Faculty Details

Title	Dr.	First Name	RIMPI	Last Name	PAL KUNDU	Photograph
Designation		ASSISTANT PROFESSOR				
Address		A-14/10, SHYAM VIHAR, PHASE-II, NAJAFGARH, NEW DELHI-110043				
Phone No	Office					
	Residence*					
	Mobile*	9313499979				
Email		rimpipal.kundu@gargi.du.ac.in				
Web-Page		https://www.gargicollege.in/academics/Mathematics/faculty				

Educational Qualifications

Degree	Institution	Year
JRF(NET)-CSIR	CSIR (MATHEMATICAL SCIENCE)	2006, 2009 (A.I.R. 44)
PhD (MATHEMATICS)	UNIVERSITY OF DELHI	2016
MSc (APPLIED MATHEMATICS)	UNIVERSITY COLLEGE OF SCIENCE, TECHNOLOGY AND AGRICULTURE (UNIVERSITY OF CALCUTTA)	2006
BSc (MATHS HONOURS)	SCOTTISH CHURCH COLLEGE, UNIVERSITY OF CALCUTTA	2004
XII	THE ARMY PUBLIC SCHOOL, DHAULA KUAN	2001
X	THE ARMY PUBLIC SCHOOL, DHAULA KUAN	1999

Career Profile

#1

Period: **19 Aug 2021 till now**

Organization: **GARGI COLLEGE, Siri Fort Road, University of Delhi, New Delhi**

Designation: **Assistant Professor (AD-HOC) in the Department of *Mathematics***

#2

Period: **16/07/2007 – 21/04/2009**

Institution: **Scottish Church College, 1 & 3, Urquhart Square, University of Calcutta, Kolkata, West Bengal**

Designation: **PERMANENT Assistant Professor in the Department of *Mathematics***

#3

Period: **07/2013- 09/2013**
Organization: **Rajdhani College, University of Delhi, New Delhi**
Designation: **Assistant Professor (AD-HOC) in the Department of *Mathematics***

#4
Period: **Even Semester (2011), Odd Semester (2012), Odd Semester(2019)**
Institution: **Netaji Subhash University of Technology, Dwarka, Sec-3, New Delhi**
Designation: **Guest Lecturer in the Department of *Mathematics***

#5
Period: **04 Feb 2020 - 18 Aug 2021**
Even Semester (2019-2020), Odd Semester (2020-2021), Even Semester (2020-2021)
Organization: **Atma Ram Sanatan Dharma College, University of Delhi, Dhaula Kuan, New Delhi**
Designation: **Assistant Professor (Guest) in the Department of *Mathematics***

Administrative Assignments

- Member of IQAC data collection unit. Representing Physical Sciences Department under the IQAC unit.
- Member of Internal Assessment Committee.
- Member of Zenith Association.

Areas of Interest / Specialization

Non-linear Dynamical systems, Celestial Mechanics, Chaos Synchronization, Control theory, Secure Communications

Subjects Taught

- Linear Algebra
- Real Analysis
- Abstract Algebra
- Differential Equations (Ordinary and Partial)
- Integral Calculus
- Differential Calculus
- Rigid Dynamics
- Statics
- Probability and Statistics
- Linear Programming Problems
- C++, R, Latex, Mathematica
- Python Programming
- Computer Assembly language

Recent Publications

- Backstepping projective synchronization scheme and adaptive function projective synchronization scheme on chaotic Dumbell satellite model: a comparative study, Ayub Khan , Rimpi Pal , Anuj and Shivani**, Advances And Applications In Mathematical Sciences (ISSN 0974-6803),**

Accepted.

- Analysis of tumor-immune response model by using conformable fractional order derivative, Ausif Padder, Rimpi Pal, Afroz and Ayub Khan, **South East Asian J. of Mathematics and Mathematical Sciences**, Vol. 18, No. 3 (2022), pp. 393-414.
- Backstepping projective synchronization and adaptive function projective synchronization of identical chaotic systems with application, Rimpi Pal, Anuj Kumar, communicated to **Transactions of the Institute of Measurement and Control**.
- Generalized Robust Active Sliding Mode Synchronization of Identical Chaotic Systems Under Periodic External Disturbances, Ayub Khan, Rimpi Pal, **Journal of Applied Physical Science International**, 2(4) (2015)125-136.
- Adaptive Hybrid Function Projective Synchronization of Chaotic Space-Tether-System, Ayub Khan, Rimpi Pal, **Nonlinear Dynamics and Systems Theory** 14 (1) (2014) 44-57.
- Complete Synchronization, Anti-Synchronization and Hybrid Synchronization of Two Identical Parabolic Restricted Three Body Problem, Ayub Khan, Rimpi Pal, **Asian Journal of Current Engineering and Maths2**(2)(2013) 118 - 126.
- Synchronization of Two Identical Restricted Planar Isosceles Three-Body-Problem and a Study on Possible Chaos Control, Ayub Khan, Rimpi Pal, **Discontinuity, Nonlinearity, and Complexity** 2(2) (2013) 183-201.
- Modelling of phytoplankton allelopathy with Monod-Haldane-type functional response-A mathematical study, Rimpi Pal, Debanjana Basu, M. Banerjee, **BioSystems** 95 (2009) 243-253. (ISSN: 0303-2647).
- Deterministic and Stochastic analysis of a delayed allelopathic phytoplankton model within fluctuating environment, Malay Bandyopadhyay, Tapan Saha, Rimpi Pal, **Nonlinear Analysis: Hybrid Systems** 2 (2008) 958-970. (ISSN: 1751-570X).

(COMMUNICATED AND UNDER REVIEW)

- Secure communication through function-synchronization of time-delayed uncertain Genesio-lorenz systems, **Ayub Khan and Rimpi Pal.**
- Adaptive function synchronization based secure communications of modified time- delayed Chen – lee Systems, **Rimpi Pal; Shivani Gahlout; Anuj Kumar.**

BOOK CHAPTER

Adaptive Hybrid Function Projective Synchronization of Chaotic Space-Tether-System, "**Advances in Stability and Control Theory for Uncertain Dynamical Systems**"**, VOL.11** (Stability, Oscillations and Optimization of Systems) **Cambridge Scientific Publishers (UK), ISBN: 978-1-908106-73-5,** Chapter 11, Adaptive Hybrid Function Projective Synchronization of Chaotic Space-Tether System**, Ayub Khan, Rimpi Pal, 2021**

Conference Organization/ Presentations/FDP/Refresher Courses

- Paper presentation entitled "FUNCTION SYNCHRONIZATION OF DELAYED GENESIO AND LORENZ SYSTEMS WITH APPLICATION IN SECURE COMMUNICATIONS", in International Conference on Advances in Pure & Applied Mathematics (ICAPAM): Vision India @ 2047, scheduled for **February 8-10, 2024**, at **Shyam Lal College, University of Delhi**.
- Paper presentation entitled "Hybrid projective function synchronization of time-delayed Genesio and lorenz systems with applications to secure communication ", in the **INTERNATIONAL CONFERENCE ON DYNAMICAL SYSTEMS, CONTROL AND THEIR APPLICATIONS**, held at Department of Mathematics, IIT ROORKEE, during July 1-3, 2022.
- Paper presentation entitled " Synchronization of two identical restricted planar isosceles three body problem and a detailed study on possible Chaos Control ", in the **National Seminar for Research Scholars**, held at Department of Mathematics, University of Delhi, during March 24-25, 2012.

- Paper presentation entitled " Projective Synchronization and Function Projective Synchronization of a Dumbell Satellite under Solar Radiation Pressure and other factors " in **International Conference on Frontiers of Mathematical Sciences with Applications-2012**, held in Kolkata, West Bengal.
- Successfully completed Two-Week "**REFRESHER COURSE IN MATHEMATICS**" organized by the DEPARTMENT OF MATHEMATICS, RAMANUJAN COLLEGE, from 31 August – 14 September 2021 and obtained A+ grade.
- Successfully completed **One-Week Online National Faculty Development Program** "Python: Essentials, Programming and Analytics" jointly organized by University of Delhi and Guru Angad Dev Teaching Learning Centre, SGTB Khalsa College, University of Delhi under the Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching (PMMMNMTT) of Ministry of Education from 27th October to 03rd November 2022 and obtained Grade "A".

Invited Lecture/Talk

- Delivered an invited lecture in **Faculty Development Program**, on **RECENTS TREND IN BIOMATHEMATICS AND DYNAMICAL SYSTEM, BIFURCATION, CHAOS AND NUMERICAL METHODS**, organized by DEPARTMENT OF MATHEMATICS, Mahadevananda Mahavidyalaya Barrackpur, Kolkata -120 from 7th-13th February 2024.

Awards and Distinctions

- Received **Gold Medal (Pravat Kr. Ghosh Gold Medal for Department topper)** and **Certificate of Merit** in B.Sc. Mathematics Honours Examination in 2004 from Scottish Church College, University of Calcutta.
- **Ranked 4th** in University of Calcutta in B.Sc. Mathematics Honours Examination in 2004 **(Among all the affiliated colleges of University of Calcutta in West Bengal)**.
- **Ranked 2nd** in University of Calcutta in M Sc Applied Mathematics Examination in 2006.
- Awarded **JUNIOR RESEARCH FELLOWSHIP and** SE**NIOR RESEARCH FELLOWSHIP** from C.S.I.R. for pursuing Ph.D. in Mathematics in Department of Mathematics, University of Delhi on 11.11.2010 under File no.: 09/045(1033)/2010-EMR-I.
- **SENIOR DIPLOMA with DISTINCTION in HINDUSTANI CLASSICAL VOCAL from PRAYAG SANGEET SAMITI, ALLAHBAD.**
- **Awarded "The Best Semi-Classical singer" trophy in The Army Public School, Dhaula Kuan.**

Other Activities

REVIEWER OF THE JOURNAL

International Journal of Control, Automation and Systems, Springer. ISSN: 2005-4092, 1598-6446

Journal of Advances in Mathematics and Computer Science (ISSN: 2456-9968)