D. Adak** | How self proliferation of CD4 +T cells affect the HIV dynamics in an in-host target cell limited HIV model with saturation infection rate: A quasi-steady-state approximation analysis | International Journal of Biomathematics (World Scientific) | 6(2) | 2013 | 0.688 | 1793-5245 / 1793-7159 | YES |

- **Journal Publications (National):**

All authors in sequence	Title of the paper	Journal Name	Volume	Year of publication	Impact Factor	ISSN/ ISBN	Peer Reviewed/UGC Listed (YES/NO)
D. Adak	Dynamics of a Seasonally Perturbed Modified Leslie-Gower Type Prey-Predator Model with Beddington – De Angelis Functional Response	Adhyayan (MBB University)	1(1)	2021	-	-	Peer Reviewed-YES

- **Books Published/ Edited**

All Author(s)/ Editor(s) in sequence	Title of the Book	Publisher(s)	Volume (if any)	Year of publication	ISSN/ ISBN
Dr. Debadatta Adak and Dr. Runu Dhar	New Researches in Science, Humanities and Social Sciences	Eastern Book House Publishers	-	2022	978 93 92038 14 3
Runu Dhar, **Debadatta Adak** (Eds.)	New Thoughts on Ancient and Modern Mathematics	Eastern Book House Publishers, India	-	2020	978-81-8194747-54-3 (Print Book), 978-81-8194747-55-0 (e-Book).

- **Book Chapter Published**

Sl. No.	All Author(s)/ Editor(s) in sequence	Title of the Book	Title of the Chapter	Publisher(s)	Volume (if any)	Year of publication	ISSN/ ISBN
1	C. Mondal, **D. Adak,** N. Bairagi	Trends in Biomathematics: Stability and Oscillations in Environmental, Social, and Biological Models	Optimal Drug Therapy in a Multi-Pathways HIV-1 Infection Model with Immune Response Delay	*Springer*	NIL	2022	ISBN 978-3-031-12514-0 ISBN 978-3-031-12515-7 (eBook)
2	A. Majumder, **D. Adak**, T. K. Bala, N. Bairagi	Health Care Waste Management and COVID 19 Pandemic: Policy, Implementation Status and Vaccine Management	Global Picture of COVID-19 Pandemic with Emphasis on European Subcontinent	*Springer*	NIL	2022	ISBN 978-981-16-9335-9 ISBN 978-981-16-9336-6 (eBook)
3	**D. Adak,** A. Debroy, S. Das	New Researches in Science, Humanities and Social Sciences	Generation and Impacts of Plastic Pollution in the Agartala Municipal Corporation: A Survey	*Eastern Book House Publishers*	NIL	2022	978 93 92038 14 3
4	**D. Adak**, S. Sarkar, S. Sinha	New Researches in Science, Humanities and Social Sciences	A mathematical study to eradicate domestic violence against women by substance abusing men in rural India	*Eastern Book House Publishers*	NIL	2022	978 93 92038 14 3
5	**D. Adak** S. Bhaumik, B. De, P. Paul	New Researches in Science, Humanities and Social Sciences	Role of Social Prosecution and Discrimination in Propagation of HIV/AIDS Pandemic: A Survey in Agartala Municipal Corporation Area	*Eastern Book House Publishers*	NIL	2022	978 93 92038 14 3
6	**D. Adak**, A. Dhar, M. Das	New Researches in Science, Humanities and Social Sciences	Some measures to control fresh water crisis in India: A mathematical study	*Eastern Book House Publishers*	NIL	2022	978 93 92038 14 3
7	**D. Adak**, M. Datta, D. Das	New Researches in Science, Humanities and Social Sciences	A mathematical approach to control HIV infection in Injecting Drug Users (IDUs) amongst the Tribal population of North East India	*Eastern Book House Publishers*	NIL	2022	978 93 92038 14 3
8	D. Adak	New Thoughts on Ancient and Modern Mathematics	A Mathematical Study on Endangered Languages	Eastern Book House Publishers, India	-	2020	978-81-8194747-54-3 (Print Book), 978-81-8194747-55-0 (e-Book).

9	**D. Adak**, S. Biswas, L. Banik	New Thoughts on Ancient and Modern Mathematics	Impact of Social Awareness and Social Stochasticity to Minimize Gender Difference by Prohibiting Female Infanticide and Feticide	Eastern Book House Publishers, India	-	2020	978-81-8194747-54-3 (Print Book), 978-81-8194747-55-0 (e-Book).
10	**D. Adak**, D. Sen, A. Saha	New Thoughts on Ancient and Modern Mathematics	Role of Reservation to Control Unemployment in an Economically Classified Society	Eastern Book House Publishers, India	-	2020	978-81-8194747-54-3 (Print Book), 978-81-8194747-55-0 (e-Book).
11	**D. Adak** and P. Debnath	Environmental Administration Concepts Issues & Challenges	A Mathematical Study on The Environmental Effects of Depletion of Forestry due to Population Augmented Industrialization	BR Publishing Corporation, India	-	2018	978-93-8878-901-1
12	**D. Adak** and N. Bairagi	Mathematical Biology and Biological Physics	Stability and hopf bifurcation in a multi-delayed eco-epidemiological model	World Scientific	-	2017	978-981-3227-87-3

☐ **Project Details:**

1) **Principal Investigator** of a **Minor Project** titled "*Impacts of Social Awareness and Governmental Regulations to Mitigate the Challenge of Plastic Pollution with a Special Reference to Tripura*" funded by MBB University has been completed and report have been submitted.

2) Dr. Debadatta Adak, Assistant Professor, Department of Mathematics was invited by **Prof. Nandadulal Bairagi**, *Coordinator, Centre for Mathematical Biology and Ecology (CMBE), Department of Mathematics, Jadavpur University* to visit CMBE as a **Visiting Faculty** from **April 16, 2021** to **April 23, 2021** to finalize the research project "*Anatomy of COVID-19 transmission dynamics: A modelling and computational approach from Indian perspective*".

3) **Principal Investigator** of a project titled "**A Socio-mathematical Study on the Endangered Languages**" in the East Zonal Level *of Anveshan 2023 – 2024: A Student Research Convention* organized by Association of Indian Universities (AIU) at North Eastern Hill University (NEHU) during **February 22-23, 2024**.

4) **Principal Investigator** of a project titled "**A Graph Theoretic Classification of the Constellations**" in the East Zonal Level *of Anveshan 2023 – 2024: A Student Research Convention* organized by Association of Indian Universities (AIU) at North Eastern Hill University (NEHU) during **February 22-23, 2024**.

5) **Principal Investigator** of a project titled "**Sustainable Consumption of Agriculture Associated Renewable Natural Resources Related to Agricultural Productivity: An Optimal Control Analysis**" in the *East Zonal Level of Anveshan 2022 – 2023: A Student Research Convention organized by Association of Indian Universities (AIU) at Royal Global University, Assam during* **March 01 – 02, 2023**.

6) **Principal Investigator** of a project titled "**Sustainable Harvesting Strategy of Forestry Biomass for Forestry Dependent Industrialization: A Mathematical Analysis**" in the *East Zonal Level of Anveshan 2022 – 2023: A Student Research Convention organized by Association of Indian Universities (AIU) at Royal Global University, Assam during* **March 01 – 02, 2023**.

7) **Principal Investigator** of a project titled **"Optimal Control Analysis of Sustainable Consumption of Renewable Natural Resources"** in the 6th *Student Project Programme organized by Tripura State Council for Science and Technology* during **December 14-15, 2022**.

8) **Principal Investigator** of a project titled **"A Mathematical Model to Determine Sustainable Harvesting Strategy of Forestry Biomass for Forestry Dependent Industrialization"** in the 6th *Student Project Programme organized by Tripura State Council for Science and Technology* during **December 14-15, 2022**.

9) **Principal Investigator** of a project titled **"A Wind Turbine Model for Efficient Conversion of Wind Energy: A Mathematical Study"** in the 5th *Student Project Programme organized by Tripura State Council for Science and Technology* during **March 04-05, 2022**.

10) **Principal Investigator** of a project titled **"Mathematical Modelling of Biodiesel Production in a Batch Reactor: Dynamics and Optimal Control Analysis"** 5th *Student Project Programme organized by Tripura State Council for Science and Technology* during **March 04-05, 2022**.

11) **Principal Investigator** of a project titled **"Impact of misinformation regarding COVID-19 vaccination process in India: A mathematical study"** in the 4th *Student Project Programme organized by Tripura State Council for Science and Technology* during **March 04-05, 2021**. **This project was awarded the 2nd Prize.**

12) **Principal Investigator** of a project titled **"Mental health impact of COVID-19 pandemic in Indian society: A mathematical perspective"** in the 4th *Student Project Programme organized by Tripura State Council for Science and Technology* during **March 04-05, 2021**.

13) **Principal Investigator** of a project titled **"Impacts of fresh water crisis in sustainable development of rural India: A mathematical study"** in the 3rd *Student Project Programme organized by Tripura State Council for Science and Technology*, **March 04-05, 2020**.

14) **Principal Investigator** of a project titled "**Some measures to eradicate domestic violence against women by substance abusing men in rural India: A mathematical perspective"** in the 3rd *Student Project Programme organized by Tripura State Council for Science and Technology*, **March 04-05, 2020**.

15) **Principal Investigator** of a project titled "**Impacts of Plastic Pollution: A Study in the Agartala Municipal Corporation"** in the *East Zonal Level of Anveshan: A Student Research Convention organized by Association of Indian Universities (AIU) at Jadavpur University,* **February 12-13, 2020**.

- **Student Projects Supervised**

Sl. No.	Academic Session	Title of the Project	Performed By	Roll No
1		A Socio-Economic Model of Class Struggle: A Mathematical Study	Madhurima Datta	417
	2017 – 2019		Moumita Nath	424
2		A mathematical approach to maintain gender balance by controlling female infanticide and feticide through social awareness in India	Sani Biswas	405
			Lipika Banik	406
3		Role of Reservation to Control Unemployment	Dibakar Sen	409
			Arup Saha	414

4		Application of Finite Difference and Finite Element Method in numerical solution of a two dimensional steady heat conduction problem with no heat generation: A comparative study	Tapendu Debnath	422
			Sajal Shil	407
5		Impacts of fresh water crisis in sustainable development of rural India: A mathematical study	Antaraa Dhar	18411009
			Mam Das	18411022
6		Impacts of Plastic Pollution: A Study in the Agartala Municipal Corporation	Arghyadip Debroy	18411011
			Shekhar Das	18411016
7	2018 – 2020	COVID-19 Pandemic and its Indicators	Deepraj Das	18411021
			Shibu Debnath	18411015
			Suraj Debbarma	18411014
8		Role of Social Prosecution and Discrimination in Propagation of HIV/AIDS Pandemic: A Survey in Agartala Municipal Corporation Area	Sanghamitra Bhaumik	18411013
			Bharati De	18411010
			Pouramita Paul	18411007
			Rajesh Das	18411006
9		Some measures to eradicate domestic violence against women by substance abusing men in rural India: A mathematical perspective	Sarmistha Sarkar	18411024
			Susmita Sinha	18411008
10		Applications of Stochastic Differential Equations in Biological Systems	Mahuya Debnath	19411003
			Joydip Majumder	19411002
11		Applications of Graph Theory in Biological Networks	Sidhartha Sankar Roy	19411013
			Titan Sutradhar	19411010
12	2019 – 2021	Mental Health Impact of COVID-19 pandemic in Indian Society: A Mathematical Perspective	Dipjoy Saha	19411011
			Ankit Debnath	19411001
13		Understanding Biological Pattern Formation Through Mathematical Models	Sagar Routh	19411014
			Manish Deb	19411016
			Samik Majumder	19411006
14	2020 – 2022	A Socio-mathematical Study of Corruption Dynamics	Sangita Gope	2004MAM0010020
			Rimi Paul	2004MAM0010021

			Swapna Debnath	2004MAM0010025
			Biplab Paul	2004MAM0010032
15		A Mathematical Model to Analyze the Propagation of Fake News through Online Social Media	Tapasi Deb	2004MAM0010015
			Ankita Chakraborty	2004MAM0010014
			Kakali Debnath	2004MAM0010029
			Kaushik Bhowmik	2004MAM0010002
16		A Mathematical Model of Competition between Two Religious Groups for Social Supremacy	Sourav Chakraborty	2004MAM0010003
			Arjun Malakar	2004MAM0010009
			Amitava Debroy	2004MAM0010030
			Biplajit Paul	2004MAM0010033
17		The Graphs in the Sky	Binoy Saha	2104MMA0010032
			Ranjan Chaudhuri	2104MMA0010021
			Pahelaj Acharya	2104MMA0010007
18		A Mathematical Model to Determine Sustainable Harvesting Strategy of Forestry Biomass for Forestry Dependent Industrialization.	Joyjit Majumder	2104MMA0010016
			Rajeswari Saha	2104MMA0010030
	2021 – 2023		Sayani Bhowmik	2104MMA0010034
			Bishal Biswas	2104MMA0010014
19		Optimal Control Analysis of Sustainable Consumption of Renewable Natural Resources	Mithun Shil	2104MMA0010017
			Surupa Sarkar	2104MMA0010033
			Aniket Banik	2104MMA0010013
			Sayanta Deb	2104MMA0010035
20		A Mathematical Model of Bone Turnover Cycle that Exhibits Torus Dynamics	Sayantan Banik	2104MMA0010028
			Gour Sundar Shib	2104MMA0010029
			Samajit Bhattacharjee	2104MMA0010031

 Details about Participation in Orientation Programme/Refresher Course/FDP/Seminar/ Conference/Webinar/Lectures etc:

Sl. No	Name of the Programme	Date	Organized by

1	UGC – Approved 6- Day Short Term Programme on "Design, Development and Delivery of MOOCs". **(Obtained Grade: A+)**	21/08/2023 – 26/08/2023	INDIRA GANDHI NATIONAL OPEN UNIVERSITY Staff Training and Research Institute of Distance Education
2	12 Weeks (1.5 FDP) NPTEL-AICTE Faculty Development Programme (FDP) on Dynamical System and Control	23/01/2023 – 14/04/2023	SWAYAM
3	Two weeks online Refresher Course in Mathematics **(Obtained Grade: A)**	12/09/2022 – 24/09/2022	UGC-Human Resource Development Centre, University of Hyderabad
4	12 Weeks (1.5 FDP) NPTEL-AICTE Faculty Development Programme (FDP) titled "Linear Systems Theory"	21/09/2020 - 04/12/2020	SWAYAM
5	4-Week Induction/Orientation Program for "Faculty in Universities/Colleges/Institutes of Higher Education"	26/06/2020 – 24/07/2020	Teaching Learning Centre, Ramanujan College, University of Delhi under the aegis of PANDIT MADAN MOHAN MALVAIYA NATIONAL MISSON ON TEACHERS AND TEACHING (MINISTRY OF HUMAN RESOURCE DEVELOPMENT)
6	One Day International Webinar on COVID-19: Issues and Challenges on Economy, Politics and Society	29/05/2020	MBB University
7	One-Week Short Term Free Online Course on "Community University Engagement: Moving Towards Engaged Teaching, Research and Service"	18/05/2020 – 22/05/2020	Association of Indian Universities (AIU) in collaboration with Participatory Research In Asia (PRIA) International Academy.
8	One Week Online Faculty Development Program on R	11/05/2020 – 15/05/2020	Birla Institute of Technology Mesra, Noida Campus in association with Spoken Tutorial Project, IIT Bombay.
9	International Conference on Recent Advances in Mathematics and its Applications (ICRAMA 2019)	16/07/2019-18/07/2019	Tripura University
10	106th Indian Science Congress	03/01/2019-07/01/2019	Indian Science Congress Association and LPU, Jalandhar
11	Advanced Instructional School on Mathematical Biology	03/12/2018-15/12/2018	IMSC Chennai & IIT Bombay & TIFR
12	National Seminar on Environmental Administration: Concepts, Issues and Challenges	08/03/2018 and 10/03/2018	MBB University
13	Recent Advances in Modelling and Computational Techniques in Applied Mathematics	20/11/2017-24/11/2017	Department of Mathematics, IIEST-Shibpur
14	National Conference on Mathematical and Theoretical Biology (NCMTB 2017)	16/03/2017-17/03/2017	Jadavpur University

15	Advanced Training in Mathematics (ATM) Schools (Workshop): Algebraic Structures on Manifolds	13/12/2016-22/12/2016	ISI Kolkata
16	International conference on Mathematical Modelling and Simulation (ICMMS-2016)	29/08/2016-31/08/2016	Banaras Hindu University
17	National Program on Differential Equations: Theory, Computation and Applications (NPDE-TCA)	24/08/2016-29/08/2016	Banaras Hindu University
18	Short Term Course on Dynamical Systems: Theory and Application (DSTA 2016)	26/06/2016-30/06/2016	IIT(ISM)-Dhanbad
19	International Workshop on Nonlinear Complex Dynamical Systems (IWNCDS-2016)	19/02/2016-20/02/2016	AERU, ISI-Kolkata and Biomathematical Society of India
20	International Conference on Nonlinear Dynamics, Analysis and Optimization (ICNDAO 2015)	09/12/2015-11/12/2015	Jadavpur University
21	India Biodiversity Meet 2015	16/11/2015-18/11/2015	ISI Kolkata
22	India Biodiversity Meet 2014	21/11/2014-23/11/2014	ISI Kolkata
23	Workshop on R-Programming for Students and Researchers (WRPSR-2014)	16/09/2014-17/09/2014	AERU, ISI-Kolkata
24	International Symposium on Complex Dynamical Systems and Applications	10/03/2014-12/03/2014	ISI Kolkata
25	National Conference on Mathematical and Theoretical Biology (NCMTB 2014)	20/02/2014-21/02/2014	Jadavpur University
26	Indo-Canadian Workshop on Mathematical Modelling of Infectious Diseases (ICWMMID-2014)	19/01/2014-21/01/2014	IIT Roorkee
27	India Biodiversity Meet 2013	14/03/2013-16/03/2013	ISI Kolkata
28	National Meet of Research Scholars in Mathematical Sciences (NMRSMS 2012)	18/11/2012-22/11/2012	Banaras Hindu University
29	National Program on Differential Equations: Theory, Computation and Applications (NPDE-TCA)	10/10/2012-14/10/2012	IIT Roorkee

30	Summer School and Workshop on Mathematical Modeling of Patterns and Diffusion Processes in Biology (MMPDPB-2012)	18/06/2012- 22/06/2012	BIRU, ISI- Kolkata
31	International Conference on Dynamical Systems	11/01/2012- 14/01/2012	Jadavpur University

 Details about Paper Presentation/Invited Lecture in Conference/Seminars/Symposiums:

Sl. No.	Title of the Paper	Seminar/Conference etc.	Organised by	Date
1	A Brief Overview of the Semiconductors and Their Applications for Technological and Economical Development of India	India's Techade: Chips for Viksit Bharat	MBB University	March 13, 2024
2	The Effects of HIV Transmission Pathway Probability and Burst Size of Infected CD4+T Cells in an In-host HIV Model	27th International Conference Of International Academy of Physical Sciences (CONIAPS XXVII) on "Fuzzy And Computational Mathematics"	Department of Mathematics, National Institute of Technology, Agartala.	October 26-28, 2021
3	Impacts of Social Panic in spread of COVID-19 infection: A mathematical study	One day International Webinar on "COVID-19: Issues and Challenges on Economy, Politics and Society"	MBB University	May 29, 2020
4	Some measures to control plastic pollution through social awareness and governmental control: a mathematical approach	International Conference on Recent Advances in Mathematics and its Applications (ICRAMA 2019)	Tripura University	July 16-18, 2019
5	Study on endangered languages: A mathematical perspective	106th Indian Science Congress	Indian Science Congress Association and Lovely Professional University, Jalandhar	January 03-07, 2019.
6	A mathematical study on the environmental effects of depletion of forestry due to population augmented industrialization	National Seminar on Environmental Administration: Concepts, Issues and Challenges	Maharaja Bir Bikram University	March 8 & 10, 2018
7	Accounting for multi delays in an HIV-1 infection model with saturated infection rate, recovery and proliferation of host cells.	National Conference on Mathematical and Theoretical Biology (NCMTB 2017)	Dept. of Mathematics, Jadavpur University	March 16-17, 2017
8	Switching from simple to complex dynamics in a predator, prey, parasite model: an interplay between infection rate and incubation delay.	International conference on Mathematical Modelling and Simulation (ICMMS-2016)	Banaras Hindu University	August 29-31, 2016
9	Study of in-host HIV-1 Infection Through Double Pathways	International Conference on Nonlinear Dynamics, Analysis and Optimization (ICNDAO 2015)	Dept. of Mathematics, Jadavpur University	December 9-11, 2015
10	Accounting for the	India Biodiversity Meet 2015	ISI Kolkata	November 16 –

				18, 2015
	complexities in a predator-prey-parasite model with nonlinear incidence rate and incubation delay			18, 2015
11	Dynamics of cytotoxic T-lymphocytes and helper cells in human immunodeficiency virus infection with Hill-type infection rate and sigmoidal CTL expansion	India Biodiversity Meet 2014	ISI Kolkata	November 21 – 23, 2014
12	Stability and Hopf bifurcation in a multi-delayed eco-epidemiological model	International Symposium on Complex Dynamical Systems and Applications	ISI Kolkata	March 10 – 12, 2014
13	Role of precautionary measures in HIV epidemic: A mathematical perspective	National Conference on Mathematical and Theoretical Biology (NCMTB 2014)	Dept. of Mathematics, Jadavpur University	February 20-21, 2014
14	Dynamical behavior of an eco-epidemiological model with saturated infection rate and incubation delay	India Biodiversity Meet 2013	ISI Kolkata	March 14 – 16, 2013
15	Dynamic behaviour of HIV model with saturation infection rate	National Meet of Research Scholars in Mathematical Sciences (NMRSMS 2012)	Banaras Hindu University	November 18-22, 2012
16	Role of self proliferation of CD4+T cells in a target cell limited HIV model	International Conference on Dynamical Systems	Jadavpur University	January 11-14, 2012

□ **Seminar/ Conference/ Workshop/ Student program etc. organized:**

1. **Organized 7 – Day Special Camp** during *April 29, 2024* to *May 05, 2024* through the NSS Unit and Red Ribbon Club of MBB University.
2. **Organized** a **Quiz Competition** on the theme "*Mera Pehla Vote Desh Ke Liye*" on **March 06, 2024**.
3. **Organized** a **Drawing Competition** on the theme "*Wetlands and Human Beings*" on **January 24, 2024**.
4. **Coordinator** of *MBB University Level Research Project Competition of ANVESHAN 2023 – 2024: Student Research Convention* organized by the MBB University on *January 18, 2024*.
5. **Activity Coordinator** of **"An Awareness Programme against the Fatal Effects of Different Drugs on Human Mind and Body"** on **January 02, 2024.**
6. **Activity Coordinator** of the **Speech Competition** on "*Mathematics for Everyone*" to celebrate the National Mathematics Day 2023 on *December 22, 2023*.
7. **Organized** a **Quiz Competition** *on the theme Importance of Fitness* to celebrate the FIT INDIA WEEK – 2023 on December 15, 2023 organized by the NSS Unit, Red Ribbon Club and Quiz Club of MBB University.
8. **Organized** *Yuva Samvad : India @ 2047* as the NSS Programme Officer on **December 12, 2023.** In this program a **Speech Competition** was organized on the theme **Panch Prans : Vision of Bharat as Vishwaguru in 2047**.
9. **Organized** a **Poster Making Competition** on the theme of HIV/AIDS, Injecting Drug Use, World AIDS Day etc. to observe the World AIDS Day 2023 on *December 01, 2023*.
10. **Activity Coordinator** of an **Awareness Programme** *on "The Role of Tripura Lokayukta in Combating Corruption and Mal-administration in Government/Public Offices*" organized by MBB University in collaboration with the Institution of the Lokayukta, Tripura on *August 24, 2023*.
11. **Activity Coordinator** of the **Information Session on "Higher Education in the US"** on **July 12, 2023**.

12. **Organizing Secretary** of the **National Seminar** on *"Issues and Challenges in Investing in Our Planet"*, a Poster Competition on the topic *"Invest in Our Planet"*, a Rally to generate mass awareness about the Environmental Sensitivity and a Tree Plantation Ceremony in the MBB University Campus on ***July 06, 2023***.

13. **Organized** a "***Student Training Program on Yoga and Its Benefits on Quality of Living***" on ***June 21, 2023***.

14. **Activity Coordinator** of the *"Half – Day Seminar on "Development of Administrative Statistics & Methodological Improvements in different Estimates / Indices"* in collaboration with the Directorate of Economics and Statistics, Government of Tripura on ***June 21, 2023***.

15. **Organized 7 – Day Special Camp** during ***April 03, 2023*** to ***April 09, 2023*** organized by the NSS Unit and Red Ribbon Club of MBB University.

16. **Organized** a **Debate Competition** on the motion: ***Innovation and technological advances will narrow down the gender discrimination*** to celebrate the **International Women's Day 2023** on ***March 13, 2023.***

17. **Activity Coordinator** of *MBB University Level Research Project Competition of ANVESHAN 2022 – 2023: Student Research Convention* organized by the MBB University on ***February 03, 2023***.

18. **Organizing Secretary** of **One Day National Seminar** *on Mathematics and Its Applications (NSMA - 2023)* organized by Department of Mathematics, MBB University on ***January 07, 2023***.

19. **Activity Coordinator** of the **Speech Competition** on *"Nobel Prize / Fields Medal Awarded Researches / Activities"* to celebrate the National Mathematics Day 2022 on ***December 22, 2022***.

20. **Organized** a **Quiz Competition** on the theme of HIV/AIDS, Injecting Drug Use etc. to observe **World AIDS Day 2022** on ***December 01, 2022***.

21. **Activity Coordinator** of **Popular Lecture** *by Prof. Dilip Kumar Dey, Honorable Vice-Chancellor, Bhaba University, Bhopal* organized by the Department of Mathematics, MBB University on ***September 29, 2022***.

22. **Convener** of the programme titled "***A Student Centric Programme on Preservation & Protection of Natural Resources and Marginalized Groups of India***" organized by the Department of Mathematics, MBB University and sponsored by the Ministry of Earth Sciences, Government of India during ***August 30 – 31, 2022***.

23. Organized a **Quiz Competition** to celebrate the 75th Year of Independence under the aegis of Azadi Ka Amrit Mahotsav on ***August 13, 2022***.

24. **Activity Coordinator** of the **Financial Awareness Programme** organized by the MBB University in collaboration with the State Bank of India – Regional Business Office (South) on ***August 22, 2022***.

25. Organized a "***Student Training Program on Yoga and Its Benefits on Quality of Living***" on ***June 21, 2022***.

26. **Organized** a **Quiz Competition** in the "*Awareness Program on Environmental Sensitivity: Only One Earth – Living Sustainably in Harmony with Nature*" to observe the World Environment Day 2022 on ***June 13, 2022***.

27. **Organized Cultural Program** on "*Azadi Ka Amrit Mahotsav*" an initiative to celebrate and commemorate 75 years of independence of India and the glorious history of India's people, culture and achievements on ***June 06, 2022***.

28. **Activity Coordinator** of the **Awareness Programme** *on Cyber Crime* organized by the Internal Quality Assurance Cell (IQAC), MBB University in collaboration with Tripura Government Law College on ***April 12, 2022***.

29. **Organized 7 – Day Special Camp** during ***April 02, 2022*** to ***April 08, 2022*** organized by the NSS Unit and Red Ribbon Club of MBB University.

30. **Activity Coordinator** of *One Day Seminar on Memory Development* on **February 10, 2022**.

31. **Organizing Secretary** of *National Seminar on Mathematics and Its Applications on Real World Problems* organized to observe the National Mathematics Day 2021 on **December 22, 2021**.

32. **Activity Coordinator** of **One Day Seminar on "Framing Course Curriculum under National Education Policy (NEP)-2020: Challenges and Role of Teachers"** on **December 13, 2021**.

33. **Organized** a **Cultural Programme** titled "*Saradia: Welcoming the Autumn*" on **October 05, 2021.**

34. **Convener** of *National Webinar on Recent Advances in Mathematical Sciences (NWRAMS 2021)* during **September 29 – 30, 2021.**

35. **Organized** a Seminar on **Yoga: A Sanatan Way of Life** on **September 23, 2021**.

36. **Organizing Secretary** of *One Day National Webinar on Science and Our Earth* on **September 16, 2021**.

37. **Organized 7 – Day Special Camp** during ***March 16, 2021*** to ***March 22, 2021*** organized by the NSS Unit of MBB University.

38. **Activity Coordinator** *of a* **Cognitive Youth Training Programme** *on National Youth Policy: Sustainable Development of North Eastern Region organized by Maharaja Bir Bikram University; sponsored by Rajiv Gandhi National Institute of Youth Development (RGNIYD), Sriperumbudur,* **February 23-25, 2021**.

39. **Activity Coordinator** *of* **The Debate and Extempore Competition** *organized by Maharaja Bir Bikram University in collaboration with Tripura State AIDS Control Society (TSACS) on* **February 06, 2021**.

40. **Organizing Secretary** of Two-Day *International Web Conference on Advance Research in Science, Humanities and Social Science (*IWCARSHSS 2020*), Organized by Department of Mathematics, Maharaja Bir Bikram University,* **July 09-10, 2020**.

41. **Organizing Secretary** of Five Days National Workshop on Computational Mathematics and its Applications (**NWCMA 2019**), Organized by Department of Mathematics, Maharaja Bir Bikram University, **September 12-16, 2019**.

42. **Convener** of National Conference on Ancient and Modern Mathematics (**NCAMM 2019**)**,** Organized by Department of Mathematics, Maharaja Bir Bikram University, Funded by DST-SERB, **February 23-24, 2019**.

43. **Coordinator** of *Theatre in Education Workshop: Acting for Creativity* organized by *National School of Drama (T. I. E Wing Tripura)* in collaboration with *Maharaja Bir Bikram University*, Agartala, Tripura at the Academic Building of Maharaja Bir Bikram University on **November 23-25, 2018**.

44. **Joint Organizing Secretary** in International Conference on Recent Trends in Mathematical Sciences (**ICRTMS 2018**), Organized by Department of Mathematics, Maharaja Bir Bikram University in collaboration with Tripura Mathematical Society, **March 24-25, 2018**.

45. Organized 13 Departmental Seminars as "**Organizing Secretary**" in the Department of Mathematics, MBB University.

□ **Involvement Beyond Academic Activities**

1. Discharging the duties of **NSS Program Officer, MBB University** as an additional duty.

2. Discharging the duties of **Convener of Cultural Committee of MBB University** and **Cultural Coordinator of Association of Indian Universities (AIU)** at MBB University as an additional duty.

3. Discharging the duties of Coordinator/Convener of **Red Ribbon Club, Yuva Tourism Club, Eco Club, Yoga and Meditation Centre, Drama Club, Music Club, Quiz Club, Equal Opportunity Cell, Students Grievance Redressal Committee, Students Services Centre (SSC) etc.** of MBB University as additional duties.

4. Regular visit to the **Dighalia Gram Panchayat: The Adopted Village** of MBB University to perform various **Skill Development Training Programs, Cleanliness Drives, Tree-plantation, Har Ghar Tiranga Campaigns, Awareness Campaigns etc**. involving the villagers.

5. Regular organization of **Cleanliness Drives, Tree-plantation, Har Ghar Tiranga Campaigns, Awareness Campaigns** against HIV-AIDS, Injecting Drug Use, Pollution etc. in the MBB University campus and surrounding locality.

6. Organized **07 Blood Donation Camps** on March 18, 2021; December 18, 2021; April 07, 2022; August 14, 2022; April 05, 2023; September 01, 2023 and May 02, 2024.

7. Organized **04 Cloth Donation Camps** on April 30, 2024 (Satish Bricks Field, Jirania), March 13, 2021 (Joy Kali Bricks Field, Jirania), April 06, 2022 (Baba Bricks Field, Sidhai Mohanpur), April 04, 2023 (Kali Maa Bricks Industries (Unit – II), Jirania) among the needy labours of different Bricks Field of Tripura.

8. Discharging the confidential duty related to examinations.

9. Delivered a lecture titled "*Mathematical Sociology – An Oxymoron*?" in the Students' Induction Programme 2022 organized by the Techno College of Engineering, Agartala on **September 30, 2022**.

10. Led an All-Round Development Survey at Dighalia Gram Panchayat: The Adopted Village of MBB University during **March 12, 2022** to **May 02, 2022**. A total of **620 households** consisting of **2307** villagers were surveyed.

11. Written and directed a short film titled "*Ray of Hope*" that won 3rd Prize of **Rs. 25000.00** in the Short Film Competition, 2021, organized by the Tripura State AIDS Control Society in November 2021.

12. Directed the play "*Kenaram-Becharam*" Written by Mr. Manoj Mitra, in the Annual day Program of MBB University on November 27, 2018.

13. Written and directed a drama on the Life and Ideology of Mahatma Gandhi in the cultural event at MBB University to celebrate the 150th Birth Anniversary of Mahatma Gandhi Day Celebration on November 10, 2018.

14. Written and directed a street play titled "*Se Ajo Bartaman*" in the *8th Theatre Olympics* organized by *National School of Drama, An Autonomous Institution under Ministry of Culture, Government of India* supported by *Information and Cultural Affairs Department, Government of Tripura* on **March 13, 2018** at Rabindra Bhavan Amrakunja.