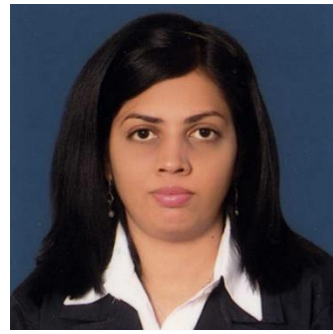


# Rashmi Prabhakar Sarode



## Address for Communication:

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**Personal Details:** Female, Indian Citizen, **Date of Birth:** 9 June 1983, Married  
**Currently Working as a Research Associate in University of Aizu, Japan**

## Education

Degree	University	Year / Period
Ph.D. (Computer Science and Engineering)	University of Aizu, Aizuwakamatsu, Japan	2018-2021
M. Tech. (Computer Science and Engineering)	Jagannath University, Jaipur, India	2012-2014
M.Sc. (Physics)	Goa University, Goa, India	2004-2008
B.Sc. (Physics)	Goa University, Goa, India	2000-2003

Diploma	Subject	University	Year / Period
Diploma in Computer Hardware and Networking	Computer Hardware and Networking	Global Institute of Computer Education, Goa	Sept. 2009 - Feb. 2010 (6 Months)
Diploma in Web Designing	HTML, CSS, Flash, Fireworks, JSP, ASP	Manipal Institute of Computer Education, Goa	Dec. 2006 - Feb. 2007 (3 Months)

## Research Interests:

Distributed Systems, Blockchain, Database Systems, Polystores, Big Data Analytics, Web Data Modeling, Cloud Computing, Mobile Cloud Computing, Cryptography.

## Working Experience

- (i) **Carried out Doctoral Work for Ph.D. Degree** – Department of Computer and Information Systems, University of Aizu, Japan. (1<sup>st</sup> October 2018 – 30<sup>th</sup> September 2021)  
Area of Concentration: Distributed Systems, Blockchain, Databases  
Ph.D. Research Advisors: Prof. Subhash Bhalla and Prof. Yutaka Watanobe  
**Title of Ph.D. Thesis:** Secure Transaction Commitment in Peer to Peer (P2P) Processes

- (ii) **Teaching Assistantship:** (TA classes taken during 2018-2021 for B.Sc. Computer Science programme of the University of Aizu, Japan)

- a) Teaching Assistant for Web Data Modeling at University of Aizu (Oct 2018 - Nov 2018, Oct 2019 - Nov 2019, Oct 2020-Nov 2020)  
Tuesday: 50 min class, Friday: 50 min class (4 classes per week)
- b) Teaching Assistant for Database Systems at University of Aizu (June 2019 - July 2019, June 2019 - July 2019)  
Monday: 50 min class, Thursday: 50 min class (4 classes per week)
- c) Teaching Assistant for C++ Programming at University of Aizu (Oct 2020 - Nov 2020)  
Monday: 50 min class, Thursday: 50 min class (2 classes per week)
- d) Teaching Assistant for Data Structure and Algorithms at University of Aizu (Dec 2020 - Jan 2021)  
Monday: 50 min class, Thursday: 50 min class (4 classes per week)
- e) Teaching Assistant for Introduction to Data Management at University of Aizu (June 2020 - July 2020, June 2021 - July 2021)  
Friday: 50 min class (2 classes per week)
- f) Teaching Assistant for Integrated Exercise for Software at University of Aizu (April 2021 - July 2021)  
Wednesday: 50 min class (3 classes per week)

- (iii) **Research Assistantship:**

- a) Polystore Data Management Systems for Managing Scientific Data-sets in Big Data Archives (October 01, 2018 – November 30, 2018)
- b) Data Encryption Security in Cloud and Mobile Cloud Computing (December 01, 2018 - June 23, 2019)
- c) Using Blockchain as a Peer-to-Peer Transaction Technology (June 24, 2019 - December 03, 2020)
- d) Secure and Fast Transactions with Blockchain on Bitcoin's Lightning Network (December 04, 2020 - May 25, 2021)
- e) Decentralized Transactions using Blockchain, its Trends and Prospective Applications (May 26, 2021 - September 30, 2021)

## Honours/Awards:

- October 01, 2018 - March 31, 2019: Recipient of JASSO Honours Scholarship (JASSO)

## Research Publications:

**ORCID ID:** 0000-0003-2759-6679

**Scopus ID:** 57210418415

**Google Scholar ID:** yQb6fWAAAAAJ&hl

## Papers Published in Peer-Reviewed Journals during Doctoral Programme

- 1) Data Encryption Security in Mobile and Cloud Computing Environments  
**Rashmi P. Sarode** and Subhash Bhalla  
*Journal of Applied Information Science* 7 (2), 19-30, (2019).  
ISSN Number: 2321-6115 Indexed: EBSCO, i-scholar database Global impact factor (2015) : 0.765  
<http://www.publishingindia.com/jais/>
- 2) Blockchain for Committing Peer-to-Peer Transactions using Distributed Ledger Technologies,  
**Rashmi P. Sarode**, Manoj Poudel, Shashank Shrestha and Subhash Bhalla  
*International Journal of Computational Science and Engineering*, 24(3), 215 - 227 (2021).  
DOI: 10.1504/IJCSE.2021.115096 EID: 2-s2.0-85108148923 Part ISSN: 17427193  
17427185 ISSN: 1742-7185 Impact Score : 1.32, h-index: 21
- 3) Open data integration model using a polystore system for large scale scientific data archives in astronomy.  
Shashank Shrestha, Manoj Poudel, **Rashmi P. Sarode**, W. Chu, and Subhash Bhalla  
*International Journal of Computational Science and Engineering*, 24(2), 116-127 (2021).  
DOI: 10.1504/IJCSE.2021.115096 EID: 2-s2.0-85106158940 Part of ISSN: 17427193 17427185  
Impact Score: 1.32, h-index: 21
- 4) Processing Analytical Queries over Polystore System for a Large Astronomy Data Repository  
Manoj Poudel **Rashmi P. Sarode**, Yutaka Watanobe and Subhash Bhalla  
*Applied Sciences: Appl. Sci.* 2022, 12, 2663. <https://doi.org/10.3390/app12052663>  
Published: 4 March 2022. Indexed by Scopus, Web of Science, SCIE. Impact Factor: 2.679, ISSN: 1742-7193  
Linking ISSN (ISSN-L): 1742-7185

## Research Papers Submitted to Peer-Reviewed Journals for Publication

- 1) High-volume Transaction Processing in Bitcoin Lightning Network on Blockchains  
**Rashmi P. Sarode**, Divij Gurpreet Singh, Manoj Poudel, Yutaka Watanobe and Subhash Bhalla  
Submitted to *International Journal of Computational Science and Engineering*.  
ISSN online 1742-7193 ISSN print 1742-7185, Cite Score 2020: 1.5
- 2) **Multi-Level Role-based Access Control System based on Stable Storage**  
Taisei Igarashi, **Rashmi P. Sarode** and Yutaka Watanobe and Subhash Bhalla  
**Submitted to Computer and Security Journal**  
ISSN: 0167-4048 <https://www.journals.elsevier.com> CiteScore: 8.5, Impact Factor : 4.438

## Research Papers Published in Refereed Proceedings of International Conferences / Workshops / Schools

- 1) Polystore Data Management Systems for Managing Scientific Data-sets in Big Data Archives.  
**Rashmi G. Patidar** (Name prior to December 2020), Shashank Shrestha, and Subhash Bhalla  
Proceedings 6th International Conference on Big Data Analytics (BDA) 2018,  
Warangal, India, December 18–21, 2018, pp. 217-227 edited by Anirban Mondal,  
Himanshu Gupta, Jaideep Srivastava, P. Krishna Reddy and D.V.L.N. Somayajulu, Springer, 2018  
DOI: 10.1007/978-3-030-04780-1\_15 EID: 2-s2.0-85059041925 Part of ISSN: 16113349 03029743

- 2) Query Languages for Polystore Databases for Large Scientific Data Archives  
**M. Poudel, S. Shrestha, Rashmi. P. Sarode, W. Chu and S. Bhalla**  
 9th International Conference on Cloud Computing, Data Science & Engineering (Confluence), IEEE, pp. 185-190, (2019).  
*DOI: 10.1109/CONFLUENCE.2019.8776972 Impact Score: 1.17, h-index : 7, INSPEC Accession Number: 18868947*  
<https://ieeexplore.ieee.org/xpl/conhome/8767138/proceeding?isnumber=8776606&pageNumber=2>  
**Electronic ISBN:**978-1-5386-5933-5    **CD:**978-1-5386-5932-8    **Print on Demand(PoD) ISBN:**978-1-5386-5934-2
- 3) Data Security in Mobile Cloud Computing  
**Rashmi P.Sarode** and Subhash Bhalla  
 Proceedings of International Conference on Sustainable Computing in Science, Technology and Management (SUSCOM2019), Amity University, Rajasthan, Jaipur, India 26-28th February (2019).  
*DOI: 10.2139/ssrn.3352362 EID: 2-s2.0-85111477262 Part of ISSN: 15565068*
- 4) Development of a Polystore Data Management System for an Evolving Big Scientific Data Archive.  
**Manoj Poudel., Rashmi P. Sarode., Shashank Shrestha, W. Chu and Subhash Bhalla**  
 In Heterogeneous Data Management, Polystores, and Analytics for Healthcare, : VLDB 2019 Workshops, Poly and DMAH, Los Angeles, CA, USA, August 30, 2019 edited by Vijay Gadeppally ,Timothy Mattson, Michael Stonebraker, Fusheng Wang, Gang Luo ,Yanhui Laing and Alevtina Dubovitskaya Springer International Publishing, 11721, pp.167-182 (2019).  
*DOI: 10.1007/978-3-030-33752-0\_12 EID: 2-s2.0-85077770807 Part of ISSN: 16113349 03029743*
- 5) Segment-Search Vs Knowledge Graphs: Making a Key-Word Search Engine for Web Documents  
**Rashmi P.Sarode., S. Sachdeva.,W. Chu, and Subhash Bhalla**  
 In 7th International Conference, BDA 2019, Ahmedabad, India, December 17–20, 2019, Proceedings : pp. 88-107 (2019), Springer , edited by Sanjay Madria, Philippe Fournier-Viger , Sanjay Chaudhary and P. Krishna Reddy  
*DOI: 10.1007/978-3-030-37188-3\_6 EID: 2-s2.0-85077509509 Part of ISSN: 16113349 03029743*

## Book Chapters

**Chapter Title:** Decentralized Transactions using Blockchain, its Trends and Prospective Applications

**Volume:** Blockchain Technology and its Potential Applications

**Chapter 6** in a book “**Blockchain Technology and its Potential Applications**” will be published in **Advances in Industry 4.0 and Machine Learning** published by **CRC Press - Taylor & Francis Group USA (2022)**

**Authors:** Rashmi P. Sarode, Divij Singh, Manoj Poudel, Shashank Shrestha, Yutaka Watanobe, and Subhash Bhalla

**Editors:** Annappa, Ph.D., National Institute of Technology Karnataka, Surathkal, Manoj Kumar M V, Ph.D., Nitte Meenakshi Institute of Technology, Bengaluru, Likewin Thomas, Ph.D., PESIT – M, Shivamogga, Sourav Kanti Adda, Ph.D., National Institute of Technology Karnataka, Surathkal, Niranjanmurthy M, Ph.D., M S Ramaiah Institute of Technology, Bengaluru (to be published shortly)

## **Papers Reviewed**

**Title:** Spam Email Classification and Sentiment Analysis based on Semantic Similarity Methods

**Journal:** International Journal of Computational Science and Engineering

**Date:** 4th October 2021

## **Conference Presentations**

- 1) Recent Developments in Mobile Cloud Computing  
**Rashmi G Patidar( Name after marriage).** and Subhash Bhalla  
**presented** in 15th World Conference on Applied Science, Engineering and Technology held on 31st December 2018, Nanutel, Margao, Goa, India
- 2) Data Security in Mobile Cloud Computing  
**Rashmi P Sarode and Subhash,** Bhalla  
**Presented at the,** International Conference on Sustainable Computing in Science, Technology & Management (SUSCOM-2019), held on February 26-28, 2019 Amity University Rajasthan, Jaipur, India.

## **Publications During M.Tech Programme**

- 1) SMS Encryption  
**Rashmi P Sarode** and N. .Manglani  
International Journal of Computer Science and Information Technologies, **6(5)**, 4655-4659 (2015). *ISSN:0975-9646* [https:// www.ijcsit.com](https://www.ijcsit.com) an online peer reviewed journal launched by **TECH SCIENCE PUBLICATIONS: h-index : 18, i10-index :48**
- 2) A comparative analysis of RSA and MD5 algorithms  
**Rashmi P. Sarode,** Piyush Gupta and N. Manglani  
Journal of Computer Science and Applications **6(1)** 25-33 (2014).  
*ISSN 2231-1270 International Research Publication House* <http://www.irphouse.com>

## **National and International Conferences Attended during M.Tech Programme**

- 1) Attended National Conference on Recent Advancements in Intelligent Computing System organized by Jagan Nath Gupta Institute of Engineering and Technology, Jaipur, INDIA during November 2-3, 2012
- 2) Attended International Conference on History and Development of Mathematics organized by JECRC University, Jaipur, INDIA during November 29-30 and December 1,2013 and presented a research paper on Mobile Cloud Computing.

## **National and International Conferences Attended during Doctoral Programme**

- 1) Attended Big Data Analytics in Astronomy, Science, and Engineering (BASE 2019) Symposium and delivered a presentation on 'Set Theoretic Query Language for PTF Data Resources' on 5th February 2019 at University of Aizu, Aizuwakamatsu, Japan.

- 2) Attended 9<sup>th</sup> International Conference on Big Data Analytics in Astronomy, Science, and Engineering (BASE 2021) during 07th – 09th December, 2021 at University of Aizu, Japan, and at prominent institutions in India at Delhi (IIT Delhi and NIT Delhi), Bangalore, and Pune (On site and through tele-conference mode). Organized by University of Aizu Japan and National Institute of Technology Delhi. Co-hosted this Conference at University of Aizu and Chaired the morning session on 9th December 2021
- 3) Recent Developments in Mobile Cloud Computing  
**Rashmi G Patidar (Name after marriage)**, and Subhash Bhalla  
**presented** in 15th World Conference on Applied Science, Engineering and Technology held on 31st December 2018, Nanutel, Margao, Goa, India
- 4) Data Security in Mobile Cloud Computing  
**Rashmi P Sarode and Subhash**, Bhalla  
**Presented at the**, International Conference on Sustainable Computing in Science, Technology & Management (SUSCOM-2019), held on February 26-28, 2019 Amity University, Rajasthan, Jaipur, India.

#### Extra-Curricular Activities

- 1) Served as a volunteer at World Education Fair on 17 th February 2016 held at SMS Convention Centre, Rambagh Palace, Jaipur, India. This fair was organised for the students who want to pursue their study overseas and obtain an international qualification.
- 2) Delivered a talk on "How to apply for Master and Doctoral Programmes in Japanese Universities in Japan" on 5th January 2019 in Dhempe College of Arts and Science, Miramar, Panjim, Goa, India.
- 3) Served as a Judge for Online Video Editing Contest held at Pope John XXIII Higher Secondary School, Don Bosco Institute, Margao, Goa, India on 25th August 2020. for selecting the best video made from a set of given criteria.
- 4) Delivered an Online Seminar Talk on 2nd September 2020, using Zoom facility in University of Tokyo, Japan from University of Aizu, Japan to international school students and parents on "University of Aizu – a brief tour".
- 5) Attended Candle Making Event on 23rd November 2019 and learnt how to paint on candles in Fukunishi-Honten, Aizuwakamatsu, Japan. Also learnt about Japanese culture and the Fukunishi-Honten shop.
- 6) Visited Kaei-gura, a Sake brewery shop on 12th December 2020 in Nanukamachi, Aizuwakamatsu, Japan and learnt the process of making Sake and tasted a few Sake desserts. Also visited a camera museum in its vicinity.

#### Technical Skills

**Programming Languages/Skills:** HTML 4.0/CSS 2.0, SEO, SMO, WordPress.

**Tools/Softwares/OS:** Adobe Photoshop, Windows 10, Ubuntu 16.04.

**Basic Knowledge:** C/C++, Core JAVA, Core PHP, MySQL, Basic Python

**Communication Skills**

English Language: Native Level ( IELTS Score: 7) Medium of Instruction)

Hindi Language: Native Level

Marathi : Mother Tongue

Japanese : Started learning Japanese

**Previous Work Experience – 11 years 3 months (2007-2018)**

Duration	Position Held	Company	Employment Status	Nature of Work
1 <sup>st</sup> May 2017 – 20 <sup>th</sup> September 2018	Sr. Web Developer and Digital Marketing Analyst	Gronical App Studios Pvt.Ltd., Delhi, India	Remote Work	Worked on Digital Marketing and WordPress Websites
January 2016 – April 2017	Project based SEO Professional	Webkype Info Services Pvt. Ltd., Noida, India	Remote Work	Worked on Organic SEO and Social Media
June 2015 – December 2015	Project based Web Developer	SRVWebs, Noida, India	Remote Work	Worked on WordPress Websites
June 2014 – May 2015	Project based Web Developer	BhavyaSoft, Jaipur, India	Remote Work	Worked on WordPress and PHP Websites
August 2011 – May 2014	Project based Web and Graphic Designer	SRVWebs, Noida, India	Remote Work	Designing WordPress Websites
March 2012	Web Designer	Short Term Project: Logic spice, Jaipur, India	Part-Time Remote Work	Designing HTML Websites
April 2012	Flash Designer	Short Term Project: Pratham Softwares, Jaipur, India	Part-Time Remote Work	Designing and Developing Animated Banners
April 2010- July 2011	Web and Graphic Designer	Online Productivity Solutions Private Limited, Goa, India	Full-Time	Designing Websites and Banners
November 2009-April 2010	Graphic Designer	Goa Prism Publications, Goa, India	Part-Time	Designing Magazines
April 2009-November 2009	Web and Graphic Designer	GainsNav, Goa, India	Full-Time	Designing Websites and Banners
June 2007-April 2009	Web and Graphic Designer	Freelancer, India	Remote Work	Designing Websites and Banners

## Statement of Purpose

To develop teaching skills by providing practical knowledge in Computer Science and enhance professional skills for training and research. I would like to utilize my lively and energetic attitude in teaching students with great enthusiasm.

I believe teaching is an integral part of an academic career and I look forward to teaching a university course. As a teacher, I hope to advance the intellectual development of my students to the best of my abilities. I am confident that my TA (teaching assistantship) experience, strong academic background, and communication skills coupled with thorough preparation and enthusiasm for the subject will make me an excellent teacher.

I also aspire to become a leading researcher in the field of distributed systems in an academic research laboratory or a comparable industry-based or non-profit research institution

## References

1. Prof. Subhash Bhalla (Ph.D. Research Advisor)  
Designation: Professor Emeritus  
Address: Department of Computer and Information Systems, University of Aizu, Tsuruga, Ikki-machi; Aizu-Wakamatsu City, Fukushima. Japan 965-8580  
Email: c21bhalla@u-aizu.ac.jp  
Phone: +80-6025-9950
2. Prof. Yutaka Watanobe (Ph.D. Research Advisor)  
Designation: Senior Associate Professor  
Address: Department of Computer and Information Systems, University of Aizu, Tsuruga, Ikki-machi; Aizu-Wakamatsu City, Fukushima. Japan 965-8580  
Email: yutaka@u-aizu.ac.jp  
Phone: +81-242-372715
3. Prof. Wanming Chu (Research Collaborator Mentor)  
Designation: Assistant Professor  
Address: Department of Computer and Information Systems, University of Aizu, Tsuruga, Ikki-machi; Aizu-Wakamatsu City, Fukushima. Japan 965-8580  
Email: w-chu@u-aizu.ac.jp  
Phone: +81(242)37-2737