

Manaal Faruqui

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CONTACT INFORMATION Google
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RESEARCH INTERESTS Conversational dialog systems, representation learning, distributional semantics, multilingual learning, morphology, natural language processing, deep learning and machine learning.

EXPERIENCE Senior Research Scientist, Google Assistant Oct 2018 – current
Research Scientist, Google AI Aug 2016 – Sep 2018

EDUCATION **Carnegie Mellon University**, Pittsburgh, PA, USA
Ph.D., Language and Information Technology, 2016

- Research area: Representation learning, distributional semantics, multilingual learning.
- Advisor: Prof. Chris Dyer

Indian Institute of Technology, Kharagpur, India

B.Tech. (Hons.), Computer Science, May, 2012
M.Tech., Computer Science, May, 2012

HONORS AND AWARDS

- Best Student Paper Award at NAACL 2015
- Selected to attend Heidelberg Laureate Forum 2015
- Best Reviewer Award at NAACL 2015
- Best Presentation Award at LTI Students' Research Symposium 2012
- Microsoft Research India Travel Grant to attend ACL-2011
- DAAD Working Internship in Science & Engineering scholarship 2010
- MITACS Globalink Research Internship Grant 2009

PATENTS Canonicalizing Search Queries to Natural Language Questions
Manaal Faruqui and Dipanjan Das.
Google LLC, US20200167379A1.

DEFENSIVE PUBLICATIONS Contextual Error Correction in Automatic Speech Recognition
Manaal Faruqui and Janara Christensen.
Technical Disclosure Commons, March 06, 2020

Automatic Correction of Disfluent Spoken Queries
Manaal Faruqui and Siddharth Gopal.
Technical Disclosure Commons, November 11, 2019

BOOKS Cross-Lingual Word Embeddings
Anders Søgaard, Ivan Vulić, Sebastian Ruder, and **Manaal Faruqui**.
Synthesis Lectures on Human Language Technologies, Morgan & Claypool Publishers, 06/2019.

JOURNAL
PUBLICATIONS

Morpho-syntactic Lexicon Generation Using Graph-based Semi-supervised Learning
Manaal Faruqui, Ryan McDonald, and Radu Soricut.
Transactions of the ACL (TACL) 2016.

CONFERENCE
PUBLICATIONS

How to Ask Better Questions? A Large-Scale Multi-Domain Dataset for Rewriting Ill-Formed Questions
Z Chu, M Chen, J Chen, M Wang, K Gimpel, **Manaal Faruqui**, X Si.
Proceedings of AAAI 2020 (long).

Handling Divergent Reference Texts when Evaluating Table-to-Text Generation
Bhuwan Dhingra, **Manaal Faruqui**, Ankur P. Parikh, Ming-Wei Chang, Dipanjan Das, and William W. Cohen.
Proceedings of ACL 2019 (long).

Text Generation with Exemplar-based Adaptive Decoding
Hao Peng, Ankur P. Parikh, **Manaal Faruqui**, Bhuwan Dhingra, and Dipanjan Das.
Proceedings of NAACL 2019 (long).

WikiAtomicEdits: A Multilingual Corpus of Wikipedia Edits for Modeling Language and Discourse
Manaal Faruqui, Ellie Pavlick, Ian Tenney, and Dipanjan Das.
Proceedings of EMNLP 2018 (long).

Learning To Split and Rephrase From Wikipedia Edit History
Jan Botha, **Manaal Faruqui**, John Alex, Jason Baldridge, and Dipanjan Das.
Proceedings of EMNLP 2018 (short).

Identifying Well-formed Natural Language Questions
Manaal Faruqui and Dipanjan Das.
Proceedings of EMNLP 2018 (short).

(Almost) Zero-short Cross-lingual Spoken Language Understanding
Shyam Upadhyay, **Manaal Faruqui**, Gokhan Tur, Dilek Hakkani-Tur, Larry Heck.
Proceedings of ICASSP 2018.

Morphological Inflection Generation Using Character Sequence to Sequence Learning.
Manaal Faruqui, Yulia Tsvetkov, Graham Neubig, and Chris Dyer.
Proceedings of NAACL 2016 (long).

Polyglot Neural Language Models: Case Study in Cross-Lingual Phonetic Representation Learning.
Tsvetkov, Sitaram, **Manaal Faruqui**, Lample, Littell, Mortensen, Black, Levin and Dyer.
Proceedings of NAACL 2016 (long).

Cross-lingual Models of Word Embeddings: An Empirical Comparison.
Shyam Upadhyay, **Manaal Faruqui**, Chris Dyer, and Dan Roth.
Proceedings of ACL 2016 (long).

Learning Curriculum with Bayesian Optimization for Task-Specific Word Representation Learning.
Yulia Tsvetkov, **Manaal Faruqui**, Wang Ling, Brian MacWhinney and Chris Dyer.
Proceedings of ACL 2016 (long).

Sparse Overcomplete Word Vector Representations.
Manaal Faruqui, Yulia Tsvetkov, Dani Yogatama, Chris Dyer, and Noah Smith.
Proceedings of ACL 2015 (long).

Non-distributional Word Vector Representations.

Manaal Faruqui and Chris Dyer.

Proceedings of ACL 2015 (short).

Retrofitting Word Vectors to Semantic Lexicons.

Manaal Faruqui, Jesse Dodge, Sujay Jauhar, Chris Dyer, Ed Hovy and Noah Smith.

Proceedings of NAACL 2015 (long). **Best Student Paper Award.**

Multilingual Open Relation Extraction Using Cross-lingual Projection.

Manaal Faruqui and Shankar Kumar.

Proceedings of NAACL 2015 (short).

Learning Word Representations with Hierarchical Sparse Coding.

Dani Yogatama, **Manaal Faruqui**, Chris Dyer and Noah Smith.

Proceedings of ICML 2015 (long).

Evaluation of Word Vector Representations by Subspace Alignment.

Yulia Tsvetkov, **Manaal Faruqui**, Wang Ling, Guillaume Lample and Chris Dyer.

Proceedings of EMNLP 2015 (short).

Improving Vector Space Word Representations Using Multilingual Correlation.

Manaal Faruqui and Chris Dyer.

Proceedings of EACL 2014 (long).

Augmenting English Adjective Senses with Supersenses.

Yulia Tsvetkov, Nathan Schneider, Dirk Hovy, Archana Bhatia, **Manaal Faruqui** and Chris Dyer.

Proceedings of LREC 2014 (long).

An Information Theoretic Approach to Bilingual Word Clustering.

Manaal Faruqui and Chris Dyer.

Proceedings of ACL 2013 (short).

Towards a model of formal and informal address in English.

Manaal Faruqui and Sebastian Padó.

Proceedings of EACL 2012 (long).

Handling OOV words in Indian-language-English CLIR.

Parin Chheda, **Manaal Faruqui** and Pabitra Mitra.

Proceedings of ECIR 2012 (short).

“I thou thee, thou traitor”: Predicting Formal vs. Informal Address in English Literature.

Manaal Faruqui and Sebastian Padó.

Proceedings of ACL 2011 (short).

Acquiring Positive Entailment Pairs Across Languages & Domains: A data analysis.

Manaal Faruqui and Sebastian Padó.

Proceedings of IWCS 2011 (long).

Training and Evaluating a German Named Entity Recognizer with Semantic Generalization.

Manaal Faruqui and Sebastian Padó.

Proceedings KONVENS 2010 (short).

Proceedings of the Representation Evaluation Workshop at ACL 2016.

Correlation-based Intrinsic Evaluation of Word Vector Representations.

Yulia Tsvetkov, **Manaal Faruqui** and Chris Dyer.

Proceedings of the Representation Evaluation Workshop at ACL 2016.

Community Evaluation and Exchange of Word Vectors at wordvectors.org

Manaal Faruqui and Chris Dyer.

Proceedings of ACL Demo Session 2014 (short).

A Framework for (Under)specifying Dependency Syntax without Overloading Annotators.

Nathan Schneider, Brendan O'Connor, Naomi Saphra, David Bamman, **Manaal Faruqui**, Jason Baldridge, Noah A. Smith and Chris Dyer.

Proceedings of the Linguistic Annotation Workshop at ACL 2013.

Identifying the L1 of non-native writers: the CMU-Haifa system.

Yulia Tsvetkov, Naama Twitto, Nathan Schneider, Noam Ordan, **Manaal Faruqui**, Victor Chahuneau, Shuly Wintner and Chris Dyer.

Proceedings of the Workshop on NLP for Building Educational Applications at NAACL 2013.

Soundex-based Translation Correction in Urdu–English CLIR.

Manaal Faruqui, Prasenjit Majumder and Sebastian Padó.

Proceedings of Workshop on Cross Lingual Information Access at IJCNLP 2011.

INTERNSHIPS

Google Research, London, UK

May – Aug, 2015

Supervisor: Dr. Ryan McDonald

Multilingual Morpho-Syntactic Lexicon Generation

Google Research, New York, USA

June – Aug, 2014

Supervisor: Dr. Shankar Kumar

Multilingual Relation Extraction

Yahoo! labs, Bangalore, India

May – July, 2011

Supervisor: Dr. Narayan Bhamidipati

Personalized Advertisement Search

University of Stuttgart, Stuttgart, Germany

May – July, 2010

Supervisor: Prof. Sebastian Padó

German Named Entity Recognition, Textual Entailment

Simon Fraser University, Vancouver, Canada

May – July, 2009

Supervisor: Prof. Anoop Sarkar

Model Adaptation in Statistical Machine Translation

TEACHING EXPERIENCE

Carnegie Mellon University

Teaching Assistant

Spring, 2016

Instructors: Prof. Chris Dyer

Machine Translation 11-731, Graduate level course

Carnegie Mellon University

Teaching Assistant

Spring, 2014

Instructors: Prof. Noah Smith & Prof. Chris Dyer

Natural Language Processing 11-411, Undergraduate level course

Carnegie Mellon University

Teaching Assistant

Fall, 2014

Instructors: Prof. Noah Smith

Advanced Natural Language Processing Seminar 11-713, Graduate level course

SERVICE

Editorial Board: Computational Linguistics Journal, 2018-2020.

Program Chair:

SEM 2020: Joint Conference on Lexical and Computational Semantics

Tutorial:

2017: Tutorial on Cross-lingual word representations at EMNLP

Workshop Organizer:

2019: Workshop on Typology in NLP at ACL

2018: Workshop on Subword and Character-level models in NLP at NAACL

2017: Workshop on Subword and Character-level models in NLP at EMNLP

2016: Workshop on Multilingual and Cross-lingual Methods in NLP at NAACL

Area Chair:

2021: EACL

2020: ICLR, EMNLP

2019: ACL, EMNLP, CoNLL

2017: ACL

Session Chair:

2016: Word Embeddings, NAACL

2014: Semantics and Discourse, EACL

Journal Reviewing:

2018: Transactions of ACL, Computational Linguistics

2017: Transactions of ACL, Computational Linguistics

2016: Computational Linguistics, TALLIP

Conference reviewing:

2018: NAACL, EMNLP

2017: ACL, EMNLP

2016: NAACL, ACL, ICML, CoNLL, ICLR

2015: EMNLP, NAACL, *SEM

2014: ICML, ACL, EACL, CoNLL

2013: NAACL, CoNLL

2012: EACL

TALKS

Invited Talks:

11/20: Workshop on Noisy User-generated Text, EMNLP 2020.

07/19: South-east Asian Machine Learning Summer School 2019, Jakarta, Indonesia.

09/18: Understanding Structure in Language through Wikipedia Edits. University of Helsinki.

08/16: Inducing Morpho-syntactic Lexicons & Morphological Inflections. Ohio State University.

07/16: Beyond the Distributional Hypothesis. University of Tokyo.

03/16: Beyond the Distributional Hypothesis. IBM Research, Yorktown Hts.

03/16: Beyond the Distributional Hypothesis. Bloomberg, New York City.

03/16: Beyond the Distributional Hypothesis. Google, New York City.

03/16: Beyond the Distributional Hypothesis. Microsoft Research, Seattle.

03/16: Beyond the Distributional Hypothesis. Allen Institute for AI, Seattle.
08/15: Improving and Better Understanding Word Vectors. University of Stuttgart.
08/15: Improving and Better Understanding Word Vectors. University College London.
07/15: Improving and Better Understanding Word Vectors. University of Edinburgh.
06/15: Improving and Better Understanding Word Vectors. University of Copenhagen.
06/15: Improving and Better Understanding Word Vectors. Cambridge University.
01/13: Machine Learning for NLP: An Introduction. VIT Chennai, India.

Conference Talks:

08/16: Generating Morpho-syntactic Lexicons. ACL in Berlin.
06/16: Morphological Inflection Generation. NAACL in San Diego.
07/15: Sparse Overcomplete Word Vector Representations. ACL in Beijing.
06/15: Retrofitting Word Vectors to Semantic Lexicons. NAACL in Denver.
04/14: Improving Word Vectors Using Multilingual Correlation. EACL in Gothenburg.
08/13: An Information Theoretic Approach to Bilingual Word clustering. ACL in Sofia.

At CMU:

10/15: Graph-based Models for Lexical Semantics. Machine Learning Lunch.
03/14: Lexical Semantics. A lecture in the undergraduate NLP course (11-411).
08/13: Multilinguality to the Rescue. LTI Students' Research Symposium.
08/12: Towards a model of formal and informal address in English. LTI Students' Research Symposium. Won the **Best Presentation Award**.

LANGUAGES

C++, Python, Native speaker of Hindi, Proficient in English.