Name: H L Shashirekha

Educational Qualification: M.Sc., Ph.D.

Designation: Professor

Address for Correspondence: Professor, Department of Computer Science, Mangalore University, Mangalore

E-mail: hlsrekha@gmail.com, hlsrekha@mangaloreuniversity.ac.in

Phone: +91 9480573679

Research Areas: Natural Language Processing, Machine Learning, Data Mining

Professional Teaching Experience: 25 years

Research Guidance (M.Phil. /Ph.D.):

Completed students' list (with hyperlinks to their CV if available)

1. Hamada Ali Mohamed Ali Nayel - Biomedical Named Entity Recognition, Jan 2019 - https://bu.edu.eg/staff/hamadaali14
2. Agaz Hussain Wani - Study of Meta-Analysis Algorithms for Gene Expression Data and Identification of Potential Cancer Biomarkers, March 2019.

Ongoing Registered Students' list

1. Ibrahim Gashaw Kassa - A^2CLIR: Amharic-Arabic Cross Language Information Retrieval Using Language Modeling
2. Chethan Chandra S Basavaraddi - Parser for Kannada language Based on Constituency and Dependency Analysis
3. K S Vanishree - Morphological Analyzer for Kannada Language
4. Shobha S Prabhu - Enhancing reliability of embedded safety critical software through lightweight formal methods
5. Padmavathi - Model Based System Engineering Approach for Avionics System and Mission Critical Fighter Application using Partitioned OS
6. Asha Hegde - Sanskrit-Kannada Translation
7. Seetha P.K - Document Summarization of Kannada texts

Research Projects

Completed

National

Ontology based classification of text documents

Research Journal Publications

In International Journals

1. Hamada A. Nayel, H. L. Shashirekha, Hiroyuki Shindo, Yuji Matsumoto (2018), "Improving Multi-Word Entity Recognition for Biomedical Texts," "International Journal of Pure and Applied Mathematics", vol. 118, No.16, pp. 301-319, 2018.
2. "Indian Language Computing", In International Journal of Multidisciplinary Research, Vol. V Issue10, 2016.
3. "Automatic Language Identification from Written Texts – An Overview", In IJIRCCE, Vol 2, Special Issue 5, October 2014.
4. "Using MFCC Features for the Classification of Monophonic Music". IJCA Proceedings on International Conference on Information and Communication Technologies ICICT (8):5-9, October 2014.
5. "Content and Structure Based Classification of XML Documents", In International Journal of Machine Intelligence, Vol. 3(4), pp. 376-380, 2011.
6. "Text Matching – A Case Study of Unnatural Language Text Document", In International Journal of Information Science & Application, pp.531-537, Vol. 2, No. 3, 2010.
7. "Constructing Domain Ontologies for Unstructured Text Documents: A Bootstrapping Approach", In International Journal of Information Processing, Vol. 4 No. 1, pp. 9-21, January 2010.
8. "Segmentation and labeling of Domain Specific Unstructured Documents: A Heuristic Approach Based on Cues", In International Journal of Computer Science and Information Technology, Vol.1, No.2, pp.85-92, December 2008.
9. "Hierarchical Representation for a Classified Page of a Newspaper". In International Journal of Systemics, Cybernetics and Informatics, pp. 66-72, Jan 2008.

Book chapter

1. "*Impact of Student Internet world – 2004 on school children- A study in Mangalore Taluk*". A Book Chapter in "Children Youth and Electronic media" edited by Dr. Subhash R.Joshi, Nov 2005.

Papers/ poster presentations in Conferences / Seminars / Symposia (list)

In International Conference Proceedings

1. "Ensemble Model for Profiling Fake News Spreaders on Twitter". CLEF (Working Notes) 2020.
2. "ULMFiT for Twitter Fake News Spreader Profiling",. CLEF (Working Notes) 2020.
3. "Effectiveness of Software Metrics on Reliability for Safety Critical Real-Time Software", EasyChair Preprint no. 4206.
4. "PUNER - Parsi ULMFiT for Named-Entity Recognition in Persian Texts", EasyChair Preprint no. 4224.
5. "DEEP at HASOC2019: A Machine Learning Framework for Hate Speech and Offensive Language Detection", *Working Notes of Forum for Information Retrieval Evaluation (FIRE 2019)*, Kolkata, December 2019.
6. "Amharic-Arabic Neural Machine Translation", In *Proceedings of the 5th International Conference on Artificia Intelligence (ARIN),* December 2019, Chennai.
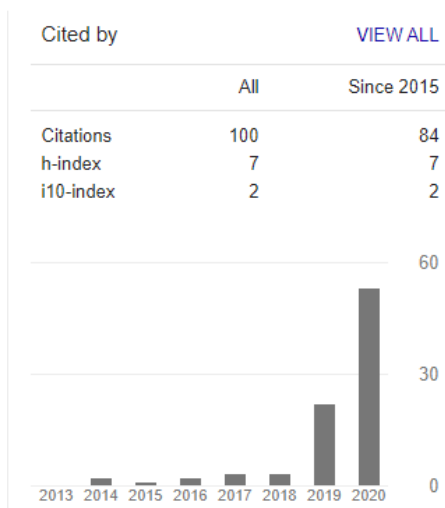
7. "Language Modeling with NMT Query Translation for Amharic-Arabic Cross Language Information Retrieval", *In Proceedings of 16th International Conference on Natural Language Processing (ICON-2019), Language* Technologies Research Center, IIIT Hyderabad.

8. "Enhanced NMT based Amharic-Arabic Cross-Language Information Retrieval System using Part of Speech Tagging", *In Proceedings of IEEE International Conference on Advances in Computing, communication and Control (ICAC3'19),* Fr. Conceicao Rodrigues College of Engineering, Bandra, Mumbai.

9. "Integrating Dictionary Feature into A Deep Learning Model for Disease Named Entity Recognition", arXiv:1911.01600.

10. Safety Critical Embedded Software: Significance and Approach to Reliability", In *Proceedings of the 15th International Conference on Advances in Computing, Communications and Informatics (ICACCI 2018)*, pp. 449-455, September 19-22, Bengaluru

11. "Machine Learning Approaches for Amharic Parts-of-speech Tagging", *In Proceedings of the 15th International Conference on Natural Language Processing (ICON-2018), NLP Association of India,* December-2018, Punjabi University, Patiala.

12. "Mangalore University INLI@FIRE2018: Artificial Neural Network and Ensemble Based Models for INLI", I*n Working notes of Indian Native Language Identification (INLI) task held in conjunction with Forum of Information Retrieval Evaluation (FIRE-2018).*

13. "Mangalore-University@INLI-FIRE-2017: Indian Native Language Identification using Support Vector Machines and Ensemble Approach", "*In Working notes of Indian Native Language Identification (INLI) task held in conjunction with Forum of Information Retrieval Evaluation (FIRE-2017)*, IISc, Bangalore, India, 8th – 10th December.

14. "Improving NER for Clinical Texts by Ensemble Approach using Segment Representations", In the Proceedings of the 14th International Conference on Natural Language Processing (ICON-2017), pages 197-204, NLP Association of India, December-2017, Kolkata, India.

15. "Clustering: A Novel Meta-Analysis Approach for Differentially Expressed Gene Detection". *In Proceedings of International Conference on Cognition and Recognition,Mysore* pp. 119-126, Springer.

16. "Dictionary Based Amharic-Arabic Cross Language Information Retrieval", Second International Conference on Advances in Computer Science and Information Technology (ACSTY 2016) Chennai, India, pp. 49-60.

17. "A comparative study of segment representation for Biomedical Named Entity Recognition. In *International Conference on Advances in Computing, Communications and Informatics (ICACCI),* pp. 1046-1052, 2016.

18. "Rule Based Agama Sandhi Splitter", In *International Conference on Advances in Computing, Communications and Informatics (ICACCI),* pp. 549-553, 2016

19. "Shinymde: Shiny Tool For Microarray Meta-Analysis For Differentially Expressed Gene Detection", *In the Proceedings of International Conference on Bioinformatics and Systems Biology (BSB), Allahabad*, pp. 1-5.

20. "A Comparative Study of Statistical and Clustering Techniques Based Meta-analysis to Identify Differentially Expressed Genes". *In Proceedings of IEEE International Conference on Advances in Computer Applications, Bharathiar University, Coimbatore*, pp. 87-93, 2016.

21. "Analysis Of Imputation Algorithms For Microarray Gene Expression Data", *In the Proceedings of International Conference on Applied and Theoretical Computing and Communication Technology (iCATccT), Davangere*, pp. 589-593, 2015.

22. "Gene selection by Mutual Nearest Neighbor approach", *In the Proceedings of International Conference on Emerging Research in Electronics, Computer Science and Technology (ICERECT),* Mandya, 2015, pp. 398-402.

23. "A Novel Algorithm for the Classification of XML Documents Based on Content and Structure", In Proc. of Second International conference on *Emerging Research In Computing, Information, Communication And Applications Ercica* (VOL 2), pp. 481-487, Bangalore, August 2014.

24. "Using Ontology for Domain Specific Information Retrieval", In Proc. of 2nd International Conference on Digital Image Processing (ICDIP 2010), Edited by Jusoff, Kamaruzaman; Xie, Yi. Proceedings of the SPIE, Volume 7546, pp. 75463J-75463J-7, Singapore, February 2010.
25. "Matching Unnatural language Text Documents", In Proc. of IEEE Bangalore Section -18th Annual Symposium on Emerging Needs in Computing, Communication, Signals and Power, ENC2SP 2009, Bangalore, August 2009. (Best paper award for the session).
26. "Ontology based similarity measure for Text Documents", In Proc. of International Conference on Signal & Image Processing, ICSIP 2009, Mysore, pp. 602-606, August 2009.
27. "Constructing Domain Ontologies for Unstructured Text Documents: A Bootstrapping Approach", In Proc. of 3rd International Conference on Information Processing ICIP'09, Bangalore, pp.3-12, August 2009.
28. "Segmentation of domain specific unstructured documents: A heuristic approach based on cues". In Proc. of International Conference on Cognition and Recognition ICCR'08, Mysore, pp.114-119, April 2008 (Best paper award for the session).
29. "Ontology Based Structured Representation for Domain Specific Unstructured Documents", In Proc of International Conference on Computational Intelligence and Multimedia Applications ICCIMA'07 at Sivakasi, Tamilnadu, India, pp.50-54, December 2007.
30. "Re-Construction of a Tree from its Preorder Traversal", In Proc. of International Conference on Advances in Computer Vision and Information Technology ACVIT-07, at Aurangabad , Maharastra, India, pp.1095-1099, Nov 2007.
31. "Segmenting and Labeling a Classified page in a newspaper". In Proc. of IEEE-International conference on Signal and Image Processing (ICSIP)-2006 held at BVB College of Engineering & Technology, Hubli, India, pp.604-609, Dec 2006.
32. "Taking ICT to the rural women", In Proc. of International Conference on Gender Issues in E-society (WIT – 2005), Annamalai University, Tamilnadu, India, Dec 2005.
33. "World Wide Web - An intelligent and user friendly digital library", In Proc. of 4th International Convention CALIBER 2006 on Dynamic Interoperable Web based Information *Systems*, Gulbarga University, Gulbarga, Feb 2006.

In National Conference Proceedings

1. "Preservation of Digital Data: Need of the Day", In Proc. National Conference on Knowledge, Knowledge Banks and Information Networking, National Institute of Technology, Karnatak, Suratkal, April 2010
2. "Retrieval of information from a classified page", In First National Conference on Image Processing, Computer Vision and Pattern Recognition, organized by PES College of Engineering, Mandya, August 2009.
3. "Information and Communication Technology in Educational institutions: A Case study of Mangalore University", In SETRAD, Thiruchirapalli, Feb 2005.
4. "Connecting rural women to the world: An Indian Experience", *In National Seminar on Women in Science and Technology: Issues and Prospects (WISTIP – 2005),* Dept of Humanities and Social Sciences, National Institute of Technology, Rourkela, Jan 2005.
5. "Text Mining – A new perspective in Document Analysis: An overview", *In Proc. of National Conference on Document Analysis and Recognition*, PES College of Engineering, Mandya, July 2003. (Presented the paper)

Impact of publications in terms of (Non-science faculty can leave out this item, if unable to fill up).

Awards / Fellowship / Recognition

- Qualified in National Education Test (1996) accredited by UGC, which is mandatory for any faculty position in Universities.

Membership of Professional Bodies

- Member of Faculty of Science & Technology, Mangalore University
- Member of Board of Studies in Computer Science (PG), Mangalore University
- Member of Board of Studies in Computer Science (PG), University of Mysore
- Member of Board of Examiners (UG & PG)