



Arya Vidyapeeth College
আর্য্য বিদ্যাপীঠ মহাবিদ্যালয়



Personal profile

Name of the Faculty: Dr. Krishna Kingkar Pathak

Designation: Assistant Professor (III)

Personal Information Date of Birth: 31-12-1980

Gender: Male

Nationality: Indian

Address for correspondence:

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Date of joining the present service: 01-02-2006

Academic Qualification MSc., PhD

Teaching Experience

In UG level: 13 Years

In PG level: 3 years (Quantum chemistry, under the department Chemistry)



Research
Experience

Date of obtaining / PhD Degree: 03–09–2014, Gauhati University

Title of the PhD thesis:

“HEAVY LIGHT MESONS IN A QCD POTENTIAL MODEL”.

Length of research experience: 11 Years

Specialization (Area of interest): High Energy Physics, Nuclear Physics,

Research Guidance (PhD guideship): Prof. Dilip Kumar Choudhury

No. Of research projects:

| Title of the project | Funding agency | Amount (in Rs) | Status (ongoing/completed) |
|-----------------------------------|--|----------------|----------------------------|
| Study of heavy-light mesons from. | UGC. No. F 5-92/2011-12/MRP/NERO/0729 | 1,35,000/- | Completed in 2015 |

Publications

No. Of Books authored : 04

- i) “Mathematical Physics-1 with T.S. Bhatia. ISBN: 978-9389292-00-8, Vishal Publishing Co. Jalandhar, India (2019).
- ii) 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.
- iii) Fundamentals of Electronics with K. C. Bali and Parminder Kaur. ISBN: 978-93-82956-81-5, (2015)Vishal Publishing Co. Jalandhar, India.
- iv) 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.

No. Of Research paper published: 15

Published Papers:

- i) Charge Radii and leptonic decay constants of heavy-light mesons in a Potential Model, Indian Journal of Physics.(Accepted in 2020).
- ii) Comments on the perturbation in a QCD Potential Model in Socio-economic and scientific development in northeast India, some reflections. ISBN: 9789388237857, March 2019 (conference proceedings).

- iii) Critical analysis of White dwarf mass limit in presence of strong Magnetic Field: Present Scenario in Socio-economic and scientific development in northeast India, some reflections. ISBN: 9789388237857, March 2019 (Conference Proceedings).
- iv) RMS and charge radii in a potential model , Indian Journal of Physics. DOI:10.1007/s12648-016-0866- 1 (2016).
- v) 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.
- vi) 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]
- vii) Comments on the perturbation of Cornell Potential in a QCD Potential Model. Journal of Physics: Conference Series 481 (2014) 012022.
- viii) On the bounds of CKM element V_{cb} in a Potential Model, Int. J. of Mod. Phys. A, Vol. 29 (2014) 1450066 [World Scientific]
- ix) Semileptonic Decay Of Bc Meson Into cc^- States in a QCD Potential Model. Int. J. of Mod. Phys. A ,Vol. 28, No. 19 (2013) 1350097. [World Scientific]
- x) Heavy-light Mesons in a QCD Potential model with relativistic effect. Int. J. Mod. Phys. A vol.28 (2013),1350010.[World Scientific]
- xi) Semileptonic decay of Bc 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]
- xii) Open flavour charmed mesons in a quantum chromodynamics potential model. Pramana: Volume 79, Issue 6 (2012), Page 1385-1393.
- xiii) 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]
- xiv) Oscillation frequency of B mesons in a QCD potential model. Chinese Physics Letters Vol. 28, No. 10 page 101201(2011)[IOP]
- xv) 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)

Papers
presented in
Seminar/
Conference

- i) Participated and presented a paper titled “scale variation in Leptonic and Semileptonic decay of B meson in a QCD potential model” in Second International Conference on Advances in Electrical, Electronic and System Engineering (ICAEESE 2019) from 2-3 November 2019.
- ii) 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 at Arya Vidyapeeth College.
- iii) 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 at Arya Vidyapeeth College.
- iv) 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 sponsored by PANE.
- v) 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.
- vi) 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 sponsored by UGC.
- vii) 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 11th May, 2012, held at Department of Physics, Gauhati University, Assam.
- viii) Attended and presented a paper on “ Decay constants of heavy-light mesons in QCD potential model” in 57th Assam Science Society Technical Session on 16th March, 2012 at GU.
- ix) 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.
- x) Attended and presented a paper entitled “Masses and Decay constants of mesons in QCD inspired quark model with relativistic effect” in the 6th PANE conferences held on April 2-4, 2009 organized by Department of Physics,

Tripura University.

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| Acted as Resource person/ chaired technical Session | i) Resource person in 5 day KRP/RP Training on Science for Secondary teachers conducted by State Council of Educational Research and Training, Assam from 28th march to 4th April 2019 at B. Barooah College. |
| Membership in reputed national/international agency | i) Life member of PANE. ii) Life member of Indian Association of Physics Teachers. iii) Member of ACTA. |
| Corporate Social responsibility | i) Member of Science Club, Arya Vidyapeeth College. ii) Hostel Superintendent, Arya College Boys Hostel. iii) Member, Project Monitoring Unit under RUSA. iv) Assistant Zonal officer, BSc odd sem evaluation, 2019. v) Assistant zonal officer, H.S. Evaluation, 2020. |
| Any other remarks | Editorial advisory member of 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 |
