

# CURRICULUM VITAE

June 2008

## Summary Sheet

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**Professor Kavi Narayana Murthy, BE, MTech, PhD**  
Department of Computer and Information Sciences, University of Hyderabad

### Publications:

Category	Published	Accepted	Submitted	Last 5 Years
Books:	3 ***	-	-	3+0+0
Journals:	9	0	0	5+0+0
Proc. of Intl/Nat. Conf.:	44	0	0	28+0+0
Papers Presented in Conf.:	12	-	-	4+0+0
Others:	3	-	-	0+0+0
Tech. Reports:	12	-	-	12+0+0
TOTAL:	83	0	0	52+0+0

\*\*\* One book authored, one conference proceedings co-edited, one e-book

### Other Indicators:

Experience (Years)	Industry: 5, PG Teaching/Research: 18, Total: 23
PG Teaching	63 One-Semester Courses
Research Guidance	PhD: 2 + (4) MTech 38 + (7)
Foreign Links/Visits	France, Germany, Ethiopia
Visiting Scientist	ISI (B), AU-KBC, AU, OU
Sessions Chaired	16
Panel Discussions	9
Membership in Committees	17, Chairman: 1, Co-Chairman: 1
Conferences Organized	5 (4 International, 1 National)
Conferences Attended	63
Invited Lectures Delivered	138 (5 Abroad)
Funded Projects/Consultancy	7
Honours and Distinctions	Sarada Ranganathan Endowment Lectures 2004
Industry Links	Technical Advisor to Several Companies
Research Interests	Natural Language and Speech Technologies
General Interests	Indian Tradition, Vedanta, Yoga, Classical Music
Contact	knmuh@yahoo.com www.LanguageTechnologies.ac.in

## *CURRICULUM VITAE*

June 2008

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**Kavi Narayana Murthy**  
Professor, Department of Computer and Information Sciences  
University of Hyderabad

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### **Education:**

**Ph.D.** (*Computer Science*) - University of Hyderabad - 1996

Area of specialization: Natural Language Processing

Thesis Title: Universal Clause Structure Grammar

**Master of Technology (MTech)** (*Artificial Intelligence and Robotics*)

University of Hyderabad - 1989 - First Class with Distinction - *First Rank*

**Bachelor of Engineering (BE)** (*Mechanical Engineering*)

Bangalore University - 1983 - First Class with Distinction

**10th Class** - Merit Scholarship

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### **Professional Experience:**

**Total: 23 Years**

**Professor** Dept. of CIS, University of Hyderabad July 1990 to date — Teaching, Research and Development, Consultancy

**Senior Systems Officer** CAD and Special Systems Group, Sundaram Clayton Ltd. (TVS Group), Bangalore, February 1989 to July 1990, — Expert Systems, AI, Parametric Design, NLP — Education/Training, Research and Software Development

**Deputy Engineer** R&D Division (Radar), Bharat Electronics, Bangalore (Govt. of India, Ministry of Defence) March 1984 to July 1987 — Training, Research and Development

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### **PG Teaching Experience:**

**Total: 18 Years**

Taught 63 semester-long post-graduate courses at University of Hyderabad

**Classes taught:** MTech(CS), MTech(AI), MTech (IT), MTech (CT), MCA, MA(Linguistics)

Taught a full semester course on Theory of Computation at IIIT-Hyderabad for post-graduate diploma in Information Technology (GDIT) during Jan-April 2000

Taught a full semester course on Speech Technologies for ME and MS students at AU-KBC Research Centre, Chennai, during Jan-April 2005

Also taught for Post Graduate Diploma courses in Computer Science (PGDCS), Translation Studies (PGDTS), Library automation and networking(PGDLAN) in the University of Hyderabad

**Subjects taught:** Natural Language Processing, Automatic Speech Recognition, Text Processing, Advanced Computational Linguistics,

Data Structures, Theory of Computation, Mathematical Foundations of Computer Science  
Computer Programming and Problem Solving, Language Processors, Internet Tools,

Foundations of Artificial Intelligence, Applied AI, Symbolic Computation, Automated Reasoning, Introduction to Robotics, etc.

**New Courses developed:** Text Processing, Automatic Speech Recognition

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## Areas of Research Interest:

- *Natural Language Engineering:* - Syntactic Parsing, Word Sense Disambiguation, Text Categorization
  - *Speech technologies:* - Automatic Speech Recognition, Speaker Recognition
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## Publications:

**Books: 3+0+0, Journal Articles: 9+0+0, Conf. Proceedings: 44+0+0, Papers Presented in Conf.:12+0+0, Others: 3=0+0, Tech Reports: 12+0+0, TOTAL: 83+4+0**

### A: Books:

1. K. Narayana Murthy, "Natural Language Processing - An Information Access Perspective", Sarada Ranganathan Endowment in Library Science, Bangalore, 2006
2. K. Narayana Murthy, "brahmacarya: Sex, Education and Human Life", K Narayana Murthy, July 2006 - An eBook of general interest in Education
3. K. Narayana Murthy, B. B. Chaudhuri (Eds), "Language Engineering Conference", Proceedings of the International Conference on Language Engineering LEC-2002, 13-15 December 2002, Hyderabad, India, IEEE Computer Society Press

## **B: Journal Publications:**

1. Kavi Narayana Murthy, "Technology for Telugu" - Bhasha, Vol 1, No 3, Feb 2008, pp - 70-95
2. G Bharadwaja Kumar, Kavi Narayana Murthy, B B Chaudhuri, "Statistical Analysis of Telugu Text Corpora" - IJDL, Vol 36, No 2, June 2007, pp - 71-99
3. Surabhi Sreekanth, Kavi Narayana Murthy, "Text-Dependent Speaker Recognition System for Telugu", Osmania Papers in Linguistics, Vol. 31, 2005, pp 84-99
4. Kavi Narayana Murthy, G Bharadwaja Kumar, "Language Identification from Small Text Samples", Journal of Quantitative Linguistics, Vol 13, No. 1, 2006 pp. 57-80
5. Atul Negi, Kavi Narayana Murthy, Chakravarthy Bhagvati, "Foundational Issues of Document Engineering in Indian Scripts and a Case Study in Telugu", Vivek, Vol 16, No. 2, 2006, pp 2-7
6. K. Narayana Murthy, "Electronic Dictionaries and Computational Tools", Linguistics Today, Vol 1, No 1, July 1997 pp 34-50
7. K. Narayana Murthy, A. Sivasankara Reddy "Universal Clause Structure Grammar" Computer Science and Informatics, Vol 27, No 1, March 1997 Special Issue on Natural Language Processing and Machine Learning, pp 26-38.
8. K. Narayana Murthy, "Universal Clause Structure Grammar and the Syntax of Relatively Free Word Order Languages", South Asian Language Review, Vol VII, No 1, Jan 1997, pp 47-64.
9. A. Sivasankara Reddy, K. Narayana Murthy, Vasudev Varma "Object Oriented Multipurpose Lexicon" International Journal of Communication, Vol 6, No 1 and 2, Jan-Dec 1996, pp 69-84.

## **C: Papers in Edited Books/Conference Proceedings:**

1. G. Bharadwaja Kumar and Kavi Narayana Murthy, "UCSG: A Wide Coverage Shallow Parsing System", Proceedings of IJCNLP-2008 The Third International Joint Conference on Natural Language Processing, 7-12 January 2008, Hyderabad, India, Vol 1, pp72-79
2. Hla Hla Htay and Kavi Narayana Murthy, "Myanmar Word Segmentation using Syllable level Longest Matching", Proceedings of the IJCNLP-2008 Workshop on Asian Language Resources, 11-12 January 2008, Hyderabad, India
3. P Srikanth and Kavi Narayana Murthy, "Named Entity Recognition for Telugu", Proceedings of the IJCNLP-2008 Workshop on NERSSEAL (Named Entity Recognition in South and South East Asian Languages) 11-12 January 2008, Hyderabad, India
4. Kavi Narayana Murthy, "UCSG Shallow Parsing Architecture", Proceedings of the IKONE-2007 International Conference on Future of Knowledge Organization in the Networked Environment, 3-5 September 2007, Bangalore, pp 195-235

5. K Raghuv eer and Kavi Narayana Murthy, "Text Categorization in Indian Languages using Machine Learning Approaches", Proceedings of IICAI-2007, December 2007, Pune, pp 1864-1883
6. M Santhosh Kumar and Kavi Narayana Murthy, "Corpus Based Statistical Approach for Stemming Telugu", Creation of Lexical Resources for Indian Language Computing and Processing LRIL-2007, C-DAC, Mumbai, 26-28 March 2007
7. Srikanth P and Kavi Narayana Murthy, "Named Entity Recognition for Telugu", Creation of Lexical Resources for Indian Language Computing and Processing LRIL-2007, C-DAC, Mumbai, 26-28 March 2007
8. M Santhosh Kumar and Kavi Narayana Murthy, "Automatic Construction of Telugu Thesaurus from Available Lexical Resources", Creation of Lexical Resources for Indian Language Computing and Processing LRIL-2007, C-DAC, Mumbai, 26-28 March 2007
9. Hla Hla Htay, G Bharadwaja Kumar and Kavi Narayana Murthy, "Statistical Analyses of Myanmar Text Corpora", Creation of Lexical Resources for Indian Language Computing and Processing LRIL-2007, C-DAC, Mumbai, 26-28 March 2007
10. Kavi Narayana Murthy, "Recent Advances in e-Learning Technologies and Intelligent Learning Environments", India-ASEAN Seminar on e-Learning and e-Learning Technologies, 6-7 November 2006, Hyderabad, India, pp. 38-42
11. G Bharadwaja Kumar and Kavi Narayana Murthy, "UCSG Shallow Parsing Architecture", Proceedings of First National Symposium on Modeling and Shallow Parsing of Indian Languages (MSPIL-2006), 2-4 April 2006, IIT Bombay, pp 48-62
12. G Bharadwaja Kumar and Kavi Narayana Murthy, "UCSG Shallow Parser", Lecture Notes in Computer Science, Volume 3878 / 2006, pp 156-167 Springer-Verlag Proceedings of the Sixth International Conference - CICLing-2006 Conference on Intelligent Text Processing and Computational Linguistics, February 19-25, 2006, Mexico City, Mexico
13. Hla Hla Htay, Kavi Narayana Murthy "Myanmar Word Segmentation" Proceedings of ICCA 2006: International Conference on Computer Applications, Yangon, Myanmar, 23-24 February 2006, pp 353-359
14. Hla Hla Htay, G. Bharadwaja Kumar, Kavi Narayana Murthy "Constructing English-Myanmar Parallel Corpora" Proceedings of ICCA 2006: International Conference on Computer Applications, Yangon, Myanmar, 23-24 February 2006, pp 231-238
15. Kavi Narayana Murthy, Sobha, L and Muthukumari, B "Pronominal Resolution In Tamil using Machine Learning", in Christer Johansson (Ed), Proceedings of the First International Workshop on Anaphora Resolution (WAR-I), 28-30 September 2005, BREDT, Bergen, Norway, Cambridge Scholar Publishing, 2007, pp 39-50
16. Kavi Narayana Murthy, "Automatic Categorization of Telugu News Articles", International Symposium on Linguistics, Quantification and Computation, CALTS, University of Hyderabad, 9-11 March 2005, pp 119-127

17. Hla Hla Htay, Kavi Narayana Murthy "Automatic Construction of Myanmar-English Bilingual Machine Readable Dictionary using Parallel Corpora" Proceedings of ICCA 2005: Third International Conference on Computer Applications, Yangon, Myanmar, March 2005, pp 667-671
18. G Bharadwaja Kumar, K Nagesh Babu and Kavi Narayana Murthy, "Towards a Robust Shallow Parser", Proceedings of SIMPLE-05, Second Conference on Indian Morphology, Phonology and Language Engineering, IIT (Kharagpur) and CIIL (Mysore), 5-7 February 2005, pp 33-39
19. Atul Negi, Kavi Narayana Murthy, "Issues of Document Engineering in the Indian Context", to appear in the proceedings of ICOSAL-6, the Sixth International Conference on South Asian Languages, Hyderabad, 6-8 January 2005, Hyderabad
20. Kavi Narayana Murthy, "Automatic Text Categorization using Bayesian Techniques", to appear in the proceedings of ICOSAL-6, the Sixth International Conference on South Asian Languages, Hyderabad, 6-8 January 2005, Hyderabad
21. A. Sasi Kanth and K. Narayana Murthy, "Significance of Syntactic Features for Word Sense Disambiguation", Lecture Notes in Artificial Intelligence, Volume 3230 / 2004, pp 340-348 Springer-Verlag
22. G Bharadwaja Kumar and Kavi Narayana Murthy, "Language Identification from Small Text Samples", Proceedings of ICON - 2004 International Conference, Hyderabad, December 2004, pp 197-206
23. G Bharadwaja Kumar and Kavi Narayana Murthy, "Script Independent Language Identification from Small Text Samples", proceedings of ICSLT-O-COCOSDA 2004 International Conference, Vol-1, pp 74-81, New Delhi, 17-19 November 2004
24. K. Narayana Murthy, "On Automatic Construction of a Thesaurus", proceedings of ICSLT-O-COCOSDA 2004 International Conference, Vol-1, pp 191-194, 17-19 November 2004, New Delhi
25. G Siva Charan, Kavi Narayana Murthy and S Durga Bhavani, "Text Categorization in Indian Languages", proceedings of ICSLT-O-COCOSDA 2004 International Conference, Vol-1, pp 56-61, 17-19 November 2004, New Delhi
26. K. Narayana Murthy, "Machine Translation - How do we succeed?", To appear in the Proc. of National Seminar on Cross Language Communication Tools For Indian Languages, Linguistics Studies Unit, Department of Tamil Language, University of Madras and Central Institute of Indian Languages, Mysore, 25-27 February 2004
27. K. Narayana Murthy, "Automatic Text Categorization", in "Semantic Web", A R D Prasad (Ed), DRTC, Indian Statistical Institute (Bangalore), 2003, pp N-1-16
28. K. Narayana Murthy, "Language Engineering in a Multi-Lingual Environment", in "Semantic Web", A R D Prasad (Ed), DRTC, Indian Statistical Institute (Bangalore), 2003, pp M-1-10

29. K. Narayana Murthy, "MAT2: Enhanced Machine Aided Translation System", Proceedings of STRANS 2002 Symposium on Translation Support Systems, 15-17 March 2002, Indian Institute of Technology (Kanpur), India
30. K. Narayana Murthy, "Theories and Techniques in Computational Morphology", Proceedings of the National Seminar on Word Structure of Dravidian Languages, 26-28 November 2001, Dravidian University, Kuppam, India, pp 365-375
31. K. Narayana Murthy, "On Efficient Creation of Machine Translation Systems", Proceedings of the UNESCO Colloquium on Language Diversity in Information Society, Paris, France, 9-10 March 2001, pp 1-13
32. K. Narayana Murthy, "Issues in the Design of a Spell Checker for Morphologically Rich Languages", 3rd International Conference on South Asian Languages, ICOSAL-3, 4th to 6th January 2001, University of Hyderabad
33. K. Vasuprada, K. Narayana Murthy, "Part-of-Speech Tagging using a Tritag Model", To appear in the Proceedings of the Second National Symposium on Quantitative Linguistics, 28-29 February 2000, Indian Statistical Institute, Calcutta
34. K. Narayana Murthy, "A Machine Assisted Translation System", Proceedings of the National Seminar on Information Revolution and Indian Languages, 12-14 November 1999, Hyderabad, pp 4-1-7
35. K. Narayana Murthy, "MAT: A Machine Assisted Translation System", Proceedings of the Fifth Natural Language Pacific Rim Symposium, NLPRS-99, 5-7 November, Beijing, China
36. P.R. Kaushik, K. Narayana Murthy, "Personal Search Assistant: A Configurable Meta Search Engine", Proceedings of AusWeb99 the Fifth Australian World Wide Web Conference, 17-20 April 1999, Southern Cross University, Australia.
37. K. Narayana Murthy, Nandakumar Hegde, "Some issues relating to a common script for Indian languages", International Conference on Indian Writing Systems and Nagari Script, 6-7 February 1999, Delhi University, Delhi, India
38. K. Narayana Murthy, "A Network and Process Model for Morphological Analysis/Generation", To appear in the Proceedings of ICOSAL-2, the Second International Conference on South Asian Languages, 9-11 January 1999, Punjabi University, Patiala, India
39. K. Narayana Murthy "An Indexing Technique for Efficient Retrieval from Large Dictionaries" To appear in the Proceedings of National Conference on Information Technology NCIT-97, 21-23 December 1997, Bhubaneswar
40. K. Narayana Murthy "Parsing Telugu in the UCSG Formalism" Proceedings of the Indian Congress on Knowledge and Language, vol 2, pp 1-16 11-17 January 1996, Central Institute of Indian Languages, Mysore
41. A. Niranjan Raj, K. Narayana Murthy "Discourse Cohesion : A Computational Approach" in E. Balagurusamy, B.Sushila (Eds), "Artificial Intelligence Technology: Applications and Management", Tata McGraw-Hill, 1993, pp 72-79.

42. K. Narayana Murthy, A. Sivasankara Reddy "INQUIRER : A Case System Based on Questions" in E. Balagurusamy, B. Sushila (Eds), "Innovative Applications in Computing", Tata McGraw-Hill, 1993, pp 219-226.
43. K. Lakshmi Narayana, Atul Negi, K. Narayana Murthy "Fast Training of Large Training Sets in Back Propagation Networks by Selective Presentation", Proceedings of the Third International Conference on Advances in Pattern Recognition and Digital Techniques (ICAPRDT'93), ISI (Calcutta), India, December 28-31, 1993, pp 453-460.
44. K. Narayana Murthy, A. Sivasankara Reddy "INQUIRER: A Language Independent View of Natural Language Understanding", in R.M.K. Sinha (Ed), "Computer Processing of Asian Languages", Tata McGraw-Hill, 1992, pp 174-181.

**D: Papers presented in Conferences/Seminars/Workshops:**

1. Ch Narsinga Rao and Kavi Narayana Murthy, "On Building an Electronic Dictionary", National Seminar-cum-Workshop on "Building a Lexicon: Techniques and Tools", Department of Telugu, University of Hyderabad, 14-16 March 2008
2. Kavi Narayana Murthy, "Technology for Telugu", First National Conference of Telugu Linguists' Forum (TelF), 6-7 November 2007, CALTS, UoH
3. Atul Negi and Kavi Narayana Murthy, "OCR for Indian Languages", Brainstorming Workshop on OCR for Indian Languages, International School of Information Management, University of Mysore, 16-17 March 2007, Mysore
4. Kavi Narayana Murthy, "Speech Recognition", IETE Zonal Seminar on Emerging and Converging Technologies (SECT-07), 10-11 February 2007, Visakhapatnam
5. K. Narayana Murthy, "UNICODE: Issues in Standardization of Character Encoding Schemes", Vidyullipi, April 2002
6. K. Narayana Murthy, "Language Technology and the role of statistics", Statistical Techniques in Language Processing, 11th to 12th June 2001, Central Institute of Indian Languages, Mysore
7. K. Narayana Murthy, "A Statistical Approach to Spell Checking", Statistical Techniques in Language Processing, 11th to 12th June 2001, Central Institute of Indian Languages, Mysore
8. K. Narayana Murthy, "UCSG Parser and MAT", Indo-UK workshop on LESAL: Language Engineering in South Asian Languages, 23rd to 24th April 2001, National centre for Software Technology, Mumbai
9. K. S. RajyaShree, K. Narayana Murthy, "Statistical Spell Checking", Indo-UK workshop on LESAL: Language Engineering in South Asian Languages, 23rd to 24th April 2001, National centre for Software Technology, Mumbai
10. K. Narayana Murthy, "Computer Processing of Kannada Language", Seminar on Computer and Kannada Development, Kannada University, Hampi, 12th October 2000

11. K. Narayana Murthy "UCSG and Machine Aided Translation from English to Kannada" Indo-French Symposium on Natural Language Processing, University of Hyderabad, 21-26 March 1997
12. Vasudev Varma, K. Narayana Murthy, A. Sivasankara Reddy, "Electronic Dictionaries: A Model Architecture", presented at the National Workshop on Electronic Dictionaries for second language learners, Bharatiar University, Coimbatore, India, 29th Sept. to 7th Oct. 1993.

**E: Course Material:**

1. K. Narayana Murthy, "Propositional Logic", a unit of "Mathematical Foundations of Computer Science" course of PGDCS, University of Hyderabad
2. K. Narayana Murthy, "Deduction", a unit of "Mathematical Foundations of Computer Science" course of PGDCS, University of Hyderabad
3. K. Narayana Murthy, "Expert Systems", Sundaram Clayton Ltd.

**F: Technical Reports:**

1. Technical Report: Kavi Narayana Murthy, "Issues in Standardization of Character Encoding Schemes", Technical Report LERC/UoH/2002/1
2. Technical Report: Kavi Narayana Murthy and G Bharadwaja Kumar, "Language Identification from Small Text Samples", Technical Report LERC/UoH/2003/1
3. Technical Report: G Bharadwaja Kumar and Kavi Narayana Murthy, "Segmenting Texts into Sentences and Sentence Fragments", Technical Report LERC/UoH/2003/2
4. Technical Report: G Bharadwaja Kumar and Kavi Narayana Murthy, "On developing a dictionary from a tagged corpus", Technical Report LERC/UoH/2003/3
5. Technical Report: K Nagesh Babu and Kavi Narayana Murthy, "A Survey of Syntactic Parsing Systems", Technical Report LERC/UoH/2003/4
6. Technical Report: K Nagesh Babu and Kavi Narayana Murthy, "A Study of POS Tag Sets", Technical Report LERC/UoH/2003/5
7. Technical Report: K Nagesh Babu and Kavi Narayana Murthy, "Performance Evaluation of the UCSG L-Module", Technical Report LERC/UoH/2003/6
8. Technical Report: V Naga Rambabu, K Hanumantha Rao and Kavi Narayana Murthy, "Telugu Vowel Recognition through Clustering", Technical Report LERC/UoH/2003/7
9. Technical Report: Sasi Kanth Ala and Kavi Narayana Murthy, "Unrestricted Word Sense Disambiguation", Technical Report LERC/UoH/2004/1
10. Technical Report: G Bharadwaja Kumar and Kavi Narayana Murthy, "Information Extraction: A Survey", Technical Report LERC/UoH/2004/2

11. Technical Report: G Bharadwaja Kumar and Kavi Narayana Murthy, "Towards a Robust Shallow Parser", Technical Report LERC/UoH/2004/3
  12. Technical Report: Atul Negi and Kavi Narayana Murthy, "Issues in Document Engineering in the Indian Context", Technical Report LERC/UoH/2004/4
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## Research Guidance:

1. Ph.D: Awarded: 2 - On-Going: 4
  1. Vasudev Varma K, "Tat-Tvam: A Metaphor Interpretation Model", (under A Sivasankara Reddy and Kavi Narayana Murthy), DCIS, University of Hyderabad, 1997
  2. Guntur Bharadwaja Kumar, "UCSG Shallow Parser: A Hybrid Architecture for a Wide Coverage Natural Language Parsing System", DCIS, University of Hyderabad, January 2008
2. M.Tech: 38 (Awarded) - 7 (On-Going):
3. MCA: 12

## Theses Review:

Reviewed several PhD and MS theses from reputed institutions from India and abroad.

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## Foreign Collaboration:

1. Member, Indo-French Research Network in Computational Linguistics - Indian coordinator for 2001-2004
  2. Member, Indo-German Team on Language Technologies on Cross-Lingual Information Access - V-MIA (Voice Based Multi-lingual Information Access)
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## Visits Abroad:

1. France - Visited and delivered lectures at University of Paris,-7, INRIA, Nancy and UNESCO under invitation from French National Commission for the UNESCO, and INRIA
  2. Ethiopia - Visited (5 to 11 July 2003 and 10 - 19 July 2004) as a member of an international team of subject experts Delivered public lectures at Addis Ababa University
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## Visiting Professor/Scientist:

1. Center for Advanced Study in Linguistics, Osmania University 1st December 2005 to 30th December 2005
  2. AU-KBC Research Centre, Chennai 10th January 2005 to 30th November 2005
  3. Documentation Research and Training Centre (DRTC), Indian Statistical Institute (ISI), Bangalore 12th January 2004 to 23rd January 2004
  4. Center for Advanced Study in Linguistics, Annamalai University 22nd February 2003 to 7th March 2003
  5. Also visited INRIA and University of Paris (France), Addis Ababa University (Ethiopia) and delivered lectures
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## Sessions Chaired:

1. Chaired a session at the International Workshop on Referential Entity Resolution, 15-17 January 2008, Chennai, India
2. Chaired a session at NERSSEAL Workshop at IJCNLP, January, Hyderabad
3. Session Co-Chair - IICAI-07, Pune - With Paolo Rosso and Vasudev Varma
4. Chaired a Meeting on Localization and Language Technology Standards for eGovernance, NIC, 20-21 Sept 2006
5. Chaired a session on Natural Language Technologies at IKONE-2007 International Conference on Future of Knowledge Organization in the Networked Environment, 3-5 September 2007, Bangalore
6. Session Co-Chair - IICAI-05, Pune - With Paolo Rosso
7. Chaired a session on Microwave Technologies at IETE Zonal Seminar on Emerging and Converging Technologies (SECT-07), 10-11 February 2007, Visakhapatnam
8. Chaired a session on "Phonology, Morphology and Processing", First National Symposium on Modeling and Shallow Parsing of Indian Languages (MSPIL-2006), 2-4 April 2006, IIT Bombay
9. Chaired a session on "Machine Learning" at KBCS-2004, December 2004, Hyderabad
10. Chaired a session on "???" at iSTRANS/ICSLT-O-COCOSDA 2004 International Conference, 17-19 November 2004, New Delhi
11. Session on "MT Strategies" at "STRANS 2002 Symposium on Translation Support Systems", 15-17 March 2002, Indian Institute of Technology (Kanpur), India
12. Session on "Sub-languages" at the "First International Conference on Global WordNet", January 21-25, 2002, Central Institute of Indian Languages, Mysore,

13. Session on "Methods in Linguistic Quantification" at the "Second National Symposium on Methods in Quantitative Linguistics", 28-29 February 2000, Indian Statistical Institute, Kolkata
  14. Session on "A.I., Machine Algorithms and Human Cognition" at the "National Symposium on Computational Linguistics: Prospects and Implications", 9th March 1999, Indian Statistical Institute, Kolkata
  15. Session on "Computational Linguistics" at the "Second International Conference on South Asian Languages, ICOSAL-2", 9-11 January 1999, Punjabi University, Patiala
  16. Session on "NLP Strategies" at the "First National Workshop on Statistical and Computational Intervention in Language in a Plural Society: the Case of India", 13th March 1997, Indian Statistical Institute, Kolkata
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## Panel Discussions:

1. "Charting the Course of Action for Indian Language Processing", First National Symposium on Modeling and Shallow Parsing of Indian Languages (MSPIL-2006), 2-4 April 2006, IIT Bombay
  2. "Prospects and Challenges in NLP Research in India Today", Symposium on Indian Morphology, Phonology and Language Engineering (SIMPLE), 5-7 February 2005, IIT (Kharagpur), Panel Member and Moderator
  3. "Spell Checkers for Indian Languages: Status and Plans", National Workshop on Indian Language Spell Checkers, 18-19 July 2002, Indian Statistical Institute, Kolkata,
  4. "Are we ready for Speech to Speech Translation?" STRANS 2002 Symposium on Translation Support Systems, 15-17 March 2002, Indian Institute of Technology, Kanpur
  5. "Web Based Learning - Prospects and Challenges", CDAC-Hyderabad, 19th May 2000
  6. "Artificial Intelligence, Machine Algorithms and Human Cognition", National Symposium on Computational Linguistics: Prospects and Implications, 9th March 1999, Indian Statistical Institute, Kolkata
  7. "NLP Strategies", First National Workshop on Statistical and Computational Intervention in Language in a plural Society: The case of India, 12-13 March 1997
  8. "LFG: Utility for Computational Research", DoE sponsored NLP Teachers' Training Programme, CALTS, University of Hyderabad, 15 January 1993
  9. "NLP: Problems and Future Prospects", DoE sponsored NLP Teachers' Training Programme, CALTS, University of Hyderabad, 11 January 1992
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## Membership of Committees:

1. Member, Project Review and Steering Group for the Project entitled "IDN for .IN Registry - Implementation Support for Kannada and Telugu"
2. Member, Board of Studies in Computer Science and Application (UG and PG), Bangalore University
3. **Co-Chairman**, Project Review and Steering Group for the Project entitled "Development of Sanskrit Computational Toolkit and Sanskrit Hindi Machine Translation System"
4. Member, Committee on Standardization on Language Technologies, Ministry of Communications and Information Technology, Government of India
5. Member, Project Review and Steering Group for the Project entitled "Development of English to Indian Language Machine Translation System based on Angla-Bharati Technology", Ministry of Communications and Information Technology, Government of India
6. **Chairperson**, e-Governance Standards - "Localisation and Language Technology Standards" working group, DIT, Govt. of India
7. Member, Project Review and Steering Group for the Project entitled "Development of English to Indian Language Machine Translation System (E-IL MT)", Ministry of Communications and Information Technology, Government of India
8. Member, Project Review and Steering Group for the Project entitled "Development of Indian Language to Indian Language Machine Translation System (IL-IL MT)", Ministry of Communications and Information Technology, Government of India
9. Member, Selection Committee, Selection of Engineers for Media Lab Asia, New Delhi and C-DAC, Hyderabad, Department of Information Technology, Government of India, 3rd July 2006
10. Member, Committee on Integrated Machine Translation Systems, Ministry of Communications and Information Technology, Govt. of India
11. Member, Technical Advisory Committee (TAC), Indian Statistical Institute, Kolkata, Computer and Communication Sciences Division
12. Member, Project Review and Steering Group (eLearning) for the project entitled "Enhancing Competency of I.T. Teachers and Industry Professionals" by K.Re.S.I.T, IIT, Mumbai, Ministry of Communications and Information Technology, Government of India
13. Member, Project Advisory Committee for project entitled "Online Teaching of Classical Tamil"
14. Member, Selection Committee, Scientific/Research staff Selection for National Centre for Free and Open Source Software (FOSS), AU-KBC, Chennai, 28-29 May 05 and 17 August 2005
15. Member, Subjects Committee, BSc in Computational Linguistics, Dravidian University, Kuppam

16. Member, Project on Comprehensive Annotated Bibliography of Telugu Works,
  17. Member, Project Advisory Committee, Post Graduate Diploma in Computer Applications in Indian Languages, University of Hyderabad
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### **Other Honours and Distinctions:**

1. Delivered *Sarada Ranganathan Endowment Lectures 2004* on Natural Language Processing and Information Retrieval 9-11 August 2004
  2. Achievement Award - In Recognition of Research to the Field and in appreciation of valuable services to the IICAI 2005 conference (Second Indian International Conference on Artificial Intelligence, 20 - 22 December 2005, Pune, India)
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### **Conferences Organized:**

1. International Workshop on Referential Entity Resolution 15-17 January 2008, Chennai, India, Jointly Organized by AU-KBC Research Centre, Chennai, DCIS, UoH, and CIIL, Mysore - Co-chair
2. IICAI 2007 - Third Indian International Conference on Artificial Intelligence, 17-19 December 2007, Pune, India. Session Co-Chair (With Paolo Rosso, Spain) - Special Session on Language Independent Natural Language Engineering, PC member, Reviewer
3. IICAI 2005 - Second Indian International Conference on Artificial Intelligence, 20 - 22 December 2005, Pune, India Session Co-Chair (With Paolo Rosso, Spain) - Special Session on NLP for IR PC member, reviewer (Achievement Award - In Recognition of Research to the Field and in appreciation of valuable services to the conference)
4. LEC-2002, an International Conference on Language Engineering, 13-15 December 2002, University of Hyderabad (Organizer, Chairman of Program Committee, Co-Editor of Proceedings (With B B Chaudhuri), Paper Reviewer)
5. National Workshop on Computational Lexicography and Text Processing, Organized by Dept. of CIS, University of Hyderabad and CIIL, Mysore, 18-23 January, 1995 Hyderabad (Co-Organizer, with Dr A Siva Sankara Reddy)

### **Participation in Conferences/Seminars/Symposia/Workshops:**

Participated in a number of international and national conferences, seminars, symposia and workshops and presented research papers, chaired sessions, participated in panel discussions, acted as resource person and reviewed papers as a member of technical/program committees.

## Programmes for University Staff:

1. 16th to 18th February 2001: Coordinated a three day In-House Training Programme on I.T. Tools and Applications for the University staff, Also delivered a lecture on Web Design
  2. 4th May 2001: Conducted a One Day Training programme on Web Design for representatives from various schools, departments and centres of the University
  3. 5th December 2001: Conducted a One Day Training programme on Web Design for representatives from various schools, departments and centres of the University
  4. 19 March 2006 "Programming in Perl" - 5 lectures from 9 am to 5 pm, IEEE Student Branch, University of Hyderabad
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## Invited Lectures:

Delivered 138 invited lectures including some keynote/inaugural/special lectures at prestigious academic and research institutions in India and abroad

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## Funded Projects and Consultancy:

1. *Development of a Robust Document Analysis and Recognition System for Printed Indian Scripts*, DIT, Governemnt of India, Co-Investigator
  2. *Language Engineering Research* - UGC (under University with Potential for Excellence scheme) - April 2002 to March 2007 - Coordinator
  3. *Resource Centre for Indian Language Technology Solutions (Telugu)* - Ministry of Communications and Information Technology - April 2000 to December 2004 - Chief Investigator  
- Several products and services developed and deployed. Released to public in CD form by DIT, Govt. of India on 12 September 2005
  4. *Hexapod Control System* - Euroflex Transmissions (India) Pvt. Ltd. - February 1999 to January 2000 - Investigator
  5. *Machine Aided Translation from English to Kannada* - Government of Karnataka - Feb. 1998 to Feb. 1999 - Chief Investigator
  6. *Spelling and Grammatical Error Detection and Correction* - Department of Science and Technology (DST), Govt. of India (Under DST's Opportunities for Young Scientists Scheme) - April 1995 to September 1997 - Chief Investigator
  7. *POWERSHIFT: A conversion tool for converting PowerBuilder applications to Oracle Forms 4.5 Applications* - Optima Software Services ltd. - May 1995 to April 1996, - Investigator
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## Knowledge/Experience/Skills:

OS VAX-VMS, DOS/Windows, UNIX/Linux  
Languages Pascal, C, SmallTalk, Lisp, PROLOG, C, PERL, etc.

## Products and Services Developed:

Several products and Services in Language and Speech Technologies have been developed and deployed through transfer of technology and other means. Some of these have been released by DIT, Govt. of India to public on 12 Sept 2005. Here is a brief listing.

See [www.LanguageTechnologies.ac.in](http://www.LanguageTechnologies.ac.in) for more details.

- UCSG Syntax, UCSG Shallow Parsing Architecture (FSM+HMM+A\*), Wide Coverage Shallow Parser for English, UCSG Demo parsers for Telugu and Kannada
- Language Identification from small Text Samples - Multiple Linear Regression based Classifier - over 99% accuracy within Indian languages, pairwise
- Automatic Text Categorization System - SVM - MI for Dimensionality Reduction - Language Independent
- Speaker Independent Continuous Speech Recognition System for Telugu - htk
- Spaker Recognition/Verification System - Password Authentication
- Kannada dictionary, English-Kannada Dictionary, Kannada Thesaurus
- MORPH: Network and Process Model for Morphological Analysis and Generation, Kannada Morphological Analyzer and Generator
- MAT Architecture for Machine Aided Translation, English-Kannada Machine Aided Translation System for Government of Karnataka
- A 40 Million Word Text Corpus for Telugu
- AKSHARA advanced multi-lingual text processor - Akshara 1.1 released by DIT, Govt. of India to public on 12 Sept 2005
- DRISHTI OCR system for Telugu and other Indian languages
- Tel-Spell: Spelling Error Detection and Correction system for Telugu - ToT to Modular Infotech, Pune
- VIDYA: Comprehensive Web Based Education System
- VAANI: TTS system for Telugu
- Lexical Resources: Several Monolingual and Bilingual Dictionaries

- PSP2: A Natural Language Question Answering system for Harita Finance - Featuring Spelling Correction, Handling Ungrammatical/Incomplete Sentences and Context Based Interpretation
  - CHART Parser for several Indian Languages, Language Games, Text Processing Tools in Prolog and Perl
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## Industry Links:

1. Media-Cognition Inc. - Technical Advisor, Media-Cognition India Pvt. Ltd.
2. Kalki Communication Technologies Pvt. Ltd, Bangalore - Member, Advisory Board on AI and NLP
3. New Horizons Cybersoft Ltd, Hyderabad - Member, Advisorory Group
4. Consultant, Optima Software Services ltd. Hyderabad
5. Consultant, Euroflex Transmissions (India) Pvt. Ltd. Hyderabad

## Work done in Industry (1984 to 1990):

March 1984 to July 1987 : Deputy Engineer, Bharat Electronics Ltd., (Govt. of India, Ministry of Defence), Bangalore:

- Developed an Optimizing Pre-processor for Wiede-Point language: Turret Punch Press: Travelling Salesman Problem: Applied a kind of nearest neighbour heuristic. A complete interpreter including lexical, syntactic and semantic analyses and error reporting was developed. Target code was then optimized.
- Developed Heuristic techniques for routing in Printed Circuit Boards with graphical interface on VAX-11/730 system.

February 1989 - June 1990 : Senior Systems Officer, Sundaram Clayton Ltd.(TVS Group), Bangalore:

- Undertook the responsibility of introducing, teaching, training, and carrying out research and development in the fields of Artificial Intelligence and Expert Systems in all the companies in the group.
- Prepared detailed teaching material on "Expert Systems".
- Organized several courses on Expert Systems for participants from different companies in the group. Delivered lectures and gave demonstrations.
- Wrote a series of articles on Expert Systems in the company's in house magazine - "NewsWare".

- Developed Expert Systems and Intelligent CAD/CAM systems in the area of Parametric Design.
  - Developed an Expert System Shell, an ES for diagnosing TVSE printer defects, an ES system for diagnosing defects in punch press, an ES for diagnosing defects in TVS Suzuki paint shop, etc.
  - Carried out research and completed the development of a Natural Language Question Answering System featuring spelling error tolerance, handling of incomplete or ungrammatical sentences, and context based interpretation.
  - Initiated a major Artificial Intelligence project called Personal Investment Advisory System and chalked out the overall design of the system.
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### **Other Activities:**

**Webmaster** of the University of Hyderabad from December 1999 to December 2004. Developed a web site for the alumni with a database link through Perl and CGI

**Warden** men's hostel

**Department Seminar InCharge** wef July 2007

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### **Membership in Professional Bodies:**

1. (IEEE)
2. SMATAC (Society for Machine Aids for Translation and Communication)- Life Member
3. DLA - Life Member

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## General Information:

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**Name:** Kavi Narayana Murthy  
**Father's Name:** Kavi Krishna Murthy  
**Date of Birth:** 1 December 1959  
**Place of Birth:** Bangalore, India  
**Nationality:** Indian  
**Languages Known:** Sanskrit, English, Hindi, Telugu, Kannada  
**General Interests:** Classical Music, Sanskrit and Indian Tradition, Yoga, Vedanta

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