CHANDAN MISRA

School of Computer Science & Engineering, XIM University

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RESEARCH INTERESTS

• Design and Prototyping • Big Data • Distributed Linear Algebra • Spatial Data Mining • Geographic Information Sciences • Music Informatics

EDUCATION AND PROFESSIONAL EXPERIENCE

XIM University *Jun. 2018 - Present*
Assistant Professor
School of Computer Science & Engineering

Indian Institute of Technology Kharagpur *Jan. 2014 - Dec. 2021*
Doctor of Philosophy
Advanced Technology Development Centre

TCS Innovation Lab, Hyderabad *Jun. 2016-Sep. 2016*
Research Internship, Contextual Knowledge Delivery
Advisor: Padmalata Nistala

Indian Institute of Technology Kharagpur *May 2013-Nov. 2013*
Senior Project Officer, Facilitation of Location Based Services using GeoSMS

Indian Institute of Technology Kharagpur *Jan. 2010-Feb. 2013*
MS (by Research) **GPA: 9.2/10**
Advisors: Prof. Anupam Basu and Prof. Baidurya Bhattacharya

Society for Natural Language Technology Research *Mar 2009-May 2012*
Junior Project Officer

Wipro Technologies *Jun. 2007-Jan. 2009*
Project Engineer

Kalyani Govt. Engineering College, West Bengal University of Technology *July 2003-June 2007*
B.Tech, Information Technology **GPA: 7.56/10.0**

AWARDS AND ACHIEVEMENTS

- Secured second position among 72 teams in **IBM ICARE National Technical Challenge** 2014.
- Designed a full set of hand-crafted Indic musical notation symbols. This is currently being used at **SNLTR** (Society for Natural Language and Technology Research).
- Developed a working system for crowdsourcing GIS data. The application has been deployed by the Department of Science and Technology, India, **at a National Level**, and the pilot deployments at Barnala and New Delhi have been successful.
- Involved in configuring and maintaining **MegHadoop**, Hadoop as a service, on **Meghamala**, the cloud infrastructure at IIT Kharagpur.
- Involved in configuring and maintaining big data cluster, Dept. of Computer Science and Engineering at IIT Kharagpur.

SKILLS

Programming Language	Proficient in • Java • Python • C Acquainted with • MatLab • R • OpenMP • CUDA
Web Languages	• HTML5 • CSS3 • JavaScript • XML • PHP
Platforms	• Android
Tools	• Git • LaTeX
Big Data Technology	• Apache Hadoop • Apache Spark

PUBLICATIONS IN DISTRIBUTED LINEAR ALGEBRA

1. **On Distributed Solution for Simultaneous Linear Symmetric Systems**, IEEE BigData 2020
   Chandan Misra, Utkarsh Parasrampuria, Sourangshu Bhattacharya, and Soumya K. Ghosh.
2. **An Optimized Distributed Recursive Matrix Multiplication for Arbitrary Sized Matrices**, IEEE BigData 2020
   Utkarsh Parasrampuria, **Chandan Misra**, and Sourangshu Bhattacharya
3. **A Fast Scalable Distributed Kriging Algorithm using Spark Framework**, International Journal of Data Science and Analytics, 10, pp. 249-264, 2020, Springer.
   Chandan Misra, Sourangshu Bhattacharya and Soumya K. Ghosh.
4. **Stark: Fast and Scalable Strassens Matrix Multiplication using Apache Spark**, IEEE Transactions on Big Data, 8(3), pp. 699-710, 2020.
   Chandan Misra, Sourangshu Bhattacharya and Soumya K. Ghosh.
5. **SPIN: A Fast and Scalable Matrix Inversion Method in Apache Spark**, Proceedings of the 19^{th} International Conference on Distributed Computing and Networking (ICDCN), Varanasi, India — January 04-07, 2018.
   Chandan Misra, Sourangshu Bhattacharya and Soumya K. Ghosh.
6. **SprIntMap: A System for Visualizing Interpolating Surface using Apache Spark**, 5^{th} International Conference on Advanced Computing, Networking, and Informatics (ICACNI), 2017, Goa, India.
   Chandan Misra, Sourangshu Bhattacharya and Soumya K. Ghosh.
7. **A Demonstration of GeomSMS: An SMS Framework for Sharing Geospatial Features**, ACM SIGSPATIAL, 2014, Texas, USA.
   Chandan Misra, Arindam Dasgupta and Soumya K. Ghosh

PUBLICATIONS IN COMPUTATIONAL MUSICOLOGY

1. **A Novel Weighted Euclidean Distance Measure for Analysis and Prediction of Rags of Tagore Songs**, Journal of Mathematics and Music, Taylor and Francis. (Communicated)[Preprint]
   Chandan Misra, Swarup Chattopadhyay
2. **SANGEET: An XML based Open Dataset for Research in Hindustani Sangeet**, CMMR2023, the 16th International Symposium on Computer Music Multidisciplinary Research, Tokyo, Japan, 13 - 17 Nov, 2023. (Communicated)[Preprint]
   Chandan Misra, Swarup Chattopadhyay
3. **SangeetTEX: A LaTeX Engine for Transcribing and Rendering Indic Music**, 7th International Conference on Technologies for Music Notation and Representation (TENOR), Marseille, France, 9-11 May, 2022.
   Chandan Misra
4. **SangeetXML: An XML based Format for Indic Music Retrieval**, ACM Multimedia Asia, Gold Coast, Australia, 2021
   Chandan Misra
5. **SangeetLab: A New Framework for Expressing Digital Indic Music**, New Interfaces for Musical Expressions (NIME), 2017, Copenhagen, Denmark. (Accepted)
   Chandan Misra
6. **Swaralipi: A Framework for Transcribing and Rendering Indic Music**, TENOR, 2016, Cambridge, UK.
   Chandan Misra, Tuhin Chakraborty, Anupam Basu and Baidurya Bhattacharya
7. **A New Framework to Preserve Tagore Songs**, World Digital Libraries, TERI Press, 2010.
   Chandan Misra, Baidurya Bhattacharya and Anupam Basu
8. **A New Framework to Preserve Tagore Songs**, ICDL, 2010, New Delhi, India.
   Chandan Misra, Baidurya Bhattacharya and Anupam Basu

COURSES TAUGHT

1. **Introduction to Web Development** - *Autumn 2018*
2. **Advanced Web Development** - *Spring 2018*
3. **Data Mining and Exploration,**
   Programming for Data Scientists - R Programming,
   Introduction to Programming in C, and
   Android Programming - *Autumn 2019*
4. **Python Programming** - *Spring 2019, Spring 2020*
5. **Artificial Intelligence and Applications** - *Spring 2019*
6. **Introduction to Programming in C,**
   Programming for Data Scientists,
   Advanced Programming in Java - *Autumn 2020-21*

7. **Parallel and Distributed Computing,**
   Big Data Management and Platform,
   Python Programming - *Spring 2020-21*
8. **Introduction to Programming in C,**
   Advanced Programming in Java - *Autumn 2021-22*
9. **Analysis and Design of Algorithms,**
   Parallel and Distributed Computing - *Spring 2021-22*
10. **Introduction to Programming in C,**
    Problem Solving with Python - *Autumn 2022-23*
11. **Web Technologies,**
    Parallel and Distributed Computing - *Spring 2022-23*

REFERENCES

1. Dr. Anupam Basu, Former Director, NIT Durgapur, Former Full Professor, Dept. of Computer Science & Engineering, IIT Kharagpur
2. Dr. Sourangshu Bhattacharya, Assistant Professor, Dept. of Computer Science & Engineering, IIT Kharagpur
3. Dr. Soumya K. Ghosh, Full Professor, Dept. of Computer Science & Engineering, IIT Kharagpur