Rakesh Kumar Sanodiya

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EDUCATION

2016–2019: Doctorate of Philosophy (Ph.D.): Computer Science and Engineering, Indian Institute of Technology Patna, Patna, Bihar	Course work with CGPA 8.3
2012–2014: Master of Technology (MTech.): Computer Technology and Application, SoIT, RGPV University, Bhopal MP	Completed with CPGA 8.43
2007–2011: Bachelor of Engineering (B.E.): Computer Science and Engineering, NIIST, RGPV University, Bhopal MP	Completed with an aggregate 75.31%.

RESEARCH INTERESTS

- Image Processing
- Computer Vision
- Pattern Recognition
- Machine Learning
- Internet of Things

RESEARCH EXPERIENCE

Ph.D. in Computer Science and Engineering Department

From 4Jan 2016 to 19 Nov 2019, Indian Institute of

Technology, Patna, Bihar, India. Supervisor: Dr. Jimson Mathew

Thesis title: "Explorations in Metric Learning with Applications to clustering and classification"

Research Assistant Professor in Intelligent Control Lab in Electrical Engineering Department

From 3 Feb 2020 to Present, National Taipei University of

Technology, Taiwan

Project Title: "Real-time object tracking in low-computational embedding systems using cutting-edge technologies such as metric learning and transfer learning"

Journal Articles:

- R. K. Sanodiya, S. Saha, and J. Mathew (2019): A Kernel Semi-supervised Distance Metric Learning with Relative Distance: Integration with a MOO Approach, In Expert Systems With Applications (Impact Factor: 5.45, ISSN No.: 0957-4174). DOI: https://doi.org/10.1016/j.eswa.2018.12.051
- 2. R. K. Sanodiya and J. Mathew (2019): A framework for semi-supervised metric transfer learning on Manifolds, In Knowledge Based System (Impact Factor: 5.92, ISSN No.: 0950-7051). DOI: https://doi.org/10.1016/j.knosys.2019.03.021
- 3. R. K. Sanodiya, J. Mathew, S. Saha, and M. D. Thalakottur (2019): A New Transfer Learning Algorithm in Semi-supervised Setting, In IEEE Access Journal (Impact Factor: 3.75, ISSN No.: 2169-3536). DOI: 10.1109/ACCESS.2019.2907571
- 4. R. K. Sanodiya, S. Saha, and J. Mathew (2019): Semi-supervised orthogonal discriminant analysis with relative distance: Integration with a MOO approach, Soft Computing (Impact Factor: 3.10, , ISSN No.: 1433-7479). DOI: https://doi.org/10.1007/s00500-019-03990-9
- R. K. Sanodiya and J. Mathew (2019): A Novel Unsupervised Globality-Locality Preserving Projections in Transfer Learning, In Image and Vision Computing (Impact Factor: 3.1, ISSN No.: 0950-7051). DOI: https://doi.org/10.1016/j.imavis.2019.08.006
- R. K. Sanodiya, J. Mathew, B. Paul, and B. A. Jose (2019): A Kernelized Unified Framework for Domain Adaptation, In IEEE Access Journal (Impact Factor: 3.75, , ISSN No.: 2169-3536) DOI:10.1109/ACCESS.2019.2958736
- R. K. Sanodiya, J. Mathew, S. Saha, and P. Tripathy (2020): A Particle Swarm Optimization based Parameter Selection to Unsupervised Discriminant Analysis in Transfer Learning, In Applied Intelligence (Impact Factor: 3.32, , ISSN No.: 1573-7497). DOI: https://doi.org/10.1007/s10489-020-01710-7
- 8. R. K. Sanodiya, M. Tiwari, J. Mathew, S. Saha, and S. Saha (2020): A Particle Swarm Optimization based Feature Selection for Unsupervised Transfer Learning, In Soft Computing (Impact Factor: 3.05). DOI: https://io.1007/s00500-020-05105-1
- 9. **R. K. Sanodiya** and L. Yao (**2020**): Unsupervised Transfer Learning via Relative Distance Comparisons, In IEEE Access Journal (**Impact Factor: 3.75**). DOI: https://doi.org/10.1109/ACCESS.2020.3002666
- 10. R. K. Sanodiya and L. Yao (2020): A Subspace Based Transfer Joint Matching with Laplacian Regularization for Visual Domain Adaptation, In Sensors Journal (Impact Factor: 3.27) DOI: <u>https://doi.org/10.3390/s20164367</u>

International Conference Proceeding:

1. R. K. Sanodiya, S. Saha, and J. Mathew (2018): A Multi-Kernel Semi-Supervised Metric Learning using Multi-objective Optimization Approach, In the proceedings of 25th International Conference on Neural Information Processing (ICONIP 2018) (Core ranking: A).

- 2. R. K. Sanodiya, S. Saha, J. Mathew, and P. Bangwal (2018): Semi-Supervised Transfer Metric Learning with Relative Constraints, In the proceedings of 25th International Conference on Neural Information Processing (ICONIP 2018) (Core ranking: A).
- 3. R. K. Sanodiya, S. Saha, J. Mathew, and A. Raj (2018): Supervised and Semi-Supervised Multi-Task Binary Classification, In the proceedings of 25th International Conference on Neural Information Processing (ICONIP 2018) (Core ranking: A).
- 4. R. K. Sanodiya, S. Saha, J. Mathew, M. D. Thalakottur, and U. Aadya (2019): Semi-Supervised Discriminant Analysis with Relative Distance: Integration with a MOO Approach, In the proceedings of IEEE Congress on Evolutionary Computation (CEC-2019) (h-Index: 66).
- 5. **R. K. Sanodiya**, C. Sharma, and J. Mathew (**2019**): Unified Framework for Visual Domain Adaptation Using Globality-Locality Preserving Projections, In the proceedings of 26th International Conference on Neural Information Processing (ICONIP 2019) (**Core ranking: A**).
- 6. **R. K. Sanodiya**, J. Mathew, M. D. Thalakottur, and M. Khushi (2019): Semi-supervised Regularized Coplanar Discriminant Analysis, In the proceedings of 26th International Conference on Neural Information Processing (ICONIP 2019) (Core ranking: A).
- 7. **R. K. Sanodiya**, A. Mathew, J. Mathew, and M. Khushi (**2020**): Statistical and Geometrical Alignment using Metric Learning in Domain Adaptation, In International Joint Conference on Neural Networks (IJCNN-2020) (Accepted)(**Core ranking: A**).

TEACHING EXPERIENCE

From January 2015 – December 2015

Designation: Assistant Professor

Organization: Radharaman Engineering College, Bhopal, MP, India

From July 2014 - December 2014

Designation: Lecturer

Organization: Govt. Polytechnic College Barwani, MP, India

SKILLS SET

- Languages: C, C++, Java, Python
- Typesetting: LATEX, Microsoft One
- Tools and Library: MATLAB, TensorFlow, Android Studio (Mobile Application)

TECHNICAL INTEREST

- UGC-JRF- NET Qualified (Dec-2015, June-2015, Dec-2014, June-2014)
- Gate Qualified (2017 (369-Score), 2016 (485-Score), 2015 (497-Score), 2014 (379-Score), 2013 (384 Score), 2012 (Score 420))

EXTRA-CURRICULAR ACTIVITIES

- OpenGovDataHack National Award (2nd Runners Up)
- International IoT Grant Challenge (Won Second Prize)
- Smart India Hackathon (Won First Prize)
- Intel @ Higher Education Challenge (Won First Prize)

PROFESSIONAL REFEREES

Dr. Jimson Mathew

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