Dr. Tapalina Bhattasali

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Google Scholar: https://scholar.google.co.in/citations?user=Y4WEFnkAAAAJ&hl=en

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❖ Academic Qualification

- PhD in Computer Science and Engineering from University of Calcutta under Remote Health project funded by Information Technology Research Academy (ITRA), Media Lab Asia, Ministry of Electronics and Information Technology (MeitY), Government of India

  Thesis Title: IoT-Based Framework for Healthcare Application & Security

  International Collaborators: AGH University of Science and Technology, Poland

  Bialystok University of Technology, Poland

  Warsaw University of Technology, Poland

- MBA in Marketing
- UGC NET in Computer Science and Application
- M.Tech in Information Technology
- Master of Computer Application

❖ Research Area

Business Data Analytics, Blockchain, Artificial Intelligence, Machine Learning, Deep Learning, Computational Intelligence, Data Science, Cloud-IoT, High Performance Computing, Sustainability, Biometrics

❖ Resource Person

➢ International Events

1 Delivered **invited lecture** on "**Blockchain Demystified**", in International Webinar (Online) organized by Azerbaijan High Performance Computing Group (AzHiPC), Azerbaijan State Oil and Industry University, Baku in June 2021.

2 Delivered **invited lecture** on "**Multi-Layer IoT Framework**", in International Webinar (Online) organized by Operational Research and Artificial Intelligence (ORAI) group, Poznan University of Technology, Poland in June 2021.

3 Delivered **keynote speech** on "**Impact of Blockchain in Current Scenario**" in International Interdisciplinary Conference (Virtual Mode), Sanyog 2020 in June 2020.

4 Delivered **invited lecture** on "**Biometrics Applications for Cloud Environment**" in International Summer School on Medical and Biomedical Image Analysis with the Optimization for Cloud and Parallel Programming organized by AGH University of Science and Technology and Motorola, Poland in Krakow, Poland in September, 2015.

➢ **National Events**

1 Delivered **invited lecture** on "**Application of Python in Computational Physics**" in a webinar organized by Department of Computer Science and Physics, Heritage College, Kolkata in February 2021.

2 Delivered **invited lecture** on "**Research Methodology**" in a National Webinar organized by Department of Electrical & Electronics, New Horizon College of Engineering (Autonomous), Bangalore in association with IEEE NHCE Student branch in December 2020.

3 Delivered **invited lecture** on "**Intellectual Property Rights in Research, Innovation and Development**" in a National Webinar organized by Entrepreneurship Development Cell, The Bhopal School of Social Sciences in December 2020.

4 Delivered **invited lecture** on "**Demystifying AI-ML-DL**" in a National Webinar organized by Department of Computer Science and Engineering, KL University, Hyderabad in October 2020.

5 Delivered **invited lecture** on "**Impact of Artificial Intelligence in Post-COVID Era**" in a National Webinar organized by SREC CSI Student branch & Department of Computer Science & Engineering, Shri Ramakrishna Engineering College (Autonomous), Coimbatore in September 2020.

6 Delivered **keynote speech** on "**Online Teaching Learning Model for Rural India: A New Normal in Post-COVID Era**", in a State-Level Online Workshop organized by IQAC, Balagarh Bijoy Krishna Mahavidyalaya, West Bengal in September 2020.

7 Delivered **invited lecture** on "**Emerging Technologies in Computation**" in a National Webinar organized by Department of Computer Science, Desh Bhagat University, Punjab in May 2020.

8 Delivered **invited lecture** on "**Artificial Intelligence: Boon or Bane**" at the 12th Xaverian Research Colloquium (XRC), "Anusandhan", at St. Xavier's College (Autonomous), Kolkata in January 2020.

9 Delivered **invited lecture** on "**Understanding Plagiarism**" at one day National Workshop on "Plagiarism and Academic Integrity" organized by St. Xavier's College (Autonomous), Kolkata in August 2019.

10 Delivered **invited lecture** on "**SEM: A Retrospection Through R**" at UGC approved seven-day National Workshop on Quantitative Research Methodology organized by St. Xavier's College(Autonomous), Kolkata in collaboration with Institute of Development Studies (IDSK), Kolkata in August 2019.

11 Delivered **invited lecture** on "**The Future Scope of Blockchain Technology**", at Global Outreach Research and Education Summit & Awards 2019, organized by Global Outreach Research & Education Association (GOREA) in Hyderabad in April, 2019.

12 Invited as resource person in Internal Faculty Orientation Programmes on Advanced DBMS, HTML and JavaScript at St. Xavier's College (Autonomous), Kolkata in 2018-2020.

❖ **Award**
  ▪ Awarded Doctor of letters (D.Litt) honorary degree in recognition and appreciation of the contribution in the field of "Secured Internet of Things Framework; Case Study: Rural Healthcare in India" (based on the field works at remote villages of Birbhum, Sunderban) from IEU, Maldives, working for SAARC countries to eradicate poverty and empowering Economics.

  ▪ Global Outreach Research Award – Young Researcher in Computer Science & Engineering.

  ▪ Prestigious IRDP Award for "Teaching and Research Excellence".

  ▪ National Award of Excellence - Adarsh Vidya Saraswati Rashtriya Puraskar.

  ▪ Silver Medal from the Governor of West Bengal for being rank-holder in M.Tech.

❖ **Roles & Responsibilities**
  ▪ Teaching relevant topics of Information Technology and Computer Science; guiding projects for both UG and PG.

  ▪ Teaching at Career Oriented Programmes in St. Xavier's College (Autonomous), Kolkata

  ▪ Associate Editor, Peer Reviewed Multi-Disciplinary Journal Aviskaar, St. Xavier's College (Autonomous), Kolkata

  ▪ Academic Mentor, Business Analytics Programme, MIT World Peace University, Pune

  ▪ Associated Researcher, Bialystok University of Technology Biometrics Team, Poland

  ▪ Editor, Azerbaijan Journal of High Performance Computing

- Visiting Faculty, University School of Engineering and Applied Sciences, Desh Bhagat University, Punjab

- Fellow at Multi-Spectra Academy

- Program Committee Member, Organizing Committee Member, Reviewer in reputed International Conferences

- Reviewer of reputed peer reviewed journals like IEEE Access, IEEE Systems, and Inderscience, Springer Journals

❖ Selected Publication

➢ Peer Reviewed Journal

1. Tapalina Bhattasali, K. Saeed, "Typing Pattern Analysis for Fake Profile Detection in Social Media", Springer, LNCS, 2021.
   This research work was supported by research grant from Bialystok University of Technology, Poland and Ministry of Science and Higher Education in Poland.

2. S. R. Nazar, Tapalina Bhattasali "Sentiment Analysis of Customer Reviews", Azerbaijan Journal of High Performance Computing, June 2021.

3. A, Kathotia, Tapalina Bhattasali, "Emergence of UPI as a Disruptor", YOUTHINK Volume 15, St. Xavier's College (Autonomous), Kolkata, 2021.

4. Tapalina Bhattasali, "Intrusion Detection Framework for Geo-Sensor Network", special issue of Azerbaijan Journal of High Performance Computing, December 2020.

5. M. Das Nath, Tapalina Bhattasali, "Anomaly Detection Using Machine Learning Approaches", special issue of Azerbaijan Journal of High Performance Computing, December 2020.

6. Tapalina Bhattasali, "Pandemic Analytics to Assess Risk of COVID-19 Outbreak", Azerbaijan Journal of High Performance Computing, June 2020.

7. A. Lunia, Tapalina Bhattasali, "A Study of App Based Cab Aggregator Model", YOUTHINK Volume 14, St. Xavier's College (Autonomous), Kolkata, 2019.

8. M. Dasnath, Tapalina Bhattasali, "Impact of Blockchain to Secure E-Banking Transaction", International Journal of Computer Science and Engineering (IJCSE), May 2019.

9. Tapalina Bhattasali, "SeDReS: Secured Data Retrieval Service", Azerbaijan Journal of High Performance Computing, June 2019.

10. Tapalina Bhattasali, "Blockchain: Remolding Future of Banking Sector", YOUTHINK Volume 13, St. Xavier's College (Autonomous), Kolkata, 2018.

11. Tapalina Bhattasali, "A New Interaction Model for Mapping Cloud Flow to Virtual Machine", International Journal for Research in Engineering Application and Management (IJREAM), 2018.

12. Tapalina Bhattasali, R. Chaki, N. Chaki, K. Saeed, "An Adaptation of Context and Trust Aware Access Control for Remote Healthcare", International Journal of Software Engineering and Knowledge Engineering (IJSEKE), 2018.

13. Tapalina Bhattasali, N. Chaki, K. Saeed, R. Chaki, "U-Stroke Pattern Modeling for End User Identity Verification through Ubiquitous Input Device", Springer, LNCS, 2015.

14. Tapalina Bhattasali, K. Saeed, N. Chaki, R. Chaki, "A Survey of Security and Privacy Issues for Biometrics based Remote Authentication in Cloud", Springer, LNCS, 2014.

15. Tapalina Bhattasali, R. Chaki, N. Chaki, "Study of Security Issues in Pervasive Environment of Next Generation Internet of Things", Springer, LNCS, 2013.

16. Tapalina Bhattasali, R. Chaki, "A Survey of Recent Intrusion Detection Systems in Wireless Sensor Network", Advances in Network Security and Applications, Springer, CCIS, 2011.

17. Tapalina Bhattasali, K. Saeed, N. Chaki, R. Chaki, "Bio-authentication for Layered Remote Health Monitor Framework", Journal of Medical Informatics & Technologies, Vol. 23 2014.

18. Tapalina Bhattasali, R. Chaki, S. Sanyal, "Sleep Deprivation Attack Detection in Wireless Sensor Network", International Journal of Computer Applications, Vol. 40, No. 15, published by Foundation of Computer Science, 2012.

19. Tapalina Bhattasali, R. Chaki, "Lightweight Hierarchical Model for HWSNET", International Journal of Advanced Smart Sensor Network Systems (IJASSN), 2011.

➢ **Book Chapter**

1. Tapalina Bhattasali, S. Xavier, "Technological Innovations for Environmental Sustainability", In: Go Green For Environmental Sustainability, CRC Press, July 2021.

2. Tapalina Bhattasali, "Cryptocurrency in E-Commerce Sector", In: Cryptocurrency- A Bright Future or Just a Fad, The Bhopal School of Social Sciences, 2021.

3. Tapalina Bhattasali, "Impact of COVID-19 Pandemics on E-Commerce Sector", In: Re-imaging the New Normal- The transformational lens of COVID -19, The Bhopal School of Social Sciences, 2020.

4. Tapalina Bhattasali, R. Chaki, K. Saeed, N. Chaki, "Typing Signature Classification Model for User Identity Verification", In: Advanced Computing and Systems for Security, Springer, Advances in Intelligent Systems and Computing, 2018.

5. Tapalina Bhattasali, R. Chaki, N. Chaki, K. Saeed, "Securing Service in Remote Healthcare", In: Advanced Computing and Systems for Security, Springer, Volume 395 of the series Advances in Intelligent Systems and Computing, 2016.

6. Tapalina Bhattasali, M. Chakraborty, N. Chaki, "Future Trends in WAN", In: Intrusion Detection in Wireless Ad-Hoc Networks, CRC Press, 2014.

➢ **Book**

1 K. Saeed, M. Adamski, Tapalina Bhattasali, M.K. Nammous, P.Panasiuk, M.Rybnik, S.H.Shaikh, New Directions in Behavioral Biometrics, CRC Press, 2016.

2 Tapalina Bhattasali, Hierarchical LIMOS Model for Heterogeneous Wireless Sensor Network: Energy Efficient Secure System Model for Wireless Sensor Network, published by Lambert Academic Publishing (LAP) House, Germany in April, 2012.

➢ **Conference Proceedings**

1. Kazaree Basak, Rajdeep Das, Rajarshi Bhattacharya, Tapalina Bhattasali, "Edge Intelligence to Detect COVID-19", In: Proceedings of AAHiPC 2020, Extended version was accepted for publication in special issue of AzHIPC Journal in 2020.

2. M. Das Nath, Tapalina Bhattasali, "SCMCI: Secured Click and Mortar Commercial Interaction", In: Proceedings of CSI Annual Convention 2020. Extended version was accepted for publication in Springer CCIS.

3. Tapalina Bhattasali, "Technology Acceptance Model for U-Transaction", 2017, November, In: Conference Proceedings of ICCEM 2017 organized by St. Xavier's College, Kolkata in collaboration with St. Xavier's University.

4. Tapalina Bhattasali, N. Chaki, R. Chaki, K. Saeed, "Context and Trust Aware Workflow Oriented Access Framework", In: Proceedings of International Conference on Software Engineering and Knowledge Engineering (SEKE 2016). Selected for publication in special issue of IJSEKE in July 2016 (indexed in SCI-E, Scopus, Journal Citation Reports/Science Edition) as best paper.

5. Tapalina Bhattasali, N. Chaki, "Heterogeneous Services in Layered Framework of IoT Enabled Assisted Living", In: Proceedings of IoT-enabled Healthcare and Wellness Technologies and Systems (IoT-Health), ACM International Conference on Mobile Systems, Applications, and Services, ACM Mobisys 2016.

6. Tapalina Bhattasali, N. Chaki, "Exploring Heterogeneous Services for IoT Enabled Remote Application Framework", In: Proceedings of ACM International Conference on Mobile Systems, Applications, and Services Companion, ACM Mobisys 2016.

7. Tapalina Bhattasali, P. Panasiuk, K. Saeed, N. Chaki, R. Chaki, "Modular Logic of Authentication Using Dynamic Keystroke Pattern Analysis", In: Proceedings of International Conference of Numerical Analysis And Applied Mathematics (WoS Publication), American Institute of Physics (AIP), ICNAAM2015.
Extended version "Typing Pattern Analysis for Modular Authentication", accepted in International Journal - Applied Mathematics and Information Science, Natural Science Publishing in 2015 (was indexed in Journal Citation Reports/Science Edition).

8. Tapalina Bhattasali, K. Saeed, "Two Factor Remote Authentication in Healthcare", In: Proceedings of International Conference on Advances in Computing, Communication and Informatics (ICACCI), IEEE XPLORE, 2014.

9. Tapalina Bhattasali, "An IoT based Secure Assisted Aged Living Framework", PhD Forum paper of International Conference on Distributed Computing and Networking, ICDCN 2014.

10. Tapalina Bhattasali, R. Chaki, N. Chaki, "Secure and Trusted Cloud of Things", In: Proceedings of Annual IEEE India Conference INDICON 2013.

11. Tapalina Bhattasali, R. Chaki, "BEAMS: Battery Exhaustion Anomaly Monitoring System Model in SENSORNET", Proceedings of International Conference on Sensing Technology (ICST 2012), IEEE.

➢ **Articles**

1. Tapalina Bhattasali, "Security Aspects in Internet of Things Domain", CSI Communications, April 2014.

2. Tapalina Bhattasali, "Cloud Based High Performance Computing", CSI Communications, September 2013.

3. Tapalina Bhattasali, "LICRYPT: Lightweight Cryptography Technique for Securing Smart Objects in Internet of Things Environment", CSI Communications, May 2013.

❖ **As Organizer (Selected Events)**

▪ Convener of two-day Online International Workshop on Advanced Applications on High Performance Computing, AAHiPC 2020, organized by Azerbaijan State Oil and Industry University (ASOIU), Baku in collaboration with St. Xavier's College (Autonomous), Kolkata in November 2020.

▪ Technical Committee Member of two-day International Webinar organized by Department of Social Work: NSS & UBA, St. Xavier's College (Autonomous), Kolkata in September 2020.

▪ Organizing Committee Member of Inter-College State Sports & Games Championship 2019-20, organized by Department of Higher Education, Government of West Bengal and St. Xavier's College (Autonomous), Kolkata in February 2020.

▪ Organizing Committee Member of National Conference on Women's Issues and Everyday Life: Power, Resistance and Representation organized by St. Xavier's College (Autonomous), Kolkata in January 2020.

▪ Organizing Committee Member of JHEASA Conference at St. Xavier's College (Autonomous), Kolkata in October 2019.

▪ Organizing Committee Member of two-day International Conference, ICCEEM 2019 organized by St. Xavier's College (Autonomous), Kolkata in September 2019.

- Programme Coordinator of One-day National Workshop on "Understanding Plagiarism" organized by St. Xavier's College (Autonomous), Kolkata in August 2019.

- Programme Coordinator of UGC approved 7-day National Workshop on Quantitative Research Methodology organized by St. Xavier's College (Autonomous), Kolkata in collaboration with Institute of Development Studies (IDSK), Kolkata in August 2019.

- Organizing Committee Member of Skill Development Programme (SDP) on "Advanced Excel" in December 2018.

- Organized E-Commerce, Cyber Law Seminars for undergraduate students by industry experts.

- Organizing Committee Member of One-Day Skill Development Programme (SDP) on GST through Computerized Accounting, organized by St. Xavier's College (Autonomous), Kolkata, 2017.

❖ **As Participant (Selected Events from July, 2017 onwards)**

- Successfully completed two-week online Faculty Development Programme on "Data Science for All", held from 12 - 23 April, 2021, jointly organized by Electronics & ICT Academies, supported by Ministry of Electronics and Information Technology, MeitY, Govt. of India.

- Participated at various National & International level Webinar, Virtual Conference, FDP and Quiz from April 2020 to June 2021.

- Participated at One-Day FDP on "Mindful Leadership" organized by St. Xavier's College (Autonomous), Kolkata in association with IIM, Kozhikode in February, 2020.

- Participated at One-Day FDP on "Applications of Finance Lab in Research" organized by St. Xavier's College (Autonomous), Kolkata.in December 2019

- Participated at One-Day FDP on "Interreligious Studies and Social Harmony", organized by St. Xavier's College (Autonomous), Kolkata in July 2019.

- Successfully completed **short term course** on Research Methodology in 2019.

- Successfully completed **UGC sponsored interdisciplinary refresher course (three weeks) on "Introduction to Data Analytics"**, organized by Department of Computer Science and Engineering, University of Calcutta in 2018-2019. Presented Topic: Impact of Blockchain on IoT Data.

- Participated at one-day seminar on Intellectual Property Law and INTERNET organized by Computer Centre and Central Computing Facilities, St. Xavier's College (Autonomous), Kolkata in October 2018.

- Participated at Global Blockchain Summit organized by Department of Information Technology & Electronics, Government of West Bengal at Biswa Bangla Convention Centre, Newtown in December 2018.

- Participated in One Day CSI Tutorial on "Social Transformation – Digital Way", 2018.

- Participated in Two Day International Conference on Emerging Perspectives in Commerce, economics and Management – Policies for a Better world (ICCEM 2017), organized by St. Xavier's College, Kolkata in collaboration with St. Xavier's University.

- Participated in Orientation-cum-training programme on "Plagiarism and How to Detect & Avoid It (use of Turnitin Software)", organized by University of Calcutta in September 2017.

❖ **Membership**

- Professional Member, Association for Computing Machinery (ACM)

- Member, Data Security Council of India (DSCI)

- Member, International Association of Computer Science and Information Technology (IACSIT)

- Member, International Association of Engineers (IAENG)

- Member, International Association of Engineers and Scientists (IAEST)

- Global member, Internet Society (ISOC)

- Lifetime member, Cryptology Research Society of India (CRSI)

- Lifetime Member, Kolkata Nivedita Shakti Charitable Trust - A National Movement for Women initiated by Vijnana Bharti

❖ **Professional Experience (12+ Years in Academics)**

- Served as academic consultant at Anuwesha Academy, OCTAVA, Career Plus

- Served as Research Assistant at AGH University of Science and Technology, Poland

- Served as Senior Research Fellow at ITRA, Media Lab Asia, Govt. of India

- Served as Senior Research Fellow at TEQIP-II, University of Calcutta

- Served as Guest Lecturer at West Bengal University of Technology

- Served as full-time faculty at Techno India College of Technology and visiting faculty in various colleges under Techno India Group

❖ **Fellowship & Travel Grant**

- Awarded DST PURSE Fellowship, Govt. of India from University of Calcutta to visit Poland for international collaboration.

- Awarded International Grant from Information Technology Research Academy (ITRA), Media Lab Asia, and MeitY, Govt. of India to visit Singapore.

- Awarded Senior Research Fellowship by Govt. of India (Media Lab Asia, MeitY) and Technical Education Quality Improvement Programme (TEQIP), university fellowship for doctoral research at University of Calcutta.

- Awarded Senior Research Assistantship by Technical Education Quality Improvement Programme (TEQIP) from West Bengal University of Technology.

- Awarded consolidated fellowship and travel grants from several tier 1 international conferences like CISIM, INDICON, ICDCN, CISIM, MOBISYS, ACSS, COMSNET.

❖ International Visit for Academic Collaboration

- Visited as lecturer in AGH University of Science and Technology, Krakow, Poland.

- Visited Poland for research collaboration as part of Doctoral research.

- Presented research paper in International Conference at Warsaw University of Technology, Warsaw, Poland.

- Invited for industrial visit to Motorola at Krakow, Poland.

- Presented research papers in a tier-1 International Conference in Singapore, organized by Singapore Management University.

- Visited Singapore to meet international mentors of remote health project.

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