



**Name** : **Debashis Bhowmick**  
**Professional Experience** : **10 Years**

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### **Objective**

Seeking a position to deliver the best effort & implement new & effective ideas by enhancing my skills according to the requirement.

### **Contact Address:**

(Home): C/O.: Gangesh Bhowmick  
Village + P.O.: Uttar Brindabanchak  
P.S.: Panskura, District: Purba Madinipur,  
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### **Professional Qualification:**

**Graduate-ship Examination AMIETE from Institute of  
Electronics & Telecommunication Engineers (June 2004).**

**CCNA (April 2007) CISCO ID: CSC011203576**

### **Project Work and Training:**

**Project Title : “PC Based Satellite Reception at Ku & C Band” Under the  
guidance of Dr.Robindranath Bera (Calcutta University)**

### **Company Training :**

Place: M/S- **Telekroniks.** (2002 to 2004)  
5B Garanhata lane, kolkata-700 006.

Working with Satellite reception (TRACKING OF DISH) at C & Ku Band,  
Repairing of various type of satellite receivers, SMPS, Monitors, TV, CPU etc,  
and various Projects with Microcontroller and Microprocessor.

### Key Skills:

- i) **Software & Hardware for Electronic Design Automation:** C/C++, FPGA, MATLAB, LabVIEW, VHDL, Arm9 processor and AVR Microcontroller, AutoCAD, TrakMaker and LPKF CircuitPro, Circuit maker Serial Data communication, SPI protocol, I2C protocol, X.25 protocol, PSPICE, OrCAD.
- ii) **Software & Hardware for Computation:** Fault analysis and troubleshooting of Computer Hardware, Network & its peripherals, MS-Excel, Windows, FTP, LAN, WIFI, Configure CISCO Router.

### Key Professional Experience:

Place: M/S-**PHINIX**. (Feb, 2004 to July, 2007)  
TM-3/6, Teghoria Mondal Para 3<sup>rd</sup> Lane, Kolkata-700059.  
Designation: Assistant Engineer (Electrical)  
Howrah Bridge Illumination project as a site engineer, US consulate LCM project and maintenance. Etc. Also work as a consultant in electrical distribution system (LT).

Place: **Indian Centre for Space Physics** (Aug, 2007 to still now)  
43, Chalantika, Garia Station Road, Kolkata-84  
Designation: **Senior Engineer (Lab-In-Charge)**

### Job Responsibilities and Key Contributions:

1. Development of balloon payloads and ground to balloon payload communication system through **GPS** sub-systems software based balloon tracking system.
2. Development of **Geiger Muller Counter** and its electronics for lab experiment and balloon payload with data storage system.
3. Development of **Si-PIN** and **CdTE** based soft and hard X-Ray detector system for Lab test and also for light weight balloon payloads with data storage system for measuring solar x-ray @ 40Km height from earth.
4. Development of **PMT** and Scintillator based soft and hard X-Ray detector system for Lab test and also for light weight balloon payloads with data storage system for measuring solar x-ray @ 40Km height from earth.
5. Development of balloon payload stabilization and pointing system for Balloon Project
6. Making various type of gas detector system, external and internal temperature monitoring, pressure monitors devices and **9DOF** for balloon payloads.
7. **FPGA** based **Si-PIN** X-ray detector system and made High Resolution Charge Sensitive Amplification based on **DSP** applications using RVI Platform.
8. **Programming in Metrowearks Code Warrior for ARM 9 Developer Suite.**
9. Development of **VLF** receiver antenna with GPS system for ionospheric and

earthquake studies and for VLF payloads for balloons, VLF summer and winter campaign and also for solar eclipse campaign and installation of **SoftPal** and **AWESOM** antenna system.

10. Worked on **ICTP-INFN** collaborative project X-ray Drift-Detector eXtra Large (**XDXL**) during my two times visits of ICTP, Trieste, Italy. This project involves simulation characterization and development of large area high resolution Silicon Drift Detector (**SDD**). This high resolution drift detector can be used in future X-Ray astronomy missions or in balloon experiments. Our main goal was to build a large area, high sensitive and high resolution SDD detector for low energy X-ray (0.5-30KeV) spectroscopy study for the astronomical objects, such as Black Holes, neutron stars, GRB.s etc. For this project, I had work on 'Multidisciplinary Laboratory' of **ICTP**, Trieste and 'Silicon detector laboratory, of **INFN** (Istituto Nazionale di Fisica Nucleare), Trieste, Italy.
11. Preparation of climate chamber for testing of payloads in low temperature and low pressure environments.
12. Designing PCB's with TraxMaker software and making PCB's for our developing work at ICSP with **LKPF Proto-Mat E33** PCB Printing machine.
13. Preparation of 8" dia Radio antenna receiver tracking system on ICSP radio antenna project.
14. Conduct Dignity Mission Balloon Project from **D1 to D68** as an active team member.
15. Supports and Regular Maintenance of ICSP networking system, Router, Computers, UPS, EPBX, Printers, Associated electrical work etc. at ICSP and IERC.
16. Planning, Designing and commissioning and electrification of Ionospheric and Earthquake Research Centre at Sitapure during building construction.

#### **Seminars, Schools, Conferences, Workshops and Meetings Attended:**

1. *Joint ICTP-TWAS First ICTP Regional Microelectronics Course on VHDL for Hardware Synthesis and FPGA Design in south and Southeast Asia at **Bangladesh**, 30 January - 19 February 2011.*
2. *Attend India LabVIEW Conference 2008, **2010, Kolkata**, India.*
3. *Very Low Frequency (VLF) Radio Waves: Theory & Observations (VELFARTO-10, Kolkata) Organized by S.N. Bose National Centre for Basic Sciences, **Kolkata**, India.*
4. *Second Kolkata Conference on "Observational Evidence for Black Holes in the Universe" from February 10-15, 2008 at Vedic village and Radisson Fort, Kolkata, India; organized by S.N. Bose National Centre for Basic Sciences, **Kolkata**, India.*
5. *Advanced Training Course on FPGA Design and VHDL for Hardware Simulation and Synthesis, October-November 2009 (**ICTP**), **Italy**.*

## International visit:

1. **Joint ICTP-TWAS First ICTP Regional Microelectronics Course on VHDL for Hardware Synthesis and FPGA Design in south and Southeast Asia at Bangladesh, 30 January - 19 February 2011.**
2. Visited **The Abdus Salam International Centre for Theoretical Physics (ICTP), Italy** for the period of 6 month from 5<sup>th</sup> May, 2008 to 5<sup>th</sup> November, 2008 as a **Visiting Scientist**.
3. Again visited **The Abdus Salam International Centre for Theoretical Physics (ICTP), Italy** for another period of 6 month from 28<sup>th</sup> Aug 2009 to 28<sup>th</sup> February 2009 as a **Visiting Scientist** and work on Detector Simulation using Santaurus software and testing of Large Area Silicon Drift Detector (XDXL).

## List of Publications:

### In Paper:

1. First VLF detection of ionospheric disturbances due to Soft Gamma Ray Repeater SGR J1550-5418 and Gamma Ray Burst GRB 090424 by S.K. Chakrabarti, S.K Mandal, S.Sasmal, **D. Bhowmick**, A.K Choudhury and N.N Patra *on Indian J. Physics* 84(11) 1461-1466 (2010).
2. VLF signal in summer and winter in the indian sub-continent using multi-station campaignings. By S K Chakrabarti, S K Mondal, S Sasmal, S Pal, T Basak, S Chakrabarti, **D Bhowmick**, S Ray, S K Maji, A Nandi, V K Yadav, T B Kotoch, B Khadka, K Giri, S K Garain, A K Choudhury, N N Partra and N Iqbal *on Indian J Phys (May 2012)* 86(5):323–334
3. VLF campaign during the total eclipse of July 22nd, 2009: Observational results and interpretations S.K. Chakrabarti, S.Pal , S.Sasmal , S.K.Mondal , S.Ray , T.Basak , S.K.Maji , B.Khadka , **D. Bhowmick**, A.K.Chowdhury *on Journal of Atmospheric and Solar-Terrestrial Physics* 86 (2012) 65–70
4. Study of properties of cosmic rays and solar X-ray flares by balloon borne experiments by S K Chakrabarti, **D Bhowmick**, S Chakraborty, S Palit, S K Mondal, A Bhattacharya, S Midya & S Chakrabarti., *on Indian Journal of Physics, April 2014, 88, 333-341*

### In Proceedings:

1. Developments of Si-PIN detectors for Continuous Spectrophotometry of Black Holes (CSPOB) by **D.Bhowmick**, S.Mondal and S.K. Chakrabarti *in proceeding of the Second Kolkata Conference on "Observational Evidence for Black Holes in the Universe" from February 10-15, 2008 at Vedic village and Radisson fFort, Kolkata, India (AIP Conf. Proc. (2008)).*
2. CSPOB - Continuous Spectrophotometry of Black Holes by S.K. Chakrabarti, **D. Bhowmick**, D. Debnath, R. Sarkar, A. Nandi, Yadav V.K. and A.R. Rao *in*

*proceeding of the Second Kolkata Conference on "Observational Evidence for Black Holes in the Universe" from February 10-15, 2008 at Vedic village and Radisson fFort, Kolkata, India (AIP Conf. Proc. 1053, 409 (2008)).*

3. The Use of Reconfigurable Virtual Instrument for Low Noise, High Resolution Charge Sensitive Amplification by Olufemi Adeluyi, **Debashis Bhowmick**, Maria liz Crespo, Address Cicuttin, Dipak Debnath, Arnab Sen in *proceeding of the FPGA World Conference'10, September 8,2010, Stockholm, Sweden*
4. Studies of VLF Signals Using Balloon Borne and Undersea Antennas by **D. Bhowmick**, S.K. Chakrabarti, S. Sasmal and S.K. Mondal, in *proceeding of the 1<sup>st</sup> International Conference on Science with Very Low Frequency (VLF) Radio Waves: Theory & Observations (VELFARTO-10), Kolkata, India (AIP Conf. Proc (2010) on 13<sup>th</sup> to 18<sup>th</sup> March 2010.*
5. High Energy Astrophysics Using Rubber Balloon by S.K. Chakrabarti, **D. Bhowmick**, R. Sarka, S. Mondal, A.Sen, in *proceeding of 20th European Space Agency Symposium, 2011,p.581 (ESA).*
6. A New Paradigm In Space Based Experiments Using Rubber Balloons by Sandip K. Chakrabarti, **Debashis Bhowmick**, Sourav Palit, Subhankar Chakraborty, Sushanta Mondal, Arnab Bhattacharyya, Susanta Middy, Sonali Chakrabarti, in *proceeding of 21st ESA Symposium (9 to 13 June,2013, Thun, Switzerland, page 663, 670*

#### **In GCN Circular Archive:**

1. ICSP VLF observation of the signatures of SGR/AXP 1E1547.0-5408 burst, GCN 8881 (2009) Sandip K. Chakrabarti, Susanta K Mondal, Sudipta Sasmal, **Debashis Bhowmick**.
2. Detailed light-curves of ICSP VLF observation of SGR/AXP 1E1547.0-5408, GCN 8900 (2009) Sandip K. Chakrabarti, Susanta K Mondal, Sudipta Sasmal, **Debashis Bhowmick**.
3. ICSP discovery of a burst in X-rays by balloon borne study of GRB131024C GCN 15415 (2013) Sandip K. Chakrabarti, **D. Bhowmick**, S.Chakraborty, R. Sarkar.

#### **Poster & Oral presentation:**

1. [Studies of VLF Signals using balloon borne and undersea antennas](#) ,On 1<sup>st</sup> International Conference on Science with Very Low Frequency (VLF) Radio Waves: Theory & Observations (VELFARTO-10, Kolkata) Organized by S.N. Bose National Centre for Basic Sciences, Kolkata, India on 13<sup>th</sup> to 18<sup>th</sup> March 2010.

2. **Continuous Spectrophotometry of Black Holes – Small Satellite Mission in Second Kolkata Conference on "Observational Evidence for Black Holes in the Universe"** from February 10-15, 2008 at Vedic village and Radisson fFort, Kolkata, India; organized by S.N. Bose National Centre for Basic Sciences, Kolkata, India.

**Others Activities:**

1. Attended ICSP Winter VLF Campaign'2008-09 and taken data from Keshmir
2. Attended ICSP Summer VLF Campaign' 2009 and taken data from Raiganj, WB
3. Attended ICSP Balloon project (D1- D68) from Baruipur, Bolpur, Raiganj, Asansol, Dhanbad etc.
4. 12 (Twelve) M.Sc and B.Tech students were guided on their final year academic project

**Personal Information:**

**Father's Name:** Shri Gangesh Bhowmick  
**Date of Birth:** 29-03-1980  
**Blood Group:** B+  
**Distinguishable Mark:** One cutoff mark on left hand thumb  
**Language proficiency:** Bengali, Hindi, English  
**Hobbies/ Interests:** Enjoy travelling, Reading Story Book, Playing Guiter.

**Place:**  
**Date:**

**Signature**

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