

# Parisa Kordjamshidi

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## Curriculum Vitae

### Research Interests

- General Machine learning, Artificial Intelligence, Knowledge representation, Natural language processing, Information extraction, Big data, Text mining
- Applications Spatial information extraction from natural language, Multimodal spatial processing, Semantic web, Machine reading, Ontology population and learning taxonomies, Biomedical text mining, Biological data analysis
- Algorithms Statistical relational learning, Structured output prediction, Probabilistic graphical models, Approximate inference, Generalized linear models, Combinatorial optimization
- Programming Paradigms Learning based programming, Probabilistic programming, Nondeterministic programming
- Other Active learning, Uncertainty modeling, Fuzzy logic

### Education

- Dec 2008-Jul 2013 **Ph.D. Computer Science**, *Department of Computer Science, KULeuven, Belgium.*
  - Thesis Title *Structured Machine Learning for Mapping Natural Language to Spatial Ontologies*
  - Committee Marie-Francine Moens (supervisor), Dan Roth, Luc De Raedt, Luc Van Gool, Johan Suykens, Hendrik Blockeel, Tinne Tuytelaars, Martijn Van Otterlo, Adhemar Bultheel.
- Sep-Dec 2008 **Pre-doctoral**, *Department of Computer Science, KULeuven, Belgium.*
- 2000-2002 **Master in Software Engineering**, *Department of Electrical and Computer Engineering, Tarbiat Modares University, Tehran, IRAN.*
  - Thesis Title *Active Learning in Text Classification*, supervisor Prof. Saeed Jalili
- 1994 -1998 **Bachelore in Software Engineering**, *Departement of Computer Engineering, Isfahan University, Isfahan, IRAN.*
- Jun 1994 **Diploma in Mathematics and Physics**, *High School, Ilam, IRAN.*

### Appointments

- July 2016-now **Assistant Professor**, TULANE UNIVERSITY, *Computer Science Department.*
- August 2016-now **Research Scientist**, IHMC, *Pensacola.*
- August 2014-now **Free Research Collaborator**, KULEUVEN, *Belgium.*
- Dec 2013-July 2016 **Postdoc research associate**, UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN, *Computer Science Department.*
- Jul 2013-Sep 2014 **Postdoc research associate**, KULEUVEN, *Computer Science Department.*
- 2000-2007 **Faculty member**, SHAHID CHAMRAN UNIVERSITY (AHVAZ, IRAN), ILAM UNIVERSITY (ILAM, IRAN).  
Full time faculty member as lecturer in Ilam University from 2003-2007.

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## Honors-Grants

- Nov 2015 Invited to talk in Rising Stars: An Academic Career Workshop for Women, MIT Department of EECS.
- Sep 2013-Sep 2014 Mobility research travel grant, KULeuven.
- Sep 2013-Sep 2014 BOF, Postdoctoral mandate grant, KULeuven, **based on my research proposal on biomedical text mining.**
- Dec 2008-Dec 2012 BOF , PhD grant, KULeuven, DTAI/LIIR.
- 2008 EUSFLAT student grant for 12th conference on information processing and management of uncertainty in knowledge-based systems, 2008-Malaga, Spain.
- 2006 Selected researcher computer science department academic staff, Ilam university.
- 1999 First ranked in BSc in software engineering at Isfahan University 1999.
- 1994 First ranked in computer Olympiad, provincial level, Ilam province, Iran.
- 1994 Distinguished student, diploma in mathematics and physics, High school.

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## Current Research Projects and Grants

- Dec 2016-Now **World Modelers, DARPA seedling Project**, Researcher, IHMC.
- August 2017-Now **Nerve-on-chip anatomy/physiology, NIH Project**, Co-PI, Tulane.
- March-August 2017 **Adding Emoticon AI into Text to Speech Systems, RealCommGlobal Project**, PI, IHMC.

### Projects without funding

#### **Multi-modal Spatial Role Labeling.**

on-going

#### **Declarative Learning Based Programming.**

on-going

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## Teaching

- Spring 2018 **CMPS 4720/6720: Machine Learning**, Tulane university.
- Fall 2017 **CMPS 3240/6240: Introduction to Machine Learning**, Tulane university.
- Spring 2017 **CMPS 4720/6720: Machine Learning**, Tulane university.
- Fall 2016 **CMPS 3240/6240: Introduction to Machine Learning**, Tulane university.
- 2015 **A Tutorial on Learning-based Programming Language –LBJava**, two guest sessions of Machine learning course, UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN.
- 2013 **Text-based information retrieval, exercises**, Master of computer science, KULEUVEN, Leuven, Belgium.
- 2009–2012 **Teaching machine Learning and Inductive Inference, exercises**, Master of Artificial Intelligence, KULEUVEN, Leuven, Belgium.
- 2000–2007 **Teaching courses in bachelor of computer science**, ILAM UNIVERSITY AND SHAHID CHAMRAN UNIVERSITY, IRAN, (below list).
- Theory of machines and languages
  - Principles of database design
  - System analysis and design
  - Machine learning
  - Machine language/system programming
  - Advanced programming in c++

- Programming in Pascal
- Basics of computer
- Digital circuits lab
- Supervisory of BSc and Msc thesis and final projects
- Basics of computer programming
- Supervision Principles
- Database lab

#### Invited talks

- March 2017 **Declarative Learning based Programming for Structured Machine Learning with Unstructured Data**, *Weekly Seminars in Computing and Software*, 28th, McMaster University, Canada.
- Nov 2015 **Saul: Towards declarative learning based programming**, *Rising Stars: An Academic Career Workshop for Women*, Nov 9-10, MIT Department of EECS.
- Nov 2015 **Saul: Towards declarative learning based programming**, *AAAI-2015 fall symposium*, Nov 12-14, The Westin Arlington Gateway, Arlington, Virginia.
- July 2015 **Declarative Learning Based Programming for Natural Language Processing**, *Workshop on Replicability and reproducibility in Natural Language Processing: adaptive methods, resources and software*, at IJCAI-2015, Buenos Aires.
- May 2015 **Structured Learning for Spatial Information Extraction from Biomedical Text**, *International Workshop on Knowledge Discovery from (Big) Text: Challenges and Opportunities when Mining Biomedical Text*, KULeven, Belgium.
- April 2015 **Structured Learning for Spatial Information Extraction from Biomedical Text**, *University of Illinois at Urbana-Champaign*, US, Database & Information Systems, weekly seminar.
- Jan 2014 **Structured Learning for Mapping Natural Language to Spatial Ontologies**, *University of Illinois at Urbana-Champaign*, US, Artificial intelligence and information systems weekly seminars.
- Dec 2010 **Machine Learning for Spatial Language Interpretation**, *The University of Bremen*, Bremen, Germany.  
Workshop on Machine Learning for Spatial Language Interpretation

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## Publication

- 2017 P. Kordjamshidi, M. van Otterlo, and M. F. Moens (2017). Spatial Role Labeling Annotation Scheme, In: Pustejovsky J., Ide N. (Eds.), Handbook of Linguistic Annotation Springer Verlag.
- Parisa Kordjamshidi, Sameer Singh, Daniel Khashabi, Christos Christodoulopoulos, Mark Sammons, Saurabh Sinha and Dan Roth. Relational Learning and Feature Extraction by Querying over Heterogeneous Information Networks. UAI-2017, Workshop on Statistical Relational AI (StarAI).
- P. Kordjamshidi, T. Rahgooy, U. Manzoor. Spatial Language Understanding with Multimodal Graphs using Declarative Learning based Programming. EMNLP-2017, Workshop on Structured Prediction for NLP.
- P. Kordjamshidi, T. Rahgooy, M-F. Moens, J. Pustejovsky, U. Manzoor and K. Roberts. CLEF 2017: Multimodal Spatial Role Labeling (mSpRL) Task Overview. LNCS volume 10456 on Experimental IR Meets Multilinguality, Multimodality, and Interaction; Proceedings of 8th International Conference of the CLEF Association.
- 2016 P. Kordjamshidi, C. Christodoulopoulos, D. Khashabi, B. Mangipudi, S. Singh, D. Roth. Better call Saul: Flexible Programming for Learning and Inference in NLP, COLING-2016.
- P. Kordjamshidi, D. Roth. Declarative Learning Based Programming, Reports of the 2016 AAAI Workshop Program, AI Magazine, Vol. 37 Issue 3.
- M. Sammons, C. Christodoulopoulos, P. Kordjamshidi, D. Khashabi, V. Srikumar and D. Roth. EDISON: Feature Extraction for NLP, Simplified. LREC-2016.
- 2014-2015 P. Kordjamshidi, D. Roth, and M.-F. Moens. Structured Learning for Spatial Information Extraction from Biomedical Text: Bacterium-Habitat Localization. BMC-Bioinformatics, 2015 (16:129).
- P. Kordjamshidi, M. F. Moens. Global Machine Learning for Spatial Ontology Population. Web Semantics: Science, Services and Agents on the World Wide Web. Semantic Search, volume 30, 2015, p 3-21.
- P. Kordjamshidi, D. Roth, H. Wu, (2015). Saul: Towards declarative learning based programming. International Joint Conference of Artificial Intelligence (IJCAI 2015).
- P. Kordjamshidi, W. Massa, T. Provoost, M.-F. Moens, (2015). Machine Reading for Extraction of Bacteria and Habitat Taxonomies. Lecture Notes in Computer Science (LNCS), Communications in Computer and Information Science (CCIS) series, Springer-Verlag, 2015.
- W. Massa, P. Kordjamshidi, T. Provoost and M.F. Moens (2015). Machine Reading of Biological Texts: Bacteria-Biotope Extraction. In Proceedings of BIOINFORMATICS 2015 Conference (candidate for best paper award).
- Y. Song, H. Peng, P. Kordjamshidi, M. Sammons, D. Roth (2015). Improving a Pipeline Architecture for Shallow Discourse Parsing. Proc. of the Conference on Computational Natural Language Learning (CoNLL2015) Shared Task.
- J. Pustejovsky, P. Kordjamshidi, M-F Moens, A. Levine, S. Dworman, Z. Yocum, (2015). SemEval-2015 Task 8: SpaceEval. SemEval2015.
- G. Glavas, J. Snaider, P. Kordjamshidi, and M.F. Moens (2014). HiEve: A Corpus for Extracting Event Hierarchies from News Stories. In Proceedings of the 9th Language Resources and Evaluation Conference. ELRA.

- 2013 P. Kordjamshidi, J. Hois, M. van Otterlo, and M. F. Moens. Learning to interpret spatial natural language in terms of qualitative spatial relations. Representing space in cognition: Interrelations of behavior, language, and formal models. Series Explorations in Language and Space, Tenbrink T. (Ed.), Wiener J. (Ed.), Claramunt C. (Ed.), Oxford University Press, 2013.
- P. Kordjamshidi and M. F. Moens (2013). Designing Constructive Machine Learning Models based on Generalized Linear Learning Techniques. In Proceedings of the NIPS Workshop on Constructive Machine Learning, Lake Tahoe, Nevada.
- P. Kordjamshidi and M. F. Moens (2013). Structured Learning for Mapping Natural Language to Spatial Calculi models. NIPS Workshop on Constructive Knowledge Extraction from Text (KET), Lake Tahoe, Nevada.
- P. Kordjamshidi and M. F. Moens (2013). Structured machine learning for mapping natural language to spatial ontologies. In Proceedings of the International Workshop on Advances in Regularization, Optimization, Kernel Methods and Support Vector Machines (ROKS 2013).
- O. Kolomiyets, P. Kordjamshidi, S. Bethard and M. F. Moens, 2013. SemEval-2013 Task 3: Spatial Role Labeling. In Proceedings of the Second Joint Conference on Lexical and Computational Semantics (\*SEM), Volume 2: Proceedings of the Seventh International Workshop on Semantic Evaluation (SemEval 2013), pp. 255-262, Atlanta, Georgia, USA, ACL.
- 2012 P. Kordjamshidi, S. Bethard, and M. F. Moens. Semeval-2012 task 3: Spatial role labeling. In SEM 2012: The First Joint Conference on Lexical and Computational Semantics, Volume 2: Proceedings of the Sixth International Workshop on Semantic Evaluation (SemEval 2012), pages 365-373. Association for Computational Linguistics, 2012.
- P. Kordjamshidi, P. Frasconi, M. van Otterlo, M. F. Moens, L. De Raedt (2012). Relational learning for spatial relation extraction from natural language. In Muggleton, S. (Ed.), Tamaddoni-Nezhad, A. (Ed.), Lisi, F. (Ed.), Inductive Logic Programming: Vol. 7207. ILP. (pp. 204-220). Berlin Heidelberg: Springer.
- P. Kordjamshidi, M. F. Moens (2012). Spatial role labeling using structured support vector machines. Proceedings of 21st Belgian-Dutch conference on machine learning (BeneLearn): vol. 21. Belgian-Dutch conference on machine learning (BeneLearn). Ghent, 24-25 May, 71-71. (Poster)
- 2011 P. Kordjamshidi, M. van Otterlo, and M. F. Moens. Spatial role labeling: Towards extraction of spatial relations from natural language. ACM Transactions on Speech Language Processing, 8:1-36, December 2011.
- P. Kordjamshidi, P. Frasconi, M. van Otterlo, M. F. Moens, L. De Raedt (2011). Spatial relation extraction using relational learning. Latest Advances in Inductive Logic Programming. ILP. Windsor Great Park, United Kingdom, 31 July-3rd August (pp. 1-6).
- P. Kordjamshidi, J. Hois, M. van Otterlo, and M. F. Moens. Machine learning for interpretation of spatial natural language in terms of QSR. Poster at the 10th International Conference on Spatial Information Theory (COSIT'11), 2011.
- 2010 P. Kordjamshidi, M. van Otterlo, and M. F. Moens. From language towards formal spatial calculi. In Workshop on Computational Models of Spatial Language Interpretation (CoSLI 2010, at Spatial Cognition 2010), 2010.

- P. Kordjamshidi, M. van Otterlo, and M. F. Moens. Spatial role labeling: Task definition and annotation scheme. In LREC'10, 2010.
- 2008 and earlier P. KordJamshidi, B. De Baets, G. De Tré. Prototype-based classification by fuzzification of cases. IPMU08. 2008.
- P. KordJamshidi, B. De Baets, G. De Tré. Active learning by measuring different types of uncertainty with probabilistic classifiers.( not published), 2008.
- G. De Tré, T. Matthé, P. KordJamshidi, M. Demoor (2007). On the use of case based reasoning techniques in flexible querying (invited paper). 18th International Workshop on Database and Expert Systems Applications, 2007, 345-349.
- S. Jalili, P. Kord Jamshidi. Active learning with labeled and unlabeled documents in text categorization (ITCC 2003), 28-30 April 2003, Las Vegas, NV, USA. IEEE Computer Society
- S. Jalili, P. Kordjamshidi. Applying automatic active text classification in categorization of Iran's Historical Documents. Conference of documents and history of Iran Dec 2002, Tehran, Iran (in Persian language).
- S. Jalili, P. Kordjamshidi. Text categorization based on machine learning techniques. Conference of information technology and optimization of telecommunication industry, Sep 2002 Isfahan, Iran (in Persian language).
- S. Jalili, P. Kordjamshidi. Active text classification and using unlabeled documents. International computer conference of computer society of Iran CSICC2003, Mashhad, Iran (in Persian language).
- P. Kordjamshidi, Getting to know the computer for non-computer students. ISBN:964-8798-24-9, in Persian, published in Iran, Summer 2006.

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## Professional Activities

### Editorial

July 2016-2019 **Member of editorial board of Journal of Artificial Intelligence Research (JAIR).**

### Organizing/Co-Organizing Workshops/Conferences

- 2018 **Local Sponsorships and Exhibits Chair**, *16th Annual Conference of the North American Chapter of the Association for Computational Linguistics: Human Language Technologies (NAACL-HLT 2018)*, June 1-6, New Orleans, Louisiana.
- 2018 **First workshop on Spatial Language Understanding**, *co-located with 16th Annual Conference of the North American Chapter of the Association for Computational Linguistics: Human Language Technologies (NAACL-HLT 2018)*, June 1-6, New Orleans, Louisiana.
- 2018 **3rd Workshop on Declarative Learning Based Programming**, *In the Thirty-Second AAAI Conference on Artificial Intelligence, 2018, USA*, February 2-3, New Orleans, Louisiana.  
Chair
- 2017 **2nd Workshop on Declarative Learning Based Programming**, *In 26th International Joint Conference of Artificial Intelligence*, August 19th, Melbourne, Australia.  
Chair
- 2017 **Multimodal Spatial Role Labeling**, *In CLEF-2017 Conference and Labs of the Evaluation Forum*, September 11-14, Dublin, Ireland.  
Chair
- 2016 **1st Workshop on Declarative Learning Based Programming**, *In thirtieth AAAI Conference on Artificial Intelligence(AAAI-16)*, February 12-17, Phoenix, Arizona, USA.  
Chair
- 2015 **International workshop on Semantic Evaluation, SpaceEval shared task**, *SemEval 2015*.
- 2013 **International workshop on Semantic Evaluation, Spatial role labeling shared task**, *SemEval 2013*.
- 2012 **International workshop on Semantic Evaluation, Spatial role labeling shared task**, *SemEval 2012*, Montreal, Canada.  
I organized the first workshop for spatial information extraction formulating a new task and benchmarking called Spatial Role Labeling in the workshop of Semantic Evaluation
- 2005 **Search engines**, *Ilam University*.  
Ilam, IRAN

### Reviewing

PC member

- AAAI-2018, LREC-2018, ACL-2018
- EACL-2017, AAAI-2017, EMNLP-2017, IJCNLP-2017, COSIT-2017-workshop on Speaking of Location.
- COLING-2016.
- Twenty-Fifth International Joint Conference on Artificial Intelligence (IJCAI-2016).

- Thirtieth AAAI Conference on Artificial Intelligence (AAAI-2016).
- The 53rd Annual Meeting of the Association for Computational Linguistics and The 7th International Joint Conference of the Asian Federation of Natural Language Processing (ACL-IJCNLP 2015).
- 21st European Conference on Artificial Intelligence (ECAI 2014).
- ECML/PKDD 2014, workshop on *Multi-target prediction*.

#### Reviewer

- AAAI-2018, LREC-2018, ACL-2018
- EACL-2017, AAAI-2017, EMNLP-2017, IJCNLP-2017, COSIT-2017-workshop on Speaking of Location
- COLING-2016
- Journal of Natural Language Engineering, 2017
- Twenty-Fifth International Joint Conference on Artificial Intelligence (IJCAI-2016)
- AAAI Conference on Artificial Intelligence (AAAI-2016, AAAI-2010)
- ACL-IJCNLP 2015
- Journal of Experimental and Theoretical Artificial Intelligence (2015)
- Journal of AI Communications
- Computational and Mathematical Methods in Medicine (2015)
- International Workshop on Semantic Evaluation (2015, 2013, 2012)
- ECAI2014
- Workshop: ECML/PKDD 2014, workshop on Multi-target prediction
- Book: Chapter review for Handbook of Linguistic annotation (2014)
- Journal: BAFI 2014 (Special Issue IDA)
- Iranian Journal of Electrical and Computer Engineering (IJECE).ijece@iust.ac.ir
- KDD12

### Current students

- Umar Manzoor, Postdoctoral researcher, started Summer 2017
- Taher Rahgooy, PhD student, started Fall 2017

### Thesis supervision/Project Advisory

2016-2017

- Capstone project, several undergrad students. Tulane University.

2010–2015

- Spatial Role Labeling based on ISO-Space 1.5 annotation scheme, a Convolutional Neural Network approach, Mahmoud Ammar, Sep. 2015. (Under Professor Marie-Francine Moens, KULeuven)
- Machine Reading of Biological Texts, Wouter Massa, June 2014. (Under Professor Moens, KULeuven)
- Ontology-based information extraction, Melih Tuzunoglu, 2013. (Under Professor Moens, KULeuven)
- Active learning for spatial information extraction, Marzieh Hosseinpour, 2013. (Under Professors Moens and Luc De Raedt)



- Preposition disambiguation using relational learning, Behrouz Eslami Shahr Babaki, 2012. (Under professors Luc De Raedt and Moens)
- Extraction of motion verbs for instructing an autonomous robot using statistical relational learning, Maarten Tielemans en Pieter-Jan Speelmans, 2011. (Under Professors De Raedt and Moens)

#### Other services

- Member of hiring committee for Research Programmer, CS, UIUC, 2015.
- Member of hiring committee for tenure track faculty, CS, Tulane University, 2016-2017.

#### Recent meetings and conferences attended or will attend

- CLEF-2017: Conference and Labs of the Evaluation Forum, Information Access Evaluation meets Multilinguality, Multimodality, and Visualization, 11-14 September 2017, Dublin-Ireland.
- EMNLP 2017: Conference on Empirical Methods in Natural Language Processing, September 7-11, 2017, Copenhagen, Denmark.
- The Conference on Uncertainty in Artificial Intelligence (UAI), Statistical Relational Learning Workshop (StarAI), Sydney, Australia, August 2017.
- The 26th International Joint Conference on Artificial Intelligence (IJCAI), Melbourne, Australia, August 2017.
- Ernst Strüngmann Forum on Interactive Task Learning: Agents, Robots, and Humans Acquiring New Tasks through Natural Interaction, May 21-26, 2017, in Frankfurt, Germany.
- The 26th International Conference on Computational Linguistics, COLING-2016, Osaka, Japan, December 11-16, 2016.
- The 15th Annual Conference of the North American Chapter of the Association for Computational Linguistics: Human Language Technologies, NAACL-HLT, San Diego, California, June 12-16, 2016.
- Computing Community Consortium (CCC) Symposium on Computing Research: Addressing National Priorities and Societal Needs, Washington,DC, May 9-10th, 2016. Invited poster presenter.
- Thirtieth AAAI Conference on Artificial Intelligence(AAAI-16), workshops, February 12-14, Phoenix, Arizona, USA
- AAAI Fall Symposium on Embedded Machine Learning, Arlington, Virginia, Nov.12-14, 2015.
- Rising Stars in EECS: An Academic Career Workshop for Women, MIT Department of EECS, Nov. 9-10, 2015.
- International Joint Conference on Artificial Intelligence, IJCAI-2015, July 25-31, Buenos Aires, Argentina.
- The 2015 Conference of the North American Chapter of the Association for Computational Linguistics: Human Language Technologies (NAACL-HTL) Denver, Colorado, May 31-June 5, 2015.
- International Workshop on Semantic Evaluation 2015, 5th June, collocated with NAACL-HTL.
- DARPA Probabilistic Programming for Advancing Machine Learning (PPAML) PI meeting, January 21-22, 2015, Crowne Plaza, Tampa, FL.
- The 52nd Annual Meeting of the Association for Computational Linguistics ACL 2014 June, 22-26, Baltimore.

- The 18th Conference on Computational Natural Language Learning (CoNLL-2014), June, 26-27, Baltimore.
- The Twenty-seventh Annual Conference on Neural Information Processing Systems (NIPS), December 05-10, 2013, Lake Tahoe.

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## Computer skills

JAVA, C, C++, Pascal, Scala, Assembly, SQL, Matlab ( fuzzy toolbox, neural networks toolbox , image processing toolbox, optimization), HTML, L<sup>A</sup>T<sub>E</sub>X, OpenOffice, Linux, Microsoft Windows, Answer set programming (ASP), Probabilistic logic programming (e.g. Problog, MLN), Logic programming (e.g. Prolog) and several other programming languages and software tools.

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## Languages

Persian	<b>Mothertongue</b>
Kurdish	<b>Mothertongue</b>
English	<b>Advanced</b>
Dutch	<b>Intermediate</b>
Arabic	<b>Intermediate</b>