

Mohammad Bahrani

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Work Address (academic):

Language and Linguistics Center,
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Work Address (business):

ASR-Gooyesh Company
No. 2-10, Boroumand Alley,
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Tel: +98-21-66551525

PERSONAL

- Birth Date: Sep. 21, 1977
- Birth Place: Kazeroun, Fars Province, Iran
- Marital Status: Married

EDUCATION

Ph.D. in Artificial intelligence, 2004-2010

- Sharif University of Technology, Tehran, Iran
- Thesis: Introducing a hybrid language model for improving performance of continuous speech recognition systems.
- Advisor: Dr. Hossein Sameti

M.S. in Artificial intelligence, 2001-2004

- Sharif University of Technology, Tehran, Iran
- Thesis: Incorporating Context Dependent Structures for HMM-based Continuous Speech Recognition Systems.
- Advisor: Dr. Hossein Sameti

B.S. in Computer Engineering-Hardware, 1996-2000

- Shiraz University, Shiraz, Iran
- Thesis: Design and implementing a real time system for positioning of a slider object.
- Advisor: Dr. Seraj-al-din Katebi

POSITION

Assistant Professor (2011-present)

- Languages and Linguistics Center, Sharif University of Technology

Technical Manager (2005-present)

- ASR-Gooyesh Pardaz Company

FIELDS OF INTEREST

- Natural Language Modeling and Processing
- Computational Linguistics
- Speech Processing and Speech Recognition
- Statistical Pattern Recognition
- Artificial Neural Networks
- Evolutionary Computing

EXPERIENCES

As Assistant Professor at Sharif University of Technology

- Teaching
 - An Introduction to Computational Linguistics
 - Advance Mathematics and Statistics in Computational Linguistics
 - Computer Programming
 - Artificial Intelligence
 - An Introduction to Mathematics and Statistics
 - Natural Language Processing (NLP)
- M.Sc. Thesis Supervision
 - Automatic Detection and Disambiguation of Metaphorical and Metonymic

Concepts

- Utilizing Latent Topic Models for Persian Document Classification
- Introducing an Approach to Build a Phrase Structure Treebank Using Persian Dependency Treebank
- Automatic Blank Verse Poet Identification Using Linguistic Features
- Automatic Labeling of Prosody in Persian Unmarked Speech
- Pattern-based Relation Extraction on Persian News Articles
- Markov Logic Networks for Persian Spoken Language Understanding
- Question Analysis for Open-domain Persian Question Answering System
- Persian Language Modeling Using Complex Networks
- Persian Anaphora Resolution Using Knowledge-based Approach

▪ Research

- Morphological Analysis of Persian Conversational Words
- Persian Natural Language Generation
- Persian Dialogue Systems
- Abstractive Text Summarization for Persian
- Gender Identification of Author

- Executive Chair of the 3rd National Conference on Computational Linguistics

As Technical manager at ASR-Gooyesh Pardaz Company

- Persian continuous speech recognition system (Nevisa project)
- Persian Text to Speech (TTS) synthesis systems (Ariana project)
- Speech enabled IVR systems (Niusha project)
- Persian word spotting system (VajeYab project)
- Intelligent typing system (Nevisyar project)
- Spoken dialog systems
- Persian telephony digit recognition
- Context dependent acoustic modeling for Persian CSR systems
- Editing and processing of large Persian text corpora
- Extracting N-gram models for Persian language
- Developing a computational grammar for Persian based on GPSG
- Preparing various lexicons for speech recognition and TTS systems
- Persian tokenizer
- Audio retrieval systems
- Text to Speech synthesis on mobile devices
- Speech to Speech translation project

FIELDS OF INTEREST

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- Natural Language Modeling and Processing
 - Computational Linguistics
 - Speech Processing and Speech Recognition
 - Statistical Pattern Recognition
 - Evolutionary Computing
 - Artificial Neural Networks

SELECTED PUBLICATIONS

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1. Jamshidlou, P., **Bahrani, M.**, "Understanding Meaning in a Text-based Dialog System for Specific Domain of Ticket Reservation", Pazand Journal, 2013. (in Persian)
 2. Mahmoodzade, Z., **Bahrani, M.**, "A case study of phonetic reduction and its role on improving automatic Persian telephony speech recognition", Journal of Research in Linguistics, 2013. (in Persian)
 3. **Bahrani, M.**, Sameti, H., "Incorporating Linguistic Knowledge in a Persian Continuous Speech Recognition System", Iranian Journal of Languages and
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- Linguistics, 2012. (in Persian)
4. **Bahrani, M.**, Sameti, H., "Building Statistical Language Models for Persian Continuous Speech Recognition Systems Using Peykare Corpus", International Journal of Computer Processing of Oriental Languages, 2011.
 5. **Bahrani, M.**, Sameti, H., "A Computational Grammar for Persian Based on GPSG", Language Resources and Evaluation Journal, 2011.
 6. Sameti, H., Veisi, H., **Bahrani, M.**, Babaali, B. & Hosseinzadeh, K., "A Large Vocabulary Continuous Speech Recognition System for Persian Language", EURASIP Journal on Audio, Speech, and Music Processing, 2011.
 7. Bijankhan, M., Seikhzadeghan, J., **Bahrani, M.**, Ghayoomi, M., "Lessons from Creation of a Persian Written Corpus: Peykare", Language Resources and Evaluation Journal, 2011.
 8. Sheikhshab, G., Sameti, H., **Bahrani, M.**, "Extracting precise n-gram probabilities from Persian SCFGs", International Conference on Computer, Communication and Information Technology, 2011.
 9. **Bahrani, M.**, Sameti, H., "A New Bigram-PLSA Language Model for Speech Recognition", EURASIP Journal on Advances in Signal Processing, 2010.
 10. Sameti, H., Veisi, H., **Bahrani, M.**, Babaali, B., Hosseinzadeh, K., "Nevisa, a Persian Continuous Speech Recognition System", In Communications in Computer and Information Science, Advances in Computer Science and Engineering, Vol. 6, pp. 485-492, Springer Berlin Heidelberg, 2008.
 11. **Bahrani, M.**, Sameti, H., Hafezi, N., Momtazi, S., "A New Word Clustering Method for Building N-gram Language Models in Continuous Speech Recognition Systems", In Lecture Notes in Computer Science, LNAI 5027, pp. 286-293, Springer, 2008.
 12. Momtazi, S., Sameti, H., Fazel-Zarandi, M., **Bahrani, M.**, "Robust Parsing for Word Lattices in Continuous Speech Recognition Systems", In Proc. IEEE International Conference on Information Sciences, Signal Processing and its Applications (ISSPA), Sharjah, UAE, 2007.
 13. **Bahrani M.**, Sameti H., Hafezi N., Movasagh H., "Building and Incorporating Language Models for Persian Continuous Speech Recognition Systems", In Proc. 5th international conference on Language Resources and Evaluation, pp. 2590-2593, Genoa, Italy, May 2006.
 14. **Bahrani M.**, Sameti H., Hafezi N., Momtazi S., Movasagh H., "Utilizing Persian Text Corpus for Statistical Language Modeling in Persian Continuous Speech Recognition Systems", The 2nd workshop on Persian language and computer, Tehran, Iran, Jun 2006. (in Persian)
 15. **Bahrani M.**, Sameti H., "Extraction and Modeling Context Dependent Phone Units for Improvement of Continuous Speech Recognition Accuracy by Phonemes Clustering", Iranian Journal of Electrical and Computer Engineering, Vol 2, 2006. (in Persian)
 16. **Bahrani M.**, Babaali B., Sameti H., "Incorporating Phoneme Language model in Persian Continuous Speech Recognition", The 7th Conference of Intelligence Systems, Tehran, Iran, 2005. (in Persian)

PATENT

Mohammad Bahrani and Hossein Sameti (with ASR-Gooyesh Pardaz Company), "A Multipurpose Grammatical Model for Persian Language based on GPSG", Iranian Patent, No. 41554, July 2007.

SELECTED TALKS

- "Content-based Audio Retrieval", Workshop on Digital Archive and Information Retrieval Methods, Islamic Republic of Iran Broadcasting, Jan. 2012.
 - "Applications of Computational Linguistics in Humanities", Institute for Humanities and Cultural Studies, Jun. 2011.
 - "Persian Language Modeling", Language and Linguistics Center, Sharif University
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of Technology, Oct. 2010.

- "Speech Recognition Systems", 3rd Broadcast Engineering Conference, Tehran, Iran, Dec. 2009.
- "Speech Recognition for Banking", ISI (Informatics Society of Iran)'s monthly seminar, Tehran, Iran, May. 2009.
- "Speech recognition Systems", Speech, Image and Intelligence seminar, Qazvin Azad University, Qazvin, Iran, Mar. 2009.
- "Spoken Dialogue Systems for Banking", Islamic Banking Workshop, Tehran, Iran, Aug. 2008.

AWARDS & HONORS

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- Nominated as the candidate for the best technopreneur, Sheikh Bahai Technopreneurship Festival, Isfahan, 2014.
 - Nominated as the top lecturer of Languages & Linguistics Center, Sharif University of Technology, 2014.
 - Member of National Foundation of Elites.
 - 2nd ranked in the M.Sc. graduates of the Artificial Intelligence, Computer Eng. Dept., Sharif University of Technology, 2004.
 - 3rd ranked in the B.Sc. graduates of the Computer Science and Eng. Dept., Shiraz University, 2000.
 - 12th ranked in Iran National Graduate Studies Entrance Examination, 2001.
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