

# **Dr. Tapalina Bhattasali**

## **Assistant Professor**

**St. Xavier's College (Autonomous), Kolkata**

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### **Academic Qualification**

- PhD in Computer Science and Engineering from University of Calcutta  
(In collaboration with AGH University of Science and Technology and Bialystok University of Technology in Poland - under Remote Health project funded by Information Technology Research Academy (ITRA), Media Lab Asia, Ministry of Electronics and Information Technology (MeitY) Government of India)
- Final Year MBA in Marketing
- UGC NET in Computer Science and Application
- M.Tech in Information Technology
- Master of Computer Application

### **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 second rank-holder in M.Tech.

### **Professional Roles & Responsibilities**

#### ***As Resource Person***

- Delivered lecture as Keynote Speaker on “Impact of Blockchain in Current Scenario” in Interdisciplinary International Conference Sanyog 2020 in June 2020.

- Invited as resource person and delivered lecture on “Emerging Technologies in Computation” in a webinar organized by Department of Computer Science, Desh Bhagat University, Punjab in May 2020.
- Delivered lecture on “Artificial Intelligence: Boon or Bane” at the 12<sup>th</sup> Xaverian Research Colloquium (XRC), “Anusandhan” in January 2020.
- Delivered lecture as Resource Person on “Understanding Plagiarism” at one-day national workshop organized by St. Xavier’s College (Autonomous), Kolkata in August, 2019.
- Delivered lecture on “SEM: A Retrospection Through R” at 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.
- Invited by Global Outreach Research & Education Association (GOREA) as resource person to deliver lecture on “Future Scope of Blockchain Technology” at Hyderabad in April 2019.
- Act as resource person in Internal Faculty Orientation Programmes on Advanced DBMS, HTML and JavaScript at St. Xavier’s College (Autonomous), Kolkata.

#### ***As Organizer/Reviewer***

- 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.
- Organizing Committee Member of National Conference on Women’s Issues and Everyday Life: Power, Resistance and Representation in January 2020 organized by St. Xavier’s College (Autonomous), Kolkata.
- Organizing Committee Member of JHEASA Conference in October, 2019 at St. Xavier’s College (Autonomous), Kolkata.
- 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.
- Program Committee Member in various reputed International Conferences like IoTBDS, SSCS.
- Organizing Committee Member of International Conferences like CISIM.
- Reviewer of various peer reviewed journals like IEEE Access, IEEE Systems, and Inderscience Journals.

### ***As Participant***

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

### **Professional Experience**

- Visiting Faculty of Computer Science in University School of Engineering and Applied Sciences, Desh Bhagat University, Punjab.
- 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 – Aviskaar Journal.
- Editor, Azerbaijan Journal of High Performance Computing.
- Programme Coordinator of exchange programme with Azerbaijan State Oil and Industry University, Baku.
- Served as consultant at Multi-Spectra Consultants, Anuwesha Academy, OCTAVA, Career Plus
- Served as Team Member, Biometrics Team, Bialystok University of Technology, Poland.
- 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 Guest Lecturer at West Bengal University of Technology.
- Served as full-time faculty at Techno India College of Technology and Techno India Institute of Technology.

### **Selected Publication**

#### **Google Scholar Profile:**

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

#### **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.

### ***Peer Reviewed Journals***

1. **Tapalina Bhattasali**, "Pandemic Analytics to Assess Risk of COVID-19 Outbreak", Azerbaijan Journal of High Performance Computing, June 2020.
2. M. Dasnath, **Tapalina Bhattasali**, "SCMCI: Secured Click and Mortar Commercial Interaction", **Springer**, CCIS, 2020.
3. M. Dasnath, **Tapalina Bhattasali**, "Impact of Blockchain to Secure E-Banking Transaction", International Journal of Computer Science and Engineering (IJCSE), May 2019
4. **Tapalina Bhattasali**, "SeDReS: Secured Data Retrieval Service", Azerbaijan Journal of High Performance Computing, June 2019.
5. **Tapalina Bhattasali**, "A New Interaction Model for Mapping Cloud Flow to Virtual Machine", International Journal for Research in Engineering Application and Management (IJREAM), 2018.
6. **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.
7. **Tapalina Bhattasali**, N. Chaki, K. Saeed, R. Chaki, "U-Stroke Pattern Modeling for End UserIdentity Verification through Ubiquitous Input Device", **Springer**, LNCS, 2015.
8. **Tapalina Bhattasali**, K. Saeed, N. Chaki, R. Chaki, "A Survey of Security and Privacy Issues for Biometrics based Remote Authentication in Cloud", **Springer**, LNCS, Volume 8838, 2014.
9. **Tapalina Bhattasali**, R. Chaki, N. Chaki, "Study of Security Issues in Pervasive Environment of Next Generation Internet of Things", **Springer**, LNCS, Volume 8104, 2013.
10. **Tapalina Bhattasali**, R. Chaki, "A Survey of Recent Intrusion Detection Systems in Wireless Sensor Network", Advances in Network Security and Applications, **Springer**, CCIS, 2011.
11. **Tapalina Bhattasali**, K. Saeed, N. Chaki, R. Chaki, "Bio-authentication for Layered Remote Health Monitor Framework", Journal of Medical Informatics & Technologies, Vol. 23, 2014.
12. **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.
13. **Tapalina Bhattasali**, R. Chaki, "Lightweight Hierarchical Model for HWSNET", International Journal of Advanced Smart Sensor Network Systems (IJASSN), Vol. 1, No. 2, 2011.

### ***Book Chapters***

1. **Tapalina Bhattasali**, R. Chaki, K. Saeed, N. Chaki, “Typing Signature Classification Model for User Identity Verification” *Advanced Computing and Systems for Security*, **Springer**, Advances in Intelligent Systems and Computing, 2018.
2. **Tapalina Bhattasali**, R. Chaki, N. Chaki, K. Saeed, “Securing Service in Remote Healthcare”, *Advanced Computing and Systems for Security*, **Springer**, Volume 395 of the series Advances in Intelligent Systems and Computing, 2016.
3. **Tapalina Bhattasali**, M. Chakraborty, N. Chaki, “Future Trends in WAN”, In: *Intrusion Detection in Wireless Ad-Hoc Networks*, **CRC Press**, 2014.

### ***Conference Proceedings***

1. **Tapalina Bhattasali**, “Technology Acceptance Model for U-Transaction”, 2017, November, St. Xavier’s College, Kolkata, ICCEM 2017 Conference Proceedings.
2. **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.

3. **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.
4. **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.
5. **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).
6. **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.

7. **Tapalina Bhattasali**, “An IoT based Secure Assisted Aged Living Framework”, PhD Forum paper of International Conference on Distributed Computing and Networking, ICDCN 2014.
8. **Tapalina Bhattasali**, R. Chaki, N. Chaki, “Secure and Trusted Cloud of Things”, In: Proceedings of Annual IEEE India Conference INDICON 2013.
9. **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. “A Study of App Based Cab Aggregator Model”, YOUTHINK, St. Xavier’s College (Autonomous), Kolkata, 2019.
2. “Blockchain: Remolding Future of Banking Sector”, YOUTHINK, St. Xavier’s College (Autonomous), Kolkata, 2018.
3. “Security Aspects in Internet of Things Domain”, CSI Communications, April 2014.
4. “Cloud Based High Performance Computing”, CSI Communications, September 2013.
5. “LICRYPT: Lightweight Cryptography Technique for Securing Smart Objects in Internet of Things Environment”, CSI Communications, May 2013.

### **Research Work**

Cloud-IoT, High Performance Computing- Edge Computing, Swarm Intelligence, Data Analytics, Blockchain, Artificial Intelligence, Machine Learning, Data Learning

### **Membership**

- 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)
- Professional Member, Association for Computing Machinery (ACM)
- Global member, Internet Society (ISOC)
- Lifetime member, Cryptology Research Society of India (CRSI)
- Honorary member, Indian Association of Private Higher Education Institute

### **Social Work**

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

### **Fellowship / Travel Grant**

- Awarded DST PURSE Fellowship to visit Poland.
- Awarded International Grant from Information Technology Research Academy (ITRA), Media Lab Asia, and MeitY, 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**

- Visited as lecturer in AGH University of Science and Technology, Krakow, Poland.
- Presented research paper in International Conference at Warsaw University of Technology, Warsaw, Poland.
- Invited for industrial visit to Motorola, 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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