Ashish Anand

CONTACT INFORMATION	H 008 Department of Computer Sc and Engg Indian Institute of Technology Guwahati Guwahati Assam 781039, India	*Phone:* +91-361-258 2374 *Fax:* +91-361-269 0762 *E-mail:* anand.ashish@iitg.ac.in *url:* www.iitg.ernet.in/anand.ashish

RESEARCH INTERESTS

Natural Language Processing, Clinical Data Mining, Machine Learning, Computational Biology

EDUCATION

Nanyang Technological University, Singapore

Ph.D., Department of Electrical and Electronics Engg, March 2009

- Dissertation Topic: "Computational Intelligence Approach for Classification and Temporal Clustering in Bioinformatics"
- Advisor: P N Suganthan

Indian Institute of Technology Kanpur, India
Department of Mathematics and Statistics
M.Sc.(Int-5Yrs), Mathematics and Sc Computing, May 2002

- Thesis: "Representation and learning of inexact information using Rough Set Theory"
- Advisor: Mohua Banerjee

HONORS AND AWARDS

NTU Reseach Scholarship, Jan, 2006 - Feb, 2009

Student Travel Support Award, Third Int Conference on PRIB, Melbourne 2008

PROFESSIONAL EXPERIENCE

Indian Institute of Technology Guwahati, India, Department of Computer Science and Engg
Associate Professor   **March, 2018 - present**

Indian Institute of Technology Guwahati, India, Department of Computer Science and Engg
Assistant Professor   **February, 2011 - March, 2018**

Institut Pasteur, Paris, France, Systems Biology Lab
Post Doctoral Fellow   **Sep, 2009 - Dec, 2010**

Nanyang Technological University, Singapore, School of EEE
Research Associate   **Feb, 2009 - Aug, 2009**

Indian Institute of Technology Kanpur, India, Dept of Biological Sciences and Bioengineering
Project Associate   **Aug, 2004 - Dec, 2005**

Biomedicum, University of Helsinki, Finland, Androgen Receptor Lab
Visiting Research Student   **Oct, 2002 - July, 2004**

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10 [(Google-Scholar: Mar-2018)]

PUBLICATIONS

Journal
- S Sahu, A Anand. 2018. What matters in a transferable neural network model for relation classification in the biomedical domain?. Accepted in Artificial Intelligence in Medicine (In Press)

- A Dutta, T Dubey, K K Singh, A Anand. 2018. SpliceVec: Distributed feature representations for splice junction prediction. Computational Biology and Chemistry (Available Online March 2018)
- M Paul, R Anand, A Anand. 2015. Detection of Highly Overlapping Communities in Complex Networks, Journal of Medical Imaging and Health Informatics, American Scientific Pub 5:1099-1103.
- A Anand, G Pugalenthi, G B Fogel, and P N Suganthan. 2010. An approach for classification of highly imbalanced biological data using weighting and undersampling. Amino Acids 39(5): 1385-1391
- A Anand, G Pugalenthi, G B Fogel, and P N Suganthan. 2010. Identification and analysis of transcription factor family-specific features derived from DNA and protein information. Pattern Recognition Letters 31: 2097-2102
- A Anand and P N Suganthan. 2009. Multiclass cancer classification by support vector machines with class-wise optimized genes and probability estimates. Journal of Theoretical Biology 259(3): 533-540
- A Anand, G Pugalenthi, and P N Suganthan. 2008. Predicting protein structural class by SVM with class-wise optimized features and decision probabilities. Journal of Theoretical Biology 253: 375-80
- H Santti, L Mikkonen, A Anand, S Hirvonen-Santti, J Toppari, M Panhuysen, F Vauti, M Perera, G Corte, W Wurst, O A Janne, J J Palvimo. 2005. Disruption of the murine PIASx gene results in reduced testis weight. Journal of Molecular Endocrinology 34(3): 645-54
- K Deb, A Anand, D Joshi. 2002. A computationally efficient evolutionary algorithm for real-parameter optimization. Evolutionary Computation, MIT Press 10(4): 371-395

Conferences
- A Dutta, T Dubey, K K Singh, A Anand. 2018. SpliceVec: Distributed feature representations for splice junction prediction. APBC Japan, 2018.
- D Raj, S K Sahu, A Anand. 2017. Learning local and global contexts using a convolutional recurrent network model for relation classication in biomedical text. In Proceedings of CoNLL 2017, Canada.
- R Pathigolla, S K Sahu, A Anand. 2017. Biomedical Event Trigger Identification Using Recurrent Neural Network. In Proceedings of BioNLP 2017, Canada.
- Abhishek, A Anand, A Awekar. 2016. Fine-Grained Entity Type Classification by Jointly Learning Representations and Label Embeddings. Accepted to appear in Inproceedings of the EACL 2017, Spain.
- S K Sahu, A Anand. 2016. Recurrent neural network models for disease name recognition using domain invariant features. Inproceedings of the ACL 2016, Berlin Germany.
- S K Sahu, A Anand, K Oruganty, M Gattu. Relation extraction from clinical texts using domain invariant convolutional neural network. Inproceedings of the ACL-BioNLP 2016 workshop, Berlin Germany.
- Muneeb TH, S K Sahu, A Anand. 2015. Evaluating distributed word representations for capturing semantics of biomedical concepts. Inproceedings of the ACL-BioNLP 2015 workshop, Beijing China.
- M Paul, R Anand, A Anand. 2014. Detection of Highly Overlapping Communities in Complex Networks, 5th International Conference on Computational Systems-Biology and Bioinformatics 2014, Singapore.
- G Priyadarshini, A Anand. 2014. Inferring Disease Correlation from Healthcare Data, National Conference on Medical Informatics 2014, AIIMS, New Delhi
- A Anand, Nikhil R Pal and P N Suganthan. 2010. Integration of Functional Information of Genes in Fuzzy Clustering of Short Time Series Gene Expression Data In Proceedings of IEEE Congress on Evolutionary Computation, 2010, Barcelona.
- A Anand, G B Fogel, G Pugalenthi, P N Suganthan. 2008. Prediction of Transcription factor families using DNA sequence features M Chetty, A. Ngom and S. Ahmad (Eds.): Third International Conference on Pattern Recognition in Bioinformatics, LNBI 5265, pp. 154-164,

2008
- A Anand, P N Suganthan, K Deb A novel fuzzy and multiobjective evolutionary algorithm based gene assignment for clustering short time series expression data In Proceedings of IEEE Congress on Evolutionary Computation, Singapore, 2007
- A Anand, G Fogel, E K Tang, P N Suganthan. 2006. Feature selection approach for quantitative prediction of transcriptional activities In Proceedings of the 2006 IEEE Symposium on Computational Intelligence in Bioinformatics and Computational Biology, pp. 57-62, 2006
- K Deb, D Joshi, A Anand. 2002. Real-coded evolutionary algorithms with parent-centric recombination In Proceedings of the IEEE Congress on Evolutionary Computation, pp. 61-66, 2002

Book Chapters
- M Banerjee, S Mitra, and A Anand. 2006. Feature selection using Rough Set. Multiobjective machine learning. Springer Series on Computational Intelligence. Yaochu Jin(Eds), pp. 3-20.

Posters
- Pranav Gupta, A Anand. 2013. Multi-label classification with label clustering. Ist Indian workshop on Machine Learning, IIT Kanpur India.
- Ruegheimer F, Anand A, Schwikowski B. 2011. A software architecture for de Novo induction of regulatory network from expression data. Proceedings of JOBIM 2011, Paris, France
- A Anand, S Drulhe, F Gwinner, F Ruegheimer, P Bochet, B Schwikowski. 2010. Inferring a latent regulation network for Bacillus subtilis using a kernel matrix completion approach. 11th International Conference on Systems Biology, ICSB, 2010, Edinburgh.

PROFESSIONAL SERVICES	*Associate Editor*: Swarm and Evolutionary Computation *Reviewer* (Journals): Bioinformatics, ACM Transactions on Asian and Low-Resource Language Information Processing, Pattern Recognition, IEEE Trans. on Evolutionary Computation, IEEE Trans. on Cybernetics, Biosystems.
INVITED TALKS	Workshop on GA for Engineering Optimization, 2014, IIT Guwahati NNMCB-Recent Advances in Mathematical and Computational Biology Research, 2014 Tezpur University DBT Workshop on Analysis of Biological Networks, 2012, IIT Guwahati Computational challenges in analyzing biological networks. 2011, Assam Engineering College, Guwahati Clustering and classification algorithms. Affymetrix users group meeting 2005 (Asia-Pacific Region) Singapore
ADMINISTRATIVE SERVICES	Member, Department Postgraduate Programme Committee 2017- Convener, Post Graduate Admissions Committee 2014, 2018 Member, Post Graduate Admissions Committee 2013 Faculty Advisor, Undergraduate Batch 2012-16 Member, Deparment Undergraduate Programme Committee 2015-2017