



**Prof. Girish Nath Jha**  
Professor of Computational Linguistics  
School of Sanskrit and Indic Studies

Concurrent Faculty, Center for Linguistics, SLL&CS  
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### **Education**

M.A : 1991, Linguistics, JNU, New Delhi  
M.Phil : 1993, Linguistics (Computational Morphology), JNU, New Delhi  
Ph.D : 1998, Linguistics (Machine Translation), JNU, New Delhi  
M.A. : 1999, Linguistics (Natural Language Interface)  
University of Illinois, Urbana-Champaign, USA

### **Research Interest**

Indian languages corpora and standards, Sanskrit and Hindi linguistics, Science & Technology in Sanskrit texts, Computational Lexicography, Machine Translation, elearning, web based technologies, RDBMS techniques, software design and localization

### **Employment History**

- *Dean*, School of Sanskrit and Indic Studies, JNU (29/12/2017-28/12/2019)
- *Director*, International Collaboration, JNU (05/05/2016-14/01/2018)
- *Chairperson*, Special Center for Sanskrit Studies, JNU (19/2/2016-28/12/2017)
- *Professor of Computational Linguistics*, Special Center for Sanskrit Studies, J.N.U (since 2014 )
- *Associate Professor* of Computational Linguistics, Special Center for Sanskrit Studies, J.N.U (since 2008)
- *Assistant Professor* of Computational Linguistics, Special Center for Sanskrit Studies, J.N.U (since 2002)

- *Software Development Specialist*, Human Kinetics, Champaign, Illinois, USA (2001 – 2002)
- *Software Engineer*, Collaborative Technologies (renamed dChain Commerce), Champaign, Illinois, USA (1999 – 2001)
- *Research Assistant*, Beckman Institute for Advanced Science and Technology, University of Illinois, Urbana-Champaign, USA (1998 - 1999)
- *Research Assistant*, Dept. of Psychology, University of Illinois, Urbana-Champaign, USA (Summer, 1997)
- *Teaching Assistant*, Dept. of Linguistics, University of Illinois, Urbana-Champaign, USA (1996-1998)

### **International Visiting Faculty**

1. Guest Professor, **University of Wurzburg, Germany**, under DAAD fellowship, November 2016
2. Visiting Professor, **University of Florence, Italy**, June-July 2016
3. Short-term guest Lectureship at **University of Wurzburg, Germany** to teach a short course in Computational Linguistics at the Digital Humanities department under a DAAD fellowship during Jan, 2014
4. Short-term guest Lectureship at **Yogyakarta State University, Indonesia** during March, 2013 to teach one week course on Computational Linguistics to the faculty of the University.
5. *Mukesh and Priti Chatter Distinguished Professor of History of Science*, **University of Massachusetts Dartmouth, USA** (2009-2012)

### **Consultancies**

1. *Nuance Communications* consultancy for mobile keyboard for Indian languages (Feb-April 2016)
2. *Swiftkey* consultancy for mobile phones predictive keyboard for minor Indian languages (Jan-March 2015)
3. *EZ Data Intelligence* consultancy for research in smart text processors for medical domain, 2013-
4. *Microsoft Research, Redmond, USA* for *Machine Translation for Indian Languages*, July - August 2012
5. *Linguistic Data Consortium (LDC)*, *University of Pennsylvania*, Philadelphia, USA for *narrow band data for language identification by computers*, January - April 2011
6. *Center of Indic Studies, University of Massachusetts, Dartmouth, USA*, for exploring scientific texts in Sanskrit, 2010-12
7. *Center for Development of Advanced Computing (CDAC)*, Pune consultancy for Software Localization, 2007
8. *Microsoft Research India Lab*, Bangalore for their POS tagging project for Indic languages, November 2006-January 2007
9. *Microsoft India* on their project on Handwriting Recognition for Devanagari, February – June 2006
10. *Mahatma Gandhi International Hindi University*, Wardha (then New Delhi) on their Database system for dialects of Hindi project (2002-2003)

### **Invited Lectures/Talks**

193. “Computational Linguistics and SOIL (Sanskrit and Other Indian Languages)”, Refresher Course, Jammu University, Dec 23, 2019

192. “Computational Linguistics for Sanskrit”, Refresher Course, Jammu University, Dec 23, 2019

191. “Eco-coop and AI- an India-Korea hussle”, International Symposium on "Korea-India partnership for coexistence", Ahmedabad, Nov 30, 2019 Organized by CKS, JNU and HRDC Ahmedabad University
190. “SOIL-Tech : Sanskrit and Other Indian Languages Technology, 2<sup>nd</sup> Refresher course in Sanskrit, HRDC, JNU, Oct 23, 2019
189. “Layers of annotation and Challenges in annotating Classical languages”, Digital Corpus of Sarala Mahabharata, Ravenshaw University, Oct 18, 2019
188. “E-learning –concepts and nuances of application development in the Indian context”, Refresher course on e-learning, HRDC, JNU, Oct17, 2019
187. “Fundamental Questions in Formal Linguistic Theories – A comparison of Panini and Chomsky” (via Skype), in ICPR sponsored seminar on “Critique of Indian & Western Questioning Tradition”, SD College Ambala, Oct5, 2019
186. “The art (and science and commerce) of selling yourself (resume writing and job interviews)”, JNU Placement cell, 24 Sept 2019
185. “Computational Linguistics and India”, 18th Refresher course in CS & IT, HRDC, JNU, 20 Sept,2019
184. “If E-learning is difficult, doing it in India is more so”, Refresher course on e-learning, HRDC, JNU, 20 Aug 2019
183. “Nuances of Linguistic Computing and Big Linguistic Data in India”, NATIONAL SEMINAR ON LINGUISTICS AND LANGUAGE SCIENCES IN INDIA- (NASLILANSI-2019) & WORKSHOPS ON FORENSIC AND CORPUS LINGUISTICS, Center of Linguistics, JNU, 9 Aug 2019
182. “Big (Linguistic) Data and challenges for Indian Language Technology”, Golden Jubilee talk at CIIL Mysore, 17 July 2019
181. “Indian Languages in the Age of IT”, IYIL-2019 Symposium, Suryaa Hotel, Delhi, 29 June 2019
180. “Language technology @JNU”, FICCI-ILIA meeting at MEITY, 25 June 2019
- 179.“Information Technology Applications for Sanskrit & Indic Studies”, Invited talk at Charleton College of Business, University of Massachusetts, Dartmouth, MA, USA, 8 May 2019
178. "Computational Linguistics for Sanskrit & Indic Studies", Gurukul Kangri University, Haridwar, 27 Apr, 2019
177. "E-Learning in India in the Context of Open Source Resources", Workshop on Elearning, HRDC, JNU, 18 March 2019
176. "E-Learning: Concepts, Development and Delivery Platforms", Workshop on Elearning, HRDC, JNU, 18 March 2019
175. "Resource creation for Indian Languages", Bharat NLP - Niti Ayog workshop, IIT Delhi 30 March 2019

174. "Information Technology (IT) Applications on Sanskrit and Other Indian Languages (SOIL)", HRDC JNU< Orientation Course, 12 March, 2019
173. "Sanskrit today – planning confident steps in the right direction", Sanskrit Dept, Amity University, 22 Feb, 2019
172. "भारतीय भाषाओं का संरक्षण और संवर्धन तकनीकी युग में", Plenary talk on Mother Tongue Day at Deshbandhu College, DU, 21 Feb, 2018
171. "AI in wilderness – the perils of linguistic computing in India", HRDC Refresher course, JNU, 19 Feb 2019
170. "Panini's model and its cross linguistic and cross disciplinary applications", HRDC Sanskrit Orientation, JNU, 11 Feb 2019
169. "Computational Linguistics, Digital Humanities and Challenges in Sanskrit Computing", HRDC Refresher course, JNU, 22 Jan 2019
168. "Information Technology (IT) for Sanskrit and Other Indian Languages (SOIL)", HRDC Refresher course, JNU, 22 Jan 2019
167. "Digital Humanities and Computational Linguistics for Sanskrit", Plenary talk at Bharati College, DU, 19 Jan, 2019
166. "Sanskrit, Technology and value education", Internaitonal conference on "Human Qualities and Values for Sustainable Higher Education", Goa University, 13 Dec 2018
165. "Language Technology and India", Mahatma Gandhi International Hindi University, Wardha 25 Oct 2018
164. "Language Technology for Indian Languages", HRDC Refresher course, JNU, 9 Oct 2018
163. "Om – the non dual universal linguistic formalism", Plenary talk in World Parliament of religion, 3 Oct 2018
162. "Computational Linguistics for Sanskrit", lecture in Research Methodology course of School of Sanskrit and Indic Studies, JNU, 1 Oct 2018
161. "LT Resource Crunch - challenges and opportunities for South Asian Languages", Keynote in International Conference on Bangla Speech and Language Processing, Shahjalal Institute of Science & Technology (SUST), Sylhet, Bangladesh, 21 Sept 2018
160. "Language Technology Resource (LTR) creation for Sanskrit and Other Indian Languages (SOIL)", Dept of Sanskrit, Jamia Islamia University, New Delhi, 14 Sept, 2018
159. "Language Technology Resource Creation for resource poor languages", DIAL2018, Vishvabharati, Shantiniketan, 9 Sept 2018
158. "Language Literature and Culture Studies in the Age of IT", HRDC Refresher course, JNU, 28 Aug 2018
157. "Consider MS in Computational Linguistics @JNU", Lecture to Engineering students' orientation, JNU, 7 Aug 2018

156. "Origin and Development of Hindi", Lecture to Korean students, SLL&CS, JNU, 6 Aug 2018

155. "Panini's contribution to linguistic analysis and formal models", Plenary talk in International Conference on "Actuating Indic Studies for a better world", Amity University, Gurugram, 2 Aug 2018

154. "Indian Language Technology Services Industry-The Present and the Future", Panelist in FICCI sponsored seminar on Bhashantara, 30 July 2018, New Delhi

153. "Languages, language policy and language education in India", Uberoi Foundation USA Teachers' Orientation, JNU, 11 July 2018

152. "NLP is difficult and doing it in India is more so (barriers of NLP research in India)", FICCI-ILIA workshop, New Delhi, 26 June 2018

151. "Language Technology Resource Development and the Big (Linguistic) Data Complexities", Plenary at JP Institute, Noida, 27 Apr 2018

150. "Sanskrit and AI", National workshop on "critique of ambiguity in Sanskrit shastras & Artificial Intelligence/Machine Translation, SD College, Ambala, March 10, 2018

149. "Digital Humanities and technology Development for Indian languages", National Seminar on Translation, Maulana Azad national Urdu University, Hyderabad, Feb 27, 2018

148. "Language Literature and Culture Studies in the age of IT", in an international seminar on "ICT for language learning - trends issues & challenges", St Ann's College, Hyderabad, Feb 22, 2018

147. "Digital Humanities and technology Development for Indian languages and heritage", LIPI, LITERATURE Conference, Ravenshaw University, Cuttack, Odisha, Feb 3, 2018

146. "India's diversity: challenges for Big Linguistic Data and Language Informatics", keynote speech at Uva Wallessa University, Sri Lanka, 1 Feb, 2018

145. "*Script language and Digitization*", Daulat Ram College, Delhi University, 26/12/2017

144. "*Resource Creation for Indian Language Processing*", Plenary talk in a workshop on "Recent Trends in NL & Speech Processing", Ambedkar Institute of Advanced Communication Technology Research, Delhi, 12/12/2017

143. "*Language Technology Resource Creation - the Big Linguistic Data Challenge of India*", Plenary talk in 39th ICOLSI, IIT Patna, 9/12/2017

142. "*Big Linguistics Data and India Challenge*", plenary talk in a seminar "Intelligence and Interactive Design", organized by Samsung India Research Network, Bangalore, 24/11/2017

141. "*Language Technology Resource Creation for Indian Languages*", Inaugural lecture in the "Lecture by Eminent Personalities" series organized by TRAI, New Delhi, 21/11/2017

140. "*Digital Humanities, Computational Linguistics and India*", lecture at HRDC, JNU, 8/9/2017

139. "*India's Ancient Wisdom - handle with care*", invited panelist in Chinmaya Vishva Vidyapeeth, Kaladi, 12/6/2017

138. *"Automatic Translation of Ancient Sanskrit manuscripts - Roadblocks for Human Language Technology"*, plenary talk in 23rd International Vedanta Congress, University of Massachusetts, Dartmouth, 13/8/2017
137. *"Computational Sanskrit"*, CPDHE, Delhi University, 4/7/2017
136. *"The Future of Identity, Language and Technology in India"*, Panel discussion for NDTV organized by Swiftkey (Microsoft), Hyatt Regency, New Delhi, 23/6/2017
135. *"Globalization, IT and Sanskrit"*, Satyavati College, Delhi University, 19/4/2017
134. *"Big Linguistic Data and India challenge"*, School of Computational and Integrative Sciences, JNU, 11/4/2017
133. *"Sanskrit and Computational Linguistics - Challenges and possibilities"*, PGDAV college, Delhi University, 31/3/2017
132. *"Sanskrit and Natural Language Processing - Challenges and Possibilities"*, Dept of Sanskrit, Kerala University, 14/3/2017
132. *"Computational Linguistics for Sanskrit and other Indian languages - Opportunities and Challenges"*, Shri Lal Bahadur Shastri Rashtriya Sanskrit Vidyapeeth, Delhi, 12/3/2017
131. *"Technology Development for Sanskrit and other Indian languages - Resource Creation and challenges"*, plenary talk delivered at Dept of Sanskrit, Tripura University, 3/3/2017
130. *"Sanskrit and IT"*, Swami Shraddhanand College, Delhi University, 1/3/2017
129. *"JNU and its International Collaboration Efforts"*, invited talk at EU-India Higher Education Cooperation Conference, India Habitat Center, 29/9/2016
128. *"Digital Humanities and heritage texts in Sanskrit"*, invited talk in a national seminar titled "Leaning of Sanskrit shastras in present system" organized by Delhi University South Campus, 12th March, 2016
127. *"Language Technology digital humanities and Indian heritage"*, invited talk in a national seminar on "Sustenance of Sanskrit", organized by SCSVMV University, Kanchipuram, March 4, 2016
126. *"New directions in Sanskrit research - Computational Linguistics"*, invited talk at Shri Lal Bahadur Rashtriya Sanskrit Vidyapeeth, New Delhi, 25th Feb, 2016
125. *"Computational Linguistics and Sanskrit"*, invited talk at Motilal Nehru College, Delhi University, 20th Feb 2016
124. *"Technology resource creation for Indian languages - a case of Sindhi"*, invited talk in a national seminar on Sindhi NLP organized by Aryabhatta College, Delhi University, 19th Feb 2016
123. *"Structured Language Resources (SLR) creation at JNU"*, invited talk in a seminar titled *Real time translation among Indian languages* organized by TIFAC, DST, New Delhi, 11 Feb 2016

122. “*Big Data and the language of Gods*”, invited talk at “5<sup>th</sup> National Sanskrit Journalists Seminar”, Akshar Dham, Delhi, 10 Dec, 2015
121. “*India's Ancient Manuscripts - complexities and challenges for language informatics*”, Delivered at “Institute of Linguistics, Adam Mickiewicz University, Poznan, Poland, 30 Nov, 2015
120. “*Computational Linguistics and India*”, Academic Staff College, JNU, Sept1, 2015
119. “*Panini Computing: challenges and gains for AI*”, NCERT, 28 Aug, 2015
118. “*Innovations in Sanskrit education*”, St. Thomas School, Noida, 27 Aug, 2015
117. “*IT for Indian language and Literature*”, Academic Staff College, JNU, 26 August, 2015
116. “*Big data and recent trends in language informatics in India*”, delivered in the national seminar on “Linguistics in Humanities”, organized by Dept. of Linguistics, Delhi University, March 10-11, 2015
115. “*Indian Heritage and Prakrit in the age of Information & Communication Technology*”, invited talk in the national Seminar on Prakrit, Shri Lal Bahadur Rashtriya Sanskrit Sansthan, Delhi, Feb 26, 2015
114. “*Sanskrit education in India – policies and innovations*”, invited talk at the Nectarland Book release, India Habitat Center, Delhi, Feb 14, 2015
113. Invited lectures and labs in the “Faculty Development Program (FDP) on Natural Language Processing” at Dept. of Computer Science & engineering, A K Garg Engineering College, Ghaziabad, Jan 30-31, 2015
112. “*Conclave on Language Informatics: South and South East Asian Languages (CLI-SSEAL)*”, presentation at Cambridge University Press, Delhi, 12 January, 2015
111. “*The Sharada project - background information*”, delivered in the inaugural session of the “5-day National Workshop on Sharada script” organized by Millennium Indian Education Foundation (MIEF) at Department of Sanskrit, Mumbai University”, Nov 6, 2014
110. “*Resource poverty to resource hunting - the case of Indian languages*”. delivered at a national seminar on “Towards standardizing Khasi for Computational Purposes”, St Anthony's College, Shillong, Oct 28, 2014
109. “*Languages Technology and Education: India and Indonesia*”, Talk delivered at Yogyakarta State University, in an Exploratory Seminar in JNU-YSU collaboration, Oct 10, 2014

108. *"Preserving and promoting Sanskrit Manuscripts - Digitization and beyond"*, Talk delivered in "National Workshop on Research Methodology in Sanskrit" at Rashtriya Sanskrit Sansthan, Agartala, Sept 20, 2014
107. *"Information Technology innovations and fundamental sciences in Sanskrit - : A multidisciplinary approach to research"*, Talk delivered in "National Workshop on Research Methodology in Sanskrit" at Rashtriya Sanskrit Sansthan, Agartala, Sept 19, 2014
106. *"Language Technology, corpora and standards for Indian languages"*, Talk delivered at the Center for Indic Studies, University of Massachusetts, Dartmouth, Aug 29, 2014
105. *"Sanskrit in the school curriculum – looking ahead"*, DPS R K Puram, August 14, 2014
104. *"Sanskrit in the age of IT – the age of innovation"*, ARSD College, Delhi University, August 14, 2014
103. *"ICT applications and innovations for Sanskrit - a practical approach"*, NCERT, New Delhi, Aug 8, 2014
102. *"NLP and Indian Languages"*, at the Refresher Course in Computer Sciences and Information Technology at Academic Staff College, JNU, July 28, 2014
101. *"Computational Linguistics for Sanskrit: a viable research option"*, talk delivered at the CPDHE, Delhi University, July 10, 2014
100. *"Knowledge representation in man and machine - philosophy and beyond"*, Dept of Linguistics, Gujarat University, Ahmadabad, 21 March, 2014
99. *Sanskrit Computational Linguistics: Opportunities and Challenges*, talk delivered at Shri Lal Bahadur Rashtriya Sanskrit Vidyapeeth, Delhi, February 25, 2014
98. *Language Technology Resources and challenges in emerging India*, Dept of Letters & Philosophy, University of Florence, Italy, Jan 22, 2014
97. *Making most of diversity – Language Technology in India*, German Center for Artificial Intelligence (DFKI), Berlin, Germany, Jan 20, 2014
96. *Corpora, Standards and Language Technology – a tale of emergent India*, Wurzburg Center for Modern India, University of Wurzburg, Germany, Jan 16, 2014
95. *Language diversity in India - a challenge for resource creation*, German Center for Artificial Intelligence (DFKI), Saarbrucken, Germany, Jan 13, 2014
94. *Indian Languages, Unicode and Automatic Transliteration*, Institute of Linguistics, Adam Mickiewicz University, Poznan, Poland, Dec 12, 2013
93. *Computer Processing and Natural Language Engineering of Indian Languages: the Case study of Sanskrit - II*, Faculty of Mathematics and Computer Science, Adam Mickiewicz University, Poznan, Poland, Dec 11, 2013



92. *Computer Processing and Natural Language Engineering of Indian Languages: the Case study of Sanskrit - I*, Faculty of Mathematics and Computer Science, Adam Mickiewicz University, Poznan, Poland, Dec 10, 2013
91. *Language Technology Resource (LTR) development and India*, invited talk in UGC Sponsored One Week National Workshop on Multilingual Technologies, Punjabi University, Patiala, Nov 12, 2013
90. *Science And Technology In Ancient Indian Texts (SATIAIT) - the latest report*, presented at the Dept of Chemistry, University of Massachusetts, Dartmouth, July 18, 2013
89. *Information Technology for Indian Language and Literature*, invited talk at Chandigarh Sahitya Academy, May 25, 2013
88. *Language Technology and Empowerment*, presented at the international seminar on "Language and Power: Perspectives, Issues and Impact", April 6-7, 2013, Special Center for Sanskrit Studies, J.N.U.
87. *Computational Linguistics, corpora and standards: the big picture*, invited talk delivered at the Nepali Dept, North Bengal University, Siliguri, April 4, 2013
86. *Newer dimensions of Sanskrit Research in the Information Technology Age*, invited talk in Shri Lal Bahadur Shastri Rashtriya Sanskrit Vidyapeetha, March 6, 2013
85. *Sanskrit in the Information Technology Age*, invited talk at Daulat Ram College, University of Delhi, March 2, 2013
84. *Sanskrit shodh ki nai dishaen*, invited talk at Haryana Sanskrit Academy, Bhiwani, Haryana Feb 10, 2013
83. *Technology for Indian Heritage: the case of ancient scripts and texts*, invited talk in the National Seminar on "Application of Information Technology for conservation, editing and publication of Manuscripts", Samskriti Foundation, Bangalore, 21-22 Jan 2013
82. *Language Technology Resource (LTR) Developments at JNU*, invited talk at Academic Staff College, JNU, July 31, 2012
81. *Resource creation for Indian languages - an update*, invited talk at a workshop on "Reinforcing International Collaboration on Language Resources and Evaluation", joint COCOSDA-FLaReNet workshop, LREC, Istanbul, May 26, 2012
80. *Emerging trends in Language Technology Resources (LTR) in India*, delivered at Microsoft Research, Redmond, USA, Apr 9, 2012
79. *Science and Technology initiatives for Indian Languages: Impacting India through US and indigenous expertise*, delivered at an International seminar on "Presence of America in India", University of Illinois, Urbana-Champaign, IL, USA, Apr 7, 2012
78. *"Sanskrit e-learning"*, invited paper in a national seminar on education at Shri Lal Bahadur Rashtriya Sanskrit Vidyapeeth, Delhi, Feb17, 2012

77. *Sanskrit shodh ki naiti dishaen*, talk delivered at Shri Lal Bahadur Rashtriya Sanskrit Vidyapeeth, Delhi, Feb10, 2012
76. *Newer areas of R & D in Sanskrit at JNU: a report*, DPS Society, Dwarka, Jan18, 2012
75. *Computational Linguistics Corpora and standards: the big picture*, distinguished lecture at JNU lecture series, Feb 3, 2012
74. *Computational Linguistics Corpora and standards: the Indian situation*, talk delivered at IIT Patna, Jan30, 2012
73. *Enabling Indian languages on computers*, Workshop on Indian language computing, Mohini Devi Memorial School, Araria, 13-16 Jan, 2012
72. *"Indian languages corpora Initiative: current status and future directions"*, inaugural talk at ILCI workshop organized by IIT Mumbai, Jan3-4, 2012
71. *"Promoting Sanskrit through Science and Technology: A report on the latest developments at JNU"*, 20th International Vedanta Congress, JNU, Dec28-31, 2011
70. *Introduction to programming in Java*, , NLP Lecture Series at Kashmir University, sponsored by LDC-IL, CIIL Mysore, Nov8-9, 2011
69. *"Linguistic Theory and Grammar Formalisms"*, NLP Lecture Series at Kashmir University, sponsored by LDC-IL, CIIL Mysore, Nov8-9, 2011
68. *"Science & Technology in Sanskrit at JNU: A report"*, Convergence of Science and Spirituality, Nov 5, 2011, organized by ISSKCON, Sri Venkateswara College, South Campus Delhi University)
67. *"Issues in POS tag-set design for Indian languages"*, Sept19, 2011, Inaugural talk in the "Workshop on POS-Morph: Urdu-Hindi& Maithili", organized by LDC-IL, CIIL Mysore, 19-21 Sept, 2011, CIIL Mysore
66. *Computational Linguistics and Sanskrit*, lecture delivered at International Sanskrit conference at Uttaranchal Sanskrit University, Haridwar, 11th Sept, 2011
65. *"Purushartha and Yoga: a no-contradiction approach"*, invited talk in the "Summer Workshop on Dharmic Traditions", Center for Indic Studies, University of Massachusetts, Dartmouth, July19 & July26, 2011
64. *"Modern Hindu Practices and their evolution"*, invited talk in the "Summer Workshop on Dharmic Traditions", Center for Indic Studies, University of Massachusetts, Dartmouth, July19, 2011
63. *"What is dharma: following a textual strategy"*, invited talk in the "Summer Workshop on Dharmic Traditions", Center for Indic Studies, University of Massachusetts, Dartmouth, July18, 2011
62. *"Why Study Sanskrit"*, talk delivered in "Trindic Corps Youth Camp", Organized by Center of Indic Studies and 3R Foundation, University of Massachusetts, Dartmouth, July1-4, 2011

61. *Computational Linguistics*, Talk delivered at Hindu College, Dec 21, 2010
60. *Sanskrit and Computer*, lecture delivered at NCERT teachers orientation, Dec 1, 2010
59. *Language Technology Resources for Sanskrit and other Indian Languages at Jawaharlal Nehru University*, India, LDC Institute, University of Pennsylvania, July 22, 2010
58. *Multilingual Multimodal resources – creating a leveling field in India*, COCODA/WRITE/FLaReNet workshop “language Technology Issues for International cooperation”, LREC2010, Malta, 22 May, 2010
57. *Indian Languages Corpora and Application Development at JNU*, Prof R N Shrivastava Memorial Lecture, Kendriya Hindi Sansthan, Agra, March 23, 2010
56. *Language Processing and Corpus Linguistics*, Prof R N Shrivastava Memorial Lecture, Kendriya Hindi Sansthan, Agra, March 22, 2010
55. *Language Technology & Sanskrit*, Dept of Sanskrit, Hansraj College, Delhi University, Feb 18, 2010
54. *Computational Linguistics for Sanskrit*, PhD research workshop, Sri Lal Bahadur Shastri Rashtriya Sanskrit Vidyapeeth, New Delhi, Feb 16, 2010
53. *A national effort to develop technologies for multiple national languages the experience of India*, FLaReNet (Fostering Language Resource Network), funded by European Commission, Barcelona, Spain, Feb 12, 2010
52. *International Collaboration: Europe and India*, FLaReNet (Fostering Language Resource Network), funded by European Commission, Barcelona, Spain, Feb 12, 2010
51. *Why should you consider Sanskrit*, Sanskrit Dept, Mothers School, Jan 22, 2010
50. *Hamaare gaon, shiksha aur computer*, Kuruom Vidyalaya: Inauguration and Educational Workshop, Jan 14, 2010, Kuruom, Sultanpur, UP
49. *Web based technologies*, Web Creations, Lucknow, Jan 13, 2010
48. *Linguistics for Sanskrit*, “Workshop on Sanskrit and Computers: Getting equipped to face the new challenges” organized jointly by the Department of Sanskrit Studies, University of Hyderabad, and the Sanskrit Academy, Osmania University, Hyderabad, 20 Dec 2009
47. *Java for Computational Linguistics*, “Workshop on Sanskrit and Computers: Getting equipped to face the new challenges” organized jointly by the Department of Sanskrit Studies, University of Hyderabad, and the Sanskrit Academy, Osmania University, Hyderabad, 21-23 Dec 2009
46. *Computational linguistics R&D at JNU*, “Workshop on Sanskrit and Computers: Getting equipped to face the new challenges” organized jointly by the Department of Sanskrit

Studies, University of Hyderabad, and the Sanskrit Academy, Osmania University, Hyderabad, 23 Dec 2009

45. *Computational Linguistics and TDIL Programme*, panel discussion on "Getting less-resourced languages on board - which languages, which resources, which methods, which funding?", 4th International Language and Technology Conference (4th LTC), Poznan, Poland, Nov 6, 2009
44. *Indian Language Corpora Initiative (ILCI)*, invited talk, 4th International Language and Technology Conference (4th LTC), Poznan, Poland, Poznan, Poland, Nov 6, 2009
43. *Sanskrit and Computer*, Sanskrit Dept, Gargi College, Delhi University, Sept 17, 2009
42. *Documentation initiatives for Sanskrit and other Indian languages*, International seminar on language documentation, Center for Linguistics, School of Languages Literatures & Culture Studies, JNU, Oct 27, 2009
41. *JNU Text Encoding & Search for Sanskrit (J-TESS)*, Rashtriya Sanskrit Sansthan, Delhi, Oct 26, 2009
40. *Issues in Sanskrit NLP and e-learning*, Kanya Mahavidyalaya, Jalandhar, Aug 7, 2009
39. *Sanskrit aur Kampyutar*, DPS HRD Center, Dwarka, New Delhi, Apr 15, 2009
38. *Emerging trends in Language Technology and Sanskrit Computing* at the Science Festival 2009, organized by School of Life Sciences, J.N.U., Feb 27, 2009
37. *Methods and Issues in Computer Processing of Panini*, Bhandarkar Oriental Research Institute, Pune, Feb 22, 2009
36. *Introduction to Language Technology*, Center of Indian Languages, SLL&CS, JNU, Jan 23, 2009
35. *Introduction to Natural Language Processing*, refresher course for Computer Science, Academic Staff College, JNU, Nov 14, 2008
34. *Demonstration of Sanskrit software developed at JNU* (included as part of *Sanskrit CD* released by Ministry of IT and CDAC Pune, Nov 25), Tirupati Sanskrit Vidyapeeth
33. *Multimedia e-learning for Sanskrit*, at DPS, HRD Center, Dwarka, New Delhi, Nov 16, 2008
32. *Issues in Sanskrit NLP and e-learning*, Dept of Sanskrit, Pali and Prakrit, MD University Rohtak, Nov 7, 2008
31. *Sanskrit and Computer*, Haryana Sanskrit Academy at Bhiwani, 28/9/2008
30. Plenary speech in the international workshop titled *Anaphora Resolution II*, organized by Bergen University, Bergen, Norway, Aug 29-31, 2008

29. Lecture series on *NLP and Panini*, Dept of Vyakarana, Faculty of Arts, Banaras Hindu University (BHU), March 25-26, 2008
28. *Teaching through e-learning*, Central Institute of Higher Tibetan Studies, Sarnath, Dec29-30,2007
27. *Multilingualism, localization and language computing*, IP Engineering College, Gaziabad, Nov 17, 2007
26. Invited speech at *First International Symposium on Sanskrit Computational Linguistics*, INRIA, at Paris-Rocquencourt, 29 Oct-31 Oct 2007
25. *Sanskrit Computational Linguistics* at Sanskrit Shodh Parishad , Delhi University, August 1, 2007
24. Lecture series on *Language Technology* at the NLSI summer training, CIIL Mysore, June 18-19, 2007
23. *Computational Linguistics*, Dept of Linguistics, Kashmir University, Srinagar, Feb23, 2007
22. Lecture-series in the area of *Sanskrit Computational Linguistics* at the *Dept of NLP and Shabdabodha*, Rashtriya Sanskrit Vidyapeetham, Tirupati, Andhra Pradesh, Jan25-27, 2007
21. *Computational Phonology and Morphology*, PGDLT course at CDAC, Noida, Jan 5, 2007
20. *Language Technology*. PGDLT course at CDAC, Noida, Dec 21, 2006
19. Lecture series on *Language Technology* , MA course on Language Technology at Mahatma Gandhi International Hindi University, Wardha, 11-15 Dec, 2006
18. *Sanskrit and computer*, Haryana Sanskrit Academy at Panchkula, Chandigarh, Nov 26, 2006
17. *Hindi Lexicography and computer*, at Central Hindi Institute, Agra, at the workshop on “Hindi dialect dictionary” , Oct 16,2006
16. *Sanskrit and Computer*, Golden Jubilee Celebration of PGDAV College, Delhi University (organized by Delhi Sanskrit Academy, Sept 29, 2006
15. Invited talk at *Summit on Internationalization of Web* at Hotel Grand Ashoka, Bangalore (24-25 August, 2006) organized by World Wide Web Consortium (W3C) and Manufacturers’ Association of Information Technology (MAIT)
14. *Computational Linguistics: an overview*, CDAC Kolkata, July 6, 2006
13. *Linguistic theories and formal grammar models*, CDAC Kolkata, July 5, 2006
12. *Paninian Formalism for NLP*, CDAC Kolkata, July 4, 2006
11. Invited talk at the *First National Symposium on Modeling and Shallow Parsing of Indian Languages(MSPIL-06)* 31st March - 4th April, 2006 at IIT Bombay

10. *Language and computers*, ASC Orientation Course, Rajdhani College, Delhi University, Dec 27,2005
9. Invited speech at the *National Seminar on Translation Today: state and issues*, Dept. of Linguistics, University of Kerala, Trivandrum, August 23-25, 2005
8. *Machine Translation* in the MA course on Translation Technology at Mahatma Gandhi Antarrashtriya Hindi University, Wardha, April11-16, 2005
7. *Computational aspects of Indian grammatical tradition* at the 4th course on IGT organized by CIIL,Mysore at NRLC, Patiala, Feb2005
6. *Computational aspects of Panini* at the Refresher course on Sanskrit Linguistics, organized by CIIL,Mysore at Dept. of Linguistics , Punjabi University, Patiala and at the NRLC, Patiala, Feb-March 2003
5. *Computational linguistics, e-learning* at the Orientation course on Information technology at Academic Staff College, JNU, August 2004
4. *Computational linguistics, e-learning* at the Orientation course on Information technology at Academic Staff College, JNU, December 2004
3. *Macromedia ColdFusion for dynamic web content* at UNESCO sponsored refresher course at School of Information Technology, JNU, September, 2003
2. *Lectures on general linguistics*, Kendriya Hindi Sansthan, Delhi: (1995-1996)
1. *Lectures in UGC sponsored computer courses*, Shri Lal Bahadur Shastri Rashtriya Sanskrit Vidyapeeth: (1995-1996)

### **Keynote/Special Plenary talks**

1. “*LT Resource Crunch - challenges and opportunities for South Asian Languages*”, Keynote in International Conference on Bangla Speech and Language Processing (ICBSLP), Shahjalal Institute of Science & Technology (SUST), Sylhet, Bangladesh, 21 Sept 2018
2. "*India's diversity: challenges for Big Linguistic Data and Language Informatics*", keynote speech at Uva Wallessa University, Sri Lanka, 1 Feb, 2018
3. "*Structured Language Resources for Indian languages - a case of Malayalam*", invited inaugural talk at the launch of Center for Malayalam Language Technology at Malayalam University, Thirur, Kerala, 16 March 2016
4. “*Typing pain endangers Indian languages*”, at Swiftkey mobile keyboard launch event, Le Meridian, Delhi, 15 July, 2015

5. "Big Data, Language Informatics and Sanskrit - opportunities and challenges", presented in the "WORKSHOP ON VEDIC-YOGIC KNOWLEDGE", Dayalbagh Educational Institute, Agra, 25 March 2015
6. *Information Technology and emerging India – a case of languages and literatures*, Keynote speech in "13th Melus-Melow Conference", Dept of English, Jammu University, Jammu, 21 Feb, 2014
7. *Language Technology in India: empowering millions*, plenary talk in the "6th Language & Technology Conference: Human Language Technologies as a Challenge for Computer Science and Linguistics" , December 8, 2013, Poznan, Poland
8. Delivered a keynote talk titled *Current progress in developing Sanskrit and other linguistic resources*, in International WAVES Conference 2012, University of Massachusetts, Dartmouth, MA, USA, July14, 2012
9. "Issues in POS annotation and limited crowd sourcing - the case of ILCIANN", keynote talk in a national seminar on "POS Annotation for Indian languages: Issues & Perspectives, organized by LDC-IL, CIIL Mysore, Dec 12-13, 2011
10. *Computational Linguistics and Sanskrit*, keynote talk delivered at a workshop on "Computational Sanskrit" at SD College Ambala, 11th Nov, 2011

### **Research papers/articles**

134. "Language Technology white Paper on Maithili", Uday Narayan Singh, Girish Nath Jha & Narayan Choudhary, 1st International Conference on SOIL-Tech, JNU, New Delhi, 15-17 Feb 2019

133. "Developing Garhwali Corpus for Statistical Machine Translation", Arushi Uniyal and Girish Nath Jha, 1<sup>st</sup> International Conference on SOIL-Tech, JNU, New Delhi, 15-17 Feb 2019

132. "Issues & Challenges in Building SMT Systems for Lesser-known Languages (The Case of English-Bhojpur & English-Garhwali)": Atul Kr. Ojha, Arushi Uniyal and Girish Nath Jha, 1<sup>st</sup> International Conference on SOIL-Tech, JNU, New Delhi, 15-17 Feb 2019

131. "Language Technology white paper on Hindi", S.S. Aggrawal, Dipti Mishra Sharma & Girish Nath Jha, 1<sup>st</sup> International Conference on SOIL-Tech, JNU, New Delhi, 15-17 Feb 2019

130. "Language Technology white paper on Sanskrit", Girish Nath Jha, Shrinivas Varakhedi & Malhar Kulkarni, 1<sup>st</sup> International Conference on SOIL-Tech, JNU, New Delhi, 15-17 Feb 2019

129. "English Multi-Word Expressions (MWE): A Tagset for Health Domain" Srishti Singh and Girish Nath Jha. In Proceedings of International Conference on Advances in Computing, Communications and Informatics (ICACCI 2018), Bangalore, India. 19-22 Sept. 2018, pg 1812-1817

Date Added to IEEE Xplore: 03 December 2018. DOI: [10.1109/ICACCI.2018.8554795](https://doi.org/10.1109/ICACCI.2018.8554795)

Publisher: IEEE. Electronic ISBN: 978-1-5386-5314-2, Print on Demand(PoD) ISBN: 978-1-5386-5315-

128. *“Translation Issues in Conversation Sanskrit-Bhojpuri Language Pair: An MT Perspective*. Shagun Sinha and Girish Nath Jha. procs of the “4th Workshop on Indian Language Data: Resources and Evaluation” (WILDRE) held under Language Resources and Evaluation Conference, Miyazaki, Japan, 2018, ISBN: 979-10-95546-09-2

127. *“Automatic Language Identification System for Hindi and Magahi”*, Priya Rani, Atul Kr. Ojha and Girish Nath Jha, poster in the procs of the “4th Workshop on Indian Language Data: Resources and Evaluation” (WILDRE) held under Language Resources and Evaluation Conference, Miyazaki, Japan, 2018, ISBN: 979-10-95546-09-2

126. *“Demo of Sanskrit-Hindi SMT System”*, Rajneesh Pandey, Atul Kr. Ojha and Girish Nath Jha, 4th Workshop on Indian Language Data: Resources and Evaluation” (WILDRE) held under Language Resources and Evaluation Conference, Miyazaki, Japan, 2018, ISBN: 979-10-95546-09-2

125. *“Demo: Parts-of-Speech Tagger for Bhojpuri”*, Srishti Singh and Girish Nath Jha, 4th Workshop on Indian Language Data: Resources and Evaluation” (WILDRE) held under Language Resources and Evaluation Conference, Miyazaki, Japan, 2018, ISBN: 979-10-95546-09-2

124. *“Demo: Graphic-based Statistical Machine Translator”*, Atul Kr. Ojha and Girish Nath Jha, 4th Workshop on Indian Language Data: Resources and Evaluation” (WILDRE) held under Language Resources and Evaluation Conference, Miyazaki, Japan, 2018, ISBN: 979-10-95546-09-2

123. *“Challenges in Annotation and Domain Adaptation in Hindi POS Tagger: with Reference to Cricket”*, Anupama Pandey, Srishti Singh, Atul Kr. Ojha and Girish Nath Jha, procs of the "International Conference on Applied and Theoretical Computing and Communication Technology (ICATCCT-2017)", Karnataka, 21-23rd December 2017.

122. *“Zero Pronouns and Their Resolution in Sanskrit Texts”*, Madhav Gopal and Girish Nath Jha, in the procs of Intelligent Systems Technologies and Applications. ISTA’17, Manipal University, Karnataka 13-16 September, 2017. Advances in Intelligent Systems and Computing, vol 683. Springer

121. *“A Classification-based Approach to the Identification of Multiword Expressions (MWEs) in Magahi Applying SVM”*, Shivek Kumar, Pitambar Behera & Girish Nath Jha, Procs of International Conference on Knowledge-Based and Intelligent Information and Engineering Systems, KES-2017, 6-8 September 2017, Marseille, France, Procedia Computer Science (Elsevier), (18770509), 112, pp.594-603, 2017.

120. *“The IMAGACT4ALL Ontology of Animated Images: Implications for Theoretical and Machine Translation of Action Verbs from English-Indian Languages”*, Pitambar Behera, Sharmin Muzaffar, Atul Kr. Ojha and Girish Nath Jha, in the procs of "6th Workshop on South and Southeast Asian Natural Language Processing (WSSANLP-2016)" held under COLING at Osaka, Japan, 11-16th December 2016.

119. *“A Pāniniān Framework for Analyzing Case Marker Errors in English-Urdu Machine Translation”*, Sharmin Muzaffar, Pitambar Behera & Girish Nath Jha, In the Procs of International Conference on Knowledge-Based and Intelligent Information and Engineering Systems, KES-2016, 6-8 September 2016, York City, UK, Procedia Computer Science (Elsevier), (1877-0509), 96, pp. 502-510, 2016.



118. "Issues and Challenges in Annotating Urdu Action Verbs on the IMAGACT4ALL Platform", Sharmin Muzaffar, Pitambar Behera & Girish Nath Jha, In Procs of LREC-2016 (ISBN: 978-2-9517408-8-4), Portoroz, Slovenia, pp. 1446-1451, 23-28 May, 2016.
117. "Training & Evaluation of POS Taggers in Indo-Aryan Languages: A Case of Hindi, Odia and Bhojpuri", Atul Kumar Ojha, Pitambar Behera, Srishti Singh and Girish Nath Jha, procs of 7<sup>th</sup> LTC, Poznan, Poland, 27-29 Dec 2015
116. "Issues and Challenges in Developing Statistical PoS Taggers for Sambalpuri, Pitambar Behera, Atul Kumar Ojha and Girish Nath Jha, Procs of 7<sup>th</sup> LTC, Poznan, Poland, 27-29 Dec 2015
115. "The TypeCraft Natural Language Database: Annotating and Incorporating Urdu" , Pitambar Behera, Sharmin Muzaffar, Girish Nath Jha, Lars Hellan and Dorothee Beermann, in the Procs of regiICON-2015, to appear in "Indian Journal of Science & Technology"
114. "Statistical Tagger for Bhojpuri (employing Support Vector Machine)", Srishti Singh, Girish Nath Jha, International Conference on Advances in Computing, Communications and Informatics (ICACCI), 2015, Pages: 1524 - 1529, DOI: 10.1109/ICACCI.2015.7275829
113. "Sanskrit manuscripts digitization and beyond : the current status in India", presented at WAVES-2014, Maharishi University of Management, Fairfield, Iowa, USA, Aug 3, 2014
112. "Issues in mapping of Sanskrit-Hindi verb forms", Nripendra Kumar Pathak, Girish Nath Jha, Procs of the "2nd Workshop on Indian Language Data Resource and Evaluation" held under LREC at Reykjavik, Iceland, 26-31 May 2014
111. "Evaluation of Hindi-English MT Systems", Atul Kr Ojha, Akanskha Bansal, Sumedh Hadke, Girish Nath Jha, Procs of the "2nd Workshop on Indian Language Data Resource and Evaluation" held under LREC at Reykjavik, Iceland, 26-31 May 2014
110. "Issues in chunking parallel corpora: mapping Hindi-English verb group in ILCT", Esha Banerjee, Akansha Bansal, Girish Nath Jha, Procs of the "2nd Workshop on Indian Language Data Resource and Evaluation" held under LREC at Reykjavik, Iceland, 26-31 May 2014
109. "Mapping Indian Languages onto the IMAGACT Visual Ontology of Action", poster by Massimo Moneglia, Susan W. Brown, Aniruddha Kar, Anand Kumar, Atul Kumar Ojha, Heliana Mello, Niharika Mishra, Girish Nath Jha, Bhaskar Ray, Annu Sharma, Procs of the "2nd Workshop on Indian Language Data Resource and Evaluation" held under LREC at Reykjavik, Iceland, 26-31 May 2014
108. "Challenges in Indian Language Transliteration: a case of Devanagari, Bangla and Manipuri", poster by K Kabi Khandanba and Girish Nath Jha, Procs of the "2nd Workshop on Indian Language Data Resource and Evaluation" held under LREC at Reykjavik, Iceland, 26-31 May 2014
107. "Indian languages on the TypeCraft platform – the case of Hindi and Odia", poster by Girish Nath Jha, Lars Hellan, Dorothee Beermann, Srishti Singh, Pitambar Behera and Esha

106. *Semantic relations in Panini's karaka system: challenges for computer processing*, Explorative Workshop: by Jawaharlal Nehru University and University of Zurich on "Relationships of Possession: Linguistic, Literary, Philosophical and Legal Perspectives", 17-19 February 2014, JNU, New Delhi
105. *Computer Processing of South Asian Languages - the case of Sanskrit (presented by Sachin Kumar and Diwakar Mishra)*, in Special session on, "Recent Developments in Sanskrit Computational Linguistics", at the 30th Round Table of South Asian Language Analysis, Department of Sanskrit Studies, School of Humanities, University of Hyderabad, 8th Feb, 2014
104. *A Generic Search for Heritage Texts*, Kumar Nripendra Pathak, Girish Nath Jha in *Human Language Technologies as a Challenge for Computer Science and Linguistics* (Procs of the 6th LTC), Zygmunt Vetulani & Hans Uszkoreit (ed), pp 504-508, Fundacja, Uniwersytetu im. A. Mickiewicza, Poznan, Poland, 2013
103. *Linking and Referencing Multi-lingual corpora in Indian languages*, Esha Banerjee, Shiv Kaushik, Pinkey Nainwani, Akanksha Bansal, Girish Nath Jha in *Human Language Technologies as a Challenge for Computer Science and Linguistics* (Procs of the 6th LTC), Zygmunt Vetulani & Hans Uszkoreit (ed), pp 65-68, Fundacja, Uniwersytetu im. A. Mickiewicza, Poznan, Poland, 2013
102. *Corpora creation for Indian Language Technologies – the ILCI project*, Akanksha Bansal, Esha Banerjee, Girish Nath Jha in *Human Language Technologies as a Challenge for Computer Science and Linguistics* (Procs of the 6th LTC), Zygmunt Vetulani & Hans Uszkoreit (ed), pp 253-257, Fundacja, Uniwersytetu im. A. Mickiewicza, Poznan, Poland, 2013
101. *Syllabification and stress assignment in phonetic Sanskrit text*, Diwakar Mishra, Kalika Bali, Girish Nath Jha, poster presentation at International Oriental COCODA 2013 conference, KIIT, Gurgaon, India, Nov 27, 2013
100. *Lexical Database System for Accessing India's Heritage Texts (With special reference to Ayurveda)*, with Baldev Ram Khandoliyan , published in "Lexicography and Dictionaries in the Information Age" (Selected papers from the "8th ASIALEX International Conference", Bali, Indonesia, 20-22 August 2013), edited by Deny A. Kwary, Nur Wulan and Lilla Musyahda, ISBN 978-602-7924-20-8, pp157-165
99. *Annotating Sanskrit corpus – adapting IL-POSTS*, Girish Nath Jha, Madhav Gopal, Diwakar Mishra in *Human Language Technology: Challenges for Computer Science and Linguistics* (revised and selected papers from 4th LTC), pp 371-379, Zygmunt Vetulani (ed), Springer Verlag, Germany, 2009
98. *"Digital libraries, electronic access and search for texts of Vedantic tradition"* in the 21st International Congress of Vedanta, University of Massachusetts, Dartmouth, July 11-14, 2013

97. Anaphora Resolution in Sanskrit: Issues and Challenges, jointly with Madhav Gopal, presented in "*Sanskrit syntax and discourse structures*", international seminar organized by University of Paris Diderot, June 13-15, 2013
96. *Text Normalizer for Sanskrit*, jointly with Diwakar Mishra and Kalika Bali, in the Procs of "5th International Sanskrit Computational Linguistics Symposium", Malhar Kulkarni (ed), DK Printworld, Delhi, 2013
95. *Using the ILCI Annotation Tool for POS Annotation: A Case of Hindi*, Ritesh Kumar, Shiv Kaushik, Pinkey Nainwani, Esha Banerjee, Sumedh Hadke, Girish Nath Jha, International Journal of Computational Linguistics and Applications (IJCLA), VOL. 3, NO. 2, JUL-DEC 2012, PP. 93–104, guest editor: Yasunari Harada, Editor in-chief: Alexander Gelbukh, Bahri Publications, Delhi, ISSN: 0976-0962.
94. *Arya vs Dravida and linguistic foundations of Indian languages*, International WAVES Conference 2012, University of Massachusetts, Dartmouth, MA, USA, July14, 2012.
93. *Developing Sanskrit Corpora Based on the National Standard: Issues and Challenges*, with Madhav Gopal, Procs of "Workshop on Indian Language Data: Resource and Evaluation", Language Resource Evaluation Conference (LREC), Istanbul, e-publication by European Language Resource Association (ELRA), May, 2012
92. *Challenges in Developing Named Entity Recognition System for Sanskrit*, with Sachin Kumar and Sobha Lalitha Devi, Procs of "Workshop on Indian Language Data: Resource and Evaluation", Language Resource Evaluation Conference (LREC), Istanbul, e-publication by European Language Resource Association (ELRA), May, 2012
91. *Grapheme-to-Phoneme converter for Sanskrit Speech Synthesis*, with Diwakar Mishra and Kalika Bali, Procs of "Workshop on Indian Language Data: Resource and Evaluation", Language Resource Evaluation Conference (LREC), Istanbul, e-publication by European Language Resource Association (ELRA), May, 2012
90. *Text encoding and search for Āyurvedic texts: an interconnected lexical database*, Procs of the workshop on "Adaptation of language resources and tools for processing cultural heritage objects", Language Resource Evaluation Conference (LREC), Istanbul, e-publication by European Language Resource Association (ELRA), May, 2012
89. *Transfer grammar for Sanskrit-Hindi Machine Translation*, co-author with Kumar Nripendra Pathak, World Sanskrit Conference, Delhi, Jan5-10, 2012
88. *Strategies for Anaphora Handling in Panchatantra*, co-author with Madhav Gopal, World Sanskrit Conference, Delhi, Jan5-10, 2012
87. *Theory of Anaphora resolution in traditional Sanskrit texts*, co-author with Diwakar Mishra, World Sanskrit Conference, Delhi, Jan5-10, 2012
86. *Standard Text encoding scheme and search for Ayurvedic texts*, co-author with Archana Tiwari, World Sanskrit Conference, Delhi, Jan5-10, 2012

85. *Strategies for Semantic representation of Karma Karaka (karturipsitatamam karmam)*, co-author with Manji Bhadra, World Sanskrit Conference, Delhi, Jan5-10, 2012
84. *Knowledgebase for Sanskrit-Hindi machine Translation divergences*, co-author with Diwakar Mani, World Sanskrit Conference, Delhi, Jan5-10, 2012
83. *Resolving Anaphors in Sanskrit*, co-author with Madhav Gopal, Procs of 5th LTC, Poznan, Poland, Nov 25-27, 2011
82. *Creating Multilingual Parallel Corpora in Indian Languages*, Co-author with Narayan Choudhary, Procs of 5th LTC, Poznan, Poland, Nov 25-27, 2011
81. *Issues in annotating less resourced languages - the case of Hindi from Indian Languages Corpora Initiative* (co-author with Pinkey Nainwani, Esha Banerjee, Shiv Kaushik), Procs of 5th LTC, Poznan, Poland, Nov 25-27, 2011
80. *A Rule based Method for the Identification of TAM features in a PoS Tagged Corpus*, Co-author with Narayan Choudhary, Pramod Pandey, Procs of 5th LTC, Poznan, Poland, Nov 25-27, 2011
79. *"Origin and Development of Indian Languages and Linguistic Area"*, in *Perspectives on the Origin of Indian Civilizations* (Angela Marcantonio, Girish Nath Jha ed.), DK Printworld, Delhi, 2012
78. *"Paninian System of Languages: A Computational Paradigm"*, Invited paper in the "Vedanta & Science Symposium", Center for Indic Studies, University of Massachusetts, Dartmouth, July6, 2011
77. *Challenges in NP-case mapping in Sanskrit-Hindi machine translation*, Kumar Nripendra Pathak, Girish Nath Jha, in "Information Systems for Indian Languages: International Conference, ICISIL" , Chandan Singh, Gurpreet Singh Lehal, Jyotsna Sengupta, Dharam Veer Sharma, Vishal Goyal (eds), Springer, ISSN 1865-0929, pp 289-293, 2011
76. *Challenges in developing a TTS for Sanskrit*, Diwakar Mishra, Girish Nath Jha, Kalika Bali, in "Information Systems for Indian Languages: International Conference, ICISIL" , Chandan Singh, Gurpreet Singh Lehal, Jyotsna Sengupta, Dharam Veer Sharma, Vishal Goyal (eds), Springer, ISSN 1865-0929, pp 228-231, 2011
75. *Tagging Sanskrit using BIS POS Tagset*, Madhav Gopal, Girish Nath Jha, in "Information Systems for Indian Languages: International Conference, ICISIL" , Chandan Singh, Gurpreet Singh Lehal, Jyotsna Sengupta, Dharam Veer Sharma, Vishal Goyal (eds), Springer, ISSN 1865-0929, pp 191-194, 2011
74. *Sanskrit verb argument valence: a computational analysis*, co-author with Subhash Chandra, Procs of the O-COCOSDA 2010, Kathmandu
73. *Translating politeness across cultures: case of Hindi and English*, co-author with Ritesh Kumar (presented by Ritesh Kumar), procs of 3rd ACM International Conference on Inter-cultural collaboration, Copenhagen Business School, Denmark, 18-20 Aug, 2010

72. *SaHiT - Sanskrit-Hindi Translator*, in the 8th International conference of the WAVES, at Trinidad & Tobago, West Indies, August 5, 2010
71. *Text Encoding and Search for Sanskrit* at the "19th International Vedanta Congress", organized by Center of Indic Studies, University of Massachusetts, Dartmouth, July 30, 2010
70. *SATIAIT – progress report and translation of Rasaayana-saara*, presented at the "Symposium on Science and Technology in Ancient Indian Text", Center of Indic Studies, University of Massachusetts, Dartmouth, USA, July 26, 2010
69. *The TDIL program and the Indian Language Corpora Initiative (ILCI)*, Procs of the Seventh conference on International Language Resources and Evaluation (LREC'10), published by ELRA, isbn 2-9517408-6-7, pp982-985, Valletta, Malta, May 19-21, 2010
68. *Multilingual Multimodal Resources of the future: challenges and opportunities for India* (with Ritu Nidhi), abstract accepted for W3C international conference titled "World Wide Web: Technology, Standards and Internationalization Conference", May 6-7, 2010, New Delhi
67. *Online Multilingual Amarakosha: the relational lexical database* (with R. Chandrashekar, Umesh Kumar Singh, Vibhuti Nath Jha, Satyendra Pandey, Surjit Kumar Singh, Mukesh Mishra), demo paper in the Procs of the 5th Global Wordnet Conference, IIT Mumbai, Feb1, 2010
66. *Annotating Sanskrit corpus – adapting IL-POSTS* (with Madhav Gopal and Diwakar Mishra), published in the Procs of the 4th International Language technology Conference, Poznan, Poland, Nov 2009
65. *Discourse Anaphora and Resolution Techniques in Sanskrit*, with Sobha L, Diwakar Mishra , accepted as poster paper at the 7th Discourse Anaphora and Ambiguity Resolution Colloquium (DAARC-2009), held in Goa, India, Nov 5-6, 2009
64. *Linguistic pedagogy and e-learning: the case for Sanskrit*, co-author with Prachi Sinha & Priti Bhowmik, accepted for "Contemporary Themes and Issues in Language Pedagogy" vol2, Vaishna Narang ed, 2009
63. *Automatic Indexing System for texts of Indian Intellectual Tradition*, with Diwakar Mani, Umesh Kumar Singh, Prachi Sinha, presented at 18th International Vedanta Congress, University of Massachusetts, Dartmouth, July16-19,2009
62. "*Sanskrit teaching: Multimedia methodology and tools*", Prachi Sinha, Girish Nath Jha, in LANGUAGE IN INDIA, vol 9:11, November 2009, ISSN 1930-2940 (Procs of "All-India Conference on Multimedia Enhanced Language Teaching – MELT 2009" edited by L. Ramamoorthy and J. R. Nirmala)
61. *Sanskrit Analysis System (SAS)*, with Manji Bhadra, Surjit Kumar Singh, Sachin Kumar, Subash, Muktanand Agrawal, R.Chandrasekhar, Sudhir K Mishra, in *Lecture Notes in Computer Science* 5402 Springer Berlin / Heidelberg, ISBN 978-3-540-93884-2 (Amba P. Kulkarni, Gérard P. Huet eds) pp116-133, 2009

60. *An algorithm for morpho-phonemic processing of Sanskrit*, Sachin Kumar, Diwakar Mishra , Girish Nath Jha, presented by Sachin Kumar & Diwakar Mishra at 3rd National Conference on Methods and Models in Computing, School of Computer and Systems Sciences, JNU, Dec 9, 2008
59. *Architecture of dyna-content web-applications*, Girish Nath Jha, invited paper at “Requirement Workshop on Assessment Needs of Website of Animal Sciences, Dairy Science, Education and Research along with Transfer of Technology under NAIP funded AGROWEB Sub-Project (Component-I)”, National Dairy Research Institute, Karnal, Oct 3, 2008
58. *Anaphors in Sanskrit*, with Sobha L, Diwakar Mishra , Surjit K Singh, Praveen Pralayankar, Johansson, C. (Ed.) Procs of the Second Workshop on Anaphora Resolution (2008), ISSN 1736-6305 Vol. 2, Cambridge Scholars Publishing, 2007
57. *Semantic processing in Panini’s karaka system*, Girish N Jha, Sudhir K Mishra, ( *Lecture Notes in Computer Science* series) 5402 Springer Berlin / Heidelberg, ISBN 978-3-642-00154-3 (Gérard P. Huet, Amba P. Kulkarni, Peter Scharf eds) pp 239-252, 2009
56. *Bhaarat men bhasha praudyogiki: ek sarvekshan*, Girish N Jha, Diwakar Mani, Diwakar Mishra, *Gaveshana*, Kendriya Hindi Sanstana, Agra, vol 90, 2008
55. *A Common Parts-of-Speech Tagset Framework for Indian Languages*, Sankaran Baskaran, Kalika Bali, Tanmoy Bhattacharya, Pushpak Bhattacharyya, Monojit Choudhury, Girish Nath Jha, Rajendran S., Saravanan K., Sobha L., KVS Subbarao, LREC 2008 - 6th Language Resources and Evaluation Conference, May 26-June1, 2008, Marrakech, Morocco
54. *Issues in computer processing of languages – a case for Sanskrit*, presented at the International Symposium on Brain Cognition & Behavior, jointly organized by Center for Linguistics, SLL&CS, J.N.U. and Utrecht University (UU), Netherlands, March14-15, 2008
53. *Designing a Common POS-Tagset Framework for Indian Languages* (co-author with Sankaran Baskaran, Kalika Bali, Tanmoy Bhattacharya, Pushpak Bhattacharyya, Rajendran S, Saravanan K, Sobha L and Subbarao K V), presented (by Kalika Bali) at *International Joint Conference on Natural Language Processing (VI workshop on Asian Language Resources)*, IIT, Hyderabad, Jan 11, 2008
52. *Morphological Analyzer for Great Andamanese Verbs: Implementing a Concatenative Template*, co-author with Narayan Choudhary and Anvita Abbi, *Vishwabharat* (April 2007 January 2008 Journal) 113-118. TDIL, New Delhi,
51. *Survey of e-content in virtual media: the case of Sanskrit*, presented in a national seminar on *teaching through e-learning*, Central Institute of Higher Tibetan Studies, Sarnath, Dec29-30,2007
50. *software localization me bhasha sambandhi samasyaem*, in *Gaveshana*, Kendriya Hindi Sansthan, Agra, vol88,2007

49. *Sanskrit Computational Linguistics*, presented at a national seminar on “Relevance of Sanskrit for science and technology” organized by Gandhi Memorial National College, Ambala, Dec 8, 2007
48. *Inflectional Morphology Analyzer for Sanskrit*, Sanskrit Computational Linguistics ( *Lecture Notes in Computer Science* series) 5402 Springer Berlin / Heidelberg, ISBN 978-3-642-00154-3 (Gérard P. Huet, Amba P. Kulkarni, Peter Scharf eds) pp 219-238, 2009
47. *Sanskrit e-learning: Grammar-Lexicon*, paper presented at "National Seminar on Teaching of Sanskrit through e-learning" organized by NCERT, Aug30, 2007.
46. *Optimality re-investigation of Hindi stress system*, Rainbow of Linguistics (Vol I, 2007, pp 72-78), T. Media Publication, 33, College Row, Kolkata-700009
45. *Indian Theories of Knowledge compared with Western Theories and Artificial Intelligence*, appeared in Creative Forum – journal of literary and creative writings (pp-63-76), Vol. 20, No.1, Jan-July2007, Bahri Publications(2006), New Delhi
44. *Localization (I10n) of web-applications: strategies for Hindi/Sanskrit*, presented at the Workshop on Localization of e-Governance Applications: Issues & Standards, February 21-22, 2007, Le Meridien, New Delhi, organized by MAIT and MCIT
43. Knowledge modeling in India: an Artificial Intelligence perspective, accepted for the Indology Journal, International Indology Conference, Goa, Feb8-10, 2007
42. *A Natural Language Interface for Databases*, procs of National Conference in Methods and Models in Computing [NCM2C 2006], School of Computer & Systems Sciences, J.N.U., Dec 2006, Macmillan India Ltd., Delhi, pp75-91
41. *Proposing a System for Identifying Divergent Sentences in Russian-English Machine Translation*, co-author with Ainura Asamidinova, procs. of National Conference in Methods and Models in Computing [NCM2C 2006], School of Computer & Systems Sciences, J.N.U., Dec 2006, Macmillan India Ltd., Delhi, pp161-171
40. *Linguistic and cultural challenges for software localization (I10n): the case of Hindi/Sanskrit*, presented at a national seminar on Technology development for content creation and Localization in Indian languages, organized by CSTT, MHRD, Govt. of India and RKGIT, Gaziabad at RKG Institute of Technology, Gaziabad, Dec 1, 2006
39. *Hierarchical vs. flat tagsets*, presented at Microsoft Research India, Bangalore, 28th October, 2006
38. *Computer applications for Lexicography*, at Central Hindi Institute, Agra, in the workshop on “Hindi dialect dictionary”, Oct 16,2006
37. *Problems in Hindi Computing*, at Central Hindi Institute, Agra, in the workshop on “Hindi dialect dictionary”, Oct 16,2006

36. *Strategies for metrical analysis of Sanskrit text*, co-author with Diwakar Mishra , procs of National Seminar on Perspectives in Linguistics, Kashmir University, Srinagar, 2006
35. *Issues in Sandhi Processing of Sanskrit* co-author with Sachin Kumar, presented by Sachin at 28th All India Conference of Linguists, Department of Linguistics, BHU, 02-04 Nov 2006
34. *Karaka based Sentence validation System*, co-author with S.K. Mishra, presented by S.K.Mishra at 28th All India Conference of Linguists, Department of Linguistics, BHU, 02-04 Nov 2006
33. *Sanskrit language pedagogy: An e-learning approach* , co-author with Priti Bhowmik, presented by Girish N Jha at 28th All India Conference of Linguists, Department of Linguistics, BHU, 02-04 Nov 2006
32. *Online indexing system for Ashtadhyayi*, co-author with Diwakar Mishra , presented by Diwakar Mishra at 28th All India Conference of Linguists, Department of Linguistics, BHU, 02-04 Nov 2006
31. *Verb phrase Analyzer of Great Andamanese* , co-author with Narayan Kumar Chaudhary, Anvita Abbi, presented by Narayan at 28th All India Conference of Linguists, Department of Linguistics, BHU, 02-04 Nov 2006
30. *Strategies for Identifying and Processing Derived Nouns in Sanskrit* , co-author with Surjit Kumar Singh, presented by Surjit at 28th All India Conference of Linguists, Department of Linguistics, BHU, 02-04 Nov 2006
29. *Translating Russian Impersonal Constructions into English: A Study by MT Errors*, co-author with Ainura Asamidinova, P.K. Pandey, abstract published by the 28th All India Conference of Linguists, Department of Linguistics, BHU, 02-04 Nov 2006
28. *Sanskrit Subanta Recognizer and Analyzer for Machine Translation* , co-author with Subash, presented by Subash at 28th All India Conference of Linguists, Department of Linguistics, BHU, 02-04 Nov 2006
27. *Online Indexing of Ādiparva of Mahābhārata* , co-author with Diwakar Mani, presented by Diwakar Mani at 28th All India Conference of Linguists, Department of Linguistics, BHU, 02-04 Nov 2006
26. Regional and Linguistic perspectives on Internationalization of Web: The case of Hindi/Sanskrit, presented at *Summit on Internationalization*, organized by W3C and MAIT, at hotel Grand Ashoka, Bangalore, August 24-25, 2006
25. *Towards a Computational Analysis System for Sanskrit*, invited paper at *The First National Symposium on Modeling and Shallow Parsing of Indian Languages (MSPIL-06)* 31st March - 4th April, 2006 at IIT Bombay, appeared in the procs of the symposium
24. *Computational lexicography and Amarakosha : an online RDBMS approach*, National Seminar of Language and Interface, Dept. of Linguistics, Delhi University, March 25, 2006



23. *Language Technology in India: A survey*: November 2005 Issue of C.S.I. magazine
22. *A Paninian Sandhi analyzer for Sanskrit*, co-author with Sachin (presented by Sachin at Platinum Jubilee International Conference, L.S.I. at Hyderabad University, Hyderabad 6-8 dec,2005)
21. *Morphological analysis of nominal inflections in Sanskrit*, co-author with Subash (presented by Subash at Platinum Jubilee International Conference, L.S.I. at Hyderabad University, Hyderabad 6-8 dec,2005)
20. *Karaka analysis of complicated Sanskrit sentences*, co-author with Sudhir K Mishra (presented by Sudhir K Mishra at Platinum Jubilee International Conference, L.S.I. at Hyderabad University, Hyderabad 6-8 dec,2005)
19. *Developing a Sanskrit Analysis System for Machine Translation*, presented at the National Seminar on *Translation Today: state and issues*, Deptt. of Linguistics, University of Kerala, Trivandrum, August 23-25, 2005
18. *Socio-psychological motivations for Maithili-Hindi code switching*, procs of the AsiaLex conference at National University of Singapore, Singapore, June1-3, 2005
17. *Information technology applications for Sanskrit lexicography: case of Amarakosha*, procs of the AsiaLex conference at National University of Singapore, Singapore, June1-3, 2005
16. *Devanagari on computer: problems and current status*, presented at the Workshop on Hindi support and compatibility for computers at JNU, New Delhi, March31-April1, 2005
15. *Identifying verb inflections in Sanskrit morphology*, (with Sudhir Mishra) Procs of SIMPLE'04, IIT Kharagpur, 2005
14. *IT initiatives for Sanskrit in India*, accepted for the Sanskrit conference at Bangkok, Thailand, June 23-36, 2005
13. *Astadyayi Online*, (with Prof. G.V.Singh), Procs of International Conference on Speech and Language Technology, New Delhi, Nov,2004, Tata McGraw Hill, 2004
12. *A karaka analyzer for Sanskrit* (with Sudhir Mishra), Procs of International Conference on Speech and Language Technology, New Delhi, Nov,2004, Tata McGraw Hill, 2004
11. *Generating nominal inflectional morphology in Sanskrit*, SIMPLE 04, IIT-Kharagpur Lecture Compendium, Shyama Printing Works, Kharagpur, WB, March, 2004
10. *Optimality re-investigation of Hindi stress system*, presented at 30th International conference on Systemic Functional Linguistics, Lucknow, 2003
9. *LexFace: a lexical interface for English-Hindi translation for share-market*, South Asian Language Review , Vol. No. XI. P 52-59, New Delhi
8. *The system of Panini*, Language in India, volume4:2 February 2004

7. Current trends in Indian languages technology Language In India, volume 3:12 December 2003
6. Jason lives ! The innate horror !! *Language in India, volume 3:10 October 2003*
5. A Prolog Analyzer/Generator for Sanskrit Subanta Padas, *Language in India, volume 3:11 November 2003*
4. *English-SQL interface for databases* (with Jerry Morgan, head of the dept of linguistics at U of I, Urbana-Champaign) presented at an international conference on SALA held at University of Illinois in July 1999
3. *Lexical conceptual structure and domain based machine translation system* (with Kapil Kapoor, G.V.Singh) presented at a symposium on Machine Aids for translation & communication, JNU, April 11-12 1996)
2. *Proposing a computational system for Nominal Inflectional Morphology in Sanskrit* (Proc. of national seminar on “Reorganization of Sanskrit Shastras with a view to prepare their computational database”, January, 1995)
1. *Indian theory of knowledge: an AI perspective* (proc. of national seminar on “Inference Mechanisms in Shastras and Computer Science”, Academy of Sanskrit Research, Malcote, Mysore, April, 1994)

### **Books**

12. *Vedanta Science and Technology – a multidisciplinary approach* (eds Girish Nath Jha, Bal Ram Singh, Sukalyan Sengupta), Procs of the 22nd International Congress of Vedanta (22Vedanta), 27-30 Dec 2015, JNU, DK Printworld, Delhi, 2020

11. *Veda as global heritage: Scientific perspectives* (eds, Girish Nath Jha, Sudhir Kumar Arya, Abhijit Dixit, Atul Kr Ojha), Procs of the International Veda Conference on "Veda as Global Heritage: Scientific Perspectives", JNU, 15-18 Dec 2016, Vidyanidhi Prakashan, Delhi, 2019

10. *Vedanta anvikshiki, Science and Philosophy in contemporary perspective* (eds. Girish Nath Jha, Sukalyan Sengupta and Blaram Singh), DK Printworld, Delhi, 2017

9. *Perspectives on the Origin of Indian Civilizations* (eds Angela Marcantonio, Girish Nath Jha), DK Printworld, Delhi, 2012

8. *Modern Perspectives on Vedanta* (ed jointly with Bal Ram Singh, R P Singh, Diwakar Mishra), DK Printworld, Delhi, 2012

7. *Computational Semantics for Sanskrit: The Case of Amarakosha Homonyms* (co-author with Mukesh Kumar Mishra), Lambert Academic Publisher, Germany, 2012

6. *Science and Technology in Ancient Indian Texts* (ed. jointly with Bal Ram Singh, Umesh Kumar Singh and Diwakar Mishra), DK Printworld, Delhi, 2011

5. *Paninian Morphophonemics: A Computational Approach to Analysis and Interpretation* (co-author with Diwakar Mishra), Lambert Academic Publisher, Germany, 2011

4. *Primary Derivation in Sanskrit: A Computational Approach to Analysis of Kridanta* (co-author with Surjit Kumar Singh), Lambert Academic Publisher, Germany, 2011

3. [Computer Processing of Sanskrit Nominal Inflections - Methods and Implementation](#)", (with Subhash Chandra), Cambridge Scholar Publishing, Feb 2011, UK (ISBN13: 978-1-4438-2684-6 Isbn: 1-4438-2684-7)

2. [Sanskrit Computational Linguistics](#) (ed.), Procs of the 4th International Sanskrit Computational Linguistics Symposium, Springer Verlag, Germany, 2010 (ISBN 978-3-642-17527-5)

1. *Sanganak-janit vyavaharik Sanskrit dhatu-rupavali*, Vidyavidhi Prakashan, Delhi, 2007

### **Contributions to Books**

1. *Maithili bhasha* (with Dr Sangeeta Kumari), chapter in the book titled *Bharatiya Bhasha Parichay*, Kendriya Hindi Nideshalay, Delhi, 2010
2. *Hindi-English Dictionary of Common Words (Vyavaharik Angrezi-Hindi kosha)*, (edit. board), Central Hindi Directorate. Min. of Human Resource Development, 2006
3. *Early Monsoon*, appeared in "The Splendor of Sunrise" (Jessica Rapisarda ed.), 2001, International library of poetry, Watermark press, One Poetry Plaza, Owings Mills, MD 21117, USA
4. *Bhashavijnana paribhasha-kosha*, contributed computational linguistics definitions in this volume published by C.H.D., Edn. deptt. of Min. of HRD, 1999

### **Reviewer for Journals**

- Language Resource Evaluation (LRE)
- Transactions on Asian Language Information Processing (TALIP)

### **Membership of Committees**

1. **Visitor's Nominee**, Central University of South Bihar, Gaya (2018-21)
2. **Visitor's Nominee**, Rajasthan Sanskrit University, Jaipur (2019-2020)
3. Expert/Advisory Committee of Bharatavani Project, CIIL Mysore (2015-)
4. Nominated member of **Board of Post Graduate Studies (BPGS)** of Sanskrit, Tripura University since 2016
5. Member of **Association for Computing Machinery (ACM)** since 2015
6. Nominated BOS member, Dept of Sanskrit of Kanya Maha Vidyalaya, Jalandhar since 2015
7. Nominated to the **Academic Advisory Council**, Center for Indic Studies, University of Massachusetts, Dartmouth, USA since 2014
8. Nominated member of **Internal Quality Assurance Committee (IQAC)** of Shri Lal Bahadur Shastri Rashtriya Sanskrit Vidyapeeth (SLBSRSV), New Delhi, 2014
9. Nominated member of **Under Graduate Board of Studies (UG-BOS)** in the BPS Womens' University, Sonapat, Haryana (2014-2016)
10. Member of **Association for Computational Linguistics (ACL)** since 2012

11. Nominated to the **Board of Directors (BoD)** of World Association for Vedic Studies (WAVES), USA, 2012 onwards
12. Nominated a member of the *Expert Committee on Linguistic Resources and Language Technology Standards* by Ministry of Communications & Information Technology, Department of Information Technology, Technology development for Indian Languages (TDIL) in 2012
13. Nominated member of the Project Review Steering Group (PRSG) of the project *Establishment of Indian Language Technology Proliferation & Deployment Centre* by Ministry of Communications & Information Technology, Department of Information Technology, Technology development for Indian Languages (TDIL) in 2012
14. Nominated as *Institutional member of the Steering Committee of FLaReNet*, European Commission project, Pisa, Italy, Oct 2010 onwards
15. Nominated as permanent member in the Expert Committee on CLDR, by the Ministry of Communications and Information Technology (MCIT), Govt. of India
16. Nominated to the *Indian Language Technologies and Products Sectional Committee (LITD 20)* of Bureau of Indian Standards
17. Nominated member of the *PRSG for Speech Technology projects* by the Technology Development for Indian Languages (TDIL) Programme of the Ministry of Communications and Information Technology (MCIT), Govt. of India
18. Served as member of the *Working Group on Technology Development for Indian Languages (TDIL)* Programme of the Ministry of Communications and Information Technology (MCIT), Govt. of India, 2007-2009
19. Nominated member of the *Working Group on Localization of Applications & Language Technology Standards*, as identified under the National e-Governance Program (NeGP) of Govt. of India
20. Nominated member of *Expert group on Computational Linguistics* by Manufacturer's Association on Information Technology (MAIT) and Ministry of Communications and Information Technology (MCIT), Govt. of India
21. Member of *Managing Committee of Chinmaya Vidyalaya*, Vasant Vihar, New Delhi (till 2014)

### **Organized Seminar/Workshops**

1. Organized 4th Workshop on Indian Language Data: Resource & Evaluation, May 12, 2018, Miyazaki, Japan under Language Resource Evaluation Conference (LREC) organized by European Language Resource Evaluation (ELRA)
2. Organized "International Veda Conference", JNU, New Delhi, Dec15-18, 2016
3. Organized 3rd Workshop on Indian Language Data: Resource & Evaluation, May 24, 2016, Portoroz, Slovenia under Language Resource Evaluation Conference (LREC) organized by European Language Resource Evaluation (ELRA)
4. Organized 22nd International Congress of Vedanta, JNU, New Delhi, Dec 27-30, 2015
5. Organized a workshop on Sharada script in collaboration with Millennium India Education Foundation (MIEF) at the Special Center for Sanskrit Studies, 16-18 Oct, 2015
6. organized 2nd International Workshop on Indian Language Data: Resource and Evaluation (WILDRE-2) ), Reykjavik, Iceland, May 26, 2014 under Language Resource Evaluation Conference (LREC) organized by European Language Resource Evaluation (ELRA)
6. Organized a workshop on Sharada script in collaboration with Millennium India Education Foundation (MIEF) at the Special Center for Sanskrit Studies, Nov 8-10, 2013

7. Organized a workshop on Sharada script in collaboration with Millennium India Education Foundation (MIEF) at the Special Center for Sanskrit Studies, Feb 18-20, 2014
8. Organized a workshop jointly with Microsoft, USA on "Indian Language Technology and English-Urdu Machine Translation" at Special Center for Sanskrit Studies, JNU, 26-27 July, 2012
9. 8th ILCI workshop on POS annotation titled "National Workshop on BIS Annotation Scheme for Indian Languages" in collaboration with IIT Hyderabad, at Hyderabad 21-23 July, 2012
10. Organized 1st International Workshop on Indian Language Data: Resource and Evaluation (WILDRE-1), Istanbul, May21, 2012 in collaboration with Microsoft Research India under Language Resource Evaluation Conference (LREC) organized by European Language Resource Evaluation (ELRA)
11. Digitization of India's ancient scripts - Brahmi, Sharada and Grantha at Special Center for Sanskrit Studies, JNU on 20th March, 2012
12. 7th ILCI workshop on POS annotation, in collaboration with IITM Kerala, organized at Trivandrum 9-10 March, 2012
13. 6th ILCI workshop on POS annotation, in collaboration with IIT Bombay organized at IIT Bombay 3-4 Jan, 2012
14. 20<sup>th</sup> International Congress of Vedanta at Special Center for Sanskrit Studies, JNU, 28-31 December, 2011
15. 5<sup>th</sup> ILCI workshop on POS annotation, in collaboration with Utkal University, Bhubaneswar and ISI Kolkata at Utkal University, Bhubaneswar, 21-23 February, 2011
16. 4<sup>th</sup> International Sanskrit Computational Linguistics Symposium at Special Center for Sanskrit Studies, JNU, 10-12 December, 2010
17. E-learning and Multimedia for Education, at Special Center for Sanskrit Studies, JNU, November 3, 2010 (in collaboration with Communication & Information Services, JNU)
18. 4<sup>th</sup> ILCI workshop on POS annotation, in collaboration with Gujrat University, Ahmedabad, 28-30 September, 2010
19. 3<sup>rd</sup> ILCI workshop on multilingual parallel corpora building, in collaboration with IITM-K Trivandrum at Trivandrum, April 9, 2010
20. International Seminar on Science & Technology in Ancient Indian Texts (SATIAIT), January 9-10, 2010 in collaboration with Center of Indic Studies, University of Massachusetts, Dartmouth, USA
21. 2<sup>nd</sup> ILCI workshop on multilingual parallel corpora building, in collaboration with Dravidian University at Kuppam, AP, 28-29 August, 2009
22. 1<sup>st</sup> ILCI workshop on multilingual parallel corpora building, in collaboration with Goa University at Goa, 25-26 March, 2009
23. Meeting On Science & Technology In Ancient Sanskrit Texts in collaboration with Prof. Bal Ram Singh, Director, Indic Studies, Univ Massachusetts, Dartmouth, at Dev Sanskriti Vishva Vidyalaya, Haridvar, 18 June 2009
24. Workshop on Sanskrit E-Learning And Multimedia for school teachers and students of south Delhi public schools, JNU, May 5,2009
25. Panchatantra Painting/Sketching Event And Workshop For Children, 14 November, 2008
26. workshop on Hindi Support And Compatibility For Computers with Hindi Unit of J.N.U., New Delhi, March 31-April 1, 2005

### **Membership of Program Committee/Scientific Committee**

1. Language Resource & Evaluation Conference (LREC), 2020, Marseille, France
2. LT4All, Paris, 2019

3. Language Resource & Evaluation Conference (LREC), 2018, Miyazaki, Japan
4. Language Resource & Evaluation Conference (LREC), 2016, Portoroz, Slovenia
5. Language Resource & Evaluation Conference (LREC), 2016, Portoroz, Slovenia
6. ACM (Association for Computing Machinery) complimentary professional membership, 2015-16
2. 14th International Conference on Natural Language Processing (ICON-2014) to be held at Goa, India, Dec 18-21, 2014
3. 2nd Workshop on Indian Language Data: Resources & Evaluation (WILDRE) under LREC, 2014, Iceland
4. 2nd Workshop on Indian Language Data: Resources & Evaluation (WILDRE) under LREC, 2014, Iceland
5. Language Resource & Evaluation Conference (LREC), 2014, Iceland
6. Workshop on "Linguistics Olympiad and Popularizing Linguistics in Schools", ICON 2013, India
7. 6th Language Technology Conference (LTC), 2013, Poland
8. Forum for Information Retrieval and Evaluation (FIRE), 2013, India
9. 21st International Congress of Vedanta, 2013, USA
10. 1st Workshop on Indian Language Data: Resources & Evaluation (WILDRE) under LREC, 2012, Turkey
11. Language Resource & Evaluation Conference (LREC), 2012, Turkey
12. 5th International Sanskrit Computational Linguistics Symposium (ISCLS), 2012, India
13. 5th Language Technology Conference (LTC), 2011, Poland
14. 20th International Congress of Vedanta, 2011, India
15. 5th Global Wordnet Association (GWA), 2010, India
16. 4th International Sanskrit Computational Linguistics Symposium (ISCLS), 2010, India
17. 3rd International Sanskrit Computational Linguistics Symposium (ISCLS), 2009, India
18. 2nd International Sanskrit Computational Linguistics Symposium (ISCLS) , 2008, USA
19. 1st International Sanskrit Computational Linguistics Symposium (ISCLS), 2007, France

### **Chairs for International Conferences**

1. Co-chair, WILDRE-V - Workshop on Indian Language Data Resource & Evaluation, LREC, Marseille, France, May 2020
2. Co-chair, WILDRE-IV - Workshop on Indian Language Data Resource & Evaluation, LREC, Miyazaki, Japan, May 2018
3. Co-Chair, "Workshop on Language Technology for Less Resourced Languages (LT-LRL)" under LTC2017, November 2017, Poznan, Poland
4. General Track chair for the session on "Natural Language Processing" in KES-2017, France, Sept. 2017
5. General Chair, IVC, Dec 2016, JNU, India
6. Co-chair, WILDRE-III - Workshop on Indian Language Data Resource & Evaluation, LREC, Portoroz, Slovenia, May 2016
7. General Track chair for the session on "Natural Language Processing" in KES-2016, UK, Sept. 2016
8. General Track chair for the session on "Natural Language Processing" in KES-2015, Singapore, Sept. 2015
9. Program Chair for the "Fourth International Symposium on Natural Language Processing (NLP'15)", Kochi, India, Aug 2015

10. Track chair for the "Natural Language Processing" in the 18th International Conference on Knowledge-Based and Intelligent Information & Engineering Systems (KES-2014) , Poland
11. Co-chair, WILDRE-II - Workshop on Indian Language Data Resource & Evaluation, LREC, Reykjavik, Iceland, May 2014
12. Chair for 2nd International Symposium on Natural Language Processing (NLP'13), India
13. Co-chair, WILDRE-I - Workshop on Indian Language Data Resource & Evaluation, LREC, Istanbul, Turkey, May 2012

### **Sessions chaired/Panel discussion**

1. Chaired a talk by Prof Shantanu Chaudhary, IIT Delhi, "*Optical Character Recognition (OCR)*", 1st International Conference on SOIL-Tech, JNU, New Delhi, 15-17 Feb 2019
2. Chaired a talk by Prof Massimo Moneglia, University of Florence (on Skype) - *The IMAGACT of Ontology of Action: Principles, Development and Validation for its use in the Indian environment*, 1<sup>st</sup> International Conference on SOIL-Tech, JNU, New Delhi, 15 Feb, 2019
3. Chaired a talk by Georg Rehm, DFKI (German Center for Artificial Intelligence, Berlin) on Skype , *The Preparation, Impact and Future of the META-NET White Paper Series "Europe's Languages in the Digital Age*, 1<sup>st</sup> International Conference on SOIL-Tech, JNU, New Delhi, 15 Feb, 2019
4. Chaired a session titled "SPEECH 1: Speech Processing at the 7th LTC, Poznan, Poland, 27 Dec 2015
5. A panelist in the panel discussion on the topic "The Name Of A Name (TNOAN)" organized by Synthesis Talk, Mumbai, Nov 15, 2014.
6. Chaired a talk titled "Multilingual projection" (delivered by Prof Pushpak Bhattacharya, IIT, Bombay) at a national seminar on "Towards standardizing Khasi for Computational Purposes", St Anthony's College, Shillong, Oct 28, 2014
7. Hosted a DD Bharati panel discussion on "Sharada Script" on June 16, 2014, New Delhi
8. Hosted a DD Bharati panel discussion on "Sharada script initiative at JNU" on June 17, 2014. New Delhi
9. A panelist in the panel discussion in the workshop "Workshop on Linguistics Olympiad and Popularizing Linguistics in Schools (LOPLingS)", ICON, CDAC Noida, Dec 18, 2013
10. Chaired a session titled *TAN I: Text Analysis I* in the "6th Language & Technology Conference: Human Language Technologies as a Challenge for Computer Science and Linguistics", Dec 7, 2013, Poznan, Poland
11. A panelist in the Panel Discussion on *Language diversity and big data* coordinated by Hans Uszkoreit in the "6th Language & Technology Conference: Human Language Technologies as a Challenge for Computer Science and Linguistics", Dec 7, 2013, Poznan, Poland

12. A panelist in the Panel Discussion on *Challenges for Computational Linguistics* Coordinated by Dafydd Gibbon in the "6th Language & Technology Conference: Human Language Technologies as a Challenge for Computer Science and Linguistics", Dec 9, 2013, Poznan, Poland
13. A panelist in the Panel Discussion on "*Modern Perspective on the Origin of Indian Civilization*", in the 21st International Congress of Vedanta, University of Massachusetts, Dartmouth, July 11-14, 2013
14. Chaired in the session titled "*SCIENCE & TECHNOLOGY IN ANCIENT INDIAN TEXTS*" in the 21st International Congress of Vedanta, University of Massachusetts, Dartmouth, July 11-14, 2013
15. Chaired a keynote talk titled "*The Vedic Cure for the Loss of the Sense of Mystery in Western Science*" by Jerry Solfvin in the 21st International Congress of Vedanta, University of Massachusetts, Dartmouth, July 11-14, 2013
16. Chaired the session titled *Vedic culture and epics*, in the "International WAVES Conference 2012", University of Massachusetts, Dartmouth, MA, USA, July 14, 2012.
17. Chaired the session titled *Sanskrit Vyakarana and Linguistics*, in the "International WAVES Conference 2012", University of Massachusetts, Dartmouth, MA, USA, July 14, 2012.
18. Chaired a session in the seminar "Convergence of Science and Spirituality, Nov5, organized by ISSKCON, Sri Venkateswara College, South Campus Delhi University)
19. Chaired a session in the "Symposium on Origin of Indian Civilization", Center of Indic Studies, University of Massachusetts, Dartmouth, 8-9 July, 2011
20. Chaired a session in the "Vedanta and Science Symposium", Center of Indic Studies, University of Massachusetts, Dartmouth, 6-7 July, 2011
21. Chaired a session on "Civilizational Harmony" in the 8th International conference of the WAVES, at Trinidad & Tobago, West Indies, August 5, 2010
22. Chaired a plenary session in the "19th International Vedanta Congress", organized by Center of Indic Studies, University of Massachusetts, Dartmouth, July 29, 2010
23. Chaired a panel discussion on "Sanskrit its evolution and representation in the digital age", in the "19th International Vedanta Congress", organized by Center of Indic Studies, University of Massachusetts, Dartmouth, July 30, 2010
24. Chaired a session in "International Workshop on Referential Entity Resolution", organized by AU-KBC, MIT campus, Anna University, Chennai, Jan15-17,2008
25. Chaired a session on "Computational Linguistics" in the 28th All India Conference of Linguists, Department of Linguistics, BHU, on Nov 4, 2006
26. Chaired a session in the National Seminar on *Translation Today: state and issues*, Deptt. of Linguistics, University of Kerala, Trivandrum, August 23-25, 2005



## Workshops

1. Participated in 4 day workshop on Samasa Tagging at Poornaprajna Vidyapeetha, Bangalore, May 16-19, 2009
2. Participated in two-day workshop on POS tagging for Sanskrit under the *Sanskrit Consortia*, organized by Dept. of Sanskrit Studies, University of Hyderabad, Hyderabad, June 20-21, 2008
3. Participated in a series of workshops on editing *Hindi-English-Bodo Dictionary*, at Central Hindi Directorate during first quarter of 2008
4. *International Workshop on Referential Entity Resolution*, AU-KBC, MIT campus, Anna University, Chennai, Jan 15-17, 2008
5. *Review of speech technologies projects*, organized by TDIL, MCIT, CDAC- Mumbai, Dec 12, 2007
6. *Indic languages tagset design*, a one day workshop organized at Microsoft Research India Lab, Bangalore, Dec 2, 2007
7. *Indic languages tagset design*, a four day workshop organized at Microsoft Research India Lab, Bangalore, March 15-18, 2007
8. *Indic languages tagset design*, a three day workshop organized at Microsoft Research India Lab, Bangalore, Jan 19-21, 2007
9. *Indic languages tagset design*, a two day workshop organized at Microsoft Research India Lab, Bangalore, 2-3 Dec, 2006
10. *Indic languages tagset design*, a two day workshop organized at Microsoft Research India Lab, Bangalore, 28-29 Oct, 2006
11. *Government @27/7: overcoming contextual & cultural challenges*, South Asia e-government summit organized at The Grand, Vasant Kunj, Oct 26, 2006 by DIT, GOI, CDAC, ASIA, OSPA forum

## Supervision of Research Students

- M. Phil. - Supervised 40 (2 in progress)
- Ph.D. - Supervised 30 (17 in progress - 9 submitting in 2020)

## Projects

1. *Machine Translation Evaluation Platform (MTEP)*, Innovation Grant from UPE-II, JNU, 2017-19
2. *Shallow Parser Tools (SP Tools) for Indian Languages - Maithili*, as Director, funded under the Technology Development for Indian Languages (TDIL) program by the Ministry of Communications and Information Technology (MCIT), March , 2012 onwards
3. *Indian Languages Corpora Initiative (ILCI)-phase2*, as Director and Consortium Leader, funded under the Technology Development for Indian Languages (TDIL) program by the Ministry of Communications and Information Technology (MCIT), 2012-16
4. *Indian Languages Corpora Initiative (ILCI)-phase1*, as Director and Consortium Leader, funded under the Technology Development for Indian Languages (TDIL) program by the Ministry of Communications and Information Technology (MCIT), 2009-12
5. *Developing Computational Tools For Sanskrit And Sanskrit-Hindi Machine Translation*, as Director, funded under the Technology Development for Indian Languages (TDIL) program by the Ministry of Communications and Information Technology (MCIT), March 28, 2008-12

6. Online Multilingual Amarakosa : as Director: funded by JNU under UPOE program of UGC, 2005-07
7. *Database system for dialects of Hindi* (2002-03): as co-director: Under my supervision , a team of software engineers developed a VB-SQL server software for dialect mapping of Hindi, sponsored and run by MGAHU, New Delhi
8. *ALED (Active Living Everyday)* at Human Kinetics, USA: a dynamic content, interactive website for fitness management 2002: project manager and lead programmer
9. *Internationalization project* of CollaTech e-solutions using JAVA resource bundles. Project involves making the source code compatible to the multilingual locales and languages, 2001
10. *Database development project* at the University of Illinois's Beckman Institute for Advanced Science and Technology 1998-99: database programmer
11. *Analyzing schizophrenic speech* at Dept. of Psychology, University Of Illinois, Urbana-Champaign, 1997: research assistant
12. *Developing technical terminology for Hindi* (attended a series of workshops organized by Scientific and Technical Terminology Commission, Min of HRD, 1994-96) and contributed in developing technical terminology for Hindi
13. *Computer Assisted Sanskrit Teaching Learning Environment* (DoE sponsored project at JNU 1991-94): research investigator

### **Technical Expertise**

- ❑ Machine Translation, computational lexicography computational grammar development, grammar analysis, interactive linguistic instruction, software internalization/localization
- ❑ Natural Language Interface, Attribute Value Grammar (AVG) development, testing, parsing, algorithm implementation
- ❑ Language Technology project management
- ❑ B2B e-commerce solutions, test drivers in Java Servlet/JSP, AWT/Swing, Apache/Tomcat, JDBC/SQL Server
- ❑ RAD database and web applications, design and development of user interface in the windows/NT environment using Delphi, SQL Server, Interbase
- ❑ Project management in software development

### **Awards / Honors**

1. Received the "**Datta Peetha Aasthaana Vidvana**" award for Sanskrit linguistics at the Shri Ganapati Sachchidananda Ashram Mysore on 26th May 2017
2. **KECSS Felicitation Award.-2016** for the revival and development of Sharada script by Kashmir Education, Culture and Science Society (KECSS), 26th Feb, 2016
3. **DAAD fellowship (Germany)** to teach Computational Linguistics at University of Wurzburg, Germany in 2014
4. Nominated to the **Editorial Board of Springer** for their journal *Language Resource and Evaluation (LRE)* since Feb 2010.
5. **Mukesh and Priti Chatter Distinguished Professor of History of Science** at University of Massachusetts Dartmouth, USA (2009-2012).
6. Evaluated as *Exceptional Programmer* by the HKUSA software director, 2002
7. Beckman Institute for Advance Science & Technology, University of Illinois *Research Assistantship* for advanced studies (Illinois, USA) 1998
8. Member of the prestigious Cognitive Science group at the University of Illinois (USA): 1997-1999

9. Ranked *Excellent Teacher* twice by students of Hindi at University of Illinois (USA) :1997,1998
10. University of Illinois Urbana-Champaign Teaching Assistantship for teaching Hindi language and linguistics to U.S. students: (Illinois, USA) :1997
11. Dept. of Psychology, University of Illinois, Urbana-Champaign *Research Assistantship* (summer 1997) to study schizophrenic speech (Illinois, USA) 1997