

## BIODATA

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Objective: To learn to teach physics in a simplified way.

### Educational Qualifications

Exam. passed	Year of Passing	Division/ Class	Name of the Board/ University
HSLC	1996	I	SEBA
HSSLC	1998	I	AHSEC
B.Sc	2002	I	G.U.
M.Sc	2004	I	G.U.
NET	01.06.2005 & 01.12.2005	–	CSIR
Ph.D	2014	–	G.U.

### Service Carrier

1. PGT teacher from **29.06.2005** to **31.01.2006** in Kendriya Vidyalaya, Maligaon, Assam, India
2. Joined Arya Vidyapeeth college on **01.02.2006**. Assam, India
3. 73<sup>rd</sup> Orientation Programme in the duration **3<sup>rd</sup> Dec. to 30<sup>th</sup> Dec. 2007** from Academic Staff College, Gauhati University.
4. Refresher course in Physics in the duration **01.02.2010 to 26.02.2010** from Academic Staff College, JNU, Delhi.
5. Act as a judge in a regional Debate competition at K V Khanapara on 24-10-11.
6. Science Academies' Refresher Course in Theoretical physics from 06-20 January 2015 at Tezpur University.
7. External for practical examination of MSc 1st Semester in Royal Global university during 21-12-2017 to 23-12-17.
8. Teaching Quantum Chemistry from 2015 to till date in the PG classes of Chemistry Department in Arya Vidyapeeth college.
9. *Attended Short term course in Research Methodology from 19th-24th March, 2018* organised by HRDC, Mizoram University.

### Workshops Attended

1. Workshop on Math Lab and Labview organized by Department of Physics, G U, 19-20 Dec, 2008

2. Workshop on “Electronics and Computer Laboratory application” organized by IDSC in collaboration with ASTEC and Department of Physics, Cotton College on **16<sup>th</sup>,17<sup>th</sup> and 18<sup>th</sup> June,2011.**
3. Workshop on hadron physics from 31<sup>st</sup> October to 5<sup>th</sup> November,2011 at BARC.
4. Attended the “Northeast workshop on Design of experiments” from 3-5 November 2016 organised by jointly Indian Statistical Institute, SQC and Or Unit, Kolkata and Department of Statistics at A. V. College.
5. Participated in the Workshop on Space Technology inputs for Disaster risk reduction in North-Eastern region with special emphasis on Early warning , Preparedness and Mitigation by NESAC from March 16-17, 2017.
6. Participated in the UGC sponsored National Workshop on “Research Methodology and computer application in Research” from 8th to 14th June 2017 organised by Department of Economics, B. H. College, Howly, Assam.

#### Seminars and Conferences

1. Attended 5<sup>th</sup> PANE conferences held on during **1<sup>st</sup> and 2<sup>nd</sup> march, 2007** organised by Department of Physics, G U.
2. Attended and presented a paper entitled “Masses and Decay constants of mesons in QCD inspired quark model with relativistic effect” in the 6<sup>th</sup> PANE conferences held on April **2-4,2009** organized by Department of Physics, Tripura University.
3. Attended and presented a paper in the poster session entitled “Isgur Wise function in a QCD potential model with coulombic potential as perturbation” in the XIX- DAE-BRNS High Energy Physics Symposium during December **13-18, 2010** organized by LNMIIT Jaipur.
4. Attended the Asia International Literary Festival held at Guwahati, Assam from **3<sup>rd</sup>-5<sup>th</sup> Dec. 2010**
5. Attended and presented a paper on ‘ Decay constants of heavy-light mesons in QCD potential model’ in 57<sup>th</sup> Assam Science Society Technical Session **on 16<sup>th</sup> March, 2012 at GU.**
6. Attended and presented a paper in the poster session on “Semileptonic decay of Bc meson in a QCD Potential Model” in one day UGC -SAP National Seminar on new Frontiers in physics on 11<sup>th</sup> may,2012, held at Department of Physics, Gauhati University, Assam.
7. Attended and presented a paper On “Comments on the perturbation of Cornell Potential in a QCD Potential Model”in NC-HEPC 2013 in the Department of Physics, GU from 12th-14th February 2013.
8. Attended and presented a paper on “Pseudoscalar Decay constants of Heavy-light Mesons “ in the UGC sponsored National seminar on “Current Trends in Physics Research” held at Darrang college from 30th January to 1st February, 2014.
9. Attended the 61st annual conference of ACTA at Moran College from 25th October to 29th October, 2014.
10. Attended the 62nd annual conference of ACTA at Bornagar College from 1st November to 4th November, 2015.
11. Participated in IUAC Acquaintance Programme on “Accelerator Based multi-disciplinary scientific research” at GU on November 16, 2015.
12. Participated and presented a paper on “Lambda scale variation in leptonic and semileptonic decay of B mesons” from 10-12 December 2016 at st. Anthony College Shillong.
13. Participated and presented a paper entitled “Critical analysis of Chandrasekhar Mass limit:present Scenario” in the national Seminar on Socio economic and Scientific development in Northeast India: Problems and Prospects in 27th and 28th October 2017.

14. Participated and presented a paper entitled “Comments on the perturbation in a QCD Potential Model” in the national Seminar on Socio economic and Scientific development in Northeast India: Problems and Prospects in 27th and 28th October 2017.

### Publications

#### In Journals

1. Isgur Wise function in a QCD potential model with coulombic potential as perturbation. **Mod. Phys. Lett. A, Vol. 26, No. 21 (2011) 1547-1554 [World Scientific ]**
2. Oscillation frequency of B mesons in a QCD potential model.  
**Chinese Physics Letters Vol. 28, No. 10 page 101201(2011)[IOP]**
3. Open flavour charmed mesons in a quantum chromodynamics potential model.  
**Pramana: Volume 79, Issue 6 (2012), Page 1385-1393.**
4. Semileptonic decay of  $B_c$  mesons into its S wave charmonium states in a QCD potential model with coulombic part as perturbation.  
**J. Mod. Physics, Vol.3, 821-826 (2012). [Scientific research]**
5. Heavy-light Mesons in a QCD Potential model with relativistic effect.  
**Int. J. Mod. Phys. A vol.28 (2013),1350010.[World Scientific ]**
6. Semileptonic Decay Of Bc Meson Into  $cc\bar{c}$  States in a QCD Potential Model.  
**Int. J. of Mod. Phys. A ,Vol. 28, No. 19 (2013) 1350097.[World Scientific ]**
7. On the bounds of CKM element  $V_{cb}$  in a Potential Model,  
**Int. J. of Mod. Phys. A, Vol. 29 (2014) 1450066 [World Scientific ]**
8. Charge Radii of B and D mesons in a quark model with two loop static potential,  
**Physical Science International Journal, DOI: 10.9734/PSIJ/2015/18709 (2015) [Science Domain international]**
9. Isgur-Wise function and a new approach to Potential Model ,IJMPA, Vol. 31, No. 35 (2016) 1650189 (19 pages) , World Scientific Publishing Company  
**DOI: 10.1142/S0217751X1650189X**
10. RMS and charge radii in a potential model , Indian Journal of Physics. DOI:10.1007/s12648-016-0866-1 (2016)

#### In Conference Proceedings

11. Masses and Decay constants of mesons in QCD inspired quark model with relativistic effect.  
**In North-East reaserch in physics. ISBN-81-87500-53-0.(2010)**
12. Comments on the perturbation of Cornell Potential in a QCD Potential Model .  
**Journal of Physics: Conference Series 481 (2014) 012022.**

### **Completed Project**

A minor research project on "Study of heavy-light mesons" from UGC. No. F 5-92/2011-12/MRP/NERO/0729 is sanctioned in the year 2012 and Completed in the year 2015.

### **Ph.D Thesis**

Awarded the Ph.D degree from Gauhati University for the Thesis entitled "**Heavy-light Mesons in a QCD Potential Model**" in the year 2014 under the Supervision of Prof. Dilip Kumar Choudhury.

### **Published Books:**

1. "**Leptonic and Semileptonic decay of B and D Mesons**" is published with Prof. D. K. Chudhury. ISBN No. 978-3-659-62288-5, in 2014 by Lambert Academic Publishing, Germany.
2. "**Fundamentals of Electronics**" with K. C. Bali and Parminder Kaur. ISBN: 978-93-82956-81-5, (2015)Vishal Publishing Co. Jalandhar, India.
3. "**A handbook of Statistical physics and Thermodynamics**" with V. S. Bhatia and M. K. Mahanta. ISBN: 978-93-82956-92-1, (2016) Vishal Publishing Co. Jalandhar, India

### **Members**

1. Life member of PANE.
2. Life member of Indian Association of Physics Teachers.
3. Member of ACTA

### **Editorial advisory member of the Journals**

- a) IJARSE: International Journal of Advance Research in Science and Engineering (UGC Approved serial no. 47721) Link: <http://www.ijarse.com/editorboard.php>
- b) International Journal Of Science Technology & Management. Link : <http://www.ijstm.com/EditorialBoard.php>
- c) International journal of innovative research in science and engineering Link: <http://www.ijirse.com/editorial.php>

### **College activities**

1. Exam branch member of the Odd semester. From 2011 to 2013
2. Member of the subcommittee for purchasing computers and Boards 2011-12.
3. Member of the subcommittee for Sc, ST, OBC remedial classes for 2011-12.
4. Chairman of teachers selection committee (under TET) from 11<sup>th</sup> March to 13<sup>th</sup> March,2012.
5. Convener of Arya Vidyapeeth Science Club from June 2012 to November 2017.
6. Advisor of interview board of SSC.
7. General Secretary of Arya Vidyapeeth College teachers unit for the session 2014-15.
8. Hostel superintendent of Arya Vidyapeeth College Boys Hostel from 5<sup>th</sup> March 2016 till date.
9. Convener of one day workshop by IQAC cell, 2015.
10. Member of IQAC cell upto 2017.

### **Reviewed articles for the Journals**

1. Physica Scripta, IOP publishing
2. Journal of Modern physics, Scientific research publishing
3. Few body system , Springer publications
4. Journal of Physics G: Nuclear and Particle Physics, IOP publishing
5. Zna (Zeitschrift für Naturforschung A), A Journal of Physical Sciences
6. Reports on Progress in Physics, IOP publishing.
11. Asian Journal of mathematical And Computer Research, (UGC Approved Journal no. 48885, Sl. no.1)

(Dr. Krishna Kingkar Pathak)  
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