

Curriculum Vitae

BRIJ MOHAN

+91-9711216414

www.brijmohan.in

30/5A, 2nd floor, West Patel Nagar, New Delhi-110008

brijmohan6414@gmail.com

Key Skills and Technologies

C/C++, Mathematica, Matlab, R, Maxima, NTL, Linux, HTML, LaTeX

Employment History

- July 2013 – Present: Assistant Professor (Adhoc), Dept. of Mathematics, **Hansraj College**, University of Delhi, Malka Ganj, New Delhi - 110007.
- July 2011 – June 2013: Assistant Professor (Adhoc), Dept. of Mathematics, **Keshav Mahavidyalaya**, University of Delhi, Pitampura, New Delhi - 110034.
- July 2009 – June 2011: Assistant Professor (Adhoc), Dept. of Mathematics, **Kalindi College**, University of Delhi, East Patel Nagar, New Delhi - 110008.

Qualifications

- 2022: Delhi University – **Ph.D.** in Mathematics (**Pursuing**)
- 2021: Harvard University, USA – **Certificate Course** in CS50: Introduction to Computer Science
- 2009: IIT Delhi – **M.Tech.** in Computer Applications
- 2006: Dept. of Mathematics, CCS Uni. – **M.Sc.** in Mathematics
- 2004: N.A.S. College, CCS Uni. – **B.Sc.** in Mathematics

Achievements

1. Qualified **GATE** in CS (Computer Science & Information Technology) in 2018
2. Qualified **NET-CSIR** with **JRF** in Mathematics in June 2007
3. Qualified **GATE** in Mathematics in 2007
4. Qualified **SET (DRDO)** for Scientist-B in 2006

Research Projects

1. RDC HRC Project:HRC/RDC/2021/RP/16 - "**A study of analytical solutions and dynamical behavior for nonlinear evolution equations using efficient methods**" sponsored by Hansraj College during 2022-2023, (Rs. 42000).
2. Innovation Project: HR-304 - "**Study and Security Analysis of Smart Cards**" sponsored by the University of Delhi during 2015-2016, (Rs. 5-Lakh).

Publications

1. Sachin Kumar, Brij Mohan **2022** A generalized nonlinear fifth-order KdV-type equation with multiple soliton solutions: Painleve analysis and Hirota Bilinear technique, Physica Scripta, Q2, IF: 3.081, SCIE,97(12):125214 <https://doi.org/10.1088/1402-4896/aca2fa>
2. Brij Mohan, Dasharath Meena **2022** Application of Hirota's Direct Method to Nonlinear Partial Differential Equations: Bilinear Form and Soliton Solutions, Hans Shodh Sudha, 3(2):31-38, <https://www.hansshodhsudha.com/volume3-issue2/manuscript%203.pdf>

3. Sachin Kumar, Brij Mohan, Raj Kumar **2022** Lump, soliton, and interaction solutions to a generalized two-mode higher-order nonlinear evolution equation in plasma physics, *Nonlinear Dynamics*, **Q1, IF: 5.741**, SCIE. <https://doi.org/10.1007/s11071-022-07647-5>
4. Sachin Kumar, Brij Mohan, Amit Kumar **2022** Generalized fifth-order nonlinear evolution equation for the Sawada-Kotera, Lax, and Caudrey-Dodd-Gibbon equations in plasma physics: Painleve analysis and multi-soliton solutions, *Physica Scripta*, **Q2, IF: 3.081**, SCIE, 97(3):035201. <https://doi.org/10.1088/1402-4896/ac4f9d>
5. Sachin Kumar, Brij Mohan **2022** A novel and efficient method for obtaining Hirota's bilinear form for the nonlinear evolution equation in (n+1) dimensions, *Partial Differential Equations in Applied Mathematics*, DOAJ, 5:100274. <https://doi.org/10.1016/j.padiff.2022.100274>
6. Sachin Kumar, Brij Mohan **2021** A study of multi-soliton solutions, breather, lumps, and their interactions for Kadomtsev-Petviashvili equation with variable time coefficient using Hirota method, *Physica Scripta*, **Q2, IF: 3.081**, SCIE, 96(12):125255. <https://doi.org/10.1088/1402-4896/ac3879>
7. Sachin Kumar, Amit Kumar, Brij Mohan **2021** Evolutionary dynamics of solitary wave profiles and abundant analytical solutions to a (3+1)-dimensional burgers system in ocean physics and hydrodynamics, *Journal of Ocean Engineering and Science*, **Q1, IF: 4.803**, SCIE. <https://doi.org/10.1016/j.joes.2021.11.002>
8. Donghoon Chang, Pranav Jain, Brij Mohan **2019** Revenue Generation Strategy through Selfish Mining focusing Multiple Pools of Honest Miners: Revisiting Eyal and Sirer (2014) Selfish Mining Strategy. <https://doi.org/10.13140/RG.2.2.31415.85928>

Research/Internship Guidance

1. As **Principal Investigator** in the Research Project: "A study of analytical solutions and dynamical behavior for nonlinear evolution equations using efficient methods.", 2022(Ongoing), RDC, Hansraj College, DU, Delhi.
2. As **Summer Internship Supervisor** of Arju Agarwal (Amity University, Kolkata): "Working with Computer Algebra System through Mathematica", w.e.f May 27- July 20, 2019.
3. As **Internship Supervisor** of Pranav Jain (IIIT Okhla, Delhi): "Revenue Generation Strategy through Selfish Mining focusing Multiple Pools of Honest Miners: Revisiting Eyal and Sirer (2014) Selfish Mining Strategy", 2019.
4. As **Principal Investigator** in the Innovation Project: "Study and Security Analysis of Smart Cards", 2015-2016, University of Delhi, Delhi.

Administrative Assignments

1. **Member**, Collaboration & Community, Committee of RDC, Hansraj College, 2022-2023.
2. **Member**, ICT Committee, Hansraj College, 2021-2022.
3. **Member**, Portal Committee, Hansraj College, 2015-2016.
4. **Convenor**, Vision Society (Hans Vision, Hansraj College), 2014-2015.
5. **Convenor**, Pixels Society, Hansraj College, 2014-2015.
6. **Stall Guide**, Antardhvani-Hansraj College, 2015.

Lecture Delivered

1. On "**Latex**" in two-day's workshop, organized by Operation Research Society of India (ORSI): Meerut chapter & Vardhman College, Bijnor, UP on 25-26th February, 2023.
2. On "**Mathematica - A System For Modern Technical Computing**" for FDP organized by MHFDC, Hansraj College, DU on August 21-26, 2020.

3. On “**Managing Online Classes: Teaching Learning Tools and e-Content Generation**” for FDP organized by Bharti College, DU on August 17-22, 2020.
4. On “**Microsoft Teams**” for the faculty members of Hansraj College, organized by MHFDC, Hansraj College, DU on August 9, 2020.
5. On “**Applications of Computer Algebra System - Mathematica**” in One-day Workshop, organized by MMH College, Ghaziabad, UP on September 29, 2018.
6. On “**Mathematica: A Tool for Computational Analysis**” in Faculty Development Programme, organized by Department of Mathematics, Hansraj College, University of Delhi on March 10-11, 2018.
7. On “**Digital Literacy: An Introduction to ICT Skills**” in Faculty Development Programme, organized by Department of Physics & Electronics, Hansraj College, University of Delhi on September 15-17, 2017.
8. On “**Understanding Interrelations between the Topics of Mathematics**” & “Importance of Prime Numbers & their Utilization in the Modern Era” in TGT Teachers Training, Bal Bharti Public School, Pitumpura, on 23rd May and 26th May, 2017.
9. On “**LaTex & Website Designing**” in National Workshop, organized by the Department of Mathematics, Shaheed Bhagat Singh College, University of Delhi on August 11-12, 2016.
10. On “**Illustration through Intuitive Examples**” in Workshop on Foundation Course, at Cluster Innovation Centre, University of Delhi on July 15, 2013.
11. As Guest faculty in **Bhaskaracharya College of Applied Sciences**, University of Delhi, 2012-2013.
12. As Guest faculty in **Dayal Singh College**, University of Delhi, 2011-2012.
13. As Guest faculty in **PGDAV (eve.) College**, University of Delhi, 2011-2012.

Workshops, Conferences, FDPs Talks (Organized)

1. Seminar on “**Annual Academic Meet: Shri Shanti Narayan Mathematics Conclave-2021**” of Department of Mathematics, Hansraj College on March 7-8, 2021.
2. Workshop on “**How to plan projects: Investigatory approach to learning and hands on experience with 3M’s-Maple, Mathematica and Matlab**” in Department of Mathematics, Hansraj College, University of Delhi on February 9, 2021.
3. Talk on “**Educational and Political Challenges before Young India: Dr. Ambedkar’s Insight**” under the aegis of Ambedkar Study Circle in Hansraj College, University of Delhi on February 18, 2019.
4. FDP on “**Software Packages for Mathematical Sciences**” in Department of Mathematics, Hansraj College, University of Delhi on November 14-19, 2018.
5. FDP On “**Mathematica : A Tool for Computational Analysis**” in the Department of Mathematics, Hansraj College, University of Delhi on March 10-11, 2018

Workshops, Conferences, FDPs (Participated)

1. International Conference on **Recent Developments in Theory, Computation & Application of Differential Equation**, January 21-23, 2019, South Asian University, New Delhi, Delhi.
2. Workshop on **LaTex** organized by Department of Mathematics, Hansraj College, University of Delhi on April 9, 2016.
3. National Conference on **Advances in Mathematics**, 7-8 March, 2014, Hansraj College, University of Delhi, Delhi.
4. Workshop on **Foundation Course Building Mathematical Ability**, 24-26 June, 2013, University of Delhi, Delhi.
5. National workshop on **Optimization Techniques & Their Applications**, 5-11 June, 2013, MNNIT Allahabad.

Arts & Culture

1. Achieved the first prize for Mathematical Poetry “**Duvidhaa**” in **National Mathematics Day** by Department of Mathematics, University of Delhi, 22 December 2022.
2. Awarded an honor for realistic story writing “**Zid ki Udaan**” by Hindi Academy, Government of Delhi published in Indraprasth Bharti, December 2016.
3. Enacted in play themed “**Surgery**” in “Chekhov ki Duniya” at Hansraj College, March 24, 2017.
<https://www.youtube.com/watch?v=nD3HO6ubHQM>
4. Play musical instruments such as Keyboard, Guitar, Flute, Mouth Organ, Cajon.
5. Write Hindi/English Articles, Stories.

Other Details

Father’s Name : Mr. Mam Chand
Mother’s Name : Late Mrs. Jag Roshni
DOB : 01 January 1984
Marital Status : Single
Language Known : Hindi, English
Permanent Address : 106, Achhrounda, Partapur, Meerut, Uttar Pradesh – 250103.
Current Address : 30/5A, 2nd Floor, West Patel Nagar, New Delhi, Delhi – 110008.

Hobbies : Hindi Poetry: www.brijpoems.blogspot.in.
Chess (Captain College Team in Graduation 2002-2004)
Photography: www.brijmohan.in
Short Hindi Stories: **Zid ki Udaan, Dibiya**, and others
Web Development, Digital Contents, Blogs
Social Work:
1. [iPA_inspired Progressive Association | Meerut](#) (Founder)
2. Ambedkar Mission Siksha Trust, Delhi

I sincerely acknowledge that all details furnished in this CV are true to the best of my knowledge.

(BRIJ MOHAN)