DR. JOY BOSE

Complete List of Publications and Patents

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Google Scholar: 707 citations, h-index 13 | DBLP: dblp.org/pid/84/5687 | ORCID: orcid.org/0000-0002-6717-2187

PUBLICATIONS

Total indexed in DBLP: 52 conference papers (c1–c52), 2 journal articles, 19 informal/preprint entries, 1 PhD thesis. Citations: 707 | h-index: 13 (Google Scholar, May 2026).

A. Peer-Reviewed Journal Articles

2025

[J3] Bandyopadhyay S., **Bose J.**, Roychowdhury S. A Hybrid Framework for Real-Time Data Drift and Anomaly Identification Using Hierarchical Temporal Memory and Statistical Tests. *International Journal of Mathematical, Engineering and Management Sciences (IJMEMS)*, 10(3), 2025. DOI: 10.48550/arXiv.2504.18599

2019

[J2] Singla K., **Bose J.**, Varshney N. Word Embeddings for IoT Based on Device Activity Footprints. *Computación y Sistemas*, 23(3), 2019. DOI: 10.13053/CYS-23-3-3276

2007

[J1] Furber S.B., Brown G., **Bose J.**, Cumpstey J.M., Marshall P., Shapiro J.L. Sparse Distributed Memory Using Rank-Order Neural Codes. *IEEE Transactions on Neural Networks*, 18(3):648–659, 2007. DOI: 10.1109/TNN.2006.890804

B. PhD Thesis

2007

[T1] **Bose J.** Engineering a Sequence Machine Through Spiking Neurons Employing Rank-Order Codes. *PhD Thesis*, University of Manchester, UK, 2007. Supervisor: Prof. Steve Furber. British Library EThOS: uk.bl.ethos.789385

C. Peer-Reviewed Conference Papers (chronological, most recent first)

2026

[c52] Bose J., Adyapak S. A Survey of Security, Privacy, and Ethics of Large Language Models in Telecom. *COMSNETS 2026. pp. 1100–1104* **DOI: 10.1109/COMSNETS67989.2026.11418201**

2025

[c51] Ramesh S., Bose J., Singh H., Raghavan A.K., Roy Chowdhury S., Sridhara G., Saini N., Britto R. Automated Code Review Using Large Language Models at Ericsson: An Experience Report. *ICSME 2025. pp. 602–607* **DOI: 10.1109/ICSME64153.2025.00061**

2024

[c50] Chowdhury S.R., Sridhara G., Raghavan A.K., Bose J., Mazumdar S., Singh H., Sugumaran S.B., Britto R. Static Program Analysis Guided LLM Based Unit Test Generation. *COMAD/CODS 2024. pp. 279–283* **DOI: 10.1145/3703323.3703742**

[c49] Pardhasaradhi N., Bose J., Vikram A., Verma A., Jain M. Identification of Inefficient Radios for Efficient Energy Consumption in a Mobile Network. *COMSNETS 2024. pp. 608–612* **DOI: 10.1109/COMSNETS59351.2024.10426851**

2022

[c48] Banerjee S., Bose J., Puthepurakel S.P., Uppuluri P.K., Bandyopadhyay S., Reddy Y.S.K., Gireesha R.H. Link-Adaptation for Improved Quality-of-Service in V2V Communication using Reinforcement Learning. *AIMLSystems 2022. pp. 1:1–1:7* **DOI: 10.1145/3564121.3564122**

[c47] Bose J., Gireesha R.H., Banerjee S., Umaashankar V. Prediction of Throughput Degradation from Trouble Frequencies, given Environmental Unknowns. *COMSNETS 2022. pp. 236–240* **DOI: 10.1109/COMSNETS53615.2022.9668474**

2020

[c46] Mishra P., Gudla S.K., ShanBhag A.D., Bose J. [Title: please verify via DOI — DBLP c46]. *IEEE CCNC 2020.* **DOI: 10.1109/CCNC46108.2020.9045128**

[—] Dhavala S.S., Bhatia C., Bose J., Faldu K., Avasthi A. Auto Generation of Diagnostic Assessments and Their Quality Evaluation. *EDM 2020. pp. 730–735*

2019

[—] Patankar A.A., Bose J., Khanna H. A Bias Aware News Recommendation System. *IEEE ICSC 2019. pp. 232–238* **DOI: 10.1109/ICOSC.2019.8665610**

[—] Bose J. Extraction of Relevant Images for Boilerplate Removal in Web Browsers. *IEEE INDICON 2019.*

2016

[—] Patankar A.A., Bose J. Bias Based Navigation for News Articles and Media. *NLDB 2016, Springer LNCS vol. 9612. pp. 465–470* **DOI: 10.1007/978-3-319-41754-7_50**

[—] Bose J. et al. Attention Sensitive Web Browsing. *ACM Compute 2016.*

2015

[—] Bose J. et al. A Hands Free Browser Using EEG and Voice Inputs. *IJCNN 2015*. **DOI: 10.1109/IJCNN.2015.7280378**

[—] Bose J. et al. A Web Browser Responsive to the User Interest Level. *IEEE INDICON 2015*. **[Best Paper Award, Track 4]**

[—] Bansal D., Bose J. et al. EEG Based Detection of Area of Interest in a Web Page. *ICACCI 2015*.

Note: DBLP records c1–c52 for Joy Bose. Entries above marked "—" are confirmed via IEEE Xplore, ACM DL, Springer, EDM proceedings, or ResearchGate but do not yet appear in DBLP. The CCNC 2020 entry (c46, DOI confirmed) has a placeholder title — please verify via the DOI link. Remaining earlier entries (c1–c45) exist in DBLP; full list at: dblp.org/pid/84/5687

D. Preprints / Technical Reports (arXiv / CoRR)

2025

2021

[i14] Ajwani R.D., Lalan A., Bhattacharya B.S., **Bose J.** Sparse Distributed Memory using Spiking Neural Networks on Nengo. *CoRR abs/2109.03111* (2021)

[i13] Sampath S., **Bose J.** Modeling Effect of Lockdowns and Other Effects on India Covid-19 Infections Using SEIR Model and Machine Learning. *CoRR abs/2110.03422* (2021)

2025

[i19] Bose J. Pendulum Model of Spiking Neurons. *CoRR abs/2507.22146 (2025).* arXiv:2507.22146

[i18] Morri S., Bose J., Reddy L.R., Anamandra S.H. Predicting Locations of Cell Towers for Network Capacity Expansion. *CoRR abs/2507.19925 (2025).* arXiv:2507.19925

[i17] Saragadam H., Nayak C.K., Bose J. A Scalable and High Availability Solution for Recommending Resolutions to Problem Tickets. *CoRR abs/2507.19846 (2025)*. arXiv:2507.19846

[i16] Ramesh S., Bose J., Singh H., Raghavan A.K., Roychowdhury S., Sridhara G., Saini N., Britto R. Automated Code Review Using Large Language Models at Ericsson: An Experience Report. *CoRR abs/2507.19115 (2025)*. arXiv:2507.19115

[i15] Bandyopadhyay S., Bose J., Roychowdhury S. A Hybrid Framework for Real-Time Data Drift and Anomaly Identification Using Hierarchical Temporal Memory and Statistical Tests. *CoRR abs/2504.18599 (2025)*. arXiv:2504.18599

[i14] Roychowdhury S., Sridhara G., Raghavan A.K., Bose J., Mazumdar S., Singh H., Sugumaran S.B., Britto R. Static Program Analysis Guided LLM Based Unit Test Generation. *CoRR abs/2503.05394 (2025)*. arXiv:2503.05394

PATENTS

8 patents granted (US Patent and Trademark Office / European Patent Office). 20+ patent applications filed (EPO, WIPO, USPTO). Samsung Star IP Award 2013 for contributions to the patent portfolio.

A. Granted Patents

[P1] **US12591731B2** — *System and Method for Selecting Relevant Content in an Enhanced View Mode* (2025, Microsoft)

[P2] **EP4331295B1** — *Reducing Interference in a Communications Network* (2024, Ericsson)

[P3] **EP3750115B1** — *Machine Learning on a Blockchain* (2021, Ericsson)

[P4] **US11295492B2** — *Electronic Device Related to Rendering of Web Content* (2022, Microsoft)

[P5] **US11030448B2** — *Method for Recommending One or More Actions (Mobile Device)* (2021, Samsung)

[P6] **US10235587B2** — *System for Optimizing Image Capturing Boundary* (2019, Samsung)

[P7] **US10210598B2** — *Electronic Device for Displaying and Processing Images* (2019, Samsung)

[P8] **US9992254B2** — *Method for Providing a Web Feed in a URI* (2018, Samsung)

B. Patent Applications Filed (Selected)

[P9] **EPO/WIPO App. (2024)** — *Intelligent Log Querying and Code Understanding via Knowledge Graphs* (2024 (filed), Ericsson)

[P10] **EPO/WIPO App. (2023)** — *AI-Assisted Automated Code Review in Telecommunications Software* (2023 (filed), Ericsson)

[P11] **EPO/WIPO App. (2021)** — *Machine Learning for Trouble Ticket Resolution Prediction in Networks* (2021 (filed), Ericsson)

[P12] **USPTO App. (2019)** — *Semi-Supervised Boilerplate Removal in Web Browsers Using Gaussian Random Fields* (2019 (filed), Microsoft)

[P13] **USPTO App. (2018)** — *Heterogeneous Data Fusion for Personalised Mobile Recommendations* (2018 (filed), Samsung)

[P14] **USPTO App. (2017)** — *Gesture and Sensor Based Cryptographic Key Generation for Secure Messaging* (2017 (filed), Samsung)

[P15] **USPTO App. (2016)** — *Push Notification Delivery Optimisation Using Predicted User Context* (2016 (filed), Samsung)

[P16] **USPTO App. (2016)** — *EEG-Based Browser Interaction System Using Neurosky BCI* (2016 (filed), Samsung)

[P17] **USPTO App. (2015)** — *Context-Aware Calendar Event Classification and Recommendation* (2015 (filed), Samsung)

[P18] **USPTO App. (2014)** — *Neural Network Model for Web Page Boilerplate Identification* (2014 (filed), Samsung)

Note: Full list of 20+ applications available on Google Patents (inventor: Joy Bose) and on request from joyboseroy@gmail.com.

SUMMARY STATISTICS

Category	Count
Peer-reviewed journal articles	3
Peer-reviewed conference papers (DBLP indexed)	52
Preprints / Technical reports (arXiv/CoRR)	19

PhD thesis	1
Granted patents (US + EP)	8
Patent applications filed (EPO/WIPO/USPTO)	20+
Total citations (Google Scholar, May 2026)	707
h-index (Google Scholar, May 2026)	13