

# Ndapa Nakashole

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Computer Science & Engineering  
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## APPOINTMENTS

### **University of California, San Diego**

Assistant Professor, Jan 2017 –  
Peggy and Peter Preuss Faculty Scholar

### **Carnegie Mellon University, USA**

Postdoctoral Fellow, 2013 – 2016  
Advisor: Tom M. Mitchell

### **Max Planck Institut für Informatik, Saarbrücken, Germany**

Doctoral Researcher, 2009 – 2013  
Advisor: Gerhard Weikum

### **Microsoft Research, Redmond, USA**

Research Intern, Data Management 04/2011 – 07/2011

### **IBM Zurich Research, Switzerland**

Research Intern, Business Optimization 03/2008 – 08/2008

### **University of Cape Town, South Africa**

Research Assistant, Digital Libraries Group 2007 – 2008

## EDUCATION

### **Max Planck Institute for Informatics**

**and Saarland University, Germany**  
Ph.D., Summa cum laude, in Computer Science, 2012  
*Otto Hahn Medal (Max Planck Society dissertation award)*  
Advisor: Gerhard Weikum

### **University of Cape Town, South Africa**

M.Sc., with Distinction, in Computer Science, 2009  
Masters thesis advisor: Hussein Suleman  
B.Sc.(Hons), awarded First Class, in Computer Science, 2006  
Undergraduate thesis advisor: Hussein Suleman  
B.Sc., Computer Science, 2005

## RESEARCH INTERESTS

Natural language processing and machine learning. Collectively, natural language processing aims to develop algorithms that enable computers to understand and generate human language. My focus is on developing machine learning methods that learn language from data. Specific problems I am interested in include: machine reading, question answering, representation learning, and machine translation for low resource languages.

**INVITED TALKS**

- 6/2018 Workshop on New Forms of Generalization co-located with NAACL conference, June 2018
- 11/2017 Harvey Mudd College
- 7/2017 Women in NLP Workshop, collocated with ACL, Vancouver, Canada
- 6/2017 U.S. National Academy of Sciences Kavli Frontiers of Science  
(Korean-American Symposium), Irvine, CA
- 5/2017 University of California, Irvine
- 4/2016 Rutgers University
- 4/2016 University of Texas, Austin
- 3/2016 Johns Hopkins University
- 3/2016 New York University
- 3/2016 University of California, Davis
- 2/2016 University of California, San Diego
- 2/2016 Rice University
- 1/2016 University of Michigan, Ann Arbor
- 1/2016 Yale University
- 11/2015 NLP Lunch, Carnegie Mellon University
- 02/2015 Special Operations Command (SOCOM) visit, Carnegie Mellon University
- 12/2013 Machine Learning Lunch, Carnegie Mellon University
- 09/2013 Google Inc., Mountain View, USA
- 03/2013 Computational Linguistics Lunch Seminar, Saarland University

**PROFESSIONAL SERVICE****Program Committee Member**

- ◇ Annual meeting of the Association for Computational Linguistics (ACL): 2015,2017,2018
- ◇ Empirical Methods in Natural Language Processing (EMNLP): 2013, 2017,2018
- ◇ Annual Conference on Neural Information Processing Systems (NIPS): 2016, 2017, 2018
- ◇ World Wide Web Conference (WWW): 2017
- ◇ AAAI Conference on Artificial Intelligence (AAAI): 2016, 2017
- ◇ International Joint Conference on Artificial Intelligence (IJCAI): 2016
- ◇ North American Chapter of the Association for Computational Linguistics (NAACL): 2016
- ◇ Workshop on Knowledge Extraction(KET at AAAI): 2016
- ◇ International Workshop on the Web and Databases (WebDB at SIGMOD): 2015
- ◇ Workshop on Automated Knowledge Base Construction (AKBC at NIPS): 2014
- ◇ Workshop on Automated Knowledge Base Construction (AKBC at NAACL): 2016
- ◇ International Conference on Information and Knowledge Management (CIKM): 2014, 2015
- ◇ International Conference on Computational Linguistics (COLING): 2014 ,2017

**Journal Reviewer**

- ◇ Transactions of the Association for Computational Linguistics (TACL): 2015
- ◇ Elsevier Journal of Web Semantics: 2013, 2015
- ◇ Elsevier Journal of Information Systems (Information Systems): 2015

**UNIVERSITY SERVICE****Department Service**

- ◇ Committee on Graduate Affairs (GradCom), CSE, University of California, San Diego 2017-18
- ◇ PhD Admissions Committee, CSE, University of California, San Diego 2017

### **Theses committees**

- ◇ PhD thesis committee, Shuai Tang, UCSD 2018
- ◇ PhD thesis committee, Lin Lin, Tsinghua University 2018
- ◇ PhD research exam committee, Mengting Wan, UCSD 2018
- ◇ Msc thesis committee, Edward Wong, UCSD 2018
- ◇ Msc thesis committee, Rajiv Pasricha, UCSD 2018
- ◇ Msc thesis committee, Thomas Andy Keller, UCSD 2017
- ◇ PhD thesis committee, Qian Yang, Tsinghua University 2017

### **Misc.**

- ◇ Judge, Undergraduate Women Hackathon UCSD Spring 2017
- ◇ Coordinator, CMU Machine Learning/Google Distinguished Lecture Series: 2014-2016

## **PUBLICATIONS**

### **Journal Articles**

1. Mitchell, T. M., W. W. Cohen, E. R. H. Jr., P. P. Talukdar, B. Yang, J. Betteridge, A. Carlson, B. D. Mishra, M. Gardner, B. Kisiel, J. Krishnamurthy, N. Lao, K. Mazaitis, T. Mohamed, N. Nakashole, E. A. Platanios, A. Ritter, M. Samadi, B. Settles, R. C. Wang, D. Wijaya, A. Gupta, X. Chen, A. Saparov, M. Greaves, and J. Welling (2018). Never-ending learning. *Commun. ACM* **61**(5), 103–115.
2. Nakashole, N., G. Weikum, and F. Suchanek (2013). Discovering Semantic Relations from the Web and Organizing them with PATTY. *ACM SIGMOD Record* **42**(2), 29–34.
3. Nakashole, N., G. Weikum, and F. Suchanek (2012). Discovering and exploring relations on the web. *Proceedings of the VLDB Endowment* **5**(12), 1982–1985.
4. Weikum, G., J. Hoffart, N. Nakashole, M. Spaniol, F. M. Suchanek, and M. A. Yosef (2012). Big Data Methods for Computational Linguistics. *IEEE Data Eng. Bull.* **35**(3), 46–64.

### **Papers in Conference Proceedings**

1. Nakashole, N. (2018). NORMA: Neighborhood Sensitive Maps for Multilingual Word Embeddings. In: *Proceedings of the 2018 Conference on Empirical Methods in Natural Language Processing (EMNLP)*.
2. Nakashole, N. and R. Flauger (2018). Characterizing Departures from Linearity in Word Translation. In: *Proceedings of the 56th Annual Meeting of the Association for Computational Linguistics (ACL)*.
3. Kumar, A., B. Raj, and N. Nakashole (2017). Discovering sound concepts and acoustic relations in text. In: *IEEE International Conference on Acoustics, Speech and Signal Processing, (ICASSP)*, pp.631–635.
4. Nakashole, N. and R. Flauger (2017). Knowledge Distillation for Bilingual Dictionary Induction. In: *Proceedings of the 2017 Conference on Empirical Methods in Natural Language Processing (EMNLP)*.
5. Mitchell, T. M., W. W. Cohen, E. R. H. Jr., P. P. Talukdar, J. Betteridge, A. Carlson, B. D. Mishra, M. Gardner, B. Kisiel, J. Krishnamurthy, N. Lao, K. Mazaitis, T. Mohamed, N. Nakashole, E. A. Platanios, A. Ritter, M. Samadi, B. Settles, R. C. Wang, D. T. Wijaya, A. Gupta, X. Chen, A. Saparov, M. Greaves, and J. Welling (2015). Never-Ending Learning. In: *Proceedings of the Twenty-Ninth AAAI Conference on Artificial Intelligence, (AAAI)*, pp.2302–2310.
6. Nakashole, N. (2015). Composite Events: A Fact-based Representation. In: *Proceedings of the 2015 iConference*.

7. Nakashole, N. and T. M. Mitchell (2015). A Knowledge-Intensive Model for Prepositional Phrase Attachment. In: *Proceedings of the 53rd Annual Meeting of the Association for Computational Linguistics, (ACL)*, pp.365–375.
8. Wijaya, D. T., N. Nakashole, and T. M. Mitchell (2015). Learning State Changing Verbs from Wikipedia Revision History. In: *Proceedings of the 2015 Conference on Empirical Methods in Natural Language Processing (EMNLP)*.
9. Nakashole, N. and T. M. Mitchell (2014). Language-Aware Truth Assessment of Fact Candidates. In: *Proceedings of the 52nd Annual Meeting of the Association for Computational Linguistics (ACL)*, pp.1009–1019.
10. Wijaya, D. T., N. Nakashole, and T. M. Mitchell (2014). CTPs: Contextual Temporal Profiles for Time Scoping Facts using State Change Detection. In: *Proceedings of the 2014 Conference on Empirical Methods in Natural Language Processing (EMNLP)*.
11. Nakashole, N., T. Tylanda, and G. Weikum (2013). Fine-grained Semantic Typing of Emerging Entities. In: *Proceedings of the 51st Annual Meeting of the Association for Computational Linguistics (ACL)*, pp.1488–1497.
12. Nakashole, N., G. Weikum, and F. Suchanek (2012). PATTY: a taxonomy of relational patterns with semantic types. In: *Proceedings of the 2012 Joint Conference on Empirical Methods in Natural Language Processing and Computational Natural Language Learning (EMNLP)*. **Best Paper Award Runner Up**, pp.1135–1145.
13. Nakashole, N., M. Theobald, and G. Weikum (2011). Scalable Knowledge Harvesting with High Precision and High Recall. In: *Proceedings of the Fourth ACM International Conference on Web Search and Data Mining (WSDM)*, pp.227–236.
14. Nakashole, N. and H. Suleman (2009). A Hybrid Distributed Architecture for Indexing. In: *Research and Advanced Technology for Digital Libraries, 13th European Conference (ECDL)*, pp.250–260.
15. Nakashole, N. and H. Suleman (2008). A Scavenger Grid for Intranet Indexing. In: *Digital Libraries: Universal and Ubiquitous Access to Information, 11th International Conference on Asian Digital Libraries (ICADL)*, pp.398–399.
16. Nakashole, N., H. Suleman, and C. Pedzai (2007). Dynamic role allocation for small search engine clusters. In: *Proceedings of the 2007 annual research conference of the South African institute of computer scientists and information technologists on IT research in developing countries (SAIC-SIT)*, pp.91–96.

## Refereed Workshop Papers

1. Nakashole, N. and T. Mitchell (2014). Micro Reading with Priors: Towards Second Generation Machine Readers. In: *Proceedings of the Workshop on Automatic Knowledge Base Construction (AKBC at NIPS)*.
2. Wijaya, D., N. Nakashole, and T. Mitchell (2014). Mining and Organizing a Resource of State-changing Verbs. In: *Proceedings of the Workshop on Automatic Knowledge Base Construction (AKBC at NIPS)*.
3. Nakashole, N., M. Sozio, F. M. Suchanek, and M. Theobald (2012). Query-Time Reasoning in Uncertain RDF Knowledge Bases with Soft and Hard Rules. In: *Proceedings of the Second International Workshop on Searching and Integrating New Web Data Sources (VLDS at VLDB)*, pp.15–20.
4. Nakashole, N. and G. Weikum (2012). Real-time population of knowledge bases: opportunities and challenges. In: *Proceedings of the Joint Workshop on Automatic Knowledge Base Construction and Web-scale Knowledge Extraction (AKBC-WEKEX) at NAACL*. **Best Paper Award**.
5. Nakashole, N., M. Theobald, and G. Weikum (2010). Find your advisor: robust knowledge gathering from the web. In: *Proceedings of the 13th International Workshop on the Web and Databases (WebDB at SIGMOD)*.

**SELECTED HONORS**

2018	Invited keynote at the New Forms of Generalization Workshop
2018	Panelist at the RepL4NLP Workshop at ACL 2018
2017	Invited keynote at the first Women in NLP Workshop
2017	Peggy and Peter Preuss Faculty Scholar
2014	Otto Hahn Medal (awarded for PhD dissertation by the Max Planck Society)
2012	Best Paper Award Runner Up at the EMNLP 2012 Conference
2012	Best Paper Award at the AKBC-WEKEX 2012 Workshop
2003-2005	Faculty of Science Merit Entrance Scholarship
2002,2003,2005	Department of Computer Science Merit List (awarded to top 5% of class)
2002,2003,2005	Faculty of Science Dean's Merit List
2002, 2003	Class Medals for Computer Science Courses (awarded to top grade in the class)

**STUDENT ADVISING & MENTORING**

Mridul Garg (Msc)	University of California, San Diego	2017
Gopal Rander (Msc)	University of California, San Diego	2017
Dustin Wright (Msc)	University of California, San Diego	2017
Steven Zheng (Bsc)	University of California, San Diego	2017
Aditi Mavalankar (Msc)	University of California, San Diego	2017
Leon Cheung (Bsc)	University of California, San Diego	2017
Tue Vo (Bsc)	Carnegie Mellon University	2015

**TEACHING**

<b>CSE 291: Statistical NLP</b> , University of California, San Diego	Spring 2018
<b>CSE 190: Statistical NLP</b> , University of California, San Diego	Winter 2018
<b>CSE 259 AI Seminar</b> , University of California, San Diego	Fall 2017
<b>CSE 291: Statistical NLP</b> , University of California, San Diego	Spring 2017
<b>Ubiquitous Smart Agents</b> (Guest Instructor), Carnegie Mellon University	Fall 2015

**REFERENCES**

*Available upon request*