

# Claire Cardie

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## Research Interests

Natural language processing

## Education

1994	<b>University of Massachusetts</b> Ph.D., Computer Science Thesis title: "Domain-Specific Knowledge Acquisition for Conceptual Sentence Analysis", supervised by Professor Wendy Lehnert	Amherst, MA
1989	<b>University of Massachusetts</b> M.S., Computer Science	Amherst, MA
1982	<b>Yale University</b> B.S., Computer Science	New Haven, CT

## Professional Experience

2006-pres	<b>Cornell University</b> <i>Professor, Department of Computer Science</i>	Ithaca, NY
2010-pres	<b>Cornell University</b> <i>Professor, Department of Information Science</i>	Ithaca, NY
2010-2011	<b>Cornell University</b> <i>Charles and Barbara Weiss Chair, Information Science</i>	Ithaca, NY
2007-2015	<b>Appinions</b> <i>Co-Founder and Chief Scientist</i>	Manhattan, NY
2005-2010	<b>Cornell University</b> <i>Charles and Barbara Weiss Director, Information Science</i>	Ithaca, NY
2004-2005	<b>Cornell University</b> <i>Co-director, Information Science</i>	Ithaca, NY

2000–2006	<b>Cornell University</b> <i>Associate Professor, Department of Computer Science</i>	Ithaca, NY
1994–2000	<b>Cornell University</b> <i>Assistant Professor, Department of Computer Science</i>	Ithaca, NY
1987–1994	<b>University of Massachusetts</b> <i>Research Assistant to Professor Wendy Lehnert</i> Natural Language Processing Lab, Department of Computer Science	Amherst, MA
1991–1992	<b>Smith College</b> <i>Visiting Lecturer, Department of Computer Science</i>	Northampton, MA
1986–1987	<b>Decision Sciences Consortium</b> <i>Artificial Intelligence Programmer</i>	Falls Church, VA
1985–1986	<b>Smart Systems Technology</b> <i>Artificial Intelligence Programmer, Course Coordinator and Instructor</i>	Falls Church, VA
1982–1985	<b>Intermetrics, Inc.</b> <i>Programmer, Language Systems Division</i>	Cambridge, MA

### **Awards and Honors**

Elected a *Fellow of the Association for Computational Linguistics*, 2015. The ACL Fellows program recognizes ACL members whose contributions to the field have been most extraordinary. Elected for “foundational contributions to co-reference resolution, information and opinion extraction, and to machine learning methods in natural language processing”.

U.S. Patent pending: *System and Methods for Automatically Detecting Deceptive Content*, U.S. Application No. 61548,865

U.S. Patent 8,280,885: *System and Method for Automatically Summarizing Fine-Grained Opinions in Digital Text*, awarded 02 October 2012

*Outstanding Achievement and Advocacy Award in the area of Education* “for her key role in integrating computing and information science into education, research, and scholarship in engineering, the social sciences, arts and humanities.” Department of Computer Science, University of Massachusetts Amherst, May 2012

Founding Chair, Information Science Department, Cornell University, *Charles and Barbara Weiss Chair*, 2010–2011

*Leading Practices Award, White House Open Government Initiative, Cornell eRulemaking Initiative (CeRI), for RegulationRoom.org*, 2010

*Flagship Initiative, The U.S. Department of Transportation, for CeRI's RegulationRoom.org, 2010*

*Inductee, Athletic Hall of Fame, Archbishop Wood High School, Warminster, PA (field hockey, track and field, softball, basketball), 2004*

*Xerox Foundation Gift, 2004–2005, 2005–2006*

*First Charles and Barbara Weiss Director of Information Science, Cornell University, 2005–2009*

*Program co-chair, COLING / ACL 2006, The Joint 21st International Conference on Computational Linguistics and 44th Annual Meeting of the Association for Computational Linguistics, with Pierre Isabelle, 2006*

*Program chair, Fourth International Conference on Computational Natural Language Learning (CoNLL) and Second Learning Language in Logic Workshop, with Walter Daelemans, Claire Ndellec and Erik Tjong Kim Sang, 2000*

*National Science Foundation Faculty Early CAREER Development Award, 1996–2000*

*Program chair, Second Conference on Empirical Methods in Natural Language Processing (EMNLP), with Ralph Weischedel, 1997*

*Ralph S. Watts College of Engineering Excellence in Teaching Award, Cornell University, 1996*

*Lilly Teaching Fellow, Cornell University, 1996–1997*

*Best Written Paper Award, Ninth National Conference on Artificial Intelligence, Honorable Mention, 1991*

*Graduate Fellow, University of Massachusetts, 1993–1994*

*Massachusetts Regents Fellowship, University of Massachusetts, 1992–1993*

*And many years ago...*

*Captain and All-Ivy, Yale University Field Hockey Team*

## Current Longer-term Board and Committee Memberships

Chief Scientist, Appinions (formerly Jodange), 2007–2015

Advisory Board Member, Context Relevant, 2012–present

Editorial Board member, *Argument and Computation*, 2014–present

Reviewing Team member, *Transactions of the Association for Computational Linguistics (TACL)*, 2012–present

Steering Committee member, *SIGNLL*, Special Interest Group of the Association for Computational Linguistics for Natural Language Learning, which oversees the planning of the annual *Conference on Natural Language Learning (CoNLL)*, 2008–present

Executive Board member, *SIGDAT*, Special Interest Group of the Association for Computational Linguistics for Linguistic Data and Corpus-based approaches to NLP, which oversees the planning of the annual conference on *Empirical Methods for Natural Language Processing (EMNLP)*, 1997–present

Member, International Advisory Committee, *SIGNLL*, Special Interest Group of the Association for Computational Linguistics for Natural Language Learning, 2000–present

## Professional Activities

General Chair, *The 56th annual meeting of the Association for Computational Linguistics (ACL 2018)*

Invited Participant, Lorentz Workshop on *Language, Knowledge and People in Perspective*, Leiden, The Netherlands, May 2017

Member, Organizing Committee, *Text Analysis Conference (TAC)* performance evaluation on *Belief and Sentiment Slot-Filling*, 2016

Member, Best Paper Awards Committee, ACL 2016.

Member, Organizing Committee, *3rd Workshop on Argument Mining*, 2016

Invited Participant, Dagstuhl Seminar on *Natural Language Argumentation*, Dagstuhl, Germany, April 2016

Steering Committee member, NSF-funded Political Science - Informatics Network, 2012–2016

Editorial Board member, *Journal of Information Technology & Politics*, 2006–2015

Editorial Board member (elected), *Machine Learning*, 2004–2015

Invited Participant, First Facebook Summit on Natural Language Processing, Palo Alto, CA, October 2015

Invited Participant, Dagstuhl Seminar on *Debating Technologies*, Dagstuhl, Germany, December 2015

Chair, *2nd Workshop on Argumentation Mining*, held at NAACL 2015

Member, Best Paper and Best Student Paper Awards Committee, NAACL 2015.

Organizer (with Carmen Banea, Rada Mihalcea and Janyce Wiebe), *SemEval-2015* performance evaluation on *Multilingual Semantic Textual Similarity* in Spanish, 2015

Invited Participant, *Frontiers and Connections between Argumentation Theory and Natural Language Processing*, Bertinoro, Italy, July 2014

Member, Best Paper Judging Committee, EMNLP 2014.

Organizer, *Text Analysis Conference (TAC)* performance evaluation on *Knowledge Base Population Sentiment Slot-Filling (KBP-SSF)*, 2014

Organizer (with Noah Smith, Anne Washington and John Wilkerson), *NLP unshared task in PoliInformatics* on the financial crisis of 2007-2008, 2014. (Held as part of the *ACL 2014 Workshop on Language Technologies and Computational Social Science*)

Organizer (with Carmen Banea, Rada Mihalcea and Janyce Wiebe), *SemEval-2014* performance evaluation on *Multilingual Semantic Textual Similarity* in Spanish, 2014

Invited Participant, *NSF/ACM Social Computing Workshop*, Arlington, VA, October 2013

Co-Chair (with Jenny Preece), *NSF Social Computational Systems Doctoral Consortium*, June, 2012

Chair, AAI Conference Outreach Committee, 2009–2011

Member, IJCAI 2011 Advisory Board, 2010–2011

Councillor (elected), Association for the Advancement of Artificial Intelligence (AAAI), 2008–2011

*CRA-W Distinguished Professor*, NSF-sponsored CAPP-R (Cohort of Associate Professors Project), 2010

Invited Participant, *Workshop on Tracking, Transcribing, and Tagging Government: Building Digital Records for Computational Social Science*, Center for Advanced Study in the Behavioral Sciences (CASBS), Palo Alto, CA, June, 2010

Member, Conference Outreach Committee, AAI Executive Council, 2008–2010

Editor (with John Wilkerson), *Journal of Information Technology & Politics Special Volume: Text Annotation for Political Science*, 2008

Organizing Committee Member, Institute for Discrete Sciences *Workshop on Associating Semantics with Graphs*, Rutgers University, April 2007

Organizing Committee Member, *First North American Computational Linguistics Olympiad (NAMCLO)*, Ithaca site, Cornell University, March 2007

Editorial Board Member, *Computational Linguistics*, 2007–2009

Program co-chair, COLING/ACL 2006, The Joint 21st International Conference on Computational Linguistics and 44th Annual Meeting of the Association for Computational Linguistics, with Pierre Isabelle, 2006

Board Member (elected), Executive Committee of the Association for Computational Linguistics, 2006–2008

Round Table Member, Judiciary Hearing on Electronic Rulemaking, U.S. House of Representatives, November 2005

Participant, first Google Faculty Summit, 2005

Secretary (elected), North American Association for Computational Linguistics, 2000–2001, 2002–2003

Secretary (elected), SIGNLL, Association for Computational Linguistics special interest group on Natural Language Learning, 1999–2001

Program chair, *Fourth International Conference on Computational Natural Language Learning (CoNLL)* and *Second Learning Language in Logic Workshop*, with Walter Daelemans, Claire Ndellec and Erik Tjong Kim Sang, 2000

Program chair, *Second Conference on Empirical Methods in Natural Language Processing (EMNLP)*, with Ralph Weischedel, 1997

Editor, special issue of *Machine Learning* on Natural Language Learning, 11(1–3), with Ray Mooney, 1999

Action editor, *Journal of Machine Learning Research*, 2000–2007

Associate editor, *Journal of Artificial Intelligence Research*, 2005–2007

Chair (with Lynette Hirshman), Nominating committee, North American Association for Computational Linguistics, 2006

Nominating committee member, North American Association for Computational Linguistics, 2004–2006

Editorial board member, *Journal of Artificial Intelligence Research*, 2004–2005

Organizing committee member, *AAAI Spring Symposium on Exploring Attitude and Affect in Text: Theories and Applications*, 2004

Editorial board member, *Machine Learning*, 1999–2001

Member, DARPA/NSF Question and Answering Roadmap Committee, 2001

Member, DARPA/NSF Summarization Roadmap Committee, 2001

### **Program Committees and Area Chairships**

Workshop on Natural Language Processing Meets Journalism, IJCAI 2016

AAAA-17 (**senior program committee**)

Conference on Empirical Methods in Natural Language Processing (EMNLP 2016)

2nd Workshop on Computational Approaches to Deception Detection (CADD2016), to be held in conjunction with NAACL 2016

The 54th Annual Meeting of the Association for Computational Linguistics (ACL 2016)

Third Workshop on Argument Mining, to be held in conjunction with ACL 2016 in Berlin, 2016

16th workshop on Computational Models of Natural Argument (CMNA 2016)

15th Annual Conference of the North American Chapter of the Association for Computational Linguistics: Human Language Technologies (NAACL-HLT 2016)

Conference on Empirical Methods in Natural Language Processing (EMNLP 2015)

Conference on Natural Language Learning (CoNLL 2015)

15th Annual Conference of the North American Chapter of the Association for Computational Linguistics: Human Language Technologies (NAACL-HLT 2016)

Nineteenth Conference on Natural Language Learning, CoNLL 2015

NAACL HLT Student Research Workshop, 2015

ACL 2015 Workshop on Noisy User-generated Text, W-NUT 2015

Twenty-Ninth AAAI Conference on Artificial Intelligence, AAAI-15

ACL Workshop on Language Technologies and Computational Social Science, Baltimore, Maryland, 2014

The 23rd World Wide Web Conference, WWW 2014

The 2013 Conference on Empirical Methods on Natural Language Processing, EMNLP 2013

51st Annual Meeting of the Association for Computational Linguistics (ACL), (**area chair** for Sentiment Analysis, Opinion Mining and Text Classification, with Rada Mihalcea), 2013

Seventeenth Conference on Natural Language Learning, CoNLL 2013

22nd International Conference on the World Wide Web (WWW), 2013 (**area chair** for Content Analysis, with Evgeniy Gabrilovich)

2013 Conference of the North American Chapter of the Association for Computational Linguistics: Human Language Technologies (NAACL HLT)

50th Annual Meeting of the Association for Computational Linguistics (ACL), 2012

13th Conference of the European Chapter of the Association for Computational Linguistics (EACL), 2012

2012 Conference of the North American Chapter of the Association for Computational Linguistics: Human Language Technologies (NAACL HLT)

2011 Conference on Empirical Methods in Natural Language Processing (EMNLP)

Conference on Computational Natural Language Learning (CoNLL) 2011 Shared Task

Workshop on Text Summarization (Canadian AI 2011)

Models of Scientific Discourse Annotation (MSDA2011)

22nd International Joint Conference on Artificial Intelligence (IJCAI), 2011

49th Annual Meeting of the Association for Computational Linguistics: Human Language Technologies (ACL HLT), 2011

2010 Conference on Empirical Methods in Natural Language Processing (EMNLP)

NAACL HLT 2010 Workshop on Active Learning for Natural Language

48th Annual Meeting of the Association for Computational Linguistics (ACL), 2010 **(area chair)**

International Conference on Weblogs and Social Media (ICWSM), 2010 **(area chair)**

23rd Pacific Asia Conference on Language, Information and Computation, 2010

Conference on Information and Knowledge Management (CIKM) Workshop on Topic-Sentiment Analysis, 2009

Discourse Anaphora and Anaphor Resolution Colloquia (DAARC 2009), 2009

Thirteenth Conference on Computational Natural Language Learning (CoNLL), 2009

Joint Conference of the 47th Annual Meeting of the Association for Computational Linguistics and the 4th International Joint Conference on Natural Language Processing of the Asian Federation of Natural Language Processing (ACL-IJCNLP), 2009

International Conference on Weblogs and Social Media (ICWSM), 2009

EACL Workshop on Language Technology and Resources for Cultural Heritage, Social Sciences, Humanities, and Education (LaTeCH-SHELT&R), 2009

NAACL HLT Student Research Workshop, 2009

24th National Conference on Artificial Intelligence (AAAI-2007) **(senior program committee)**, 2007

International Conference on Weblogs and Social Media (ICWSM), 2007

Sentiment and Subjectivity in Text, Workshop at the Annual Meeting of the Association of Computational Linguistics, 2006

Computational Approaches to Analyzing Weblogs, AAAI Spring Symposium, 2006

Human Language Technology Conference/Conference on Empirical Methods in Natural Language Processing (HLT-EMNLP 2005), 2005

Ninth International Conference on Computational Natural Language Learning (CoNLL), 2005



42nd Annual Meeting of the Association for Computational Linguistics (ACL-04) (**area chair**), 2004

Eighth International Conference on Computational Natural Language Learning (CoNLL), 2004

Conference on Empirical Methods in Natural Language Processing (EMNLP), 2004

Tenth ACM SIGKDD International Conference on Knowledge Discovery and Data Mining (KDD), 2004

ACL-2004 Workshop on Reference Resolution and Its Applications, 2004

Twentieth International Conference on Machine Learning (ICML), 2003

26th Annual International ACM SIGIR Conference, 2003

Conference on Empirical Methods in Natural Language Processing (EMNLP), 2003

IEEE International Conference on Data Mining (ICDM), 2003

Seventh International Conference on Computational Natural Language Learning (CoNLL), 2003

International Symposium on Reference Resolution and Its Applications to Question Answering and Summarization, 2003

Sixth International Conference on Computational Natural Language Learning (CoNLL), 2002

Mining Answers from Texts and Knowledge Bases, AAAI Spring Symposium, 2002

24th Annual International ACM SIGIR Conference (**area chair**), 2001

Eighteenth International Conference on Machine Learning (ICML), 2001

Fifth International Conference on Computational Natural Language Learning (CoNLL), 2001

First International Conference on Knowledge Capture (K-CAP), 2001

Seventeenth International Conference on Machine Learning (ICML) (**area chair**), 2000

First Meeting of the North American Chapter of the Association for Computational Linguistics (NAACL), 2000

Fourth International Conference on Computational Natural Language Learning (CoNLL), 2000

Question-Answering Session, 38th Annual Meeting of the Association for Computational Linguistics, 2000

Sixteenth International Conference on Machine Learning (ICML), 1999

Topic Detection Session, 37th Annual Meeting of the Association for Computational Linguistics, 1999

Third International Conference on Computational Natural Language Learning (CoNLL), 1999

Fifteenth National Conference on Artificial Intelligence (AAAI), 1998

36th Annual Meeting of the Association for Computational Linguistics and 17th International Conference on Computational Linguistics (ACL-COLING), 1998  
Fifteenth International Conference on Machine Learning (ICML), 1998  
Sixth Workshop on Very Large Corpora (WVLC), 1998  
AAAI-98 Workshop on Case-Based Reasoning Integrations, 1998  
Fourth International Colloquium on Grammatical Inference (CGI), 1998  
Third International Conference on New Methods in Language Processing (NeMLaP), 1998  
Second International Conference on Computational Natural Language Learning (CoNLL), 1998  
Fourteenth National Conference on Artificial Intelligence (AAAI), 1997  
Fourteenth International Conference on Machine Learning (ICML), 1997  
34th Annual Meeting of the Association for Computational Linguistics (ACL), 1996  
Thirteenth National Conference on Artificial Intelligence (AAAI), 1996  
Second International Colloquium on Grammatical Inference (ICGI), 1996  
Conference on Empirical Methods in Natural Language Processing (EMNLP), 1996  
International Conference on New Methods in Natural Language Processing (NeMLaP), 1996  
Twelfth International Conference on Machine Learning (ICML), 1995

### **Reviewer**

ACM SIGCHI Conference on Human Factors in Computing Systems, 2013  
24th International Conference on Computational Linguistics, 2012  
NSF Social Computational Systems (SoCS) Doctoral Consortium, 2012  
Human Language Technologies: The 2010 Annual Conference of the North American Chapter of the Association for Computational Linguistics (HLT-NAACL), 2010  
Human Language Technologies: The 2009 Annual Conference of the North American Chapter of the Association for Computational Linguistics (HLT-NAACL), 2009  
Twentieth International Conference on Computational Linguistics (COLING-04), 2004  
41st Annual Meeting of the Association for Computational Linguistics (ACL), 2003  
Seventeenth Annual Conference on Neural Information Processing Systems (NIPS), 2003  
17th International Joint Conference on Artificial Intelligence (IJCAI), 2001  
39th Annual Meeting of the Association for Computational Linguistics (ACL), 2001  
37th Annual Meeting of the Association for Computational Linguistics (ACL), 1999

### **Tutorials**

Symbolic Machine Learning for Natural Language Processing, *37th Annual Meeting of the Association for Computational Linguistics*, with Ray Mooney, 1999

### **Journal Referee (recent)**

Computational Linguistics; Journal of Artificial Intelligence Research (JAIR)

### **Educational Reviews**

Williams College, Department of Computer Science, February 2014

### **Funding Agency Reviewing**

*National Science Foundation Review Panels*

CISE: 2009, 2012, 2014

Human-Computer Interaction (formerly Interactive Systems): 2003, 2001, 2000, 1999, 1998, 1996

Knowledge and Cognitive Systems (IRI): 2000

Knowledge Models and Cognitive Systems (IRI): 1995

*National Science Foundation Proposal Reviews*

CISE: 2008

CRI: 2008

Knowledge and Distributed Intelligence Program: 1999

Database Activities in the Biological Sciences (Special Projects Program): 1997

*Hercules Foundation*, Large-Scale Research Infrastructure Program, Belgium, 2008

*State of Indiana 21st Century Fund* proposals, 2007

*Natural Sciences and Engineering Research Council of Canada (NSERC) Proposal Reviews*

Information, Communication, and Manufacturing Division: 2002

*Swiss Natural Science Foundation Proposal Reviews*

Computer Science / AI Division: 2002

*ARO Proposal Reviews*

Mathematical and Computer Sciences Division: 1998

### **Software, Corpora and Datasets**

The Reconcile Research Platform for Noun Phrase Coreference Resolution  
Released, April 2010.

OpQA Opinion Question-Answering Corpus.  
Part of the MPQA corpus.

### **Publications**

#### **Journal Articles**

Using Argument Structure to Interpret Online Debate.  
K. Budzynska, J. Lawrence, B. Konat, J. Park, C. Cardie, C. Reed.  
*ACM Transactions on Internet Technology*  
2017.

Physics-Inspired Neural Networks (Pi-NN) for Efficient Device Compact Modeling.  
Mingda Li, Ozan Irsoy, Claire Cardie, Huili Grace Xing.  
*IEEE Journal on Exploratory Solid-State Computational Devices and Circuits*  
44–49, December, 2016.

A Survey on Assessment and Ranking Methodologies for User-Generated Content on the Web.  
Elaheh Momeni, Claire Cardie and Nicholas Diakopoulos.  
*ACM Computing Surveys (CSUR)*,  
48:3, February 2016.

A Hierarchical Distance-dependent Hierarchical Bayesian Model for Event Coreference Resolution.  
Bishan Yang, Claire Cardie and Peter Frazier.  
*Transactions of the Association for Computational Linguistics*, Vol 3:517–528, 2015.

Joint Modeling of Opinion Expression Extraction and Attribute Classification.  
Bishan Yang and Claire Cardie.  
*Transactions of the Association for Computational Linguistics (TACL)*, 2:505–516, 2014.

Book Review: Sentiment Analysis and Opinion Mining by Bing Liu.  
Claire Cardie.  
*Computational Linguistics*, 40:2:511–513, 2014.

Rulemaking 2.0.  
Cynthia R. Farina, Mary Newhart, Claire Cardie, and Dan Cosley.  
*University of Miami Law Review*, Vol. 65, No. 2., 2011.

Rulemaking in 140 Characters or Less: Social Networking and Public Participation in Rulemaking.  
Cynthia R. Farina, Mary Newhart, Paul Miller, Claire Cardie, Dan Cosley and Rebecca Vernon.  
*Pace Law Review*, Volume 31, Issue 1 *Social Networking and the Law*, Article 8, 2011.

Guest Editors' Introduction: Text Annotation for Political Science Research.  
Claire Cardie and John Wilkerson.  
*Journal of Information Technology & Politics*, 5:1, 2008.

Annotating Expressions of Opinions and Emotions in Language.  
Janyce Wiebe, Theresa Wilson, Claire Cardie.  
*Language Resources and Evaluation* formerly *Computers and the Humanities*, 39:2-3, 165–210, 2005.

A Cognitive Bias Approach to Feature Selection and Weighting for Case-Based Learners.

Claire Cardie.

*Machine Learning*, 41, 81–116, 2000.

Using Clustering and SuperConcepts within SMART: TREC 6.

C. Buckley, M. Mitra, J. Walz, and C. Cardie.

*Information Processing and Management*, 36(1), 109–131, 2000.

Integrating Case-Based Learning and Cognitive Biases for Machine Learning of Natural Language.

Claire Cardie.

*Journal of Experimental and Theoretical Artificial Intelligence*, 11, 297–337, 1999.

Guest Editors' Introduction: Machine Learning and Natural Language.

Claire Cardie and Raymond Mooney.

*Machine Learning*, 11:(1–3), 1–5, 1999.

Empirical Methods in Information Extraction.

Claire Cardie.

*AI Magazine*, 18(4), 65–79, 1997. (invited survey)

Evaluating an Information Extraction System.

W. Lehnert, C. Cardie, D. Fisher, J. McCarthy, E. Riloff, and S. Soderland.

*Journal of Integrated Computer-Aided Engineering*, 1(6), 1994.

## Ph.D. Thesis

Domain-Specific Knowledge Acquisition for Conceptual Sentence Analysis.

Claire Cardie.

Available as University of Massachusetts, CMPSCI Technical Report 94–74, 1994.

## Book Chapters

Opinion Mining and Sentiment Analysis.

Claire Cardie and Eric Breck.

In *Oxford Handbook of Computational Linguistics (Second Revised Edition)*, Ruslan Mitkov (Ed.), Oxford University Press, 2017.

Evaluating an Opinion Annotation Scheme Using a New Multi-Perspective Question and Answer Corpus.

Veselin Stoyanov, Claire Cardie, Janyce Wiebe, and Diane Litman.

In *Computing Attitude and Affect in Text: Theory and Practice*, James G. Shanahan, Yan Qu, Janyce Wiebe (Eds.), Springer, 2005.

Low-Level Annotations and Summary Representations of Opinions for Multi-Perspective Question Answering.

Claire Cardie, Janyce Wiebe, Theresa Wilson, and Diane Litman.  
In *New Directions in Question Answering*, Mark Maybury (editor), AAAI Press/MIT Press, 2004.

Embedded Machine Learning Systems for Natural Language Processing: A General Framework.

Claire Cardie.

In *Connectionist, Statistical and Symbolic Approaches to Learning for Natural Language Processing*, S. Wermter, E. Riloff, and G. Scheler, eds., 315–328, Springer Verlag, Berlin, 1996.

### Refereed Conferences and Performance Evaluation Workshop Publications

The 2016 TAC KBP BeSt Evaluation.

Owen Rambow, Meenakshi Alagesan, Michael Arrigo, Daniel Bauer, Claire Cardie, Adam Dalton, Hoa Dang, Mona Diab, Greg Dubbin, Jason Duncan, Gregorios Katsios, Axinia Radeva, Tomek Strzalkowski, Jennifer Tracey.

*Proceedings of the 2016 Text Analysis Conference, TAC 2016.*

Investigating LSTMs for Joint Extraction of Opinion Entities and Relations.

Arzoo Katiyar and Claire Cardie.

*Proceedings of the 54th Annual Meeting of the Association for Computational Linguistics (Volume 1: Long Papers), ACL 2016.*

Modeling Compositionality with Multiplicative Recurrent Neural Networks.

Ozan Irsoy and Claire Cardie.

*International Conference on Learning Representations (ICLR), 2015.*

Socially-Informed Timeline Generation for Complex Events.

Lu Wang, Claire Cardie and Galen Marchetti.

*2015 Conference of the North American Chapter of the Association for Computational Linguistics Human Language Technologies (NAACL HLT 2015).*

Toward Machine-assisted Participation in eRulemaking: An Argumentation Model of Evaluability.

Joonsuk Park, Cheryl Blake and Claire Cardie. *Proceedings of the 15th International Conference on Artificial Intelligence and Law (ICAIL), 2015.*

SemEval-2015 Task 2: Semantic Textual Similarity, English, Spanish and Pilot on Interpretability.

Eneko Agirre, Carmen Banea, Claire Cardie, Daniel Cer, Mona Diab, Aitor Gonzalez-Agirre, Weiwei Guo, Iigo Lopez-Gazpio, Montse Maritxalar, Rada Mihalcea, German Rigau, Larraitz Uria, Janyce Wiebe.

*Proceedings of the 9th International Workshop on Semantic Evaluation (SemEval 2015).*

Overview of the TAC 2014 Knowledge Base Population Evaluation: Sentiment Slot Filling

Claire Cardie, Carmen Banea, Rada Mihalcea and Janyce Wiebe.

*Text Analysis Conference (TAC), 2014.*

CornPittMich Sentiment Slot-Filling System at TAC 2014

Xilun Chen, Arzoo Katiyar, Xiaoan Yan, Lu Wang, Carmen Banea, Yoonjung Choi, Lingjia Deng, Claire Cardie, Rada Mihalcea and Janyce Wiebe.

*Text Analysis Conference (TAC)*, 2014.

Improving on Recall Errors for Coreference Resolution.

Bishan Yang and Claire Cardie.

*NIPS 2014 Workshop on Automated Knowledge Base Construction (AKBC)*, 2014.

Deep Recursive Neural Networks for Compositionality in Language.

Ozan İrsoy and Claire Cardie.

*Advances in Neural Information Processing Systems 27 (NIPS)*, 2096–2104, 2014.

Opinion Mining with Deep Recurrent Neural Networks.

Ozan Irsoy and Claire Cardie.

*Proceedings of the 2014 Conference on Empirical Methods in Natural Language Processing (EMNLP)*, 720–728, 2014.

Major Life Event Extraction from Twitter based on Congratulations/Condolences Speech Acts.

Jiwei Li, Alan Ritter, Claire Cardie and Eduard Hovy.

*Proceedings of the 2014 Conference on Empirical Methods in Natural Language Processing (EMNLP)*, 1997–2007, 2014.

Query-Focused Opinion Summarization for User-Generated Content.

Lu Wang, Hema Raghavan, Vittorio Castelli and Claire Cardie.

*Proceedings of COLING 2014, the 25th International Conference on Computational Linguistics: Technical Papers*, 1660–1669, 2014.

SemEval-2014 Task 10: Multilingual Semantic Textual Similarity.

Eneko Agirre, Carmen Banea, Claire Cardie, Daniel Cer, Mona Diab, Aitor Gonzalez-Agirre, Weiwei Guo, Rada Mihalcea, German Rigau, Janyce Wiebe.

*Proceedings of the 8th International Workshop on Semantic Evaluation (SemEval 2014)*, 2014.

SimCompass: Using Deep Learning Word Embeddings to Assess Cross-level Similarity.

Carmen Banea, Di Chen, Rada Mihalcea, Claire Cardie and Janyce Wiebe.

*Proceedings of the 8th International Workshop on Semantic Evaluation (SemEval 2014)*, 2014.

AsseSS: A Tool for Assessing the Support Structures of Arguments in User Comments.

Joonsuk Park and Claire Cardie.

*Proceedings of the 5th International Conference on Computational Models of Argument (COMMA '14)*, demo, 2014.

Improving Agreement and Disagreement Identification in Online Discussions with A Socially-Tuned Sentiment Lexicon.

Lu Wang and Claire Cardie.

*Proceedings of the 5th Workshop on Computational Approaches to Subjectivity, Sentiment and Social Media Analysis (WASSA 2014)*, 97–106, ACL 2014.

Overview of the 2014 NLP Unshared Task in PoliInformatics.

Noah Smith, Claire Cardie, Anne Washington and John Wilkerson.

*Proceedings of the ACL 2014 Workshop on Language Technologies and Computational Social Science*, 5–7, 2014.

Website: [sites.google.com/site/unsharedtask2014/](http://sites.google.com/site/unsharedtask2014/)

Identifying Appropriate Support for Statements in Online User Comments.

Joonsuk Park and Claire Cardie.

*Proceedings of the First Workshop on Argumentation Mining*, 29–38, ACL 2014.

The Enrollment Effect: A Study of Amazon’s Vine Program.

Dinesh Puranam and Claire Cardie.

*Proceedings of the Joint Workshop on Social Dynamics and Personal Attributes in Social Media* 17–27, ACL 2014.

A Piece of My Mind: A Sentiment Analysis Approach for Online Dispute Detection.

Lu Wang and Claire Cardie.

*Proceedings of the 52nd Annual Meeting of the Association for Computational Linguistics (Volume 2: Short Papers)*, 93–99, ACL 2014.

Towards a General Rule for Identifying Deceptive Opinion Spam.

Jiwei Li, Myle Ott, Claire Cardie and Eduard Hovy.

*Proceedings of the 52nd Annual Meeting of the Association for Computational Linguistics (Volume 1: Long Papers)*, 1566–1576, ACL 2014.

Context-aware Learning for Sentence-level Sentiment with Posterior Regularization.

Bishan Yang and Claire Cardie.

*Proceedings of the 52nd Annual Meeting of the Association for Computational Linguistics (Volume 1: Long Papers)*, 25–35, ACL 2014.

Timeline Generation: Tracking Individuals on Twitter.

Jiwei Li and Claire Cardie.

*Proceedings of the 23rd International World Wide Web Conference (WWW 2014)*, 643–651, 2014.

Sentiment Analysis on Evolving Social Streams: How Self-Report Imbalances Can Help.

Pedro Calais Guerra, Wagner Meira Jr. and Claire Cardie.

*7th International ACM Conference on Web Search and Data Mining (WSDM 2014)*, 443–452, 2014.

The language of lies: A context constrained approach.

Hancock, J.T., Ott, M., Cardie, C., and Markowitz, D.

*International Communication Association 63rd Annual Conference*, London, UK. 2013.

Bidirectional Recursive Neural Networks for Token-Level Labeling with Structure.

Ozan Irsoy and Claire Cardie.

*NIPS Workshop on Deep Learning*, 2013.



CornPittMich Sentiment Slot-Filling System at TAC 2013

Carmen Banea, Yoonjung Choi, Lingjia Deng, Ozan Irsoy, Detian Shi, Claire Cardie, Rada Mihalcea and Janyce Wiebe.

*Text Analysis Conference (TAC)*, 2013.

Identifying Manipulated Offerings on Review Portals.

Jiwei Li, Myle Ott and Claire Cardie.

*Proceedings of the 2013 Conference on Empirical Methods in Natural Language Processing, EMNLP 2013*.

Joint Inference for Fine-grained Opinion Extraction.

Bishan Yang and Claire Cardie.

*Proceedings of the 51st Annual Meeting of the Association for Computational Linguistics, ACL 2013*.

Domain-Independent Abstract Generation for Focused Meeting Summarization.

Lu Wang and Claire Cardie.

*Proceedings of the 51st Annual Meeting of the Association for Computational Linguistics, ACL 2013*.

A Sentence Compression Based Framework to Query-Focused Multi-Document Summarization.

Lu Wang, Claire Cardie, Hema Raghavan, Vittorio Castelli, Radu Florian.

*Proceedings of the 51st Annual Meeting of the Association for Computational Linguistics, ACL 2013*.

TopicSpam: a Topic-Model-Based Approach for Spam Detection.

Jiwei Li, Claire Cardie and Sujian Li.

*Proceedings of the 51st Annual Meeting of the Association for Computational Linguistics (Volume 2: Short Papers)*, ACL 2013.

Properties, Prediction, and Prevalence of Useful User-generated Comments for Descriptive Annotation of Social Media Objects.

Elaheh Momeni, Claire Cardie, and Myle Ott.

*International Conference on Weblogs and Social Media, ICWSM 2013*.

A Measure of Polarization on Social Media Networks Based on Community Boundaries.

Pedro H. Calais Guerra, Wagner Meira Jr., Claire Cardie, Robert Kleinberg.

*International Conference on Weblogs and Social Media, ICWSM 2013*.

Negative Deceptive Opinion Spam.

Myle Ott, Claire Cardie, and Jeffrey T. Hancock.

*Proceedings of the 2013 Conference of the North American Chapter of the Association for Computational Linguistics: Human Language Technologies (NAACL HLT)*, 2013.

CPN-CORE: A Text Semantic Similarity System Infused with Opinion Knowledge.

Carmen Banea, Yoonjung Choi, Lingjia Deng, Samer Hassan, Michael Mohler, Bishan

Yang, Rada Mihalcea, Claire Cardie, Jan Wiebe. *Proceedings of \*SEM 2013*, Atlanta, GA, USA. June 2013.

Extracting Opinion Expressions with semi-Markov Conditional Random Fields.

Bishan Yang and Claire Cardie.

*Proceedings of EMNLP-CoNLL 2012: Conference on Empirical Methods in Natural Language Processing and Computational Natural Language Learning*, 2012.

Focused Meeting Summarization via Unsupervised Relation Extraction.

Lu Wang and Claire Cardie.

*Proceedings of the 13th Annual SIGdial Meeting on Discourse and Dialogue (SIGDIAL)*, 2012.

**(Best Paper Nomination)**

Unsupervised Topic Modeling Approaches to Decision Summarization in Spoken Meetings.

Lu Wang and Claire Cardie.

*Proceedings of the 13th Annual SIGdial Meeting on Discourse and Dialogue (SIGDIAL)*, 2012.

Improving Implicit Discourse Relation Recognition Through Feature Set Optimization.

Joonsuk Park and Claire Cardie.

*Proceedings of the 13th Annual SIGdial Meeting on Discourse and Dialogue (SIGDIAL)*, 2012.

Facilitative Moderation for Online Participation in eRulemaking.

Joonsuk Park, Claire Cardie, Sally Klingel, Mary Newhart, and Jean-Joseph Vallb.

*Proceedings of the 13th Annual International Conference on Digital Government Research (dg.o 2012)*, 2012.

In Search of a Gold Standard in Studies of Deception.

Stephanie Gokhman, Jeffrey T. Hancock, Poornima Prabhu, Myle Ott, and Claire Cardie.

*Proceedings of the EACL 2012 Workshop on Computational Approaches to Deception Detection*, 2012.

Estimating the Prevalence of Deception in Online Review Communities.

Myle Ott, Claire Cardie, Jeffrey T. Hancock.

*Proceedings of the 21st International World Wide Web Conference (WWW)*, 2012.

Multi-aspect Sentiment Analysis with Topic Models.

Bin Lu, Myle Ott, Claire Cardie, Benjamin Tsou.

*Proceedings of the ICDM 2011 Workshop on Sentiment Elicitation from Natural Text for Information Retrieval and Extraction (SENTIRE)*, 2011.

Automatically Creating General-Purpose Opinion Summaries from Text.

Veselin Stoyanov and Claire Cardie.

*Proceedings of the International Conference Recent Advances in Natural Language Processing 2011 (RANLP)*, 2011.

Joint Bilingual Sentiment Classification with Unlabeled Parallel Corpora.

Bin Lu, Chenhao Tan, Claire Cardie, and Benjamin K. Tsou.

*Proceedings of the 49th Annual Meeting of the Association for Computational Linguistics: Human Language Technologies (ACL HLT)*, 2011.

Finding Deceptive Opinion Spam by Any Stretch of the Imagination.

Myle Ott, Yejin Choi, Claire Cardie, and Jeffrey Hancock.

*Proceedings of the 49th Annual Meeting of the Association for Computational Linguistics: Human Language Technologies (ACL HLT)*, 2011.

Summarizing Decisions in Spoken Meetings.

Lu Wang and Claire Cardie.

*Proceedings of the ACL Workshop on Automatic Summarization for Different Genres, Media, and Languages*, Association for Computational Linguistics (ACL), 2011.

Compositional Matrix-Space Models for Sentiment Analysis.

Ainur Yessenalina and Claire Cardie.

*Proceedings of the 2011 Conference on Empirical Methods in Natural Language Processing (EMNLP)*, 2011.

Multi-level Structured Models for Document Sentiment Classification.

Ainur Yessenalina, Yisong Yue, and Claire Cardie.

*Proceedings of the 2010 Conference on Empirical Methods in Natural Language Processing (EMNLP)*, 2010.

Hierarchical Sequential Learning for Extracting Opinions and their Attributes.

Yejin Choi, and Claire Cardie.

*Proceedings of the 48th Annual Meeting of the Association for Computational Linguistics (ACL)*, 2010. short paper.

Automatically Generating Annotator Rationales to Improve Sentiment Classification.

Ainur Yessenalina, Yejin Choi, and Claire Cardie.

*Proceedings of the 48th Annual Meeting of the Association for Computational Linguistics (ACL)*, 2010. short paper.

Coreference Resolution with Reconcile.

Veselin Stoyanov, Claire Cardie, Nathan Gilbert, Ellen Riloff, David Butler and David Hysom.

*Proceedings of the 48th Annual Meeting of the Association for Computational Linguistics (ACL)*, 2010. short paper.

Reconcile: A Coreference Resolution Research Platform.

Veselin Stoyanov, Claire Cardie, Nathan Gilbert, Ellen Riloff, David Butler, David Hysom.

*Cornell University Technical Report*, <http://hdl.handle.net/1813/14919>, 2010.

Adapting a Polarity Lexicon Using Integer Linear Programming for Domain-Specific Sentiment Classification.

Yejin Choi and Claire Cardie.

*Conference on Empirical Methods in Natural Language Processing (EMNLP 2009)*, 2009.

Conundrums in Noun Phrase Coreference Resolution: Making Sense of the State-of-the-Art.

Veselin Stoyanov, Nathan Gilbert, Claire Cardie and Ellen Riloff.

*Joint Conference of the 47th Annual Meeting of the Association for Computational Linguistics and the 4th International Joint Conference on Natural Language Processing of the Asian Federation of Natural Language Processing (ACL-IJCNLP 2009)*, 2009.

Learning with Compositional Semantics as Structural Inference for Subsentential Sentiment Analysis.

Yejin Choi, Claire Cardie.

*Conference on Empirical Methods in Natural Language Processing (EMNLP)*. 2008.

The power of negative thinking: Exploiting Label Disagreement in the Min-cut Classification Framework.

Mohit Bansal, Claire Cardie and Lillian Lee.

*Conference on Computational Linguistics (COLING 2008): Companion volume: Posters*, 2008.

Topic Identification for Fine-Grained Opinion Analysis.

Veselin Stoyanov, Claire Cardie.

*Conference on Computational Linguistics (COLING 2008)*, 2008.

A Study in Rule-Specific Issue Categorization for e-Rulemaking.

Claire Cardie, Cynthia Farina, Adil Aijaz, Matt Rawding, Stephen Purpura.

*9th Annual International Conference on Digital Government Research*. Montreal, Canada, 2008.

Active Learning for e-Rulemaking: Public Comment Categorization.

Stephen Purpura, Claire Cardie, Jesse Simons.

*9th Annual International Conference on Digital Government Research*. Montreal, Canada, 2008.

Facilitating Issue Categorization & Analysis in Rulemaking.

Tom Bruce, Claire Cardie, Cynthia Farina, and Stephen Purpura.

*e-Government Workshop at the Ninth International Conference on Digital Government Research*. Montreal, Canada, 2008.

Annotating Topics of Opinions.

Veselin Stoyanov and Claire Cardie.

*Sixth International Conference on Language Resources and Evaluation (LREC 2008)*. Marrakech, Morocco, 2008.

An eRulemaking Corpus: Identifying Substantive Issues in Public Comments.

Claire Cardie, Cynthia Farina, Adil Aijaz, Matt Rawding, Stephen Purpura.

*Sixth International Conference on Language Resources and Evaluation (LREC 2008)*. Marrakech, Morocco, 2008.

Cornell System Description for the NTCIR-6 Opinion Task.

Eric Breck, Yejin Choi, Veselin Stoyanov, and Claire Cardie.

*The 6th NTCIR Workshop Meeting*. Tokyo, Japan, 2007.

Structured Local Training and Biased Potential Functions for Conditional Random Fields with Application to Coreference Resolution.

Yejin Choi and Claire Cardie.

*NAACL Human Language Technology Conference (NAACL-HLT)*, 2007.

Identifying Expressions of Opinion in Context.

Eric Breck, Yejin Choi, and Claire Cardie.

*Twentieth International Joint Conference on Artificial Intelligence (IJCAI)*, 2007.

Joint Extraction of Entities and Relations for Opinion Recognition.

Yejin Choi, Eric Breck, and Claire Cardie.

*Proceedings of Empirical Methods in Natural Language Processing (EMNLP)*, 2006.

Partially Supervised Coreference Resolution for Opinion Summarization through Structured Rule Learning.

Veselin Stoyanov and Claire Cardie.

*Proceedings of Empirical Methods in Natural Language Processing (EMNLP)*, 2006.

Toward Opinion Summarization: Linking the Sources.

Veselin Stoyanov and Claire Cardie.

*Workshop on Sentiment and Subjectivity in Text, COLING/ACL*, 2006.

Using Natural Language Processing to Improve E-rulemaking.

Claire Cardie, Cynthia Farina, Thomas Bruce, Erica Wagner.

*Proceedings of the 7th Annual International Conference on Digital Government Research*, 2006.

Better Inputs for Better Outcomes: Using the Interface to Improve e-Rulemaking.

Cynthia Farina, Claire Cardie, Thomas Bruce, Erica Wagner.

*Workshop on eRulemaking at the Crossroads, 7th Annual International Conference on Digital Government Research*, 2006.

Identifying Sources of Opinions with Conditional Random Fields and Extraction Patterns.

Yejin Choi, Claire Cardie, Ellen Riloff, and Siddharth Patwardhan.

*Human Language Technology Conference/Conference on Empirical Methods in Natural Language Processing (HLT-EMNLP 2005)*, 2005.

Multi-Perspective Question Answering Using the OpQA Corpus.

Ves Stoyanov, Claire Cardie, and Janyce Wiebe.

*Human Language Technology Conference/Conference on Empirical Methods in Natural Language Processing (HLT-EMNLP 2005)*, 2005.

Optimizing to Arbitrary NLP Metrics using Ensemble Selection.

Art Munson, Claire Cardie, and Rich Caruana.

*Human Language Technology Conference/Conference on Empirical Methods in Natural Language Processing (HLT-EMNLP 2005)*, 2005. (full paper with poster presentation)

Playing the Telephone Game: Determining the Hierarchical Structure of Perspective and Speech Expressions.

Eric Breck and Claire Cardie.

*Twentieth International Conference on Computational Linguistics (COLING-04)*, 2004.

Evaluating an Opinion Annotation Scheme Using a New Multi-Perspective Question and Answer Corpus.

Veselin Stoyanov, Claire Cardie, Janyce Wiebe, and Diane Litman.

*2004 AAAI Spring Symposium on Exploring Attitude and Affect in Text*, AAAI Press, 2004.

Weakly Supervised Natural Language Learning Without Redundant Views.

Vincent Ng and Claire Cardie.

*Human Language Technology Conference of the North American Chapter of the Association for Computational Linguistics (HLT-NAACL 2003)*, 173–180, Association for Computational Linguistics, 2003.

Bootstrapping Coreference Classifiers with Multiple Machine Learning Algorithms.

Vincent Ng and Claire Cardie.

*Proceedings of the 2003 Conference on Empirical Methods in Natural Language Processing (EMNLP-2003)*, Association for Computational Linguistics, 2003.

Combining Low-Level and Summary Representations of Opinions for Multi-Perspective Question Answering.

Claire Cardie, Janyce Wiebe, Theresa Wilson, and Diane Litman.

*2003 AAAI Spring Symposium on New Directions in Question Answering*, 20–27, AAAI Press, 2003.

Recognizing and Organizing Opinions Expressed in the World Press.

Janyce Wiebe, Eric Breck, Chris Buckley, Claire Cardie, Paul Davis, Bruce Fraser, Diane Litman, David Pierce, Ellen Riloff, Theresa Wilson, David Day, Mark Maybury.

*2003 AAAI Spring Symposium on New Directions in Question Answering*, 12–19, AAAI Press, 2003.

Improving Machine Learning Approaches to Coreference Resolution.

Vincent Ng and Claire Cardie.

*Proceedings of the 40th Annual Meeting of the Association for Computational Linguistics*, Association for Computational Linguistics, 2002.

Identifying Anaphoric and Non-Anaphoric Noun Phrases to Improve Coreference Resolution.

Vincent Ng and Claire Cardie.

*Proceedings of the 19th International Conference on Computational Linguistics (COLING-2002)*, 2002.

Combining Sample Selection and Error-Driven Pruning for Machine Learning of Coreference Rules.

Vincent Ng and Claire Cardie.

*Proceedings of the 2002 Conference on Empirical Methods in Natural Language Processing*, Association for Computational Linguistics, 2002.

Detecting Discrepancies in Numerical Estimates Using Multidocument Hypertext Summaries.

Michael White, Claire Cardie, Vincent Ng, and Daryl McCullough.

*Proceedings of the Second International Conference on Human Language Technology Research (HLT-02)*, 2002.

Selecting Sentences for Multidocument Summaries Using Randomized Local Search.

Michael White and Claire Cardie.

*ACL 2002 Workshop on Automatic Summarization*, 2002.

Limitations of Co-Training for Natural Language Learning from Large Datasets.

David Pierce and Claire Cardie.

*Proceedings of the 2001 Conference on Empirical Methods in Natural Language Processing (EMNLP-2001)*, Association for Computational Linguistics, 2001.

Constrained K-means Clustering with Background Knowledge.

Kiri Wagstaff, Claire Cardie, Seth Rogers, and Stefan Schroedl.

*Proceedings of the Eighteenth International Conference on Machine Learning*, Morgan Kaufmann, 2001.

Multi-document Summarization via Information Extraction.

Michael White, Tanya Korelsky; Claire Cardie, Vincent Ng, David Pierce, and Kiri Wagstaff.

*Proceedings of the First International Conference on Human Language Technology Research (HLT-01)*, 2001.

Detecting Discrepancies and Improving Intelligibility: Two Preliminary Evaluations of RIPTIDES.

Michael White, Claire Cardie, Vincent Ng, Kiri Wagstaff, and Daryl McCullough.

*2001 Document Understanding Conference (DUC-01)*, 2001.

User-Oriented Machine Learning Strategies for Information Extraction: Putting the Human Back in the Loop.

David Pierce and Claire Cardie.

*Working Notes of the IJCAI-2001 Workshop on Adaptive Text Extraction and Mining*, pages 80-81, 2001.

Clustering with Instance-Level Constraints.

Kiri Wagstaff and Claire Cardie.

*Proceedings of the Seventeenth International Conference on Machine Learning*, 1103–1110, Morgan Kaufmann, 2000.

Examining the Role of Statistical and Linguistic Knowledge Sources in a General-Knowledge Question-Answering System.

Claire Cardie, Vincent Ng, David Pierce, and Chris Buckley.

*Proceedings of the Sixth Applied Natural Language Processing Conference (ANLP-2000)*, 180–187, Association for Computational Linguistics / Morgan Kaufmann, 2000.

Towards Translingual Information Access Using Portable Information Extraction.  
M. White, C. Cardie, C. Han, N. Kim, B. Lavoie, M. Palmer, O. Rambow, J. Yoon.  
*Proceedings of the ANLP/NAACL Workshop on Embedded Machine Translation Systems*, 31–37, 2000.

The Smart/Empire TIPSTER IR System.  
C. Buckley, C. Cardie, S. Mardis, M. Mitra, D. Pierce, K. Wagstaff, and J. Walz.  
*TIPSTER Phase III Proceedings*, 107–121, Morgan Kaufmann, 1999.

Noun Phrase Coreference as Clustering.  
Claire Cardie and Kiri Wagstaff.  
*Proceedings of the Joint Conference on Empirical Methods in Natural Language Processing and Very Large Corpora*, 82–89, Association for Computational Linguistics, 1999.

Combining Error-Driven Pruning and Classification for Partial Parsing.  
Claire Cardie, Scott Mardis, and David Pierce.  
*Proceedings of the Sixteenth International Conference on Machine Learning*, 87–96, Morgan Kaufmann, 1999.

The Role of Lexicalization and Pruning for Base Noun Phrase Grammars.  
Claire Cardie and David Pierce.  
*Proceedings of the Sixteenth National Conference on Artificial Intelligence*, 423–430, AAAI Press / MIT Press, 1999.

Error-Driven Pruning of Treebank Grammars for Base Noun Phrase Identification.  
Claire Cardie and David Pierce.  
*Proceedings of the Annual Conference of the Association for Computational Linguistics and COLING-98*, 218–224, Association for Computational Linguistics, 1998.

SMART High Precision: TREC 7.  
Chris Buckley, Mandar Mitra, Janet Walz, and Claire Cardie.  
*Proceedings of the Seventh Text REtrieval Conference (TREC-7)*, NIST Special Publication 500–242, 285–298, 1998.

Using Clustering and SuperConcepts within SMART: TREC 6.  
Chris Buckley, Mandar Mitra, Janet Walz, and Claire Cardie.  
*Proceedings of the Sixth Text REtrieval Conference (TREC-6)*, NIST Special Publication 500–240, 107–124, 1998.

Improving Minority Class Prediction Using Case-Specific Feature Weights.  
Claire Cardie and Nicholas Howe.  
*Proceedings of the Fourteenth International Conference on Machine Learning*, 57–65, Morgan Kaufmann, 1997.

(Paper selected for presentation at a joint plenary session with the *Tenth Annual Conference on Computational Learning Theory (COLT 1997)*.)

Examining Locally Varying Weights for Nearest Neighbor Algorithms.  
Nicholas Howe and Claire Cardie.



*Proceedings of the Second International Conference on Case-Based Reasoning*, 455–466, Springer, 1997.

An Analysis of Statistical and Syntactic Phrases.

Mandar Mitra, Chris Buckley, Claire Cardie, and Amit Singhal.

*5TH RIAO Conference, Computer-Assisted Information Searching on the Internet*, 200–214, 1997.

Automating Feature Set Selection for Case-Based Learning of Linguistic Knowledge.

Claire Cardie.

*Proceedings of the Conference on Empirical Methods in Natural Language Processing*, 113–126, Association for Computational Linguistics, 1996.

Embedded Machine Learning Systems for Natural Language Processing: A General Framework.

Claire Cardie.

*Workshop on New Approaches to Learning for Natural Language Processing*, 14th International Joint Conference on Artificial Intelligence (IJCAI-95), 119–126, AAAI Press, 1995.

A very similar version also appeared as a book chapter.

A Case-Based Approach to Knowledge Acquisition for Domain-Specific Sentence Analysis.

Claire Cardie.

*Proceedings of the Eleventh National Conference on Artificial Intelligence*, 798–803, AAAI Press / MIT Press, 1993.

University of Massachusetts/Hughes: Description of the CIRCUS System as Used for MUC-5.

W. Lehnert, J. McCarthy, S. Soderland, E. Riloff, C. Cardie, J. Peterson, and F. Feng; C. Dolan, and S. Goldman.

*Proceedings of the Fifth Message Understanding Conference (MUC-5)*, 277–291, Morgan Kaufmann, 1993.

University of Massachusetts/Hughes: Description of the CIRCUS System as Used for TIPSTER Text Extraction.

W. Lehnert, J. McCarthy, S. Soderland, E. Riloff, C. Cardie, J. Peterson, and F. Feng; C. Dolan, and S. Goldman.

*Proceedings of the TIPSTER Text Program (Phase I)*, 241–256, Morgan Kaufmann, 1993.

Using Decision Trees to Improve Case-Based Learning.

Claire Cardie.

*Proceedings of the Tenth International Conference on Machine Learning*, 25–32, Morgan Kaufmann, 1993.

Corpus-Based Acquisition of Relative Pronoun Disambiguation Heuristics.

Claire Cardie.

*Proceedings of the 30th Annual Conference of the Association for Computational Linguistics*, 216–223, Association for Computational Linguistics, 1992.

Learning to Disambiguate Relative Pronouns.

Claire Cardie.

*Proceedings of the Tenth National Conference on Artificial Intelligence*, 38–43, AAAI Press / MIT Press, 1992.

Using Cognitive Biases to Guide Feature Set Selection.

Claire Cardie.

*Proceedings of the Fourteenth Annual Conference of the Cognitive Science Society*, 743–748, Lawrence Erlbaum Associates, 1992. A very similar version of the paper also appeared in *Working Notes of the AAAI Workshop on Constraining Learning with Prior Knowledge*, 11–18, AAAI Press, 1992.

University of Massachusetts: Description of the CIRCUS System as Used for MUC-4.

W. Lehnert, C. Cardie, D. Fisher, J. McCarthy, E. Riloff, and S. Soderland.

*Proceedings of the Fourth Message Understanding Conference (MUC-4)*, 282–288, Morgan Kaufmann, 1992.

University of Massachusetts: MUC-4 Test Results and Analysis.

W. Lehnert, C. Cardie, D. Fisher, J. McCarthy, E. Riloff, and S. Soderland.

*Proceedings of the Fourth Message Understanding Conference (MUC-4)*, 151–163, Morgan Kaufmann, 1992.

A Cognitively Plausible Approach to Understanding Complicated Syntax.

Claire Cardie and Wendy Lehnert.

*Proceedings of the Ninth National Conference on Artificial Intelligence*, 117–124, AAAI Press / MIT Press, 1991. **Best Written Paper Nomination**

University of Massachusetts: Description of the CIRCUS System as Used for MUC-3.

W. Lehnert, C. Cardie, D. Fisher, E. Riloff, and R. Williams.

*Proceedings of the Third Message Understanding Conference (MUC-3)*, 116–119, Morgan Kaufmann, 1991.

University of Massachusetts: MUC-3 Test Results and Analysis.

W. Lehnert, C. Cardie, D. Fisher, E. Riloff, and R. Williams.

*Proceedings of the Third Message Understanding Conference (MUC-3)*, 223–233, Morgan Kaufmann, 1991.

Learning Syntax Within a Semantic Parser.

Claire Cardie and Wendy Lehnert.

*Proceedings of AAAI Spring Symposium on Machine Learning of Natural Language and Ontology*, 27–31, DFKI: Kaiserslautern FRG, 1991.

Analyzing Research Papers Using Citation Sentences.

Wendy Lehnert, Claire Cardie, and Ellen Riloff.

*Proceedings of the Twelfth Annual Conference of the Cognitive Science Society*, 511–518, Lawrence Erlbaum Associates, 1990.

## Other Publications

Cornell Expert Aided Query-focused Summarization (CEAQS): A Summarization Framework to PoliInformatics.

Lu Wang, Parvaz Mahdabi, Joonsuk Park, Dinesh Puranam, Bishan Yang and Claire Cardie.

*NLP Unshared Task in PoliInformatics*, 2014.

Early Stage Influenza Detection from Twitter.

Jiwei Li and Claire Cardie.

Preprint, 2013.

<http://arxiv.org/pdf/1309.7340v3.pdf>

Machine Learning for Natural Language Processing (and Vice Versa?).

Claire Cardie.

*16th European Conference on Machine Learning and 9th European Conference on Principles and Practice of Knowledge Discovery in Databases*, Lecture Notes in AI, Springer, 2005.

**(invited plenary talk)**

OpinionFinder: A System for Subjectivity Analysis.

Theresa Wilson, Paul Hoffmann, Swapna Somasundaran, Jason Kessler, Janyce Wiebe; Yejin Choi, Claire Cardie; Ellen Riloff and Siddharth Patwardhan.

*Proceedings of HLT/EMNLP 2005 Interactive Demonstrations*, 2005. **(refereed demo presentation)**

Graduate Study in Information Science at Cornell University.

Lori Lorigo, Claire Cardie, Geri Gay, and Phoebe Sengers.

*CHI 2005 Workshop on Graduate Education in Human-Computer Interaction*, Portland, OR, 2005. **(education)**

*ARDA/NRRC Summer Workshop on Multiple-Perspective Question Answering: Final Report*.

Janyce Wiebe, Eric Breck, Chris Buckley, Claire Cardie, Paul Davis, Bruce Fraser, Diane Litman, David Pierce, Ellen Riloff, Theresa Wilson.

2002. **(government agency publication)**

Issues, Tasks and Program Structures to Roadmap Research in Question and Answering (Q&A).

John Burger, Claire Cardie, Vinay Chaudhri, Robert Gaizauskas, Sanda Harabagiu, David Israel, Christian Jacquemin, Chin-Yew Lin, Steve Maiorano, George Miller, Dan Moldovan, Bill Ogden, John Prager, Ellen Riloff, Amit Singhal, Rohini Srihari, Tomek Strzalkowski, Ellen Voorhees, Ralph Weischedel.

2001. **(DARPA/NSF committee publication)**

Weighting Unusual Feature Types.

Nicholas Howe and Claire Cardie.

*Cornell CS Technical Report: TR99-1735*, Ithaca, NY, 1999.

Proposal for an Interactive Environment for Information Extraction.

Claire Cardie and David Pierce.

*Cornell CS Technical Report: TR98-1702*, Ithaca, NY, 1998.

Proposal for a Framework for the High-Precision Identification of Linguistic Relationships.

Claire Cardie and Scott Mardis.

*Cornell CS Technical Report: TR97-1653*, Ithaca, NY, 1997.

Word Sense Disambiguation Using Numerical Constraint Satisfaction.

Julia Komissarchik and Claire Cardie.

*Cornell CS Technical Report: TR97-1621*, Ithaca, NY, 1997.

Understanding Empty Category Constructions in a Semantically-Oriented Parser.

Claire Cardie.

*Sixth Annual CUNY Sentence Processing Conference, 29*, Amherst, MA, 1993.

The CIRCUS System as Used in MUC-3.

W. Lehnert, R. Williams, C. Cardie, D. Fisher, and E. Riloff.

*COINS Technical Report 91-59*, Amherst, MA, 1990.

Software Tools for Knowledge Elicitation: A Review and Analysis.

Claire Cardie and Craig Will.

*Smart Systems Technology Technical Report*, Falls Church, VA, 1987.

Understanding Texts Using Integrated Knowledge Sources.

John Leddo and Claire Cardie.

*Decision Sciences Consortium Technical Report*, Falls Church, VA, 1987.

### **Invited Talks**

*Talk title: TBD*, Department of Computational Linguistics, University of Heidelberg, May 2017.

Keynote Address, *Talk title TBD*, Lorentz invited workshop on Language, Knowledge and People in Perspective, Leiden, The Netherlands, April 2017.

Keynote Address, *Keeping Apace with Research in Natural Language Processing*, Web Search and Data Mining Conference (WSDM 2017), March 2017.

*The Belief and Sentiment (BeSt) Knowledge Base Population Evaluation*, 2016 Text Analysis Conference (TAC), NIST-Gaithersburg, MD, November 2016.

*The Role of Sentiment in Argumentation Mining*, Dagstuhl Seminar on Natural Language Argumentation, April 2016.

*Context-aware Joint Inference for Fine-Grained Opinion Analysis*, Plenary Lecture, Jelinek Speech and Language Technologies Workshop, University of Washington, Seattle, WA, August 2015.

*Detecting Deception in On-Line Reviews*, University of Potsdam, Potsdam, Germany, April 2015.

--- Inaugural Distinguished Lecturer, NLP Lecture Series, Humboldt University, Berlin, Germany, April 2015.

*Overview of the TAC2014 Knowledge Base Population Evaluation: Sentiment Slot Filling*, Text Analysis Conference (TAC), NIST, Gaithersburg, MD, November 2014.

*Using Natural Language Processing to Extract Situated Knowledge from Public Comments in Complex Policymaking* (with Ayelet Tsabari, Technion), Technion-Cornell Joint Research Partners Exposition, Jacobs Technion-Cornell Institute, Cornell Tech, NYC, November 2014.

*The Information Science Story*, Cornell Computer Science 50th Anniversary, October 2014.

Invited Tutorial, *Automatic Analysis of Opinions and Sentiment in Text*, Frontiers and Connections between Argumentation Theory and Natural Language Processing, Bertinoro, Italy, July 2014.

*New Results for Deceptive Opinion Spam Detection: Contexts and Concerns*, Workshop on Big Data and Human Language Technology, Columbia University, October 2013.

*Automatic Identification of Fake On-line Reviews*, Faculty of Computer Science, University of Vienna, May 2013.

*Automatic Analysis of Opinions and Sentiment in Text: Research Meets the Real World*, Big Data and Language Technology Workshop, University of Copenhagen Business School, May 2013.

*Automatic Identification of Fake On-line Reviews*, Big Data and Language Technology Workshop, University of Copenhagen Business School, May 2013.

*Cornell-Technion Dual MS degree in Connective Media*, Engineering College Council (ECC) Meeting, New York City, April 2013.

*Proposal for a Cross-Disciplinary Project on Political Framing*, Political Science-Informatics Steering Committee Meeting, Allen Center, Northwestern University, January 2013.

*Finding Deceptive Opinion Spam by Any Stretch of the Imagination*, Third Annual New Directions in Analyzing Text as Data Conference (Secrets and Lies session), Harvard University, October 2012.

*NLP for Connective Media*, Technion-Cornell Connective Media Joint Research Workshop, Cornell NYC Tech Campus, September 2012.

*Focused Summarization of Spoken Meetings*, Brazil-Cornell Workshop, Ithaca, May, 2012.

*Quick Introduction to(a few) NLP (Applications)*, Cornell CS-Weill Radiation Departments Workshop, April 2012.

*Detecting Deceptive Online Reviews*, Center for Language and Speech Processing, Johns Hopkins University, November 2011.

*From Fact to Fiction (to Federal Rulemaking?)*, Inside Cornell, New York City, November 2011.

*Natural Language Processing for E-Rulemaking*, Guest Lecture, Cornell e-Rulemaking Clinic, November 2011.

*Opinion Analysis: From Academia to the Real World*, Invited Talk, Workshop on Computational Approaches to Subjectivity and Sentiment Analysis (WASSA) at ACL 2011, Portland, Oregon, June 2011.

*Sentiment Analysis for the Web*, Cornell Silicon Valley 2011, Invited Panelist, Make the Connection: Mobile, Social and Cloud Computing, March 2011.

*Managing Opportunities*, CRA-W's Cohort of Associate Professors Project (CAPP-R) Workshop, Providence RI, June 2010.

*Plenary Panel: Hopes and Dreams...How You'd Like to See Women in CSE Five, Ten, Twenty Years from Now*, CRA-W's Cohort of Associate Professors Project (CAPP-R) Workshop, Providence RI, June 2010.

*RegulationRoom.org and the Role of Computational Discourse Techniques* Invited Workshop on Tracking, Transcribing, and Tagging Government: Building Digital Records for Computational Social Science Center for Advanced Study in the Behavioral Sciences Workshop (CASBS), June 2010.

*What Business Innovators Need to Know about Sentiment Analysis*, Sentiment Analysis Symposium, New York, NY, April 2010.

*Topics, Issues, and Agendas*, Text as Data Conference, Kellogg School of Management, Northwestern University, March 2010.

*What Were They Thinking?! Finding and Extracting Opinions in the News*. Computer Science Colloquium Series, University of Pennsylvania, October 2009.

--- EECS Distinguished Speaker, Department of Electrical Engineering and Computer Science, Northwestern University, January 2010.

--- Computer Science Colloquium Series, Department of Computer Science, SUNY Buffalo, January 2010.

*What Were They Thinking?! The Role of Topics and Opinion Holders for Fine-grained Opinion Analysis*. Invited Keynote, Conference on Information and Knowledge Management (CIKM) Workshop on Topic-Sentiment Analysis, November 2009.

*What Were They Thinking?! Finding and Extracting Opinions in the News*. Computer Science Colloquium Series, Cornell University, November 2008.

--- Center of Language Sciences (CLS), University of Rochester, November 2008.

*Finding and Extracting Opinions on the Web*, Evergreen College, October 2008.

*'In my opinion ...': Extracting Content from Subjective Language*, Invited Plenary Talk, Les Confrences TALN (Traitement Automatique des Langues Naturelles) et JEP (Journes d'Etudes sur la Parole), Avignon, France, June 2008.

*An eRulemaking Corpus: Identifying Substantive Issues in Public Comments*, Sixth International Conference on Language Resources and Evaluation (LREC 2008), Marrakech, Morocco, June 2008.

*Topic Identification for Fine-Grained Opinion Analysis*, Universit d'Avignon, France, May 2008.

*The Jodange 'Top of Mind' Service*, with Larry Levy, DEMO 08, Palm Desert, January 2008.

*Automatic Analysis of Subjective Language*, Laboratoire Parole et Langage, Universite de Provence, France, October 2007.

*Opinions in Text*, Laboratoire Parole et Langage, Universite de Provence, France, August 2007.

*Using Recent Advances in Machine Learning for Opinion Summarization*, ONR Workshop on Recent Advances in Mathematics and Information Sciences for Analysis and Understanding of Massive and Diverse Sources of Data, DIMACS, Rutgers University, May 2007.

*Constructing Graph-Based Opinion Summaries from Text*, Institute for Discrete Sciences Workshop on Associating Semantics with Graphs, DIMACS/DyDAn Center, Rutgers University, April 2007.

*Identifying Opinions in Text*, Boston Cornell Club Boston, March 2007.

*Analyzing Sentiment in Text*, Fidelity Cornell Alumni Network, Boston, March 2007.

*A Sentimental Journey*, Invited Keynote Address, 21st International Conference on the Computer Processing of Oriental Languages, Singapore, December 2006.

---City University of Hong Kong, Hong Kong, December 2006.

*Looking for Solutions*, National Science Foundation Workshop on Coding Across the Disciplines: A Project-Based Workshop on Manual Text Annotation Techniques, University of Pittsburgh, November 2006.

*New Directions in Information Extraction*, Cornell Engineering Visit, Tsinghua University, Beijing, China, November 2005.

*Machine Learning for Natural Language Processing (and Vice Versa?)*, Invited Plenary Talk, 16th European Conference on Machine Learning and 9th European Conference on Principles and Practice of Knowledge Discovery in Databases, Porto, Portugal, October 2005.

*Noun Phrase Coreference Resolution for Information Extraction: Supervised and Weakly Supervised Methods*, Keynote, Belgium and The Netherlands Workshop on Information Extraction, University of Antwerp, March 2005.

*Machine Learning for Noun Phrase Coreference Resolution*

...University of Saarland, March 2005.

...Syracuse University, School of Information Studies, June 2004.

...IBM Watson Research Center, June 2004.

...General Motors, Detroit Michigan, June 2004.

...University of Washington, Department of Computer Science Colloquium, January 2004.

...Xerox Research and Development Center, Webster NY, January 2004.

...SUNY Buffalo, Department of Computer Science Colloquium, December 2003.

...University of Pennsylvania Distinguished Lecture Series, December 2003.

*Noun Phrase Coreference Resolution*, Cornell Information Science Seminar, Cornell University, October 2003.

*Research Directions in Statistical Natural Language Processing*, Intelligent Information Systems Institute, Cornell University, June 2003.

*Natural Language Technologies for Text Mining*, Industrial and Labor Relations Statistics Seminar, Cornell University, April 2003.

*Natural Language Technologies for E-Rulemaking*, NSF Workshop on E-Rulemaking: New Directions for Technology and Regulation, John F. Kennedy School of Government, Harvard University, January 2003.

*Successes, Failures, and New Directions in Natural Language Learning*, Plenary Talk, International Conference on Machine Learning, Williams College, July 2001.

*Machine Learning for Information Extraction from Unrestricted Text*, Alan J. Perlis Symposium, Yale University, April 2001.

*Noun Phrase Coreference for Information Extraction*, University of Maryland, April 2001.

*Improving a Machine Learning Approach to Noun Phrase Coreference Resolution*, University of Texas at Austin, February 2001.

*Overview of Cornell University Projects in Natural Language Understanding*, America On-Line, December 2000.

*Noun Phrase Coreference for Information Extraction*, University of Montreal, March 2000.

*A Clustering Approach to Noun Phrase Coreference*, Williams College, December 1999.

*Noun Phrase Coreference for Information Extraction and Text Summarization*, Washington University, November 1999.



*Noun Phrase Coreference for Information Extraction*, Purdue University, October 1999.

*New Directions in Machine Learning for Information Extraction*, Invited talk, Workshop on Machine Learning for Information Extraction, Sixteenth National Conference on Artificial Intelligence, July 1999.

*Machine Learning for Information Extraction*, University of Ottawa, February 1999.

*A Corpus-Based Method for Finding Base Noun Phrases*, Johns Hopkins University, April 1998.

*Combining Multiple Knowledge Sources for NLP via Symbolic Machine Learning Techniques*, Invited Workshop on Interfacing Models of Language, Neural Information Processing Systems Conference, December 1997.

*Case-Based Learning of Natural Language*, University of Rochester, November 1997.

*Improving Minority Class Prediction Using Case-Specific Feature Weights*, University of Utah, October 1997.

*Knowledge Acquisition for Natural Language Understanding Using Machine Learning Techniques*, Harvard University, April 1997.

*The Use of Cognitive Biases in Case-Based Learning of Linguistic Knowledge*, Invited Workshop on Computational Models of Human Syntactic Processing, Netherlands Institute for Advanced Study (NIAS), Wassenaar, The Netherlands, June 1996.

*Lexical Knowledge Acquisition Using Machine Learning Techniques*, SUNY Binghamton, September 1995.

*Machine Learning and Natural Language Processing*, European Commission-sponsored Workshop on Machine Learning of Natural Language and Speech, University of Amsterdam, December 1994. (I was the only speaker invited from outside Europe.)

*Domain-Specific Knowledge Acquisition for Conceptual Sentence Analysis*

---Southern Methodist University, January 1994.

---Washington and Lee University, January 1994.

---Boston College, February 1994.

---Johns Hopkins University, February 1994.

---North Carolina State, February 1994.

---Washington University, February 1994.

---Carnegie Mellon University, March 1994.

---Massachusetts Institute of Technology, March 1994.

---Northeastern University, March 1994.

---University of Michigan, March 1994.

---Villanova University, March 1994.

- ...Cornell University, April 1994.
- ...Middlebury College, April 1994.
- ...Smith College, April 1994.

## **Summary of Funding**

Cornell Discovery and Innovation Research Seed Grant, *Transforming online group communication and collaboration*, 2016–2019, \$ 375,000, PI. (with Lillian Lee and Cristian Danescu-Niculescu-Mizil, Cornell University)

National Science Foundation, *HCC: Large: Social-Computational Support of Civil Engagement in Public Policymaking*, 2013–2017. \$ 2,263,876 PI. (with Cynthia Farina (Law School), Sue Fussell (IS), and Gilly Leshed (IS))

DARPA DEFT Program, “Uncovering Motivations, Stances, and Anomalies through Private State Recognition and Interpretation”, 2012–2017, \$2,000,000 (with Rada Mihalcea, University of Michigan and Janyce Wiebe, University of Pittsburgh)

Amazon Web Services (AWS) in Education, Coursework Grant award (\$16000, Apr 2014 - Apr 2015).

Technion-Cornell Joint Research Project Award, *Recognizing Personal Stories in a Platform for Civic Participation*, \$20,000, 2013–2014. PI. (with Cynthia Farina (Law School), Dmitriy Epstein (Law School/IS), Mary Newhart (Law School), Alon Itai (Technion), Ayelet Baram-Tsabari (Technion))

Technion-Cornell Joint Research Project Award, *Civic Participation 2.0*, \$30,000, 2012–2013 PI. (with Cynthia Farina (Law School), Dmitriy Epstein (Law School/IS), Mary Newhart (Law School), Alon Itai (Technion), Ayelet Baram-Tsabari (Technion))

Google Gift, 2012, \$80,000

Boeing Gift, 2012, \$200,000

National Science Foundation, “SoCS: Improving Citizen Participation in Rulemaking: Integrating Human and Computational Facilitation of Online Deliberation in Complex Government Policymaking” (SoCS), 2011–2014, \$766,000 (with Cynthia Farina, Law School; Dan Cosley, Information Science; Sally Klingel, ILR)

National Science Foundation, “SoCS: Collaborative Research: Leveraging Others’ Insights to Improve Collaborative Analysis” (SoCS-0968450), 2010–2013, \$520,000 (with Sue Fussell, Information Science; and Sara Kiesler (CMU))

National Science Foundation, “NSCC/LA: Collaborative Research: Modeling Discourse and Social Dynamics in Authoritarian Regimes” (BCS-0904822), 2009-2014, \$950,946 (with Jeff Hancock (PI), Information Science; and Mats Rooth, Department of Linguistics)

National Science Foundation, “HCC: Large: Collaborative Research: Design Principles for Information Networks Supporting the Social Production of Knowledge” (HCC-0910664), 2009–2012, \$2,061,727 (with Jon Kleinberg (PI); Dan Cosley, Information Science; Jeff Hancock, Information Science; Dan Huttenlocher, Lillian Lee)

Google Gift, 2010, \$80,000

University Affiliate Center, Department of Homeland Security, "Extracting Events and Opinions from Text", 2007–2010, \$2,400,000 (with Janyce Wiebe, University of Pittsburgh, and Ellen Riloff, University of Utah; Cornell portion \$800,000)

National Science Foundation, "Dynamics of Deception in Computer-Mediated Environments (HSD), 2006–2010, \$685,991 (with Jeffrey Hancock, Department of Communication)

Google Gift, 2005, \$80,000

National Science Foundation, "Natural Language Processing Support for eRulemaking" (IIS-0535099), 2005–2009, \$750,000 (with Cynthia Farina, Cornell Law School)

Xerox Foundation Gift, 2005–2006, \$20,000

Xerox Foundation Gift, 2004–2005, \$20,000

ARDA AQUAINT Phase II, "Opinions in Question Answering", 2004–2006, \$463,500 (Cornell portion; with Janyce Wiebe, University of Pittsburgh, and Ellen Riloff, University of Utah)

National Science Foundation, "Reducing the Corpus Annotation Bottleneck for Natural Language Learning" (IIS-0208028), 2002–2005, \$500,000

ARDA, Mitre's Northeast Regional Research Center, "Multi-Perspective Question Answering Workshop", 2002–2003, \$62,000

National Science Foundation, "ITR/IM: The Construction and Analysis of Information Networks" (IIS-0081334), 2000–2003, \$450,000 (with Kleinberg, Lee, Selman, Strogatz)

National Science Foundation, "POWRE-Integrating Natural Language Processing and Information Retrieval for Intelligent Text-Processing" (EIA-0074896), 2000–2001, \$68,695

DARPA, *TIDES Text-Processing Initiative*, "Rapidly Portable Translingual Information Extraction and Interactive Multidocument Summarization", 2000–2002, \$1,300,000 (with Michael White of Cogentex Inc., subcontractor)

National Science Foundation, *Faculty Early CAREER Development Award*, "Knowledge Acquisition for Natural Language Understanding" (IRI-9624639), 1996–2000, \$200,000

DARPA, *TIPSTER Text-Processing Initiative*, "Improving End-User Efficiency in a TIPSTER-Compliant Information Retrieval System", 1997–1999, \$600,000 (with Chris Buckley of SaBIR Research, subcontractor)

National Science Foundation, *Research and Education for Undergraduates*, 1997, \$12,500

Lilly Foundation, *Lilly Teaching Fellowship*, 1996–1997, \$10,000

National Science Foundation, *Graduate Research Traineeships*, "Computational Aspects of Cognitive Science", 1995–1999, \$562,500. (I became a PI in 1996; with Barbara Lust, Human Development)

### **Doctoral Dissertation Committee Chair**

Kai Sun, Department of Computer Science  
Vlad Niculae, Department of Computer Science  
Esin Durmus, Department of Computer Science  
Yao Cheng, Department of Computer Science  
Arzoo Katiyar, Department of Computer Science  
Xilun Chen, Department of Computer Science  
Ozan Irsoy, Department of Computer Science, graduated 2017  
Joonsuk Park, Department of Computer Science, graduated 2016  
Bishan Yang, Department of Computer Science, graduated 2015  
Lu Wang, Department of Computer Science, graduated 2015  
Myle Ott, Department of Computer Science, graduated 2013  
Stephen Purpura, Department of Information Science  
Left in 2012 to start Context Relevant  
Ainur Yessenalina, Department of Computer Science, graduated 2012  
Yejin Choi, Department of Computer Science, graduated 2010  
Art Munson, Department of Computer Science, graduated 2010  
Veselin Stoyanov, Department of Computer Science, graduated 2009  
Eric Breck, Department of Computer Science, graduated 2008  
Hui Tan, Department of Computer Science, masters 2006  
Vincent Ng, Department of Computer Science, graduated 2004  
David Pierce, Department of Computer Science, graduated 2003  
Kiri Wagstaff, Department of Computer Science, graduated 2002  
Scott Mardis, Department of Computer Science, graduated 2000  
Mandar Mitra, Department of Computer Science, graduated 1999  
Amit Singhal, Department of Computer Science (for G. Salton), graduated 1997

#### **Doctoral Dissertation Committee External Member**

Parinaz Sobhani, University of Ottawa, external referee, graduated 2017  
Nathan Gilbert, University of Utah  
Nikhil Dinesh, University of Pennsylvania, graduated 2011  
Yun Niu, University of Toronto, graduated 2008  
Jingying Chen, University of Pennsylvania, graduated 2008  
Elena Filatova, Columbia University, graduated 2007  
Laurianne Sitbon, Universit d'Avignon, graduated 2007  
Veronique Hoste, University of Antwerp, graduated 2005  
Xiaoyun Wu, SUNY Buffalo, graduated 2004  
Einat Amitay, Macquarie University, Australia, external reviewer, graduated 2001  
Roman Yangarber, New York University, graduated 2000  
Lluís Marquez, Universitat Politècnica de Catalunya, external referee, graduated 1998  
Cynthia Thompson, University of Texas at Austin, graduated 1998

#### **Cornell Doctoral Dissertation Committees**

Mingda Li, ECE, Member  
Nitesh Goyal, Information Science, Member

Liz Murname, Information Science, Member, graduated 2017  
Dinesh Puranam, Johnson School of Business, Member, graduated 2016  
Ruben Sipos, Computer Science, Cognitive Science Minor Member, graduated 2014  
Maria Boston, Linguistics, Member, graduated 2011  
Hao-Chuan Wang, Information Science, Member, graduated 2011  
Kan Li, Computer Science, Member, graduated (M.S.) 2010  
Vladimir Barash, Information Science, Member, graduated 2011  
Art Munson, Computer Science, Member, graduated 2010  
Dave Crandall, Computer Science, Member, graduated 2007  
Bo Pang, Computer Science, Member, graduated 2006  
Amanda Holland-Minkley, Computer Science, Member, graduated 2004  
Alin Dobra, Computer Science, Member, graduated 2003  
Eric Aaron, Computer Science, Member, graduated 2000  
Nicholas Howe, Computer Science, Member, graduate 2001  
Yi-Cheng Huang, Computer Science, Member, graduated 2002  
Yonghong Mao, Linguistics, Member, graduated (M.S.) 1999  
Shamitha Somashekar, Human Development, Member, graduated 1999  
Wee-Liang Heng, Computer Science, Member, graduated 1998  
Chris Buckley, Computer Science, Member, graduated 1995

### Visiting PhD Students

Evelin Amorim, UFMG - Universidade Federal de Minas Gerais, Brazil (Spring/Summer 2016)  
Pedro Calais Guerra, UFMG - Universidade Federal de Minas Gerais, Brazil (Oct 2012–July 2013)  
Elaheh Momeni, University of Vienna (Fall 2012)  
Bin Lu, City University of Hong Kong (Summer 2010–Spring 2011)

### Undergraduate Research Projects

Jonathan Chan (Spring 2017), Boyu Liu (Visiting student, University of Science and Technology, Hong Kong, Spring 2017), Matthew Weidman (Summer 2016, Spring 2017), Alyssa Trigg (Spring 2016), Jamison Poland (Fall 2015, Spring 2016), Gerui Wang (Visiting Student, Tsinghua University, Spring 2016), Jamison Poland (Fall 2015, Spring 2016), Xinya Du (Visiting student, Shanghai Jiaotong, Summer 2015, Fall 2015, Spring 2016), Yiqing Hua (Visiting student, Shanghai Jiaotong, Summer 2015, Fall 2015), Galen Marchetti (Fall 2014), Rebecca Doherty (Spring 2014), Sungho Park (Spring 2014), Dietan Shi (Spring 2014), Sungho Park (Spring 2014), Dietan Shi (Spring 2014), Chetan Parag Gupta (Spring 2014), Dietan Shi (Summer 2013), Sungho Park (Fall 2013), Ying Qin (Fall 2013), Sanyukta Inamdar (Spring 2013), Christopher Yu (Spring 2013), Yinglei Wang (Fall 2012), Sanyukta Inamdar (Summer 2012), Hansol Dol (Fall 2011), Bianca Rhodes (Summer 2010), Alex Ainslie (Independent Major advisor; Dec 2009 graduate), Tommy Cusick, (Fall 2009, Spring 2010; **BOOM award winner, Cisco Pioneer Award**), Justin Prieto, (Fall 2009, Spring 2010; **BOOM award winner, Yahoo! Excellence Award**), Chelsea Howe (College Scholar committee member, 2009 graduate), Morgan Ulinski (Fall 2008), Zachary Lipton (2008–2009), Ben Pu (2007–2009), Dave

Golland (Spring 2007), Todd Barthelme (Spring 2007), Benjamin Cole (Fall 2006, Spring 2007), Matt Rawding (Fall 2006, Spring 2007), Alex Rivers (Fall 2006), Brianna Lance (College Scholar committee member, 2006 graduate), Eric Chen (Fall 2005), Guillermo Munoz (Fall 2005), Dmitriy Shtokman (Spring 2005), Eli Brown (Spring 2005), Brian Lukoff (College Scholar committee member, 2004 graduate), Yekaterina Petrova (Fall 2003, Spring 2004), Ron Hose (Fall 2003), Alex Chang (Fall 2003), Steven Baker (2001–2003), Peter Brodsky (Fall 2002), Tyson Bergland (Spring 2001), Ross Paul (College Scholar committee chair, 2000-2001), Jordan Barry (Spring 2001), Jesse Yu (Spring 2001), Theodore Kim (Fall 2000), John Abrehamson (Spring 2000), Marc Durant (Spring 2000), Piyanuch Silapachote (Spring 2000), John Blitzer (1999–2001), Erwin Chan (Fall 1999, Spring 2000), Jim Curcio (Fall 1999), Tiffany Chiu (Summer 1999), Serena Kohli (Summer 1999), Daniel Witriol (Summer 1998), David Young (Summer 1998), Julie Goldberg (Spring 1997, Summer 1998), Greg Baeckler (Spring 1997), Dan Klein (Spring 1997), Ken Lee (Spring 1997), Tina Nolte (Spring 1997), Shawn Cooper (1996–1997), Sam (Wai Kwong) Lee (1996–1997), Mitesh Shah (1996–1997), Dan Bernstein, (Fall 1996), Ed Wayt (Fall 1996), Sradee Roochon (Spring 1996), Tristan DeBuysscher (Fall 1995, Spring 1996), Kevin Saunders (from Environmental Engineering, 1995–1997), Eric Allen (Summer 1995, Spring and Summer 1996) Scott Brown (Spring 1995), Phil Irwin (Spring 1995)

### **MS Projects Supervised**

Anusha Chowdhury (Spring 2017), Opinion Extraction Using TensorFlow

### **MEng Projects and Research**

Sungho Park (Spring 2016), Xiaoan Yan (Summer 2014), Teng Qu (Fall 2014), Sungho Park (Spring 2014), Xiaoan Yan (Spring 2014), Paul Munn (Fall 2013), Aseel Addawood (Spring 2013), Rishabh Animesh (Spring 2013), Sandeep Chawla, (Spring 2013), Chaorong Chen (Spring 2013), Aanchal Gupta (Spring 2013), Yi Li (Spring 2013), Rushabh Mehta (Spring 2013), Vidya Sindhu Nagesh (Spring 2013), Rakesh Recharla Chenchu (Spring 2013), Aayush Saxena (Spring 2013), Prashanth Shanthaveerappa (Spring 2013), Suman Somasundar (Spring 2013), Sandeep Chawla (Fall 2012), Rushabh Mehta (Fall 2012), Vidya Sindhu Nagesh (Fall 2012), Aseel Addawood (Summer 2012), Khushboo Aggarwal (Spring 2012), Anand Bheemarajalah (Spring 2012), Swinburn Miranda (Spring 2012), Anshul Pandey (Spring 2012), Poornima Prabhu (Fall 2011), Anusree Banerjee (Fall 2011), Shreesh Ayachit (Fall 2011), June Ho Hwang (Spring 2011), Pracheer Gupta (Spring 2011), Uday Babbar (Spring 2011), Quazi Hussain (Spring 2011), Biswajit Biswal (Spring 2011), Assel Salimova (Spring 2011), Daniela Balmus (Spring 2011), Jeff Davidson (Fall 2010), Tommy Cusick (Spring 2010; BOOM award winner), Mehant Rajendar Baid (Spring 2010), Raghavendar Chandrasekaran, (Spring 2010), Sujith Vidanapathirana (Fall 2009, Spring 2010; BOOM award winner, Yahoo! Excellence Award), Daniela Balmus (Summer 2009), Beibei Zhu (Spring 2009), Yan Tang (Spring 2009), Terry Chia-Wei Wu (Fall 2008), Eugen Mirkin (Spring 2007), Abishek Sharma (Spring 2007), Chong Suk Yoon (Fall 2006, Spring 2007), Janani Deverajan (Fall 2006, Spring

2007), Rajat Mehta (Fall 2006, Spring 2007), Saudia Ooyshee (Spring 2006), Dustin Harber (Spring 2006), Derrick Yeung (Spring 2006), Doug Wong (Spring 2006), Danish Mujeeb (Spring 2006), Yiu Woon Lau (Spring 2006), Justin Hart (Fall 2005), Richard Calvi (Summer/Fall 2005), Joe Dillman (Spring 2005), Greg Leedberg (Spring 2005), Eli Brown (Spring 2005), Rongrong Heather Qi (Spring 2005), Dustin Shultz (Spring 2005), Soo-Yung Cho (Fall 2004, Spring 2005), Yasuhiko Kuichi (Fall 2004, Spring 2005), Andrew Kae (Fall 2004), Sofya Tennenbaum (Fall 2004), Santoshreddy Karla (Fall 2004), Sukwon Yoon (Fall 2003, Spring 2004), Bing Zhao (Fall 2003, Spring 2004), Young-Hoon Mok (Fall 2003), Mikolaj Franaszczuk (Fall 2003), Nadya Travinin (Fall 2001), Mirek Janusz (Fall 2001), Marjorie Freedman (Fall 2001, Spring 2002), Dennis Yeh (Spring 2002), Sheila Kang (Fall 2000, Spring 2001), Eric Strong (Spring 2001), Ngoclan Vu (Fall 2000), Roman Lobkovsky (Spring 2000), Rui Wang (Spring 2000), Woong Yoon (Fall 1999, Spring 2000) Ernie Post (Fall 1998, Spring 1999), Jerry Hsu (Fall 1996), Shilpa Agarwal (Spring 1996), Janeen Reich (Spring 1996), Ivan Tam, (Spring 1996), Yuichi Tsuchimoto, (Spring 1996, Fall 1996), Agatha Hsin Liu (Fall 1996), Carlos Barragan-Orbe, (Fall 1995, Spring 1996), Ed Lazzerini, (Fall 1995, Spring 1996), Chris Paradis, (Fall 1995, Spring 1996), Daniel Rabinovitch, (Fall 1995, Spring 1996), Lynn Dabbous (Fall 1995), Herng-Kwan Ju (Fall 1994, Spring 1995), Boon Bin Saelim (Fall 1994, Spring 1995)

#### **Department, College, and University Service**

Director of Undergraduate Studies, Department of Computer Science, 2016–2019  
 Member, Ad-hoc Committee on Tenure and Promotion, College of Arts & Sciences, 2017  
 Chair, Ad-hoc Committee on Tenure and Promotion, College of Engineering, 2016  
 Member, Cornell College of Arts & Sciences, Curriculum Review Committee, 2016–pres  
 Assistant Professor Faculty Mentor, Computer Science, 2016  
 Assistant Professor Faculty Mentor, ORIE, 2016  
 Assistant Professor Faculty Mentor, Information Science, 2015–2016  
 Member, CS PhD Admissions Committee, 2016  
 Member, Technion-Cornell Innovation Institute (TCII) Faculty Hiring Oversight Committee, 2012–2014, 2015–pres  
 Advisor, Computer Science majors (Arts & Sciences, Engineering)  
 Advisor, Information Science majors (Arts & Sciences, Engineering, CALS)  
 Advisor, Cognitive Science Graduate Minor  
 Member, Cornell Presidential Research Scholars Board, 2002–present  
 Founding Member, Cornell Virtual Center for Language Acquisition, 2002–present  
 Member, College Scholar Advisory Board, 2000–present  
 Member, Independent Major Advisory Board, College of Arts & Sciences, 2000–present

Chair, Faculty Recruiting Committee, Computer Science, 2013–2014

Member, Ad-hoc Committee on Tenure and Promotion, Johnson School, 2013–2014

Member, Cognitive Studies Steering Committee, 2011–2014

Member, Committee on Academic Planning for Cornell NYC Tech Campus, 2012–2013

Advisor, Cognitive Studies Concentration, 1994–2013

Member, PhD Admissions Committee, Information Science, 2013

Chair, Working Group on Academic Planning of the Cornell-Technion Dual MS Degree on Connective Media, 2012–2013

Member, Research Data Management Service Group Advisory Board, 2011–2013

Member, PhD Admissions Committee, Computer Science, 2012

Chair, Information Science Department, 2010–2011

Member, Curriculum Committee, Information Science, 2002–2011

Member, Provost’s Advisory Group of Women in Science and Engineering (WISE), 2001–2013

Director, Information Science Program, 2005–2010

Chair, Faculty Search Committee, Information Science, 2009–2010

Co-Director of Undergraduate Studies, Information Science, Systems, and Technology (Eng), 2004–2005

Member, Computer Science Chair Search Committee, 2009 (committee chair), 2006, 2004, 1999

Co-Director, Information Science Program, 2004–2005

Director of Undergraduate Studies, Information Science (A&S, CALS), 2003–2005

Member, Computing and Information Science Council, 2004–2007

College Scholar Advisor, 2001–pres, 1997–1998, 1995–1996

Member, Faculty of Computing and Information Founders, 2001–2003

Chair, Working Group for Undergraduate Majors in Information Science, 2002–2003

Independent Major Advisor, 2001–2004, 2008–2010

Member, Faculty of Computing and Information Working Group for Information Science, 2001–2002

Member, Faculty of Computing and Information Working Group for Crosscutting Education Programs, 2001

Member, Selection Committee, Cognitive Studies Summer Fellowships, 1996–2001

Member, Selection Committee, Cognitive Studies Continuing Fellowships, 1996–2001

Member, Selection Committee, Cognitive Studies Incoming Fellowship, 1998–2001

Member, Ph.D. Admissions Committee, Department of Computer Science, 2001, 1997, 1996



Member, Space Committee, Department of Computer Science, 2001  
 Member, Cognitive Studies Steering Committee, 1999–2001  
 Member, Selection Committee, Engineering College Associate Dean for Undergraduate Programs, 1999  
 Member, Selection Committee, Computer Science Department Chair, 1999  
 Member, Engineering College Lecture Series Committee, 1999-2000  
 Member, Fall Faculty Reception Committee, Engineering College, 1999  
 Member, Faculty Recruiting Committee, Department of Computer Science, 1999  
 Member, Selection Committee, Engineering College Teaching Awards, 1998  
 Organizer, AI Q exam, Department of Computer Science, 1995, 1996, 1997  
 Reviewer, Undergraduate Minority/Underrepresented Summer Research Exchange Program, 1996  
 Member, Cognitive Studies Undergraduate Committee, 1994, 1995, 1996  
 Member, Engineering College Committee on Faculty Development and Mentoring, 1995

### **Outreach**

Mentor, Yale Captains Mentoring Captains, 2012-pres  
 Mentor, Yale Field Hockey team player, 2012-pres  
 Participant, Yale Field Hockey Alumnae Mentoring Fete, February 2017  
 Participant, Yale Field Hockey Alumnae Mentoring Fete, February 2016  
 Program committee member, NAACL HLT Student Research Workshop, 2015  
 Speaker, 2nd Annual Yale Field Hockey Mentoring Program, New York, February 2014. Talk title: *Set for Life*.  
 Panelist, *The Yale Field Hockey Chronicles*, 40th Anniversary of Varsity Field Hockey at Yale, October 2012  
 Co-Chair (with Jenny Preece), NSF Social Computational Systems Doctoral Consortium, University of Michigan, June, 2012  
 Program Committee Member, EACL Student Research Workshop, 2012  
 Panelist/Mentor, CRA-W's Cohort of Associate Professors Project (CAPP-R) Workshop, Providence RI, June, 2010  
 Organizing Committee Member, *North American Computational Linguistics Olympiad (NACLO)*, Ithaca site, Cornell University, 2009  
 Program Committee Member, NAACL HLT Student Research Workshop, 2009  
 Panelist, *NAACL HLT Student Research Workshop*, 2009  
 Leader, *Women in Science Roundtable Discussion for Women Athletes*, Yale University, 2007  
 Reviewer, *AAAI 2007 Student Abstract and Poster Program*, 2007

Organizing Committee Member, *First North American Computational Linguistics Olympiad (NAMCLO)*, Ithaca site, Cornell University, 2007

Panelist, *Student Research Session, 42nd Annual Meeting of the Association for Computational Linguistics (ACL-04)*, 2004

Founding member, *Women's Mentorship Program in Computer Science* at Cornell University

Reviewer, *NAACL-sponsored Summer School in Language Technologies*, North American Chapter of the Association for Computational Linguistics, 2003

Reviewer, *AAAI Doctoral Consortium*, Eighteenth International Joint Conference on Artificial Intelligence, 2003

Panelist, *Perspectives on Women in Computer Science*, Women's Mentorship Program in Computer Science, Department of Computer Science, Cornell University, December 2002

Organizer, *first NAACL-sponsored Summer School in Language Technologies*, North American Chapter of the Association for Computational Linguistics, 2002

Panelist, *Student Research Workshop*, 40th Annual Meeting of the Association for Computational Linguistics, 2002

Reviewer, *Cornell Engineering Communications Program* technical writing classes, Spring 2000

Lecturer, *Cornell University Summer College*, Explorations in Engineering, 1999, 2000

Panelist, *North American Association for Computational Linguistics Student Research Workshop*, 2000

Panelist, *AAAI/SIGART Doctoral Consortium*, 1999

Board of Advisors, *GirlWideWeb*, an internet magazine for girls 9 to 15, 1997–2000

Panelist, *ENGRG470 Undergraduate Teaching* panel discussion on teaching

Panelist, *Association for Computer Science Undergraduates (ACSU)* panel discussion on graduate school, 1995, 1997

Reviewer, *Cornell Engineering Communications Program* technical writing classes, each semester from Fall 1994 to Spring 1996

Reviewer, *Twelfth National Conference on Artificial Intelligence* Student Poster Session, 1993

Logo Instructor, *Cambridge Elementary School Volunteers*, Cambridge, MA, 1983–1984

### **Random Media Mentions**

Quoted in Associated Press story about Amazons fake review lawsuit. Story has been published over 300 times, including:

— ABC News, (<http://abcnews.go.com/Technology/wireStory/spot-fake-online-review-34589932>),

— The Guardian (<http://www.theguardian.pe.ca/Canada—World/Society/2015-10-20/article-4315078/Finding-the-fake—tips-on-spotting-false-reviews-online/1>),

— The New York Times, (<http://www.nytimes.com/aponline/2015/10/20/us/ap-us-bogus-reviews-tips.html>). October, 2015.

Interviewed for The Informed Traveler radio show, "Identifying Fake Hotel Reviews", November, 2015. [http://www.nationaltravelradio.com/Audio/Fake\\_Hotel\\_Reviews.mp3](http://www.nationaltravelradio.com/Audio/Fake_Hotel_Reviews.mp3)

Forbes, 12/09/14. Role as Co-founder and Chief Scientist for Appinions discussed <http://www.forbes.com/sites/brucerogers/2014/12/09/larry-levys-appinions-builds-platform-for-content-and-influencer-marketing/>

**Favorite quote** (from Larry Levy, Co-founder and CEO of Appinions): "Getting Professor Cardie and Cornell on board with Levys idea for a business venture was no simple matter. First time round, Claire basically told me to take a hike."

The New York Times, 08/19/2011. "In a Race to Out-Rave, 5-Star Web Reviews Go for \$5".

<http://www.nytimes.com/2011/08/20/technology/finding-fake-reviews-online.html>

Additional coverage elsewhere:

— ABC News <http://abcnews.go.com/Technology/software-aims-detect-fake-online-hotel-reviews/story?id=14172704>,

— Businessweek, <https://www.bloomberg.com/news/articles/2011-09-29/a-lie-detector-test-for-online-reviewers>,

— NPR, <http://www.npr.org/2011/08/28/139975080/review-too-good-to-be-true-sometimes-it-is>).

See also the accompanying graphic:

<http://www.nytimes.com/interactive/2011/08/20/business/20110820-is-that-review-a-fake.html>

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