



Kirori Mal College

(University of Delhi)

University of Delhi, Delhi-110007

(Phone No. - 011-7121 9084 : Email - principal@kmc.du.ac.in)



Print Date : 15-02-2026

1. Personal Profile

Title: **Dr.** First Name: **BIPLOB** Last Name: **BARMAN**

Designation: **ASSISTANT PROFESSOR** Mobile No. -----

Phone No. (Office) ----- Phone No. (Residence): -----

Email: **bbarman@kmc.du.ac.in** Webpage: -----



Facebook: ----- Twitter: -----

LinkedIn: <https://www.linkedin.com/in/biplob-barman-637a7945> Instagram: -----

Youtube: ----- Research Gate Link: <https://www.researchgate.net/profile/Biplob-Barman>

Google Scholar Link: <https://scholar.google.com/citations?hl=en&user=JVsg8XgAAAAJ>

Address: -----

2. Educational Qualifications

| Degree/ Certification | Institution | Year |
|-----------------------|--|------|
| B.Sc. (H) Physics | Ramjas College, University of Delhi | 2005 |
| M.Sc. | Jubilee hall, University of Delhi | 2007 |
| Ph.D. | State University of New York at Buffalo, USA | 2015 |
| GATE | MHRD, Govt. of India | 2008 |

3. Career Profile & Administrative Assignments

| Category | Role/ Designation | Department/ Committee | Date From - To | Remarks |
|----------------|---------------------|---|---------------------------|---------|
| CAREER PROFILE | ASSISTANT PROFESSOR | PHYSICS KIRORI MAL COLLEGE, DELHI | 15.Dec.2022 - Till date | |
| CAREER PROFILE | ASSISTANT PROFESSOR | PHYSICS University of Michigan-Flint, Michigan, USA | 01.Sep.2017 - 14.Dec.2022 | |

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|----------------------------|----------------|--|---------------------------|--|
| CAREER PROFILE | POST DOCTORATE | PHYSICS University of Alabama at Birmingham, 1720 University Blvd, Birmingham, AL 35294, USA | 01.Jun.2015 - 24.Aug.2017 | |
| ADMINISTRATIVE ASSIGNMENTS | MEMBER | AUDIO-VISUAL FACILITIES AND EQUIPMENT MAINTENANCE COMMITTEE KIRORI MAL COLLEGE, DELHI | 01.Jul.2023 - 30.Jun.2026 | |
| ADMINISTRATIVE ASSIGNMENTS | MEMBER | NORTH EAST STUDENT CELL KIRORI MAL COLLEGE, DELHI | 01.Jul.2023 - 30.Jun.2025 | |
| ADMINISTRATIVE ASSIGNMENTS | MEMBER | STANDING COMMITTEE FOR MONITORING ADMISSIONS Kirori Mal College, University of Delhi | 01.Jul.2023 - 14.Oct.2025 | |
| ADMINISTRATIVE ASSIGNMENTS | MEMBER | FAPS – THE FINE ARTS & PHOTOGRAPHY SOCIETY KIRORI MAL COLLEGE, DELHI | 01.Jul.2023 - 30.Jun.2025 | |
| ADMINISTRATIVE ASSIGNMENTS | MEMBER | MEDIA COMMITTEE Kirori Mal College, University of Delhi | 01.Jul.2023 - 30.Jun.2026 | |
| ADMINISTRATIVE ASSIGNMENTS | MEMBER | PHYSICS Kirori Mal College, University of Delhi | 01.Jul.2023 - 30.Jun.2024 | Department of Physics' Stock taking committee. |
| ADMINISTRATIVE ASSIGNMENTS | MEMBER | ROBOTICS Kirori Mal College, University of Delhi | 01.Jul.2023 - 30.Jun.2024 | Department of Physics |
| ADMINISTRATIVE ASSIGNMENTS | MEMBER | OTHERS Kirori Mal College, University of Delhi | 01.Jul.2023 - 30.Jun.2024 | Department of Physics' Seminar Committee. |
| ADMINISTRATIVE ASSIGNMENTS | MEMBER | CAREER DEVELOPMENT CELL Kirori Mal College, University of Delhi | 14.Jun.2023 - 30.Jun.2026 | |
| ADMINISTRATIVE ASSIGNMENTS | MEMBER | CANTEEN COMMITTEE Kirori Mal College, University of Delhi | 01.Jul.2024 - 30.Jun.2026 | |
| ADMINISTRATIVE ASSIGNMENTS | CONVENER | PHYSICS Kirori Mal College, University of Delhi | 01.Jul.2024 - 30.Jun.2025 | Department of Physics' Seminar Committee |
| ADMINISTRATIVE ASSIGNMENTS | MEMBER | PHYSICS Kirori Mal College, University of Delhi | 01.Jul.2024 - 30.Jun.2025 | Department of Physics' Library Committee |
| ADMINISTRATIVE ASSIGNMENTS | MEMBER | PHYSICS Kirori Mal College, University of Delhi | 01.Jul.2024 - 30.Jun.2025 | Department of Physics' Entertainment Committee |
| ADMINISTRATIVE ASSIGNMENTS | MEMBER | IQAC Kirori Mal College, University of Delhi | 01.Jul.2024 - 30.Jun.2025 | Departmental IQAC Coordinator |
| ADMINISTRATIVE ASSIGNMENTS | MEMBER | OTHERS Kirori Mal College, University of Delhi | 01.Jul.2024 - 30.Jun.2025 | Academic Prizes Committee |

4. Other Profiles

Other Profile Name/ Description

SUBJECTS TAUGHT

University of Michigan-Flint, Michigan, USA

College Physics I
Principles of Physics I & II
Intermediate Electricity and Magnetism
Advanced Physics Lab II: Advanced Physics Research
UNV 100 First Year Experience

Kirori Mal College, University of Delhi

Essentials of Python (Skill Enhancement course)
Advanced Mathematical Physics (3rd Year Physics Hons)
Mathematical Physics 2 Lab (2nd year Physics Hons)
Mechanics Lab (1st year Analytical Chemistry)
Digital Empowerment (Value Added Course)
Analog systems and applications (2nd year Physics Hons)
Analog systems and applications lab (2nd year Physics Hons)
Electromagnetic theory lab (3rd year Physics Hons)

AWARDS AND DISTINCTIONS

Dr. Lois Matz Rosen Junior Faculty Excellence in Teaching Award, University of Michigan-Flint, Michigan, USA

5. Research Guidance

| Year | Guide For | Title of the Dissertation/ Thesis | Scholar Name | Status |
|------|-----------|-----------------------------------|--------------|--------|
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6. Research Projects

| Year | Title of Project | Sponsorship Agency | Duration | Amount Sanctioned | Date of Sanction |
|------|---|---|----------|-------------------|------------------|
| 2020 | Physics and Astronomy for Community Engagement (PACE) | American Physical Society | 2 years | 713522 | 01.Apr.2020 |
| 2019 | Chemical synthesis of nanomaterials and studying their optical properties via Laser radiation | Office of Research, University of Michigan-Flint, USA | 4 Months | 330717 | 03.Apr.2019 |
| 2019 | Instrumentation of high resolution optical techniques for semiconductor research | Office of Research, University of Michigan-Flint, USA | 2 years | 1304101 | 24.Mar.2019 |

7. Publications

| Category | Publication Name | Title | Name of Author | Reference Link/ DOI Link | Publication Year |
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| JOURNAL PAPER (International) | Superradiant emission in a high-mobility two-dimensional electron gas | Journal of Physics: Condensed Matter | B Barman, AG Linn, AL O'Beirne, J Holleman, C Garcia, V Mapara, JL Reno, SA McGill, V Turkowski, D Karaiskaj, DJ Hilton (First Author) | 10.1088/1361-648X/acce8c | Ap 20 |
| JOURNAL PAPER (International) | Excitation wavelength dependent photon emission and phase change probing in CsPbBr ₃ quantum dots | Solid State Communications | Lyall Alwafi, Amlan Datta, James M. Pientka, Biplob Barman (Corresponding Author) | https://doi.org/10.1016/j.ssc.2023.115136 | Ma 20 |
| JOURNAL PAPER (International) | Highly efficient photon detection systems for noble liquid detectors based on perovskite quantum dots | Scientific Reports (Nature Publishing Group) | Amlan Datta, Biplob Barman, Stephen Magill, Shariar Motakef (Joint Author) | https://doi.org/10.1038/s41598-020-73437-x | O 20 |
| JOURNAL PAPER (International) | Circular Polarization Dynamics during Magnetic Polaron Formation in Type-II Magnetic Quantum Dots | The Journal of Physical Chemistry C | Biplob Barman, James M Pientka, Joseph R Murphy, Alexander N Cartwright, Wu-Ching Chou, Wen-Chung Fan, Rafal Oszwa?dowski, Athos Petrou (First Author) | https://doi.org/10.1021/acs.jpcc.0c02723 | Ma 20 |
| JOURNAL PAPER (International) | Optical Control of Hole Wavefunction in Type-II Magnetic Quantum Dot Structures | The Journal of Physical Chemistry C | Peiyao Zhang, Tenzin Norden, James M Pientka, Rafal Oszwa?dowski, Arman Najafi, Biplob Barman, Yutsung Tsai, Wen-Chung Fan, Wu-Ching Chou, Jong E Han, Igor Z?utic?, Bruce D McCombe, Athos Petrou (Joint Author) | https://doi.org/10.1021/acs.jpcc.9b06264 | Se 20 |

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| JOURNAL PAPER (International) | Measuring the magnetization of a permanent magnet | American Journal of Physics | B Barman, A Petrou (Corresponding Author) | https://doi.org/10.1119/1.5092452 | Fe 20 |
| JOURNAL PAPER (International) | Broadband ultrafast terahertz spectroscopy in the 25 T Split Florida-Helix | Review of Scientific Instruments | Jeremy A Curtis, Ashlyn D Burch, Biplob Barman, A Garrison Linn, Luke M McClintock, Aidan L O'Beirne, Matthew J Stiles, John L Reno, Stephen A McGill, Denis Karaiskaj, David J Hilton (Joint Author) | https://doi.org/10.1063/1.5023384 | Ju 20 |
| JOURNAL PAPER (International) | Pattern transfer to GaAs substrates and epitaxial growth of GaAs nanostructures using self-organized porous templates | Journal of Vacuum Science & Technology B | Archana Kumari, John Byron Hatch, Chaehyun Kim, Biplob Barman, Jaesuk Kwon, Athos Petrou, Hao Zeng, Hong Luo (Joint Author) | https://doi.org/10.1116/1.4943920 | Ma 20 |
| JOURNAL PAPER (International) | Mn ²⁺ -Doped CdSe/CdS Core/Multishell Colloidal Quantum Wells Enabling Tunable Carrier–Dopant Exchange Interactions | ACS nano | Savas Delikanli, Mehmet Zafer Akgul, Joseph R Murphy, Biplob Barman, Yutsung Tsai, Thomas Scrace, Peiyao Zhang, Berkay Bozok, Pedro Ludwig Hernández-Martínez, Joseph Christodoulides, Alexander N Cartwright, Athos Petrou, Hilmi Volkan Demir (Joint Author) | https://doi.org/10.1021/acsnano.5b05903 | No 20 |

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| JOURNAL PAPER (International) | Time-resolved magnetophotoluminescence studies of magnetic polaron dynamics in type-II quantum dots | Physical Review B | B Barman, R Oszwaldowski, L Schweidenback, AH Russ, JM Pientka, Y Tsai, Wu-Ching Chou, WC Fan, JR Murphy, AN Cartwright, IR Sellers, AG Petukhov, I Žutić, BD McCombe, A Petrou (First Author) | https://doi.org/10.1103/PhysRevB.92.035430 | June 2015 |
| JOURNAL PAPER (International) | Magnetoluminescence and valley polarized state of a two-dimensional electron gas in WS ₂ monolayers | Nature nanotechnology | T Scrace, Y Tsai, B Barman, L Schweidenback, A Petrou, G Kioseoglou, I Ozfidan, M Korkusinski, P Hawrylak (Joint Author) | https://doi.org/10.1038/nnano.2015.78 | March 2016 |
| JOURNAL PAPER (International) | Photoluminescence study of Be-acceptors in GaInNAs epilayers | Journal of Applied Physics | Y Tsai, B Barman, T Scrace, M Fukuda, VR Whiteside, IR Sellers, M Leroux, M Al Khalfioui, A Petrou (Joint Author) | https://doi.org/10.1063/1.4906409 | January 2016 |
| JOURNAL PAPER (International) | Probing the nature of carrier localization in GaInNAs epilayers by optical methods | Applied Physics Letters | Y. Tsai, B. Barman, T. Scrace, G. Lindberg, M. Fukuda, V. R. Whiteside, J. C. Keay, M. B. Johnson, I. R. Sellers, M. Al Khalfioui, M. Leroux, B.A. Weinstein, and A. Petrou (Joint Author) | https://doi.org/10.1063/1.4813388 | June 2016 |

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| JOURNAL PAPER (International) | Carrier-dopant exchange interactions in Mn-doped PbS colloidal quantum dots. | Applied Physics Letters | Gen Long, Biplob Barman, Savas Delikanli, Yu Tsung Tsai, Peihong Zhang, Athos Petrou, and Hao Zeng (Joint Author) | https://doi.org/10.1063/1.4743010 | Ju 20 |
| CONFERENCE PAPER/ PROCEEDINGS (International) | Ultrafast Time-Domain Spectrometer in the 25 T Split Florida-Helix Magnet | CLEO: Science and Innovations 2019 San Jose, California United States | Ashlyn D. Burch, Jeremy A. Curtis, Biplob Barman, A. Garrison Linn, Luke M. McLintock, Aidan L. O'Beirne, Matthew J. Stiles, John. L. Reno, Stephen A. McGill, Denis Karaiskaj, and David J. Hilton (Joint Author) | https://opg.optica.org/abstract.cfm?uri=CLEO_SI-2019-STu4F.1 | Ma 20 |
| CONFERENCE PAPER/ PROCEEDINGS (International) | Conventional versus unconventional magnetic polarons: ZnMnTe/ZnSe and ZnTe/ZnMnSe quantum dots | SPIE | B Barman, Y Tsai, T Scrace, JR Murphy, AN Cartwright, JM Pientka, I Zutic, BD McCombe, A Petrou, IR Sellers, R Oszwaldowski, A Petukhov, WC Fan, Wu-Ching Chou, CS Yang (First Author) | https://doi.org/10.1117/12.2064339 | Au 20 |

8. Books

| Category | Book Name | Title | Name of Author | ISSN/ ISBN Number |
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9. Faculty Achievements

| Year | Category of Achievement | Role | National/ International etc. | Name | Date From-To |
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| 2023 | FACULTY INDUCTION PROGRAM ATTENDED | ASSISTANT PROFESSOR | National | 4-Week Faculty Induction/Orientation Programme for "Faculty in Universities/Colleges/Institutes of Higher Education" | 20.Jan.2023 - 18.Feb.2023 |
| 2023 | FACULTY DEVELOPMENT PROGRAM ATTENDED | ASSISTANT PROFESSOR | National | Online two-week refresher course in "Physics" | 27.Feb.2023 - 13.Mar.2023 |
| 2020 | INVITED LECTURES/ RESOURCE PERSON/ PAPER PRESENTATIONS ATTENDED | ASSISTANT PROFESSOR | International | 2020 AAPT Winter Meeting, Orlando, FL | 19.Jan.2020 - 19.Jan.2020 |
| 2019 | WORKSHOP/ SEMINAR/ CONFERENCE ATTENDED | ASSISTANT PROFESSOR | International | Catalyst Course Design Program | 06.Jan.2019 - 06.May.2019 |
| 2019 | WORKSHOP/ SEMINAR/ CONFERENCE ATTENDED | ASSISTANT PROFESSOR | National | Seminar | 17.May.2019 - 17.May.2019 |
| 2019 | WORKSHOP/ SEMINAR/ CONFERENCE ATTENDED | ASSISTANT PROFESSOR | International | Seminar | 16.Apr.2019 - 16.Apr.2019 |
| 2017 | WORKSHOP/ SEMINAR/ CONFERENCE ATTENDED | POST DOCTORATE | International | American Physical Society, March Meeting, 2017 | 13.Mar.2017 - 17.Mar.2017 |
| 2015 | WORKSHOP/ SEMINAR/ CONFERENCE ATTENDED | STUDENT | International | American Physical Society, March Meeting, 2015 | 02.Mar.2015 - 06.Mar.2015 |
| 2014 | WORKSHOP/ SEMINAR/ CONFERENCE ATTENDED | STUDENT | International | American Physical Society, March Meeting, 2014 | 03.Mar.2014 - 07.Mar.2014 |
| 2013 | WORKSHOP/ SEMINAR/ CONFERENCE ATTENDED | STUDENT | International | American Physical Society, March Meeting, 2013 | 18.Mar.2013 - 22.Mar.2013 |
| 2012 | WORKSHOP/ SEMINAR/ CONFERENCE ATTENDED | STUDENT | International | American Physical Society, March Meeting, 2012 | 27.Feb.2012 - 02.Mar.2012 |
| 2011 | WORKSHOP/ SEMINAR/ CONFERENCE ATTENDED | STUDENT | International | American Physical Society, March Meeting, 2011 | 21.Mar.2011 - 25.Mar.2011 |

Dr. BIPLOB BARMAN