

CURRICULUM VITAE

Dr. Biru Rajak

Assistant Professor

Department of Computer Science

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Research Area: IoT, Blockchain, Traffic Management

Professional Experiences

- 4.5+ years as Assistant Professor at Asansol Girls' College, Asansol (affiliated to Kazi Nazrul University)(Dec, 2016 to Till date)
- Research Scholar at NIT Allahabad, under the The Ministry of Electronics and Information Technology (MeitY), HRD Ministry (Jan, 2015 – Dec, 2016).
- 3.5 years as Senior System Engineer at Tata Consultancy Services (June, 2011 - Jan 2015).
- 6 months as a software developer at CSIR, New Delhi (Jan 2011 – June 2011).

Role & Responsibilities

- Coordinator of Computer Science at Asansol Girls' College
- Coordinator of BCA at Kazi Nazrul University
- Member at BOS of Computer science and BCA at Kazi Nazrul University
- Sports Convener at Asansol Girls' College
- Sports committee member at Kazi Nazrul University
- Convener of Public Examination at Asansol Girls' College

Academic Details

Sl. No.	Qualification	Institute	Year
1	Ph.D.	MNNIT Allahabad	2021
2	MCA	MNNIT Allahabad	2011
3	B.Sc. (H) Comp. Sc.	Visva Bharati	2008
4	12 th	Kendriya Vidyalaya Asansol (CBSE)	2005
5	10 th	Kendriya Vidyalaya Asansol (CBSE)	2003

Award/ Achievements

- Best performer at Allahabad University during 123rd Orientation Program.
- Winners of Intra NIT (MNNIT Allahabad) PG badminton Tournament.
- Volley Ball, Kho-Kho and Badminton (team) Captain (MCA) at MNNIT Allahabad.
- Represented school at State Level in Volleyball, Basket Ball and Kho-Kho.
- House and School Caption at school level.

Invited Lecture

- Delivered as an Expert lecture on **“Smart Vehicle for Smart Cities using IoT”** (21st March, 2021) in Workshop on **“Technologies Behind Smart City: An IoT Perspective (IoSCT-2021)”** from 20th March, 2021 – 24th March, 2021 organized by the Department of Computer Science & Engineering Motilal Nehru National Institute of Technology Allahabad Prayagraj-211004.
- Delivered as an Expert lecture on **“Transportation of Emergency Vehicle using IoT”** (22nd March, 2021) in Workshop on **“Technologies Behind Smart City: An IoT Perspective (IoSCT-2021)”** from 20th March, 2021 – 24th March, 2021 organized by the Department of Computer Science & Engineering Motilal Nehru National Institute of Technology Allahabad Prayagraj-211004.
- Delivered as an Expert lecture on **“Big Data Analytics”** in TEQIP-III Sponsored Five days Online Workshop cum Faculty Development Program on Data Sciences, May 04-08, 2020, MNNIT Allahabad.
- Delivered as an Expert lecture on **“Role of IoT in Smart Traffic”** in Five days Online Workshop on Emerging IT Technologies, May 29 - June 02, 2020, MNNIT Allahabad.
- Conducted hands-on session on workshop on Computational Intelligence WCI-2019 from June 25- July 5, 2019 by CSED MNNIT Allahabad.
- Conducted hands-on session on **“Image and Video Analytics”** in TEQIP-III Sponsored workshop from March 29- April 2, 2018 by CSED MNNIT Allahabad.
- Delivered as an Expert lecture on **“Internet of Things”** at 1 month National Summer Internship program form at MNNIT Allahabad.
- Delivered as an Expert lecture on **“Android”** at 1 month National Summer Internship program at MNNIT Allahabad in 2017.
- Conducted Hands-on Lab session on **“Distributed and Cloud Computing”** at MNNIT Allahabad in 2016.

Others Notable Inputs

- Worked as External Practical Examiner for ISC Computer Examination.
- Head Examiner at various Practical and Theory Examination at Kazi Nazural University.
- Providing ICT/ Technical help to nearby Colleges.
- Nodal officer of Student credit card at Asansol Girls’ College launch by Govt. of West Bengal.

Technical Expertise

- Programming Language : C, C++, Java, Java Script, Python
- O/S and Platform : Windows XP, Windows Vista, Windows 7, Ubuntu, Cent Os, Android

- Technologies : Core Java, JDBC, JavaScript, SQL, HTML, CSS, XML, IoT Blockchain,
- Tools/IDE : MS (All-Office, Excel, Power point and others), Open Office, Latex, VMware, RAD 9.0,Eclipse,Clearcase, Microsoft SQL Server Management Studio, SVN, Clear-Case, Android Studio
- Databases / Structures : MySQL, Oracle, Microsoft SQL Server, DB2

Training and Internship

Council of Scientific and Industrial Research (**MHRD**): **6 months** (Jan 2011–June 2011)
 Did Six months internship in ASP. Net at Council of Scientific and Industrial Research (**MHRD**). Project is a symposium management system for managing and organizing the symposium for all Indian scientist of CSIR. It is published to web on intra net in a secured manner. It enables to create a central repository for symposium under the supervision of Scientist S.Nigam

Summer Internship: **IIT Bombay** **2 months** (June 2010–July 2010).
 Did Two months internship at Educational Animation tool under the ministry of Human Resource and Development. This project deals about the educational tool for primary classes for education purpose developed in open source Blender under the supervision of Prof. D.B. Pathak.

Workshop/OP/RC/ FDP attended

1. One Week AICTE Training And Learning (ATAL) Academy Online Elementary FDP on "SOCIAL ENTERPRISE MANAGEMENT" from 11-06-2021 to 15-06-2021 at National Institute of Technology Jamshedpur.
2. One Week (Online) Faculty Development Programme on Creating Online Learning Platform, jointly organized by Department of Education and HRDC, Guru Ghasidas Vishwavidhyalaya (A Central University) under PMMMNMTT, from March 22-28, 2021.
3. Fourteen days Interdisciplinary Refresher Course on Engineering and Technology, HRDC, MIZORAM UNIVERSITY from 1st -14th December 2020.
4. One week FDP on Moodle Learning Management System training organized at Bodoland University in association with Spoken Tutorial Project, IIT Bombay from May 11th to May 15th 2020.
5. One Month UGC sponsored Orientation Program organised by UGC-HRDC, University of Allahabad from Feb 14- March 13, 2019.

Webinar Conducted

S.No	Topic	National/ International	Organiser	Date	Role
1	Nutrition & Diet Perspective: COVID 19 Pandemic Scenario	National	Asansol Girls College	6 th June 2020	Technical Coordinator
2	Intellectual Property Rights: Entrepreneurial Mindset and Research Ethics	National	Asansol Girls College	12 th June , 2020	Convener
3	Corona Pandemic- Searching hope and responsibilities	International	Asansol Girls College	20 th June, 2020	Meeting Coordinator
4	Biodiversity and Climate Change: A Recent Context	National	Asansol Girls College	25 th June , 2020	Technical Coordinators
5	Recent Advances of Sensors: Bio-sensing for COVID-19 Kits and	International	Asansol Girls College	30 th June, 2020	Technical Team

	Spectroscopic Tools for Detection of Toxic Metals				
6	Data Science: Big Data Analytics	International	Asansol Girls College	2 nd July, 2020	Convener
7	Citations, References and Research Ethics	National	BB College & Asansol Girls College	13 th & 15 th Sept, 2020	Technical Team
8	Manav Mulya aur Harishankar Parsai ka Shaitya	International	Asansol Girls College	26 th June 2021	Technical Coordinator

Paper Presented in National/State Seminar

- 1 Paper presented on topic “**Where Sanskrit meets Computer Science**” in UGC sponsored a 2-day National Seminar from 14 Jan -15 Jan, 2017 at Asansol Girls College.
- 2 Paper presented on topic “**The Challenges and Impact of Digitization in Higher Education**” in one day State Level Seminar on 19th April 2017 at Asansol Girls' College.

Research Publications

Journal (Scopus/ESCI/WoS/UCG CARE List)

1. **Biru Rajak** “Challenges in Named Data Networking” in Indian Journal of Natural Sciences, ISSN No :0976-0997 Vol.12 / Issue 66 / June / 2021 (**Web of Science**)
2. **Biru Rajak**, Shrabani Mallick & Kumar Gaurav “Role of Information Communication and Technology at Kumbha Mela –2019 (PRAYAGRAJ)” Elementary Education Online ISSN:1305-3515 (**Scopus Indexed**)
3. Shwetank Avikal, Amit Kumar Singh, Nithin Kumar KC, **Biru Rajak** & Gaurav Kumar Badhotiya, “A Decision-Making Approach for Installation of Telecom Tower” in Materials Today: Proceedings (**Elsevier - Scopus Indexed**)
4. **Biru Rajak**, Dekate Shantanu Pradip, Aakash Chandhoke & Dharmender Singh Kushwaha “Simulation of Emergency Vehicle for Shortest Path in Sumo”. New Horizons, Vol-18, pp-435-442, 2021, ISSN No. 2277 – 5218(only print) (**UGC CARE List**).
5. Shrabani Mallick, **Biru Rajak**, Ashish Kumar Verma & Dharmender Singh Kushwaha. “A Best Effort Classification Model For Sars-Cov-2 Carriers Using Random Forest”. IJCSNS International Journal of Computer Science and Network Security, Vol.21, No.1, January 2021. <https://doi.org/10.22937/IJCSNS.2021.21.1.5> (**ESCI Indexed Journal**)
6. **Biru Rajak** & Dharmender Singh Kushwaha. "Creating a Dynamic Real Time Green Corridor and Assessing its Impact on Normal Traffic Flow." Procedia Computer Science 171 (2020): 2-11, 2020. DOI:10.1016/j.procs.2020.04.002 (**Scopus Indexed Journal**)
7. **Biru Rajak** & Dharmender Singh Kushwaha, "An Efficient Emergency Vehicle Clearance Mechanism for Smart Cities". Journal of Mechanics of Continua and Mathematical Sciences, Vol.-14, No.-5, September - October (2019) pp 78-97 ISSN (Print) 0973-8975. DOI: 10.26782/jmcs.2019.10.00007 (**ESCI Indexed Journal**)

8. **Biru Rajak** & Dharmender Singh Kushwaha, “An Efficient Congestion Avoiding Approach for Optimal Path Finding for Emergency Vehicle”, Recent Advances in Computer Science and Communications (2020)13:1.(ISSN2666-2558) DOI: 10.2174/2666255813666191227144637 (**Scopus Indexed Journal**)

Conference/ Book Chapter

- 1 **Biru Rajak**, Dharmender Singh Kushwaha, “Traffic Control and Management Over IoT for Clearance of Emergency Vehicle in Smart Cities” In: Fong S., Akashe S., Mahalle P. (eds) Information and Communication Technology for Competitive Strategies. Lecture Notes in Networks and Systems, vol 40. Springer, Singapore, 2018. DOI: 10.1007/978-981-13-0586-3_12 (**Springer - Scopus Indexed**)
- 2 **Biru Rajak**, Aprna Tripathi, Dharmender Singh Kushwaha, "A Real-Time Road Congestion-Based Hybrid Approach for Finding the Optimized Route”, Proceedings of the Fourth International Conference on Microelectronics, Computing and Communication Systems (pp.83-97) DOI: 10.1007/978-981-15-5546-6_8 (**Springer - Scopus Indexed**)