

# Paramita Mirza

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*Natural Language Processing, Computational Semantics, Information Extraction, Knowledge Harvesting*

## Education

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### University of Trento

*Trento, Italy*

*Ph.D., Doctoral Program in Information and Communication Technology (ICT)*

*2012 - 2016*

- Supported by project specific grants by Fondazione Bruno Kessler, Center for Information and Communication Technology (FBK-ICT IRST).
- Graduated on April 12, 2016.
- Thesis: "Extracting Temporal and Causal Relations between Events" advised by Dr. Sara Tonelli.

### Free University of Bozen-Bolzano (FUB)

*Bolzano, Italy*

*M.Sc., European Master's Program in Language and Communication Technologies (LCT)*

*2011 - 2012*

- Second year of the LCT program, supported by Erasmus Mundus scholarships.
- Graduated on October 12, 2012 (grade: 110/110).
- Thesis: "Exploiting Combinatory Categorical Grammar (CCG) within Distributional Semantic Models" advised by Dr. Raffaella Bernardi.

### University of Lorraine

*Nancy, France*

*M.Sc., European Master's Program in Language and Communication Technologies (LCT)*

*2011 - 2012*

- First year of the LCT program, supported by Erasmus Mundus scholarships.

### Bandung Institute of Technology

*Bandung, Indonesia*

*B.Sc., Informatics*

*2004 - 2008*

- Partially supported by college scholarships from Samsung Electronics Indonesia.
- Graduated on July 2, 2008 (grade: 3.43/4.00).
- Thesis: "Support Vector Machine Application for Information Extraction from Job Fair Advertisements" advised by Dr. Dwi Hendratmo Widyantoro.

## Experience

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### Max Planck Institute for Informatics

*Saarbrücken, Germany*

*Postdoctoral researcher*

*Jul. 2016 - PRESENT*

- Research focuses include causation and common sense knowledge harvesting, emotional aspect of relation extraction and the semantics of numbers in natural language texts.
- Supervised by Prof. Gerhard Weikum.

### Free University of Bozen-Bolzano

*Bolzano, Italy*

*Research Assistant*

*May. 2016 - Jun. 2016*

- Research focus was extracting relation cardinality, i.e., cardinal numbers in texts representing, for instance, the number of Angelina Jolie's children.
- Supervised by Dr. Simon Razniewski, Prof. Werner Nutt.

### National University of Singapore

*Singapore*

*Postgraduate Intern*

*Jun. 2015 - Sep. 2015*

- Research focus was exploring word embeddings and deep learning techniques for temporal ordering of events.
- Supervised by Dr. Min-Yen Kan, Prof. Hwee Tou Ng.

### Samsung Electronics Indonesia

*Bekasi, Indonesia*

*Software R&D Engineer*

*Oct. 2008 - Aug. 2010*

- Main responsibilities included developing and debugging firmware of electronic products, including DVD & MP3 players and Home Theater Systems.

## Skills

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<b>Programming</b>	Python, C/C++, Scala, Java, Prolog, PHP, JSP, LaTeX
<b>Databases</b>	MySQL, PostgreSQL, Microsoft SQL Server 2005
<b>Others</b>	Weka, GATE, Apache Hadoop
<b>Languages</b>	Indonesian (native), English (fluent), German (basic knowledge), Italian (basic knowledge)

## Project Experience

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### Newsreader

Trento, Italy

EU-funded research project [www.newsreader-project.eu](http://www.newsreader-project.eu)

Nov. 2012 - Nov. 2015

- Research area: event & temporal information extraction, temporal ordering & causation.
- Developed a system for extracting temporal ordering and causation between events from financial news, to be used in automated construction of event timelines.
- Led to PhD dissertation, 3 conference publications [2, 7, 8] and 4 workshop publications [5, 9–11].
- Supervised by Dr. Sara Tonelli and Dr. Anne-Lyse Minard

### MAGIK: Managing Completeness of Data

Bolzano, Italy

[magik-demo.inf.unibz.it](http://magik-demo.inf.unibz.it)

May. 2012 - Oct. 2012

- Research area: information and knowledge management.
- Developed a system for managing, querying and visualizing database completeness.
- Led to 2 demo publications [12, 14]
- Supervised by Dr. Ognjen Savkovic, Prof. Werner Nutt.

### COMPOSES: Compositional Operations in Semantic Space

Rovereto, Italy

EU-funded research project [clic.cimec.unitn.it/composes](http://clic.cimec.unitn.it/composes)

Feb. 2012 - Jun. 2012

- Research area: distributional semantics.
- Explored the benefits of combinatory categorial grammar for distribution semantic models.
- Led to Master's thesis and a conference publication [13].
- Supervised by Dr. Raffaella Bernardi, Prof. Roberto Zamparelli

## Conference Publications

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2017

- [1] Paramita Mirza, Simon Razniewski, Fariz Darari, and Gerhard Weikum. "Cardinal Virtues: Extracting Relation Cardinalities from Text". In: *(to appear) Proceedings of the 55th Annual Meeting of the Association for Computational Linguistics (Volume 2: Short Papers)*. Vancouver, Canada, July 2017.

2016

- [2] Paramita Mirza and Sara Tonelli. "CATENA: CAusal and TEmporal relation extraction from NATural language texts". In: *Proceedings of COLING 2016, the 26th International Conference on Computational Linguistics: Technical Papers*. Osaka, Japan, Dec. 2016.
- [3] Paramita Mirza and Sara Tonelli. "On the contribution of word embeddings to temporal relation classification". In: *Proceedings of COLING 2016, the 26th International Conference on Computational Linguistics: Technical Papers*. Osaka, Japan, Dec. 2016.
- [4] Paramita Mirza, Simon Razniewski, and Werner Nutt. "Expanding Wikidata's Parenthood Information by 178%, or How To Mine Relation Cardinality Information". In: *Proceedings of the ISWC 2016 Posters & Demonstrations Track*. Kobe, Japan, Oct. 2016.

2015

- [5] Paramita Mirza and Anne-Lyse Minard. "HLT-FBK: a Complete Temporal Processing System for QA TempEval". In: *Proceedings of the 9th International Workshop on Semantic Evaluation (SemEval 2015)*. Denver, Colorado, June 2015.
- [6] Paramita Mirza. "Recognizing and Normalizing Temporal Expressions in Indonesian Texts". In: *Proceedings of the 14th International Conference of the Pacific Association for Computational Linguistics*. PACLING '15. Bali, Indonesia, May 2015.

2014

- [7] Paramita Mirza and Sara Tonelli. "An Analysis of Causality between Events and its Relation to Temporal Information". In: *Proceedings of COLING 2014, the 25th International Conference on Computational Linguistics: Technical Papers*. Dublin, Ireland, Aug. 2014.
- [8] Paramita Mirza and Sara Tonelli. "Classifying Temporal Relations with Simple Features". In: *Proceedings of the 14th Conference of the European Chapter of the Association for Computational Linguistics*. Gothenburg, Sweden, Apr. 2014.
- [9] Paramita Mirza and Anne-Lyse Minard. "FBK-HLT-time: a complete Italian Temporal Processing system for EVENTI-Evalita 2014". In: *Proceedings of the 4th International Workshop EVALITA-2014*. Pisa, Italy, Dec. 2014.
- [10] Paramita Mirza. "Extracting Temporal and Causal Relations between Events". In: *Proceedings of the ACL 2014 Student Research Workshop*. Baltimore, Maryland, USA, June 2014.
- [11] Paramita Mirza, Rachele Sprugnoli, Sara Tonelli, and Manuela Speranza. "Annotating Causality in the TempEval-3 Corpus". In: *Proceedings of the EACL 2014 Workshop on Computational Approaches to Causality in Language (CatoCL)*. Gothenburg, Sweden, Apr. 2014.

2012 - 2013

- [12] Ognjen Savković, Paramita Mirza, Alex Tomasi, and Werner Nutt. "Complete Approximations of Incomplete Queries". In: *Proc. VLDB Endow.* 6.12 (Aug. 2013).
- [13] Paramita Mirza and Raffaella Bernardi. "CCG Categories for Distributional Semantic Models". In: *Proceedings of the International Conference Recent Advances in Natural Language Processing RANLP 2013*. Hissar, Bulgaria, Sept. 2013.
- [14] Ognjen Savković, Mirza Paramita, Sergey Paramonov, and Werner Nutt. "MAGIK: Managing Completeness of Data". In: *Proceedings of the 21st ACM International Conference on Information and Knowledge Management*. CIKM '12. Maui, Hawaii, USA, 2012.

## Achievements & Awards

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- 2013 **Google scholarship**, 3rd Lisbon Machine Learning Summer School *Lisbon, Portugal*
- 2010 **Erasmus Mundus scholarship**, European Master's Program in Language and Communication Technologies *Nancy, France & Bolzano, Italy*
- 2006 **College scholarship**, Samsung Electronics Indonesia *Bekasi, Indonesia*

## Academic Activities

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**Reviewer**, Journal of Natural Language Engineering

**PC member**, EMNLP 2015, COLING 2016, EMNLP 2017

## References

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**Prof. Gerhard Weikum**, Max Planck Institute for Informatics

*weikum@mpi-inf.mpg.de*

**Dr. Sara Tonelli**, Fondazione Bruno Kessler

*satonelli@fbk.eu*

**Prof. Werner Nutt**, Free University of Bozen-Bolzano

*nutt@inf.unibz.it*