Name: Dr. Raj Kumar Samanta

Department: CSE / CSD

Contact Nos.: 9333336958

Qualifications: Ph.D

Designation: Professor

VIDWAN ID: 187733

Experience (Teaching / Research / Industry, in years): 23

Date of Joining at the Present Institution: 2nd May 2013

Examinations Cleared: NET-CSIR/GATE

Qualifications Summary (Reverse chronological order):

Degree	Institute	From – To	Subjects
B.Tech	REC (NIT) Hamirpur	1991 - 1995	CSE
M.Tech.	MANIT Bhopal	1999 - 2003	Energy Engg
Ph.D	NIT Durgapur	2008 - 2011	CSE

Experience Summary (In chronological order):

Designation, Organization, Date From – Date To

Sl. No.	Name of Employer	Designation of Post	Duties Performed	Period
a. Teaching				
1	**Dr. BC Roy Engg. College, Durgapur**	Professor	Teaching, Administration	6th Oct. 2020 to Till date
2	**Dr. BC Roy Engg. College, Durgapur**	Professor (HOD IT)	Administration and Teaching	1st Sept. 2019 to 6th Oct 2020
3	**Dr. BC Roy Engg. College, Durgapur**	Associate Professor	Teaching and Research	2nd May 2013 to Sept 2019
4	**SIT Siliguri**	Associate Professor	Principal Incharge, Teaching, Research	2nd Jan. 2013 to 15th Mar. 2013
5	**NIT Sikkim, Govt. of India**	Faculty	**Faculty Incharge Academic Affairs** (FIAA), **Faculty Incharge Students' Affairs** (FISA), **Central Counselling Board 2012, MHRD, Govt. of India, Reporting Center**	2nd Feb. 2012 to 21st Dec. 2012

			IC (MHRD, GOI), Teaching, Exams Controller. Faculty Incharge Research & Consultancy Committee (FIRCC).	
6	MSIT (TIG), Kolkata	Assistant Professor	Teaching, Administration, Incharge Infosys Campus connect.	8th July 2011 – 1st Feb. 2012
7	HIT Haldia	Assistant Professor	Teaching and Research	17th Feb 2011 to 7th July 2011
	b. Teaching & Other			
1	**NIT Durgapur, Govt. of India**	Inst. Res. Scholar	Research, Teaching	1st Feb. 2008 to 15th Feb. 2011
2	**IISS (ICAR) Bhopal, GOI**	Computer Programmer	S/W Dev, ARIS Cell, Administration	29th Sept. 1997 to 18th Jan. 2008

Specialization/Research Interest: Computer Networks, Intelligent Systems/Service/App

Awards & Recognitions
Best paper/ scholarship/Position in university exam / awards while at industry/ other organizations etc.

MHRD Scholarship for Ph.D

Courses taught:

1. Introduction to Computing (C) (Th & Prac)
2. Data Structure and Algorithms (Th & Prac)
3. Computer Organisation   (Th & Prac)
4. Computer Architecture   (Th & Prac)
5. Computer Networks   (Th & Prac)
6. Advanced Computer Architecture (PG)
7. Teaching Pedagogy and Research Methodology (PG)

Online Mode of Teaching:

The Faculty member needs to specify the online teaching/ assessment method adopted. (Link to any faculty created resources for Lecture notes / PPT/ Video Lecture etc. in Google Drive / Weblink etc):

Teaching through Google Meet, Assessment through online VIVA/MCQ.

PPT Link:
https://docs.google.com/presentation/d/139s7rQyJf4mgn8LFikA42yxfMBWalcDf/edit?usp=sharing&ouid=112058133010809703516&rtpof=true&sd=true

Publications:

Journal:

1. Sadhukhan, B., Mukherjee, S., Sarkar, D. **Samanta, R.K.**, *et al.* "Investigating the relationship between earthquake occurrences and global temperature fluctuation patterns.", *Arab J Geosci* **14,** 1932 (2021). (DOI: https://doi.org/10.1007/s12517-021-08296-5).

2. Sadhukhan, B., Mukherjee, S., Banerjee, S., **Raj Kumar Samanta**. "Multifractal, nonlinear, and chaotic nature of earthquake and global temperature.", *Arab J Geosci* **14,** 1811 (2021). (DOI: https://doi.org/10.1007/s12517-021-08153-5).

3. Somenath Mukherjee, Rajdeep Ray, **Rajkumar Samanta**, Mofazzal H Khondekar, Goutam Sanyal (2017), "Nonlinearity and chaos in wireless network traffic" ***Chaos, Solitons & Fractals***, Vol. 96, pp. 23-29, ISSN: 0960-0779, (DOI: https://doi.org/10.1016/j.chaos.2017.01.005).

4. Somenath Mukherjee, Rajdeep Ray, **Raj Kumar Samanta**, Mofazzal H. Khondekar, Gautam Sanyal (2017), "Dynamic Admission Control Based on Effective Demand for Next Generation Wireless Networks", International Journal of Electronics and Communication Engineering Vol:11, No:4, pp. 489-495, (DOI: waset.org/Publication/10008403).

5. **Raj Kumar Samanta** (2014), "Few Aspects and Research Issues of Next Generation Wireless Networks", *The Bulletin of Engineering and Science, Dr. B.C. Roy Engineering College Durgapur Research Journal (ISSN: 0974-7176)*, Vol. 6, No. 1, pp.16-20, 2014.

6. **Rajkumar Samanta**, Abhishek Pal (2014), "An Approach for the Integration of the Existing Wireless Networks", World Academy of Science, Engineering and Technology International Journal of Computer, Information, Systems and Control Engineering Vol:8 No:9, pp. 1575 – 1582, 2014.

7. Somenath Mukherjee, **Raj Kumar Samanta**, Gautam Sanyal (2014), "Stochastic Estimation of Wireless Traffic Parameters", International Journal of Computer, Information, Systems and Control Engineering Vol:8 No:8, pp. 1422 – 1427, 2014.

8. **Raj Kumar Samanta**, Sanyal, G. and Bhattacharjee, P. (2010), "Analysis of Cellular Wireless Networks with Non-Classical Traffic and Channel Reservation", International Journal of Computers and Applications, Vol. 34(3) pp. 157- 165, 2012. (**Scopus**)

9. **Raj Kumar Samanta**, Partha Bhattacharjee, Gautam Sanyal, "QoS Evaluation of Cellular Wireless Networks with Non-Classical Traffic and Queuing Handoff Requests", International Journal of Computers Science, Vol. 9, No. 4, pp. 11-20, 2010. (**WoS**)

10. **Raj Kumar Samanta**, Sanyal, G. and Bhattacharjee, P. (2009), "Modeling Cellular Wireless Networks Under Gamma Inter-Arrival and General Service Time Distributions", International Journal of Electrical and Computer Engineering, Vol. 5, No. 2, pp. 86-93, 2010.

11. **Raj Kumar Samanta**, Sanyal, G. and Bhattacharjee, P. (2010) 'A new dynamic guard channel reservation scheme for cellular wireless networks', Int. J. Communication Networks and Distributed Systems, Vol. 5, No. 4, pp.429–443, 2010. (**Scopus**)

12. **Raj Kumar Samanta**, Sanyal, G. and Bhattacharjee, P. (2009), "Performance Analysis of Cellular Wireless Network by Queuing Priority Handoff calls", International Journal of Electrical and Electronics Engineering, Vol. 3, No. 8, pp.

474-479, 2009.

13. S. Ahmed, **R.K. Samanta**, M.M. Pandey, A R Ansari, "WindPower – A Tool for Optimum Site Matching of a Wind Turbine", Journal of Institute of Engineers (India), Vol 87, pp. 51-56, April 2006.

Conference:

1. Somenath Mukherjee, Rajdeep Ray, Mofazzal H Khondekar, **Rajkumar Samanta**, Goutam Sanyal (2017), "Characterisation of wireless network traffic: Fractality and stationarity", IEEE Third International Conference on Research in Computational Intelligence and Communication Networks (ICRCICN), pp. 79-83, 3-5 Nov. 2017, Kolkata, India, (**DOI:** 10.1109/ICRCICN.2017.8234485).

2. Arnab Das and **Raj Kumar Samanta**,"Development of new unicast routing protocol for MANET" *International conference on current developments in mathematics and mathematical sciences organized by Calcutta Mathematical Society (ICCDMMS-2014)* December 19-21, 2014 Calcutta.

3. Arnab Das and **Raj Kumar Samanta**, "A Novel Beacon-Less Unicast Routing Protocol For MANET", One day national seminar on Co-operative System for Next Generation Networks, The Institute of Engineers (India), Durgapur Local Center, 27th April 2014.

4. **Raj Kumar Samanta**, Partha Bhattacharya, Gautam Sanyal, "Impact of Queue Size Under Different Mobility on the Performance of Cellular Wireless Network", International Conference on Systemics, Cybernetics and Informatics (ICSCI – 2011), Jan. 5-8, Hyderabad, 2011.

5. **Raj Kumar Samanta**, Partha Bhattacharya, Gautam Sanyal, "Novel Approach for Channel Reservation to Improve QoS in Cellular Wireless Networks", WorldComp International Conference on Wireless Networks (ICWN'10), July 12-15, Las Vegas, USA, 2010.

6. **Raj Kumar Samanta**, Partha Bhattacharjee, Gautam Sanyal, "Mathematical Modeling for Evaluation of Quality of Service Parameters in Next Generation Cellular Wireless Networks", ACEEE International Conference on Advances in Computing, Control, and Telecommunication Technologies (ACT 2009), Dec. 28-29, pp. 767-771, Trivandrum, Kerala, India, 2009 (**WoS**).

7. **Raj Kumar Samanta**, Partha Bhattacharjee, Gautam Sanyal, "Performance Analysis of Cellular Wireless Networks with Non-Classical Traffic with and without Channel Reservation", Proc. IASTED International Conference on Communication Systems, Networks and Applications (CSNA 2009), Oct, 12-14, Beijing, China, 2009 (**WoS**).

8. **Raj Kumar Samanta**, Partha Bhattacharjee, Gautam Sanyal, "Study and Analysis of Cellular Wireless Networks with Multiclass Traffic", Proc. IEEE International Conference on Advanced Computing (IACC 2009), pp. 305-310, March 06-07, Patiala, India, 2009 (**WoS**).

9. **Raj Kumar Samanta**, Partha Bhattacharjee, Gautam Sanyal, "A Generic Model for prediction of mobility of mobile nodes in cellular Networks", Proc. International Conference on Advanced Computing & Communication Technologies, November 08-09, Panipat, India, 2008.

Book:

1. **Raj Kumar Samanta** - C++ For the Beginners, LAP Lambert Academic Publishing, Germany, ISBN: 978-3-659-95996-7.

Book Chapter:

Supervision of Ph.D:

Ph.D

1. Somenath Mukherjee, **Dr. Raj Kumar Samanta**, "Development of Suitable Admission Control Algorithm in Multiclass Wireless Environment", 2018, NIT Durgapur (Completed).

Invited Lectures:

1. Webinar on GATE - Gateway to Dream Career: Why & How, 30th Oct. 2021 organised by CSE Dept., BCREC Durgapur.
2. A Short Term Training on "Data Communication and its Applications" - sponsored by Technical Education Quality Improvement Program (Phase II), a World Bank Project approved by Ministry of HRD organised by The Department of CSE, Bankura Unnayani Institute of Engineering (BUIE), Pohabagan PO - Bhagabandh, Dist - Bankura - 722 146, 14-18 April, 2014
3. Seminar on "Cooperative System for Next Generation Networks organised by The Institute of Engineers (India), Durgapur Local Centre, 27th April 2014.
4. "Network Simulation using NS-2" at National Institute of Technology, Durgapur in a workshop entitled "Network Security and its applications in Soft-computing techniques", held in the month of July 2008.
5. "Simulating Network Traffic using NS-2" at National Institute of Technology, Durgapur in a workshop entitled "Performance Evaluation and Routing using IPv6 techniques", held in the month of July - August 2008.

Participation in seminar/conference/symposium/workshop/discussion meeting

1. Participated in a webinar on "How to Write a Good Research Paper" on Oct 30, 2021 organised by Indian Institute of Material Management, Jaipur and Nirwan University.
2. Participated in a webinar on "Creative Thinking: Ways and Means" on Oct 28, 2021 organised by Indian Institute of Material Management, Jaipur and Nirwan University.
3. AICTE-Leadership in Teaching Excellence (LITE) faculty training Aug. 23 - Nov. 30, 2021.
4. Participated in a webinar on "Climate Change: Meaning, Evidences, Causes, Consequences & Measures" on Oct 14, 2021 organised by Indian Institute of Material Management, Jaipur and Nirwan University.
5. Participated in a webinar on "How entrepreneurs can Leverage Incubation Support for Startup Building: Know All You Need to Know About the Startup Incubation Support" on Oct 08, 2021 organised by Indian Institute of Material Management, Jaipur and Nirwan University.

6. "Energy Efficient and Environment Friendly Porous Radiant Burner for Cooking and Industrial Applications" on Sep 30, 2021 organised by Indian Institute of Material Management, Jaipur and Nirwan University.
7. Webinar on Augmented & Virtual Reality – Applications, June 19, 2021.
8. Webinar on Modelling and Evaluation of Data Science Model: Decision Tree a Supervised Learning Algorithm on 8th May 2021.
9. Webinar on Post Covid-19 Marketing Senarios, 12th May 2020.
10. Webinar on Culture and Communications in the Post Covid Times on 7th July 2020.
11. Webinar on Project Management in IT on 30th May 2020.
12. Webinar on World Environment Day on 5th June 2020.
13. Webinar on Learning Scope:2020 and Beyond 5th June 2020.
14. Webinar on Machine Learning using Python 2nd May 2020.
15. Webinar on Blockchain on 11th May 2020.
16. Webinar on Tools and Trends in AI, ML and Data Science on 29th August 2020.
17. Webinar on Trend on Modern Communication Engineering systems on 18th Sept 2020.
18. Webinar on Artificial Intelligence and Data Science on 20th March 2021.
19. Webinar on SIMULATION OF MACHINE LEARNING USING OPEN-SOURCE TOOLS on 13th March 2021.
20. Webinar on INTELLIGENT SYSTEMS AND NETWORKING on 30th March 2021.
21. Webinar on Awarness webinar on Outcome Based Education and Accreditation for the Engineering Colleges in West Bengal, 15th December 2020.

Participation in faculty development programmes

1. 5 days Online Faculty Development on Modern Applications of Artificial Intelligence and Machine Learning in Hardware and Software, Sept. 14 – 18, 2021, BCREC Durgapur.
2. One-Week Online Faculty Development Programme (FDP) on Emerging Trends in the Applications of Machine Learning and Artificial Intelligence-(ETAAM-2021) (21st to 25th June 2021), organized by the Department of Information Technology, GMR Institute of Technology, Rajam, Andhra Pradesh, India.
3. Webinar on Fake News and Image Detection on Social Media, 15-16th March 2021.
4. FDP on Artificial Intelligence using Python, 14-19 Sept. 2020.
5. FDP on Artificial Intelligence and Machine Learning on 21-26 Sept. 2020.
6. FDP on Recent Trends and Advances in Computational Intelligence 2020 on 27-31 October 2020.

Organization of events (Dr. B. C. Roy Engineering College)
1. Coordinator, 5 Days FDP on 3D Printing and Design, Aug. 17 -21 , 2021, BCREC Durgapur.
2. Webinar on Machine Learning and its Applications, 15th May 2021.
3. Webinar on Machine Learning and its Applications, 20th Feb 2021.
4. Webinar on 3D Printing Technology, 09th Jan 2021.
5. Webinar on Engineering Happiness, 07th Sept 2020.
6. Workshop on Data Science 03th March 2020.

7. **Co**-ordinator, a two days' workshop on "**Ethical Hacking**" organised at NIT Sikkim September 2012.
8. **Convenor: "Nanotechnology - New Opportunities and Challenges"** organised by The Institute of Engineers (India), Durgapur Local Centre, on March 29, 2015

Participation in administrative committees (selected)
1. Program Coordinator, AICTE's LITE, 2021
2. Program Coordinator CSD, 2021
3. Coordinator, B.Tech. (CSE), 2021
4. Course Assessment Committee (CAC), 2021
5. Sponsorship Chair - MESIICON 2022
6. HOD IT 2018-20
7. Coordinator, NBA, CSE, 2014 - 18
8. Coordinator, PG CSE 2015-17

Project Ideas Submitted to Govt. Agencies/ On-going Projects / Research Ideas under preparation & execution

Membership of professional bodies: IEEE, IETE, IEI, CSI, MGMI etc.

1. Fellow – Institute of Engineers (I).
2. Member - Scientific and Technical Committee & Editorial Review Board, World Academy of Science, Engineering and Technology, International Scientific Committee, Riverside, Connecticut, CT 06878, USA.
3. IAENG International Association of Engineers, 2021
4. Reviewer : AMSE Press France
5. Reviewer : INFOCOMP Journal of Computer Science, **ISSN**: 1807-4545, Brazil