

Dr. Sajal Saha
7th January 1980
Kolkata, India



CONTACT ADDRESS

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EDUCATION

| Degree | University / Board | Year |
|----------------------------|---|------|
| PhD(Tech) | National Institute of Technology, Durgapur | 2016 |
| ME(Information Technology) | Maulana Abul Kalam Azad University of Technology(formerly WBUT) | 2007 |
| MCA | Sikkim Manipal University of Health Medical and Technological Science | 2004 |
| B.Sc (Honours in Physics) | Calcutta University | 2001 |
| 12 th | West Bengal Council of Higher Secondary Education | 1997 |
| 10 th | West Bengal Board of Secondary Education | 1995 |

GLOBAL CERTIFICATION

1. IBM Certified Enterprise Design Thinking Practitioner
2. IBM Certified Enterprise Design Thinking Co-Creator
3. IBM Certified Enterprise Design Thinking Team Essential for AI
4. AWS Academy Certified Educator
5. Dale Carnegie Certified Trainer for High Impact Teaching Skills.

VISITING FACULTY

1. NIT Nagaland from February 2018- May 2018
2. Kaziranga University from March 2022 till date.

EMPLOYMENT HISTORY

| Organization | Designation | Period | | Duration |
|-------------------|----------------------|----------------|---|-----------|
| Adamas University | Professor(CSE Dept.) | 2022 till date | HOD- CSE ,Director, Product & Innovation | 2.5 years |

| | | | | |
|---|--------------------------------|-----------------------------|--|-------------------|
| Meghnad Saha Institute of Technology, Techno India | Principal | 2021-2022 | Principal | 7 Months |
| Kaziranga University, Jorhat, Assam | Professor(CSE Dept.) | January 2021-September 2021 | Dean, School of Computing Sciences 2019-2021 Dean, Research 2019-2021 Associate Dean, Compliance 2017-2019 | 5.5 years |
| Kaziranga University, Jorhat, Assam | Associate Professor (CSE Dept) | 2021-2022 | | |
| | | | | |
| Narula Institute of Technology, Kolkata | Assistant Professor(Grade II) | 2010-2016 | | 6 years |
| Narula Institute of Technology, Kolkata | Senior Lecturer | 2009-2010 | | 1 year |
| Narula Institute of Technology, Kolkata | Lecturer | 2004-2009 | | 4 years 10 months |
| ISRO, Regional Remote Sensing Service Centre, IIT Campus, Kharagpur | Project Trainee | January 2004 to May 2004 | | 5 months |
| Total | | | | 20 years+ |

PATENTS/COPYRIGHT

| | Title of invention | IP | Application No | Date | Status |
|---|---|-----------|------------------|-----------|------------|
| 1 | Ultra Safety Helmet | Patent | 201731028497 | 28.04.18 | Published |
| 2 | An Intelligent Dustbin | Patent | 201831024232 | 20.07.18 | Granted |
| 3 | A System to Monitor Moisture Level in the Soil | Patent | 201831040250 | 16.11.18 | Granted |
| 4 | IOT Based Full Body Sanitization System | Patent | 202131028764 | 16.07.21 | Granted |
| 5 | An innovative web application for human psycho-emotional data acquisition to generate users emotional signature pattern (ESP) | Copyright | SW-14789/2021 | 14/7/2021 | Registered |
| 6 | Cognitrack Innovative Attendance Management System With Real Time Student Count And Percentage Analytics | Copyright | SW-18740/2024 | 26.02.24 | Registered |
| 7 | OutlierIQ: A Web Application For Detection of Anomalies in IoT Data Using Clustering Technique | Copyright | 16709/2024-CO/SW | 24.05.24 | Applied |

FUNDING DETAILS

| | Title of the Project | Funding Agency | Duration | Amount | Status | My Role |
|---|---|-------------------|------------------|-------------|---------|---------|
| 1 | Artificial Intelligence and Machine Learning in Robotics | NVIDIA | 1 year | 2.15 lakhs | Ongoing | PI |
| 2 | Developing an AI Based Toto-Bangla-English Trilanguage Learning Application: A Step Towards Digital Archiving of the Endangered Toto Language of WestBengal | ICSSR | 2 years(2024-26) | 23.80 lakhs | Ongoing | Co-PI |
| 3 | Development of a High-Resolution Brain Generated Event Related Potential Recorder (BRAIN CAP) | Adamas University | 2 years(2023-24) | 0.5 lakh | Ongoing | PI |
| 4 | Developing Metacognitive Awareness, Critical Thinking Ability, and Prediction System through ICT based Language Learning Application: A Case Study of | Adamas University | 2 years(2023-24) | 2 lakhs | Ongoing | Co-PI |

| | | | | | | |
|---|--|----------------------|-------------------------|--------------------|------------------|-----------|
| | Dormant English as Second Language Learners | | | | | |
| 5 | Augmentation of Multimedia lab with AR/VR facilities for engineering content creation | AICTE MODROBS | 2 years(2021-22) | 9.03 lakhs | Completed | PI |
| 6 | STTP on "Recent Advancement in Artificial Intelligence and Machine Learning" | AICTE STTP | 6 Months (2021) | 3 lakhs | Completed | PI |
| 7 | Institute Innovation Council Mentor Mentee Scheme | IIC | 1 Year(2022) | 2.25 lakhs | Completed | PI |
| 8 | Handoff Analysis in WLAN-GPRS Integrated Network | AICTE RPS | 2 years(2010-12) | 2.5 lakhs | Completed | PI |
| | | | Total | 45.23 lakhs | | |

PHD SUPERVISION

| | Name of the scholar | Topic | University | Registered on | Status |
|---|----------------------------|---|-----------------------------|----------------------|----------------|
| 1 | Mr. Ayan Chakraborty | Identification and Analysis of Human Psycho-Emotional Pattern Within Controlled Stimuli by Cognitive and Adaptive System | Kaziranga University | 2018 | Awarded |
| 2 | Mr. Shiladitya Munshi | Design & Development of Real-Time Big Data Processing model | Kaziranga University | 2018 | Awarded |
| 3 | Mr. Swagata Paul | Methods of Attack Detection in Nodes of Big Data System | Kaziranga University | 2018 | Awarded |
| 4 | Mr. Chinmoy Bharadwaj | A Study on QoS analysis and optimization in Edge Networks | Kaziranga University | 2017 | Awarded |
| 5 | Ms. Kaveri Banerjee | Smart Contract Solution Based on Blockchain for Healthcare Data Management | Adamas University | 2021 | Ongoing |
| 6 | Mr. Prabhat Das | Development of Optimal Approach towards IOT data analysis using clustering techniques | Kaziranga University | 2022 | Ongoing |
| 7 | Mr. Siddhartha Datta | Blockchain Technology for Optimisation of Supply Chain Management in Indian Armed Forces | Adamas University | 2023 | Ongoing |
| 8 | Mr. Supriyo Pal | Optimizing Efficiency and Sustainability in Smart Solid Waste Management Systems | Adamas University | 2023 | Ongoing |

AWARDS AND RECOGNITION

1. Received the Outstanding Achievers Award, along with a cash prize of Rs. 2,00,000 (2 lakhs), during Adamas Achievers Day at Adamas University on 05.10.24 for achieving the highest admissions in the School of Engineering and Technology for the 2024-25 session.
2. Ms. Sneha Bhowmik, Mr. Abhishek Bhowmik, Md. Sohail Irfan guided by Dr. Sajal Saha, have won the Young Innovators Award, along with a cash prize of ₹20,000, for their project titled “Urban and Remote Logistics through Autonomous Drone Network” at the TATA Social Enterprise Summit organized by IIM Kolkata on 15th September 2024.
3. Awarded INR 2.15 lakhs of Hardware (NVIDIA Jetson Nano) by NVIDIA through NVIDIA Hardware Grant program 09.09.24.
4. First Prize (INR 25,000) - 36-hour ACM HACK-A-DAY Faculty Hackathon, organized by ACM Kolkata, March 12-13, 2022.
5. Best Paper Award - International Conference on Signal Processing, VLSI Communication and Embedded System (ICSVCE-

- 2021), Bardhaman Engineering College, Hyderabad.
6. Awarded Silver medal - Ranked Second Overall in ME Examination, WBUT, with a DGPA of 9.22.
 7. First Prize - Business Plan Competition 2020, organized by Kaziranga University Entrepreneurship Club.
 8. Second Position - Project "Handoff Analysis in WLAN GPRS Integrated Network", ANVESHAN, AIU (Association of Indian University) National Student Research Convention, Pune University, April 9-11, 2008.

HONOURS

- Chairman, Board of Studies, Department of CSE, Adamas University (2022-till date)
- Advisor, NAAC Committee, Ellite College of Engineering (2022 till date)
- PhD external examiner, Pune University (2023), MAKAUT(2024).
- External expert of research advisory committee, MIT World Peace University (2021-22)
- External member-BOS, School of Computing Sciences, Kaziranga University (2022 till date)
- Member, Selection committee: Assam Womens University(2017-18), MIT World Peace University.

OUTREACH ACTIVITIES

- Mentor of Change, Atal Innovation Mission (supported by NITI Ayog) - Mentoring three schools in Assam.
- Mentor, Down Town Venture Labs Foundation in Guwahati, Assam.
- President, Institute Innovation Council, Kaziranga University - Led the university to top IIC activities in North East region in 2019-20.
- Instrumental in establishing partnerships with AWS Academy and Oracle Academy, providing free access to cloud computing curriculum, cloud services, and software.
- Liaison for research and academic collaborations with Emory University, USA, University of Arakansas at Little Rock and Asian Institute of Technology, Bangkok, Susrut Eye Hospital and Research Centre, AIC SMU-TBI.
- SPOC and Academic Coordinator, KU-IBM ICE program (2016-21).
- Coordinator, IIRS ISRO Outreach Program and NPTEL Local Chapter, Kaziranga University(2016-21).
- Facilitated free access to Urkund plagiarism software through Inflibnet under the Shodhsuddhi scheme, Government of India.
- Configured IRINS portal of Meghnad Saha Institute of Technology and Adamas University
- SPoC, Narula Institute of Technology, Infosys Campus Connect program (August 2013-2016) - Rolled out five batches (350 students).
- Liaison for final year project collaborations with government organizations such as ISRO Kolkata, IIRS ISRO Dehradun, and National Informatics Centre.
- Instrumental in partnering with AWS Educate, providing cloud-enabled infrastructure facility and \$100 credit vouchers for 250 students per semester at Kaziranga University since 2017-2021.
- Participated and mentored groups of undergraduate and postgraduate students of JIS Group in several 2-week education camps at the Asian Institute of Technology, Bangkok, Thailand between 2013 and 2016.

MANAGERIAL RESPONSIBILITIES

- Management of the information and general administrative issues and practices for TEQIP, IIC, NBA, NAAC, NIRF, ARIIA, AICTE, UGC, Niti Ayog (Atal Incubation Mission), INFLIBNET and MHRD respectively.
- Presentation of reports for management as and when required.
- Managing the operating budget, performance analysis and reporting to support decision making.

- Provide expert guidance and leadership to students.

PROFESSIONAL ACHIEVEMENTS

ADAMAS UNIVERSITY(2022 TILL DATE)

- Director of Product and Innovation
- Developed more than 20 strategic innovation models to enhance student's engagements, academic performance and optimize resource utilization.
- Successfully configured and deployed public cloud infrastructure at Adamas University in collaboration with the AWS Academy and Oracle Academy.
- Created a live internal quality assurance data repository, accessible at <https://sites.google.com/view/iqaf/home>.
- Served as a member of the IQAC and Academic Council of Adamas University.

MEGHNAD SAHA INSTITUTE OF TECHNOLOGY (2021-22)

- Oversaw comprehensive academic planning and strategy development.
- Implemented a student mentoring system, providing individualized counseling to guide students on their career paths.
- Formulated and established policies and procedures to ensure a well-organized academic environment.
- Configured a transparent research monitoring dashboard in Infilbnet IRINS platform, accessible at <https://msit.irins.org/>.

KAZIRANGA UNIVERSITY(2016-21)

- Dean, School of Computing Sciences (January 2020 - September 2021)
- Dean, Research, Innovation, Incubation and Quality Assessment (January 2019 - September 2021)
- Professor In-Charge, IT Infrastructure & ERP, Kaziranga University (September 25, 2020 - September 2021)
- Head, Department of CSE (September 2017 - December 2017)
- Associate Dean (Compliance), Kaziranga University (February 2017 - January 2019)
- Assistant Registrar (Academics) (July 2016 - August 2018)

Key responsibilities and achievements:

- Supervised faculty and staff, including recruitment, support, and mentoring.
- Fostered a shared vision and strategic plan to promote research and encouraged shared governance.
- Facilitated planning, revision, and implementation of graduate academic program curricula based on stakeholder requirements.
- Established private cloud infrastructure using OpenStack and ESXi Server.
- Created and nurtured a productive, content, and positive work environment for faculty and staff.
- Served as Secretary of the University Doctoral Research Committee.
- Conducted nine Train the Trainer (T3) workshops of three-day duration, organized by IBM at Kaziranga University.

NARULA INSTITUTE OF TECHNOLOGY JIS GROUP(2004-16)

- Participated in 15 AICTE/UGC/Industry-sponsored short-term courses (two-week duration).
- Participated and presented papers in 23 international and national conferences and seminars.
- Managed the conference management system (EasyChair) for the IEEE ICCIA-2011 conference.
- Convener, Internal Quality Assurance Cell, NIT - Prepared and submitted quality assessment reports to UGC.
- Member of the Training and Research Committee for TEQIP Phase II, a World Bank-funded project.
- Official mentor for IBM TGMC projects (2009-11) and trainer for Infosys Campus Connect Program (2008-2016).
- Secretary, Incubation Centre, Narula Institute of Technology - Supported student prototype development, commercialization, and business startups.

- Conducted online examinations through Moodle.

SEMINAR/CONFERENCE/WORKSHOP ORGANIZED

1. Organized a week-long international workshop on **"Multidisciplinary Application of AI in Innovation and Research"** at Adamas University (October 10-14, 2022).
2. Coordinated and served as a resource person for a 15-day summer training program on **"AWS Cloud Certification Training"** for NELIT, Kohima at Kaziranga University (July 7-19, 2021).
3. Organized a one-day international workshop on **"Emerging Trends in Digital Visualization and Mapping 2019"** at Kaziranga University (July 16, 2019).
4. Organized several IEEE-sponsored international conferences, including **ICCIC 2021, NESIDS-2018, ICCACCS 2014, ICCIA-2011, and WoMS-2008.**
5. Coordinated a one-month residential summer program on **"Virtualization, Cloud Computing, Big Data Analytics, and Internet of Things: Towards Smart Governance"** for NELIT, Kohima at Kaziranga University (2018).
6. Conducted 16 IBM Train the Trainer (T3) programs at Kaziranga University (2016-2019).
7. Conducted IBM ICE days on November 15, 2018, and November 23, 2019, at Kaziranga University.

MEMBERSHIP PROFESSIONAL BODIES

1. Member IEEE, IEEE Communication Society, IEEE Computer Society (Membership id: 91145325)
2. Member ACM (Membership id: 9595440)
3. Global Member ISoC-Internet Society (Membership id: 257507)
4. Member CSI (Membership id: F8003967)
5. Associate Member: Indian Cyber Safety and Security Standards(NCSSL)
6. Member International Association of Engineers-IAENG (Membership id:114653)
7. Member International Association of Computer Science and Information Technology-IACSIT (Membership id: 80341449)

SUBJECTS TAUGHT

- Design Thinking (2 semesters)
- Public Blockchain and Ethereum(1 Semester)
- Innovation and Entrepreneurship (2 semesters)
- Venture Ideation (1 semester)
- Formal Language & Automata Theory (16 semesters).
- Compiler Design (9 semesters).
- Internet of Things (2 semester)
- Virtualization and Cloud computing (4 semesters)
- Cloud Computing Architecture and Deployment Model (2 Semesters)
- Managing the Cloud (2 Semesters)
- Database Management System (4 semesters).
- Computer Network (11 semesters).
- Computer Communication (2 semesters).

- Data structure & Algorithms (3 semesters).
- Wireless Communication (1 semester)
- Wireless Sensor Network (2 semester)
- Mobile Computing (5 semesters)
- Introduction to IT Infrastructure and landscape (3 semesters)

Annexure I

PUBLICATIONS

| Book | Book Chapter | International Journal | International Conference Proceedings | National Conference Proceedings | Total(except book) | Scopus indexed publication ** |
|------|--------------|-----------------------|--------------------------------------|---------------------------------|--------------------|-------------------------------|
| 2 | 8 | 14 | 18 | 5 | 46 | 26 |

****List of Scopus indexed publication:** <https://www.scopus.com/authid/detail.uri?authorId=35759621000>

Scopus Author ID: 35759621000

Web of Science Researcher id: [C-5958-2019](https://orcid.org/0000-0002-7519-2962)

Orcid id: <https://orcid.org/0000-0002-7519-2962>

Book

1. **Sajal Saha, Ajoy Mondal,**” *GIS and Remote Sensing: Applications in Flood Damage assessment*”, **Lap Lambert Academic Publishing, Germany, ISBN 978-3-8484-3342-1, Total pages: 161, price: 77\$.**
2. **Sajal Saha, Asish K Mukhopadhyay, A. K. Bhattacharjee,** “*Mobility Management in IP based Network: Framework, Issues and Challenges*”, **Lap Lambert Academic Publishing, Germany, ISBN 978-3-659-69274-1, Total pages: 232, price: 107 \$**

Book Chapter

3. Bhuyan B.P., **Saha S.** (2021), “*Selection of Mobile Node Using Game and Graph Theory for Video Streaming Application*”. In: Choudhary A., Agrawal A.P., Logeswaran R., Unhelkar B. (eds) *Applications of Artificial Intelligence and Machine Learning. Lecture Notes in Electrical Engineering*, vol 778. Springer, Singapore. https://doi.org/10.1007/978-981-16-3067-5_24
4. Bharadwaj C., **Saha S.**, Kalita K.K., Mukhopadhyay A.K. (2022) “*An IoT-Based Architecture for Edge Computing to Reduce the Latency and Bandwidth for Streaming Data Application*”. In: Mandal J.K., Roy J.K. (eds) *Proceedings of International Conference on Computational Intelligence and Computing*. Algorithms for Intelligent Systems. Springer, Singapore. https://doi.org/10.1007/978-981-16-3368-3_30.
5. Mukhopadhyay A.K., **Saha S.** (2022) “*Handoff Analysis in Overlay Based GTP Tunneled 3G-WLAN Integrated Network*”. In: Mandal J.K., Roy J.K. (eds) *Proceedings of International Conference on Computational Intelligence and Computing. Algorithms for Intelligent Systems*. Springer, Singapore. https://doi.org/10.1007/978-981-16-3368-3_24
6. **Saha, Sajal,** Alam Mazid, Dey Smita,” *Artificially Intelligent Customized Voice Response System: A Framework for Artificially Intelligent Customized Voice Response System Design using Speech Synthesis Markup Language*”, in *Intelligent Speech Signal Processing*, **Elsevier Press, Chapter 10, p.p. 175-185.**

7. **Saha, Sajal**, Chakraborty, Angana, Mukhopadhyay, AsishK., Bhattacharjee, Anup Kumar, “*WiMAX and Wi-Fi Services through Mobile Networks: Issues on Network Planning, Optimization, and Sustainability*”, in **Self-Organization in Future Mobile Communication Systems**(an imprint of IGI Global) USA. Chapter 7, p.p. 163-193.
8. **Sajal Saha**, Asish K Mukhopadhyay Anup K. Bhattacharjee, “*QoS and Mobility Management Issues on next Generation Mobile WiMAX Networks*”, in **Broadband Wireless Access Networks for 4G: Theory, Applications, and Experimentation**, Information Science Reference (an imprint of IGI Global) USA, 978-1-4666-4888-3 Chapter 16, p.p. 299-324. Price 235\$.
9. **Sajal Saha**, Asish K Mukhopadhyay, “*Mobility Management Issues for Next Generation Wireless Networks*”, in **Network and Traffic Engineering in Emerging Distributed Computing Applications**, Information Science Reference (an imprint of IGI Global) USA, ISBN 978-1-4666-1888-6, Chapter-10, p.p. 247-274, price: 183\$.
10. **Saha, Sajal**, Chakraborty, Angana, Mukhopadhyay, AsishK., Bhattacharjee, Anup Kumar,” *Mobile WiMAX Physical Layer Optimization and Performance Analysis Towards Sustainability and Ubiquity*”, in **Information Systems Design and Intelligent Applications**(Springer lecture notes in **Information Systems Design and Intelligent Applications**) pp 101-111 Volume 339.

International Journal

11. Bharadwaj C, Barman U, **Saha S.** (2023) Analysis of Latency and Bandwidth for Edge-Based Short Length in Edge Computing Devices for Short Ranges and Long Ranges. *Indian Journal of Science and Technology.* 16(8): 531-539. <https://doi.org/10.17485/IJST/v16i8.2051>. (Scopus, Web of Science).
12. Shiladitya Munshi, **Sajal Saha**, Radha Tamal Goswami, "Theories of Real Time Stream Processing Architecture Using Task Forking Model", Indian Journal of Computer Science & Engineering, ISSN: I0976-5166. Vol. 14, No. 1. DOI: 10.21817/indjcse/2023/v14i1/231401103. (Scopus).
13. Swagata Paul, Sajal Saha, Radha Tamal Goswami, "Detection of Unknown Insider Attack on Components of Big Data System: A Smart System Application for Big Data Cluster", International Journal of Computer Network and Information Security(IJCNIS), Vol.14, No.5, pp.47-59, 2022. DOI:10.5815/ijcnis.2022.05.04. (Scopus).
14. Nabajyoti Borah, Raju Moni Borah, Bandan Boruah, Purnendu Bikash Acharjee, **Sajal Saha**, Ripjyoti Hazarika. (2021). A Critical Study on Tea Leaf Disease Detection using Deep Learning Techniques. Design Engineering, 15126 - 15141. Retrieved from <http://www.thedesignengineering.com/index.php/DE/article/view/8746>
15. Purnendu Bikash, **Sajal Saha** (2022). A Critical Study towards the Detection of Parkinson's Disease using ML Technologies. Design Engineering, (1), 988-996. Retrieved from <http://www.thedesignengineering.com/index.php/DE/article/view/8961>
16. Ayan Chakraborty, R. T. Goswami, and **Sajal Saha** , "Error tuning and gap analysis of human psycho-emotional pattern recognition framework using time series forecasting model", AIP Conference Proceedings 2407, 020012 (2021) <https://doi.org/10.1063/5.0074312>(Scopus)
17. Ayan Chakraborty, Sajal Saha, R.T. Goswami, Rajrupa Chattaraj,” *EMOFY: Emotional Data Acquisition within a controlled stimulus environment*”, Journal of Emerging Technologies and Innovative Research (JETIR), vol-7, issue-12(UGC CARE)
18. A. Chakraborty, A. Banerjee and **S. Saha**, “Sensors In Precision Agriculture: A Survey On Application, Security And Privacy”, **Advances and Applications in Mathematical Sciences. Vol:18, No:9,p.p. 949-957, Mili Publications(ESCI and UGC CARE)**
19. A K Mukhopadhyay, S Khara, **Sajal Saha**, D. Saha, “*Performance analysis of the CAC scheme CARETON under mixed cell environment in overlay networks*”, p.p. 65-74, Vol. 6, No. ½, **Int. J. Internet Protocol Technology, Inderscience Publication, Switzerland. (Scopus, ESCI)**
20. **Sajal Saha**, Raju Dutta, Soumen Debnath, Asish K Mukhopadhyay, “*Intelligent Paging Based Mobile User Tracking Using Fuzzy Logic*”, AIP Conference Proceedings 1324, 19-23 (2010) <https://doi.org/10.1063/1.3526192>.(Scopus)

21. Raju Dutta, **Sajal Saha**, Asish K Mukhopadhyay, "Fuzzy Application for Tracking Heterogeneous Sensor Node to Prolong System Lifetime in WSN" IJCA Proceedings on International Conference on Recent Advances and Future Trends in Information Technology (iRAFIT 2012) iRAFIT(1):12-18, April 2012. Published by **Foundation of Computer Science, New York, USA**
22. Raju Dutta, **Sajal Saha**, Asish K Mukhopadhyay, "A Mathematical Model for Reducing Service Time in Maintenance of Stationery Nodes in Mobile Networks", p.30-34, **International Journal of Research and Reviews in Next Generation Networks(IJRNGN)**, Science Academy Publishers, UK, Vol 1, No 1.
23. **Sajal Saha**, Asish K Mukhopadhyay, Suranjan Ghose, "Fast Handoff mobile IP protocol using a Novel Route Optimization Technique", p.207-211, **International Journal of Recent Trends in Engineering (ISSN: 1797-9617)**, Academy Publishers, Finland, Vol 2, No 1. cited: 1 time.
24. S. Khara, **Sajal Saha**, A. K Mukhopadhyay, C. Ghosh," Call Dropping Analysis in a UMTS/WLAN Integrated Cell", p.p. 411-415, **International Journal of IT and Knowledge Management (IJITKM)** (ISSN 0973-4414), Vol-III, Issue-II.
25. Asish K Mukhopadhyay, **Sajal Saha**, S. Choudhury, S. Khara, S. Pal, P. Bhattacharya, " Analysis of Multi-Tier Overlay-based Next Generation Wireless Networks", p.91-96, **International Journal of IT and Knowledge Management (IJITKM)** (ISSN 0973-4414), Vol-II, Issue-I.

International Conferences

26. S. Nath, D. Pal and **S. Saha**, "Detection of Cyber-attacks using Deep Convolution in Honeyed Framework," *2023 International Conference on Disruptive Technologies (ICDT)*, Greater Noida, India, 2023, pp. 79-87, doi: [10.1109/ICDT57929.2023.10150916](https://doi.org/10.1109/ICDT57929.2023.10150916).
27. Chakraborty A., **Saha S.**, Goswami R.T. (2020) An Adaptive Framework for Human Psycho-Emotional Mapper Based on Controlled Stimulus Environment. In: Batra U., Roy N., Panda B. (eds) *Data Science and Analytics. REDSET 2019. Communications in Computer and Information Science*, vol 1229. Springer, Singapore
28. Paul S., **Saha S.**, Goswami R.T. (2020) "Big Data Cluster Service Discovery: A System Application for Big Data Cluster Security Analysis". In: Batra U., Roy N., Panda B. (eds) *Data Science and Analytics. REDSET 2019. Communications in Computer and Information Science*, vol 1230. Springer, Singapore
29. Paul S., **Saha S.**, Goswami R.T. (2020) "Testbeds, Attacks, and Dataset Generation for Big Data Cluster: A System Application for Big Data Platform Security Analysis." In: Das H., Pattnaik P., Rautaray S., Li KC. (eds) *Progress in Computing, Analytics and Networking. Advances in Intelligent Systems and Computing*, vol 1119. Springer, Singapore
30. S. Munshi, **S. Saha** and R. T. Goswami, "Extending Storm API for Real Time Computing on Big Data" *2019 IEEE 16th India Council International Conference (INDICON)*, Rajkot, India, 2019, pp. 1-4. doi: 10.1109/INDICON47234.2019.9028971
31. S. Munshi, **S. Saha** and R. T. Goswami, "Real Time Big Data Processing: A Comparative Study of Existing Approaches", *2019 IEEE 16th India Council International Conference (INDICON)*, Rajkot, India, 2019, pp. 1-4. doi: 10.1109/INDICON47234.2019.9029096
32. Chakraborty, Angana and **Saha, Sajal** and Banerjee, Indrajit and Gupta, Arnab," *Optimized WiMAX Network Development in India: Specification and Implementation*",pp.89-99, vol. 335, **Computational Advancement in Communication Circuits and Systems**, Springer.
33. **Sajal Saha** et al., "Performance Analysis of Service classes for IEEE 802.16m QoS Optimization", **1st International Conference on Emerging Trends and Applications in Computer Science, (ICETACS - 2013)**, India, 11th – 13th September, 2013(Published in IEEE Explore digital library).

34. Raju Dutta, **Sajal Saha** and A. Mukhopadhyay, “*Tracking Heterogeneous Dynamic Sensor using Fuzzy Logic to Prolong System Lifetime in WSN*”, **International Conference on Modelling, Optimisation and Computing (ICMOC 2012)** 10th-11th April, 2012(Published in Elsevier Procedia Technology).
35. Raju Dutta, **Sajal Saha** and A. Mukhopadhyay, “*Efficient Clustering Technique to optimize the System Lifetime in Wireless Sensor network*”, **International Conference on [Advances in Engineering, Science and Management \(ICAESM 2012\)](#)**, 30th-31st March, 2012(Published in IEEE Explore digital library) cited: 1 time.
36. Raju Dutta, Sajal Saha and A. Mukhopadhyay, “*Replacement Strategies for Minimizing Maintenance Cost and Maximizing Sensor Network Lifetime*”, **2011 International Conference on Communication and Industrial Application(ICCIA-2011)** 26th-28th December, 2011(Published in IEEE Explore digital library).
37. **Sajal Saha** et al., “*THMIP- A Novel Mobility Management Scheme using Fluid Flow model*”, **2nd International Conference on Emerging Trends and Applications in Computer Science, (NCETACS - 2011), India**, 4th- 6th March, 2011(Published in IEEE Explore digital library) cited: 1 time.
38. Asish K Mukhopadhyay, **Sajal Saha**, “*Performance Analysis of a Fuzzy Logic Based Call Admission Control over Heterogeneous Wireless Networks*”, p. 220-223, **1st International Conference on Parallel, Distributed and Grid Computing (IEEE PDGC - 2010), Shimla**, 28th-30th October, 2010(published in IEEE Explore digital library).
39. **Sajal Saha** et al., “*An Efficient Call Admission Control Scheme on Overlay Networks Using Fuzzy Logic*”, **3rd International Symposium on Advanced Networks and Telecommunication System (IEEE ANTS), IIT Delhi**, 12th -14th December, 2009 (published in IEEE Explore and ACM digital library) cited:6 times.
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42. **Sajal Saha**, Subhasree Choudhury & Asish K Mukhopadhyay, “*Handoff Delay analysis in a UMTS network using NS-2*”, published in McMillan advance research series(ISBN 023-063-759-0), p.736-741, **International Conference on Computer, Communication, Control and Information Technology (C3IT-2009)**, 06th -07th February, 2009.
43. Subhasree Choudhury, **Sajal Saha**, Asish K. Mukhopadhyay, “*A Survey of Vertical Handover Schemes in Wireless Networks*”, published in McMillan advance research series(ISBN 023-063-759-0), p.754-759, **International Conference on Computer, Communication, Control and Information Technology (C3IT-2009)**, 06th-07th February, 2009.

National Conferences

44. **Sajal Saha**, Samata Saha, Asish K. Mukhopadhyay, “*Analysis of Vertical Handoff in Heterogeneous Overlay Networks*”, **National Conference on Materials, Devices and Circuits in Communication Technology**, Burdwan, 27-28th March 2010.
45. **Sajal Saha** et al.,” *A Comparative Study of Route Optimization Protocols in Mobile IP*”, p.105-109, **National Conference on Computing and Communication System (CoCoSys-2009)**, 2nd-4th January 2009.
46. **Sajal Saha**, Ajoy Mondal,” *Application of Remote sensing And GIS in Flood Damage Assessment*”, p.137-140, **National Conference on Computing and Communication System (CoCoSys-2009)**, 2nd-4th January 2009.
47. **Sajal Saha**, Subhasree Choudhury, Asish K Mukhopadhyay, “*Simulation of Wireless Networks with Mobile IP Using NS-2*”, Proceedings of **National Conference On Device, Intelligent Systems and Communication & Networking (AEC-DISC 2008)** p.101-105, 1st -2nd August, 2008.

48. Subhasree Choudhury, **Sajal Saha**, Asish k. Mukhopadhyay,” **Handoff Analysis in Heterogeneous Overlay Networks Supporting Global Mobility**”, **IEEE WIE National Symposium on Emerging Technologies-IEEE WieNSET-2007, 29-30 June 2007.**

Annexure II

INVITED LECTURES/TALKS

1. Delivered keynote speech on "**Experience the future through Augmented Reality**" in CSI sponsored two weeks international faculty development program on "Emerging Concepts in modern computational systems" on 5th January, 2022 organised by Department of Computer Science and Engineering, Brainware University
2. Delivered talk on "**Utilization and deployment of public cloud infrastructure**" on 15th December, 2021 jointly organised by Product and Innovation cell and Centre for incubation, Adamas University
3. Invited lecture on "**Harnessing the power of AI**" in AICTE sponsored one week short term training program on "Recent Advancement in AI and Machine Learning" Phase II on 29th October, 2021 organised by Department of Computer Science and Engineering, Kaziranga University.
4. Invited lecture on "**Rethinking education in an age of digitalization and disruption Computer education in the framework of national education policy 2020**" in AICTE sponsored one week short term training program on "Recent Advancement in AI and Machine Learning" on 6th October, 2021 organised by Department of Computer Science and Engineering, Kaziranga University.
5. Given invited lecture on "Attaining Outcome-based learning through mapping of program outcome and Course Outcome" organized by MIT World Peace University on 24.07.21
6. Given invited lecture on "**Secure Integration of IoT in Public Cloud Environment**" organized by IETE Kolkata section and SR group of Institution jointly in the preconference tutorial of ICCIC2021 on 07.02.21
7. Given invited lectures on "**Research Challenge and opportunities in Public Cloud Domain**" in the faculty development program "**Research trends in Computer Engineering and Information Technology(RTCEIT-2021)**" organized by Smt. Kashibai Navale College of Engineering, Pune on 5th January 2021.
8. Given invited lecture on "**Cloud IOT Integration**" at Brainware University on 3rd October 2020.
9. Given an expert lecture on "**Runtime IoT Sensor data analysis and visualization in Cloud Computing Environment**" at Nirma University on 3rd September 2020.
10. Invited talk on "**Industrial Applications of Cloud Computing**" at Bundelkhand University, Jhansi
11. Series of webinars on "**Cloud Computing and Virtualization**", "**Cloud Computing Architecture and deployment model**" and "**Live project demo in Cloud Computing**" on **25.04.20, 02.05.20 and 03.05.20** at **Narula Institute of Technology.**
12. Invited talk on "**Workshop on Disruptive Technologies**" on 13th -14th February at JB college, Jorhat, Assam
13. Invited talk on "**Seminar on Cloud Computing**" on 05th January 2019 at Kingston Educational Institute. The topic of the talk was "Cloud Computing Architecture and Deployment Model: Impact on MSME".
14. Invited talk in "**Vibrant Gujrat Startup & Technology Summit 2018**" on 12th October,2018 at Gandhinagar. Theme of my talk was "**Transforming Technology for Education**". Other eminent speakers were from IIT Gandhinagar, KIIT University, Nirma University, Raksha Shakti University, Gujrat University, Hindustan University, Techno India Group to name a few.
15. Faculty Development Program on "**MATLAB and it's application in Electrical Engineering**", from 19th October 2017 to 23rd October 2017 at **NIT Nagaland.**
16. Seminar on "**E-Learning through ICT: Scope and Opportunities for AICTE approved Institutions**" on 23rd

January,2014 at SRGI, Jhansi

17. One day workshop on "NPTEL" on 12th February 2012 at BITM, Shantiniketan