# Dr.Manaj Dandapathak

*Assistant Professor in Physics*
*Dept. of Basic Sciences and Humanities*
*Ramkrishna Mahato Govt. Engineering College,Purulia* ✉ *phymanoj@yahoo.co.in*

## Personal Information

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| Name | Dr.Manaj Dandapathak |
| Permanent Address | 1st Lane, Farmside Road<br>Vidyabhaban palli, Chinsurah (RS)<br>Hooghly-712102, West Bengal, India |
| Email | phymanoj@yahoo.co.in |

## Professional Information

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| 2006 – 2009 | **Assistant Professor of Physics**<br>Sri Ramkrishna Sarada Vidyamahapitha<br>Kamarpukur, Hooghly, West Bengal, India |
| 2009 – 2016 | **Assistant Professor of Physics**<br>Hooghly Mohsin College, Chinsurah<br>Hooghly, West Bengal, India |
| 2016 – till date | **Assistant Professor of Physics**<br>Ramkrishna Mahato Govt. Engineering College,Purulia,<br>Vill: Agharpur, P.O.- Ramamoti, P.S.- Joypur, Dist.- Purulia 723103. |

## Education

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| 2015 | **Ph.D in Science**,University of Burdwan, Burdwan<br>**Title of the Thesis:**Analytical Studies on Chaotic Dynamics of RF and Microwave Oscillators.<br>**Supervisor-***Prof. B.C. Sarkar*, University of Burdwan. |
| 2002 – 2004 | **M.Sc. in Physics**<br>Completed M.Sc. with first class in 2013,<br>University of Burdwan, Burdwan.<br>**Specialization: Radiophysics and Electronics** |
| 1999 – 2002 | **B.Sc. in Physics(Hons)**<br>Completed with first class<br>Chandernagar Govt. College<br>Chandernagar, Hooghly, West Bengal, India. |

2004 – till date **Research Experience**

## Academic Achievements/Awards

2004 Qualified in National Eligibility Test (NET) in Physical Science with CSIR fellowship.

2004 Qualified in Graduate Aptitude Test in Engineering (GATE) in Physical Science.

## Area of Teaching Interest

- Classical Mechanics
- Mathematical Methods
- Quantum Mechanics
- Statistical Mechanics
- Electrodynamics
- Optics
- Electromagnetic Theory
- Nonlinear Dynamics
- General and Special theory of Relativity
- Astrophysics
- Electronics and Communications

## Area of Research Interest

- Microwave and RF oscillators
- Nonlinear Dynamics
- Chaos
- Phase Locked devices
- PLL design
- Optical phase locked loops
- Optical Costas loop
- Optical communications
- Microwave Synthesizer

## PUBLACATIONS

1 S. Chakraborty, **M. Dandapathak**, S.S. De Sarkar, "Effect of Self Feedback on Mean-Field Coupled Oscillators: Revival and Quenching of Oscillations", December 2020, International Journal of Bifurcation and Chaos, Accepted(05)

2 **M. Dandapathak**, "Some story at the beginning time of Science", September 2019, Gyan o Bigyan, September issue

3 S. Chakraborty, **M. Dandapathak**, B.C. Sarkar, "Oscillation quenching in third order Phase Locked Loop coupled by mean field diffusive coupling", November 2016, Chaos (Woodbury, N.Y.) 26(11):113106

4 A.K. Guin,**M. Dandapathak**, S.Sarkar, B.C. Sarkar, " Birth of oscillation in coupled non-oscillatory Rayleigh Duffing Oscillators", June 2016, Communications in Nonlinear Science and Numerical Simulation 42

5 **M. Dandapathak**, B.C. Sarkar, "Chaotic Dynamics of an Optical Phase Locked Loop Having Loop Filter with High Frequency Gain", December 2015, Optik - International Journal for Light and Electron Optics 126(24)

6 **M. Dandapathak**, B.C. Sarkar, "Nonlinear Dynamics of Optical Costas Loop with Inherent Time Delay", December 2015, Optik - International Journal for Light and Electron Optics 126(24):5077-5082.

7 **M. Dandapathak**, S. Sarkar, B.C. Sarkar, "Nonlinear dynamics of an optical phase locked loop in presence of additional loop time delay", October 2014, Optik - International Journal for Light and Electron Optics 125(23)

8 B.C. Sarkar, **M. Dandapathak**, S. Sarkar, "Effects of Package Parasites on the Dynamics of a Gunn Oscillator", August 2014, Indian Journal of Science and Technology 7(8):1114-1124

9 B.C. Sarkar, **M. Dandapathak**, S. Sarkar, T. Banerjee, "Analytical studies on the dynamics of two coupled periodic Gunn oscillator using Melnikov technique", February 2013, Progress In Electromagnetics Research M 28:213-228

10 **M. Dandapathak**, B.C. Sarkar, "Studies on the Dynamics of a Second Order PLL in the face of Two Input Signals", December, 2012, International Journal of Engineering and Technology, 10(3), 123-130

11 **M. Dandapathak**, B.C. Sarkar, "Analytical Studies on the Dynamics of Two Coupled Gunn Oscillators", December 2012, Conference: National Conference on Materials, Devices and Circuits in Communication Technology (MDCCT-2012), Burdwan University

12 **M. Dandapathak**, B.C. Sarkar, "Dynamics of a packaged Gunn Oscillator: An analytical and Simulation Study", December 2010, Conference: Proc. of International conference on Microwave Antenna, propagation and remote sensing, ICMARS 2010 (Jodhpur), December 14-17, 2010.

13 **M. Dandapathak**, B.C. Sarkar, " Studies on nonlinear dynamics in delayed Phase locked loop", March 2010, Conference: Proc. of National Conference MDCCT-2010, BU, India, 27-28 March 2010.

14 **M. Dandapathak**, B.C. Sarkar, " Effect of Package parasites on the nonlinear dynamics of Solid State Microwave Oscillators", January 2010, Conference: Proc. of International Conference ICRPA- 2010, BU, India, 16- 17 Jan 2010.

15 **M. Dandapathak**, T. Banerjee, B.C. Sarkar, " Quantifying Chaotic Dynamics in Nonlinear Gunn Oscillator", March 2009, Conference: Proc. Of National Conference on Nonlinear Systems and Dynamics NCNSD- 2009, Saha Institute of Nuclear Physics, Kolkata, India, March 5-7, 2009

## Administrative Duties

1 Worked as Assistant Coordinator and Coordinator of JEE in the year 2011 and 2012 respectively.

2 Worked in Exam cells from year 2009 to 2017.

3 Worked in Admission Committee from year 2010 to 2016.

4 Presently working as Coordinator of Service Book committee, Holiday list preparation Committee, UGC committee, IQAC.

5 At present, working as member of Purchase committee, Teacher's welfare committee.