

# Eugene Charniak

## *Curriculum Vitae*

### 1. Personal

University Professor of Computer Science  
Brown University  
Providence, RI 02912

### 2. Home Address

106 Halsey Street  
Providence, RI 02906

### 3. Education

A.B. with Honors, Physics, University of Chicago, 1967

M.S., Electrical Engineering, Massachusetts Institute of  
Technology, 1968

Ph.D., Electrical Engineering, Massachusetts Institute of  
Technology, 1972

Dissertation topic: Toward a Model of Children's Story Comprehension  
(Supervised by M. Minsky)

### 4. Professional Appointments

1968-1971	Teaching Assistant, Massachusetts Institute of Technology, Cambridge, MA
1971-1972	Research Assistant, Massachusetts Institute of Technology, Cambridge, MA
1972-1973	Research Associate, Massachusetts Institute of Technology, Cambridge, MA
1973-1975	Research Scientist, Institute of Semantic and Cognitive Studies, Lugarno, Switzerland
1976-1977	Institute of Semantic and Cognitive Studies became part of the Computer Science Department, University of Geneva
1977-1978	Visiting Assistant Professor, Department of Computer Science, Yale University, New Haven, CT
1978-1979	Assistant Professor of Computer Science and Engineering, Brown University, Providence, RI
1979-1981	Assistant Professor of Computer Science and Cognitive and Linguistic Science, Brown University, Providence, RI
1981-1984	Associate Professor of Computer Science and Cognitive and Linguistic Science, Brown University, Providence, RI
1984-	Professor of Computer Science and Cognitive and Linguistic Science, Brown University, Providence, RI

1984-1985 Visiting Professor of Computer Science, Yale University, New Haven CT

1991-1997 Chairman, Department of Computer Science, Brown University, Providence, RI

1998 Visiting Professor of Computer Science and Electrical Engineering, Johns Hopkins University, Baltimore, MD

2006 University Professor of Computer Science

## 5. Publications

### *Books*

Computational Semantics: An Introduction to Artificial Intelligence and Natural Language Comprehension (with Y. Wilks), North-Holland Publishing Company, Amsterdam (1976).

Artificial Intelligence Programming (with C. Riesbeck and D. V. McDermott), Lawrence Erlbaum Associates, Hillsdale, NJ (1980). Second Edition (with C. Riesbeck, D. V. McDermott and J. R. Meehan) (1987).

Introduction to Artificial Intelligence (with D. V. McDermott), Addison-Wesley, Reading, MA (1985).

Statistical Language Learning MIT Press, Cambridge, MA (1993).

### *Chapters in Books*

"Context and the Reference Problem," *Natural Language Processing* (ed. R. Rustin), pp. 311-331, Algorithmic Press, New York (1972).

"Introduction to Syntax," *Computational Semantics: An Introduction to Artificial Intelligence and Natural Language Comprehension* (ed. E. Charniak and Y. Wilks), North-Holland Publishing Co., Amsterdam (1976).

"Reference and Question Answering in Simple Narration," *Semantics and Artificial Intelligence* (ed. P. Eisenberg), W. de Gruyter, Berlin (1976) (in German).

"Inference and Knowledge," *Computational Semantics: An Introduction to Artificial Intelligence and Natural Language Comprehension* (ed. E. Charniak and Y. Wilks), North-Holland Publishing Co., Amsterdam (1976).

"Knowledge and Inference in Language Comprehension: An Overview," *Machine Representations of Knowledge*, D. Reidel Publishing Co., Netherlands (1977).

"Context Recognition in Language Comprehension," *Strategies for Natural Language Processing* (ed. W. Lehnert and M. Ringle), Laurence Erlbaum Associates, Hillsdale, NJ (1982).

"Cognitive Science is Methodologically Fine," *Methods and Tactics in Cognitive Science* (ed. W. Kintch, J.R. Miller and P.G. Polson), Laurence Erlbaum Associates, Hillsdale, NJ (1983).

"A Parser with Something for Everyone," *Parsing Natural Language* (ed. M. King), Academic Press, London (1983).

"Parsing, How To," *Automatic Natural Language Parsing* (ed. K. Sparck

Jones and Y. Wilks), Wiley, Colchester, England (1983).

“Probabilistic Text Understanding” (with Robert Goldman), *Statistics and computing*  
Also in *Artificial Intelligence Frontiers in Statistics: AI and Statistics III* (ed. D. J. Hand), Chapman and Hall (1992).

“A Statistical Syntactic Disambiguation Program and what it Learns” (with Murat Ersan),  
*Symbolic, Connectionist, and Statistical Approaches to Learning for Natural Language Processing* (ed. S. Wermter, E. Riloff, and G. Scheler), Springer, pp. 146-160 (1996).

#### *Refereed Journal Articles*

“A Framed PAINTING: The Representation of Common Sense Knowledge Fragment,” *Cognitive Science* 1 (4), pp. 355-395 (1977). Also published as Technical Report 31, Institute for Semantic and Cognitive Studies, Geneva, Switzerland (1977).

“On the Use of Framed Knowledge in Language Comprehension,” *Artificial Intelligence* 11 (3), pp. 225-265 (1978). Also published as Research Report 137, Yale University Artificial Intelligence Project (1978).

“A Common Representation for Problem Solving and Language Comprehension Information,” *Artificial Intelligence*, 16, pp. 225-255 (1981).

“The Case-Slot Identity Theory,” *Cognitive Science* 5 (3), pp. 285-292 (1981).

“Passing Markers: A Theory of Contextual Influence in Language Comprehension,” *Cognitive Science*, pp. 171-190 (1983).

“Motivation Analysis, Adductive Unification, and Non-Monotonic Equality,” *Artificial Intelligence*, 34 (3), pp. 275-296 (1988).

“Dynamic Construction of Belief Networks” (with Robert Goldman), Proc. *Conference on Uncertainty in Artificial Intelligence*, (1990). Also appears in *Uncertainty in Artificial Intelligence*, 6, pp. 171-184 (1991).

“Bayesian Networks Without Tears,” *AI Magazine*, pp. 50-63 (1991).

“A Language for Construction of Belief Networks” (with Robert Goldman), *IEEE Transactions on Pattern Analysis and Machine Intelligence*, 15 (3), pp. 196-208 (1993).

“A Bayesian Model of Plan Recognition” (with Robert Goldman), *Artificial Intelligence Journal*, 64 (1), pp. 53-79 (1993).

“Cost-Based Abduction and MAP Explanation” (with Solomon Shimony), *Artificial Intelligence Journal*, 66, pp. 345-374 (1994).

“Taggers for Parsers” (with G. Carroll, J. Adcock, A. Cassandra, Y. Gotoh, J. Katz, M. Littman, and J. McCann), *Artificial Intelligence Journal*, 85 (1-2), pp. 45-57 (1996).

“Statistical Techniques for Natural Language Parsing,” *AI Magazine*, 18 (4), pp. 33-43 (1997).

"New Figures of Merit for Best-first Probabilistic Chart Parsing" (with Sharon Carballo), *Computational Linguistics*, 24, pp. 275-298 (1998).

"Recognizing Disfluencies in Conversational Speech" (with Matthew Lease, Mark Johnson), *IEEE Transactions on Audio, Speech and Language Processing* 14(5), 1566-1573 (2006)

#### *Refereed Conference Articles*

"Computer Comprehension of Calculus Word Problems," Proc. 1969 *International Joint Conference on Artificial Intelligence*, pp. 303-316 (1969).

"Jack and Janet in Search of a Theory of Knowledge," Proc. 1973 *International Joint Conference on Artificial Intelligence* (1973).

"A Partial Taxonomy of Knowledge about Actions," Technical Report, Institute for Semantic and Cognitive Studies, Castagnola, Switzerland (1975). Also published in Proc. 1975 *International Joint Conference on Artificial Intelligence*.

"Organization and Inference in a Frame-Like System of Common Sense Knowledge," *Papers for the Workshop on Theoretical Issues in Natural Language Processing*, M.I.T. (1975).

"Ms. Malaprop, a Language Comprehension Program," Proc. 1977 *International Joint Conference on Artificial Intelligence* (1977). Also published as Research Technical Report 31, Institute for Semantic and Cognitive Studies, Geneva, Switzerland (1977).

"With a Spoon in My Hand This Must be the Eating Frame," Proc. *Second Workshop on Theoretical Issues in Natural Language Processing* (1978). Also published in *Journal of Computational Linguistics* (1978).

"Six Topics in Search of a Parser: An Overview of AI Language Research" (with W. Lehnert and M. Ringle), Proc. *Seventh Joint Conference on Artificial Intelligence* (1981).

"Word Sense and Case Slot Disambiguation" (with Graeme Hirst), Proc. 1982 *National Conference on Artificial Intelligence* (1982).

"The Bayesian Basis of Common Sense Medical Diagnosis," Proc. 1983 *National Conference on Artificial Intelligence* (1983).

"Time and Tense in English" (with Mary Harper), Proc. 1986 *Conference of the Association for Computational Linguistics*, pp. 3-9 (1986).

"A Neat Theory of Marker Passing," Proc. 1986 *National Conference on Artificial Intelligence*, pp. 584-589 (1986).

"A Connectionist Context-Free Parser Which is Not Context-Free, But Then It is Not Really Connectionist Either" (with Eugene Santos), Proc. *Ninth Annual Conference of the Cognitive Science Society* (1987).

"A Logic for Semantic Interpretation" (with Robert Goldman), Proc. 1988 *Conference of the Association for Computational Linguistics*, pp. 87-94 (1988).

"A Probabilistic ATMS for Plan Recognition" (with Robert Goldman), *Workshop on Plan Recognition*, AAAI Press (1988).

“A Semantics for Probabilistic Quantifier-Free First-Order Languages with Particular Application to Story Understanding” (with Robert Goldman), *Proc. 1989 International Joint Conference on Artificial Intelligence*, pp. 1074-1079 (1989).

“Plan Recognition in Stories and in Life” (with Robert Goldman), *Proc. Fifth Workshop on Uncertainty in Artificial Intelligence*, pp. 54-59 (1989).

“A Probabilistic Approach to Plan-Recognition and Text Understanding - Work In Progress” (with Robert Goldman), *Proc. Second Workshop on Plan Recognition, IJCAI 1989* pp. 1-5 (1989).

“Probabilistic Semantics for Cost-Based Abduction” (with Solomon E. Shimony), *Proc. 1990 National Conference on Artificial Intelligence* (1990).

“A New Algorithm for Finding MAP Assignments to Belief Networks” (with Solomon E. Shimony), *Proc. Conference on Uncertainty in Artificial Intelligence*, (1990).

“A Probabilistic Approach to Text Understanding” (with Robert Goldman), *Third International Workshop on Artificial Intelligence and Statistics* (1991).

“A Probabilistic Model of Plan Recognition” (with Robert Goldman), *Proc. 1991 Conference of the American Association for Artificial Intelligence* (1991).

“A Probabilistic Analysis of Marker-Passing Techniques for Plan-Recognition” (with Glenn Carroll), *Proc. Conference on Uncertainty in Artificial Intelligence* (1991).

“A New Admissible Heuristic for Minimal-Cost Proofs” (with Saadia Husain), *Proc. 1991 Conference of the American Association for Artificial Intelligence* (1992).

“Two Experiments on Learning Probabilistic Dependency Grammars from Corpora” (with Glenn Carroll), *AAAI-92 Workshop on Statistically-Based NLP Techniques*, AAAI Press (1992).

“Dynamic MAP Calculations for Abduction” (with Eugene Santos), *Proc. Tenth National Conference on Artificial Intelligence*, AAAI Press/MIT Press (1992).

“Learning Probabilistic Dependency Grammars from Labeled Text” (with Glenn Carroll), *Working Notes, AAAI Fall Symposium Series* (1992).

“Equations for Part-of-Speech Tagging” (with C. Hendrickson, N. Jacobson, and M. Perkowitz), *Proc. Eleventh National Conference on Artificial Intelligence* (1993). Received AAAI best-written-paper award.

“Context-Sensitive Statistics for Improved Grammatical Language Models” (With Glenn Carroll), *Proc. Twelfth National Conference on Artificial Intelligence*, AAAI Press/MIT Press (1994).

“Figures of Merit for Best-First Probabilistic Chart Parsing” (with Sharon Carballo), *Proc. Conference on Empirical Methods in Natural Language Processing*, pp. 127-132 (1996).

“Tree-bank Grammars,” *Proc. Thirteenth National Conference on Artificial Intelligence*, AAAI Press/MIT Press, pp. 1031-1036 (1996).

“Statistical Parsing with a Context-free Grammar and Word Statistics” *Proc. of the Fourteenth National Conference on Artificial Intelligence* AAAI Press/MIT Press (1997), Best Paper Award.

“Edge-based Best-first Chart Parsing” (with Sharon Goldwater and Mark Johnson), *Proc. Sixth Workshop on Very Large Corpora*, pp. 127-133 (1998).

“Noun-phrase Co-occurrence Statistics for Semi-automatic Semantic Lexicon Construction” (with Brian Roark), *36th Annual Meeting of the Association for Computational Linguistics and 17th International Conference on Computational Linguistics*, pp.1110-1116 (1998).

“A Statistical Approach to Anaphora Resolution” (with Niyu Ge and John Hale), *Proc. Sixth Workshop on Very Large Corpora*, pp.161-171 (1998).

“Finding Parts in Very Large Corpora” (with Matthew Berland), *Proceedings Of the ACL-1999*, pp. 57-64 (1999).

“Automatic Compensation for Parser Figure-of-merit Flaws” (with Don Blaheta), *Proceedings of the ACL-1999*, pp. 513-518 (1999).

“Determining the Specificity of Nouns from Text” (with Sharon Caraballo), *1999 Joint Sigdat Conference on Empirical Methods in Natural Language Processing and Very Large Corpora* pp. 63-70 (1999).

“Reading comprehension programs in a statistical-language-processing class” (with several co-authors) *Proceedings of the NAACL2000 Workshop on Reading Comprehension Tests as Evaluation for Computer-Based Language Understanding Systems, Association for Computational Linguistics (2000)*

“A maximum-entropy-inspired parser” *Proceedings of the 2000 Conference of the North American Chapter of the Association for Computational Linguistics, ACL New Brunswick NJ (2000)*

“Assigning function tags to parsed text” (with Don Blaheta) *Proceedings of the 2000 Conference of the North American Chapter of the Association for Computational Linguistics, ACL, New Brunswick NJ (2000)*

“Measuring efficiency in high-accuracy, broad-coverage statistical parsing” (with Brian Roark) *Proceedings of the COLING-2000 Workshop on Efficiency in Large-scale Parsing Systems (2000)*

“Immediate-head parsing for language models” *Proceedings of the Association for 2001 (2001 Computational Linguistics)* (Best paper award)

“Unsupervised learning of name structure from co-reference data” *Proceedings of the North American Association for Computational Linguistics 2001*, pp. 48-54 (2001)

“Edit detection and parsing for transcribed speech” (with Mark Johnson), *Proceedings of the North American Association for Computational Linguistics 2001*, pp. 118-126 (2001)

“Entropy Rate Constancy in Text” (with Dmitri Genzel) *Proceedings of the Association for Computational Linguistics 2002*

“Parsing and Disfluency Placement” (with Donald Engel and Mark Johnson)

*Proceedings of the Conference on Empirical Methods in Natural Language Processing*

“Syntax-based Language Models for Statistical Machine Translation” with Kevin Knight and Kenji Yamada, *Machine Translation Summit IX, 2003*.

“Variation of Entropy and Parse Trees of Sentences as a Function of the Sentence Number” with Dmitri Genzel, *2003 Conference on Empirical Methods in Natural Language Processing*.

“Coarse-to-fine n-best Parsing and MaxEnt Discriminative Reranking”, Eugene Charniak and Mark Johnson, *Proceedings of the 2005 Meeting of the Association for Computational Linguistics, 2005*

“Supervised and Unsupervised Learning for Sentences Compression”, Jenine Turner and Eugene Charniak, *Proceedings of the 2005 Meeting of the Association for Computational Linguistics, 2005*

“Parsing Biomedical Literature,” by Matt Lease and Eugene Charniak  
*International Joint Conference on Natural-Language Processing, 2005*

“Effective self-training for parsing,” David McClosky, Eugene Charniak, and Mark Johnson, *Proceedings of the North American Chapter of the Association for Computational Linguistics 2006*

“Multilevel Coarse-to-fine PCFG Parsing,” Eugene Charniak, Mark Johnson, *Proceedings of the 2006 Meeting of the North American Chapter of the Association for Computational Linguistics (NAACL), 2006*

“Reranking and Self-Training for Parser Adaptation”, David McClosky and Eugene Charniak and Mark Johnson *Proceedings of the ACL 2006*

“Learning Phrasal Categories. William P. Headden III, Eugene Charniak and Mark Johnson, *Empirical Methods in Natural Language Processing, 2006*

“A Look at Parsing and Its Applications” Matthew Lease, Eugene Charniak, Mark Johnson, and David McClosky, *Proceedings of the American Association for Artificial Intelligence 2006*

“A Unified Local and Global Model for Discourse Coherence”. Micha Elsner, Joseph Austerweil, and Eugene Charniak in *Proceedings of HLT-NAACL '07, Rochester, New York, April 2007. Association for Computational Linguistics*.

“Language Modeling for Determiner Selection”. Jenine Turner and Eugene Charniak In *Human Language Technologies 2007: The Conference of the North American Chapter of the Association for Computational Linguistics; Companion Volume, Short Papers, pages 177-180, Rochester, New York, April 2007. Association for Computational Linguistics*.

“Brown at CL-SR'07: Retrieving Conversational Speech in English and Czech”. Matthew Lease and Eugene Charniak in *Working Notes of the Cross-Language Evaluation Forum (CLEF): Cross-Language Speech Retrieval (CL-SR) track, 2007*.

“You Talking to Me? A Corpus and Algorithm for Conversation Disentanglement” Micha Elsner and Eugene Charniak, In *Proceedings of ACL-08: HLT, Short Papers, pages 101-104, Columbus, Ohio, June 2008. Association for Computational Linguistics*.

“Coreference-inspired Coherence Modeling” Micha Elsner and Eugene Charniak, In Proceedings of ACL-08: HLT, Short Papers, pages 41-44, Columbus, Ohio, June 2008. Association for Computational Linguistics.

“Evaluating Unsupervised Part-of-Speech Tagging for Grammar Induction” William P. Headden III, David McClosky, and Eugene Charniak, In Proceedings of the 22nd International Conference on Computational Linguistics (COLING'08), Manchester, UK, August 2008.

“A Dirichlet-smoothed Bigram Model for Retrieving Spontaneous Speech”, Matthew Lease and Eugene Charniak, 8th Workshop of the Cross-Language Evaluation Forum, CLEF 2007, Revised Selected Papers, volume 5152 of Lecture Notes in Computer Science. Springer-Verlag, 2008.

“Self-Training for Biomedical Parsing”, David McClosky and Eugene Charniak, In Proceedings of ACL-08: HLT, Short Papers, pages 101-104, Columbus, Ohio, June 2008. Association for Computational Linguistics.

“When is Self-training Effective for Parsing?”, David McClosky, Eugene Charniak, and Mark Johnson, In Proceedings of the 22nd International Conference on Computational Linguistics (COLING'08), Manchester, UK, August 2008.

“The same-head heuristic for conference”. Micha Elsner and Eugene Charniak Proceedings of the Association for Computational Linguistics, 2010.

“Nearly context-sensitive top-down incremental parsing”. Eugene Charniak. In Proceedings of the Conference for Empirical Methods in Natural-Language Processing 10, 2010.

“Native Language Detection with Tree Substitution Grammars” Eugene Charniak with Ben Swanson Proceedings of the 50th Annual Meeting of the Association for Computational Linguistics, pages 193–197, 2012.

“Apples to Oranges: Evaluating Image Annotations from Natural Language Processing Systems” Eugene Charniak with Rebecca Mason Proceedings of the 2012 Meeting of the North American Chapter of the Association for Computational Linguistics NAACL, 2012.

“A Context free TAG variant,” with Ben Swanson, Elif Yamangil, and Stuart Shiber, NAACL/HLT 2013.

“Extracting the Native Language Signal for Second Language Acquisition,” with Ben Swanson ACL 2013.

“A Generative Joint, Additive, Sequential Model of Topics and Speech Acts in Patient-Doctor,” with Byron C. Wallace, Thomas A. Trikalinos, M. Barton Laws and Ira B. Wilson, EMNLP 2013.

“Naïve Bayes Word-Sense Induction,” with Do Kook Choe, EMNLP 2013.

“Identifying Differences in Physician Communication Styles with a Log-Linear Transition Component Model.” with Wallace, B. C., Dahabreh, I. J., Trikalinos, T. A., Laws, M. B., Wilson, I., & Charniak, E. In Twenty-Eighth AAAI Conference on Artificial Intelligence (AAAI-2014). 2014



“Domain-Specific Image Captioning”, with Mason, Rebecca, and Eugene Charniak  
Conference on Natural-Language Learning (CONLL-2014) 2014

“Natural Language Generation with Vocabulary Constraints” Proceedings of the Ninth  
Workshop on Innovative Use of NLP for Building Educational Applications ACL  
2014 Pp 124–133

“Data Driven Language Transfer Hypotheses” Swanson, Ben, and Eugene Charniak 2014  
Meeting of the European Chapter of the Association for Computational Linguistics  
(EACL 2014) 2014Pp 169-174

“Humans Require Context to Infer Ironic Intent (so Computers Probably do, too).”  
Wallace, Byron C., Laura Kertz Do Kook Choe, and Eugene Charniak. 2014 Meeting of  
the Association for Computational Linguistics (ACL-2014) 2014

“Syntactic parse fusion”, Do Kook Choe, David McClosky and Eugene Charniak. 2015  
Proceedings of EMNLP.

“A hybrid generative/discriminative approach to citation prediction” 2015 Proceeding of  
NAACL.

#### *Technical Reports*

“CARPS, A Program Which Solves Calculus Word Problems,” MAC-TR-51 (Thesis),  
Project MAC, M.I.T. (1968).

“Micro-Planner Reference Manual” (with G.J. Sussman and T. Winograd), A.I. Memo  
203A, M.I.T. Artificial Intelligence Laboratory (1971).

“Toward a Model of Children's Story Comprehension,” TR-266, M.I.T.  
Artificial Intelligence Laboratory (1972).

“He Will Make You Take it Back, A Study in the Pragmatics of Language,” Technical  
Report 6, Institute of Semantic and Cognitive Studies, Castagnola, Switzerland (1974).

“A Brief on Case,” Technical Report 22, Institute for Semantic and Cognitive Studies,  
Castagnola, Switzerland (1975).

“On the Referential/Attributive Distinction,” Technical Report 24, Institute for Semantic  
and Cognitive Studies, Geneva, Switzerland (1976).

“Micro-SAM and Micro-ELI: Exercises in Popular Cognitive Mechanics” (with C.  
Riesbeck), Research Report 139, Yale University Artificial Intelligence Project (1978).

“Type Checking in LISP,” Technical Report No. CS-58, Department of Computer  
Science, Brown University (1979).

“The Frail/Nasl Reference Manual” (with Michael K. Gavin and James Hendler),  
Technical Report No. CS-83-06, Department of Computer Science, Brown University  
(1983).

“Knowledge Representation and the Plan-Recognition-as-Planning Theory,”  
Technical Report No. CS-85-01, Department of Computer Science, Brown  
University (1985).

"Probabilistic Semantics for Cost-Based Abduction" (with Solomon E. Shimony), Technical Report No. CS-90-02, Department of Computer Science, Brown University (1990).

"A New Admissible Heuristic for Minimal-Cost Proofs" (with Saadia Husain), Technical Report No. CS-91-11, Department of Computer Science, Brown University (1991).

"Probabilistic Abduction for Plan Recognition" (with Robert Goldman), Technical Report No. CS-91-12, Department of Computer Science, Brown University (1991).

"A Probabilistic Analysis of Marker-Passing Techniques for Plan Recognition" (With Glenn Carroll), Technical Report No. CS-91-44, Department of Computer Science, Brown University (1991).

"Two Experiments on Learning Probabilistic Dependency Grammars from Corpora" (With Glenn Carroll), Technical Report No. CS-92-16, Department of Computer Science, Brown University (1992).

"Taggers for Parsers" (with J. Adcock, G. Carroll, A. Cassandra, Y. Gotoh, J. Katz, M. Littman, J. McCann), Technical Report No. CS-94-06, Department Of Computer Science, Brown University (1994).

"Context-Sensitive Statistics for Improved Grammatical Language Models" (With Glenn Carroll), Technical Report No. CS-94-07, Department of Computer Science, Brown University (1994).

"Parsing with Context-Free Grammars and Word Statistics," Technical Report No. CS-95-28, Department of Computer Science, Brown University (1995).

"A Statistical Syntactic Disambiguation Program and what it learns" (With Murat Ersan), Technical Report No. CS-95-29, Department of Computer Science, Brown University (1995).

"Expected-Frequency Interpolation," Technical Report No. CS-96-37, Department of Computer Science, Brown University (1996).

"A Generative Discourse-New Model for Text Coherence" (with Micha Elsner), Technical Report No. CS-07-04, Department of Computer Science, Brown University (2007)

#### *Book Reviews*

"How to Register Dissatisfaction with AI," *The Behavioral and Brain Sciences* 1 (1) (1979).

"Review of ``Readings in Uncertain Reasoning," *Canadian Artificial Intelligence* (28), pp. 25-27 (1991).

#### *Invited Lectures*

1972                      Stanford University  
                                 Rutgers University

1973                      Carnegie-Mellon Workshop on the Representation of Knowledge

Milan Polytech

1973, 74, 75 IBM European Advanced Education Institute

1974 Zurich Polytech  
Lausanne Polytech  
Artificial Intelligence and Simulation of Behavior (AISB) Conference,  
Sussex

1975 NATO Summer School on the Representation of Knowledge, Santa  
Cruz  
AISB Summer School, Cambridge, England  
University of Edinburgh  
University of Amsterdam  
Catholic University, Nijmegen  
University of Leyden

1976 University of Bern  
University of Bielefeld  
University of Cologne  
Workshop on Semantic Representation, Bonas, France

1977 Psycholinguistics Seminar, University of Geneva  
French National Research Center, Paris  
Conference on Artificial Intelligence, Bad Honeff, Germany  
Massachusetts Institute of Technology  
University of Maryland

1978 University of Rochester  
Bolt, Beranek and Newman

1979 Raytheon Corporation  
Massachusetts Institute of Technology  
University of New Hampshire

1980 Carnegie-Mellon University  
University of Connecticut

1981 Hewlett-Packard  
Bolt, Beranek and Newman

1982 Natural Language Parsing Workshop, Essex, England  
Conference on the Philosophy of Computation, Brown University

1983 Rhode Island College  
Yale University  
National Conference on Artificial Intelligence  
Workshop on Unsupervised Image Classification, Brown University,  
University of Rochester

1984 National Conference on Artificial Intelligence  
Hudson Valley SIGART and Vassar College  
Ohio SIGART and Air Force Institute of Technology

1985 Central Florida State University (Distinguished Lecture Series)  
Columbia University

Digital Equipment Corporation  
New Mexico State University

1986 St. John's College  
Carnegie-Mellon University  
Boston University  
National Conference on Artificial Intelligence  
Mitre Corporation  
Fall Joint Computer Conference

1987 Theoretical Issues in Natural Language Processing-3  
Yale University  
Digital Equipment Corporation  
ACM Computer Science Conference (Keynote Speaker)

1988 Philosophy of Cognitive Science Series - Brown University  
University of California, Berkeley  
Xerox Parc  
SRI International  
University of California, Irvine  
University of California, Los Angeles  
Workshop on Planning Recognition, AAAI 1988  
Rochester Planning Workshop  
Rome Connectionist Natural Language Workshop

1989 General Electric  
University of Sussex  
Conference of the British Society for the Philosophy of Science  
Imperial College - London  
Penn State University (Distinguished Lecture Series)  
IJCAI Workshop on Plan Recognition  
Workshop on Uncertainty in Artificial Intelligence

1990 University of Chicago  
Northwestern University  
Florida Artificial Intelligence Research Symposium  
Connectionism Workshop, University of Pennsylvania

1991 Curriculum Workshop, M.I.T.  
University of Rochester  
Second International Colloquium on Cognitive Science, San Sebastian,  
Spain

AI Curriculum Workshop, Holy Cross  
US Navy Center for Applied Research in Artificial Intelligence,  
Washington, DC

1992 Louisiana State University  
Tulane University

1993 AAAI Invited Lecture  
AAAI Tutorial

1994 University of Toronto  
Carnegie-Mellon University  
Brown University Department of Cognitive Science

1995            Cornell University  
 Florida Artificial Intelligence Research Symposium  
 Southern Methodist University  
 International Joint Conference on Artificial Intelligence, Montreal,  
 Canada  
 IJCAI Workshop on New Methods in Language Learning  
 University of Massachusetts at Amherst  
 Third Natural Language Processing Pacific-Rim Symposium, Seoul,  
 Korea

1996            University of Pennsylvania

1997            University of Utah (Distinguished Lecture Series)  
 University of Rochester  
 Uncertainty in Artificial Intelligence (Banquet Speaker)  
 Johns Hopkins University

1998            University of Maryland  
 Machines that Think Conference (Snowbird)  
 Neural Information Processing Systems (NIPS)

1999            Johns Hopkins University  
 ASIS 1999 Annual Conference  
 Brown Humanities Institute  
 CUNY Sentence Processing Conference

2000            International Biometric Society East North America Region (AR)  
 Stanford University  
 AI'2000 - The Canadian Artificial Intelligence Conference for

2000            Johns Hopkins Summer Workshop Microsoft  
 Institute for Mathematics and its Applications

2001            University of Saarbrucken  
 University of Bonn  
 AT&T Labs  
 Uncertainty in Artificial Intelligence Conference

2002            Educational Testing Service  
 Brown SUMS Conference (Undergraduate Mathematics).  
 Johns Hopkins (CLSP Summer School)  
 Columbia University Distinguished Lecture Series

2003            Fourth International Conference on Parsing Technology University of  
 Rochester

2004            Massachusetts Institute of Technology

2005            Google  
 Matesius Lecture Speaker - Charles University, Prague  
 ISI/UCLA Distinguished Lecture Series  
 Johns Hopkins

2005            Distinguished Lecture Series University of Pittsburg

- 2006 Matesius Lecture Speaker – Charles University, Prague  
Johns Hopkins Summer School on Computational Linguistics  
AI@50 Dartmouth 50th Anniversary Celebration of the 1956  
AI Conference AAI Doctoral Workshop Panel
- 2006 University of Illinois Distinguished Lecture Series Johns Hopkins  
University Computational-Linguistics Summer school
- 2008 Google (Mountain View California)  
Oregon Graduate Institute  
ISI International  
Stanford University  
University of California, Berkeley
- University of Maryland,  
The 23<sup>rd</sup> Meeting of the Florida Artificial  
Intelligence Research  
Symposium (FLAIRS-23)
- 2011 Carnegie-Mellon University  
The lifetime achievement award talk  
DARPA “kickoff” meeting for their new project
- 2012 Panel at NAACL “NLP Idol: Plucked from Obscurity

*Invited Workshop Papers:*

- 2004 An enhanced model for recognizing disfluencies in conversational  
speech Rich-Text Workshop 2004 (with Mark Johnson and Matt Lease)

*Papers Read*

- 1967 First Joint International Conference on Artificial Intelligence
- 1972 Conference on Natural Language Processing, NYU
- 1973 Third Joint International Conference on Artificial Intelligence
- 1975 Workshop on Theoretical Issues in Natural Language Processing, MIT
- 1977 Fifth International Joint Conference on Artificial Intelligence
- 1978 Second Workshop on Theoretical Issues in Natural Language  
Processing, U. Illinois
- 1979 Workshop on “Dense Representations,” University of California, San  
Diego Twelfth Annual Mathematical Psychology Meeting, Providence,  
RI Representation des connaissances et raisonnement dans les sciences  
de l’homme et de la socie\_’te\_’, Saint-Maxim in ACM National  
Conference
- 1981 Seventh International Joint Conference on Artificial Intelligence

1982	Cognitive Science Curriculum Conference, U. Rochester Conference of the Philosophy of Computation, Brown U.
1983	National Conference on Artificial Intelligence
1985	Workshop on Connectionist Symbol Processing
1986	National Conference on Artificial Intelligence
1988	Conference of the Association for Computational Linguistics
1989	Eleventh International Joint Conference on Artificial Intelligence, Workshop on Uncertainty in Artificial Intelligence
1990	Informatics Curricula for the 1990's National Conference on Artificial Intelligence Conference on Uncertainty in Artificial Intelligence
1993	AAAI
1994	AAAI

## 6. Service

### *To the University*

1978-1980	Colloquia Chairman, Program in Computer Science
1978-1980	Co-organizer, Artificial Intelligence Lecture Series
1980-1986	Executive Committee, Center for Cognitive Science
1980-1981	Freshman Advisor, Department of Computer Science
1981-1984	Graduate Advisor, Department of Computer Science
1981-1988	Chairman, Graduate Admissions Committee
1988-1990	Deans Scholarship Committees
1988-1991	Graduate Advisor
1989-1991	Committee on Nominations
1991-1997	Chair, Department of Computer Science
1999-	Lectureship Committee
2003	Chair, Undergraduate Recruitment Committee
2004	Chair, Undergraduate Recruitment Committee
2005	Undergraduate Recruitment Committee Faculty Search Committee. Facilities Committee.

2006	Undergraduate Recruitment Committee Faculty Search Committee. Conduit Associate Editor
2008	Gave a talk at Brown University Staff Development Day Undergraduate Recruitment Committee Search Committee
2009	Department Thesis Oversight Committee Undergraduate Recruitment Committee
2010	Undergraduate Recruitment Committee (meet with prospective undergraduates and give talks at recruitments Days.)  Faculty Search committee Successful nomination of Pascal Van Hentenryck to be fellow of the Association for the Advancement of Artificial Intelligence (AAAI)
2011	Faculty Search committee I have served the community in reviewing for several conferences.
2012	Chair of the Faculty Search Committee Undergraduate Recruitment
2014	Committee member on Medical Faculty Advancement (CMFA)
2015	Undergraduate Recruitment Committee Faculty Search Committee

*To the profession*

1969-	Referee, International Joint Conferences on Artificial Intelligence
1977-	Associate Commentator, The Behavioral and Brain Sciences
1977-1984	Editor, Cognitive Science
1978-NSF	Reviewer, Intelligent Systems
1979-1984	Editorial Advisory Board, Cognition and Brain Theory
1980-	NSF Reviewer, Information Science and Technology
1980-1981	Program Committee, Seventh International Joint Conference on Artificial Intelligence
1982-1986	Editorial Board, Studies in Natural Language Processing Cambridge University Press
1983-1986	Board, American Association for Artificial Intelligence
1984-1996	Editorial Board, \fICognitive Science



1988	ACL Conference Program Committee AAAI Conference Program Committee Editorial Board, Computational Linguistics
1988-1989	Knowledge Representation Conference Program Committee
1989	Reviewer, International Joint Conference on Artificial Intelligence
1990	Site Reviewer, New York State Education Department, Doctoral Evaluation Project
1992	Reviewer, NSF 1993 Undergraduate Course and Curriculum Development Program
1994	Program Committee, AAAI Best Paper Committee, AAAI
1996	Evaluation Panel Member for the Presidential Faculty Fellows Program, NSF Program Committee, Conference on Empirical Methods in Natural Language Processing Site Reviewer, Linguistic Data Consortium
1997	Editorial Board, Journal of AI Research
1997	Local Arrangements Chair EMNLP-97 Program Committee ACL 97
1998	Program Chair, Workshop on Very Large Corpora
1999	ACL99 Reviewer NSF Site visitor
2001	Program Co-chair ACL-2002 Program Co-chair Conference of the Association for Computational Linguistics 2002 (ACL-2002) Reviewer Conference on Empirical Methods in Natural-Language Processing 2002 (EMNLP-02)
2003	Program committees: 2003 Meeting of the North American Chapter of the Association for Computational Linguistics, 2003 Conference on Empirical Methods in Natural Language Processing, 2003 Conference of the Association for Computational Linguistics.  Advisory committee, Johns Hopkins Summer Workshop.
2004	Program committees: 2004 Meeting of the North American Chapter of the Association for Computational Linguistics, 2004 Conference on Empirical Methods in Natural Language Processing, 2004 Conference of the Association for Computational Linguistics.
2005	ACL reviewer Disfluency in Spontaneous Speech Conference reviewer Conference on Natural-Language Learning (CONLL) reviewer

2007	Program committee: 2006 Meeting of the North American Chapter of the Association of Computational Linguistics, 2006 Conference on Empirical Methods in Natural Language Processing
2008	Program committee: reviewer, Empirical Methods for Natural-Language Processing, Association for Computational Linguistics.
2008	Tenure and Promotion letters – Berkeley, Cornell, Michigan
2010	Served as reviewer for many conferences Best Paper award committee for ACL 2010 Invited speaker, Memorial service for Fred Jelinek
2012	Reviewer for most of the major NLP Conferences Served as Vice President of Empirical Methods in Natural-Language Pressing (EMNLP)
2014	Undergraduate recruitment committee, Faculty Search committee.

## 7. Academic Honors, Research Grants, Fellowships and Honorary Societies

### *Honors*

1967	A.B. with Honors, University of Chicago National Science Foundation Fellowship Sigma Xi
1990	Fellow of the American Association for Artificial Intelligence, founding member
2011	Association for Computational Linguistics (ACL) lifetime achievement award. Twenty second Hoffman prize for a distinguished publication on Christopher Marlowe
2014	Association for the Advancement of Artificial Intelligence (AAAI) Classic Paper award (2014-15). for the paper Statistical parsing with a context-free grammar and word statistics. AAAI-1997)

### *Research Grants*

1979-1980	NSF, ``Computer Science and Computer Engineering Research Equipment'', \$55,096.
1979-1988	ONR, ``The Computer Solution of Word Problems in Inventory Control as a First Step Toward a Program Which Learns from Textbooks'', \$464,626.
1980-1985	ONR, ``Automated Technical Documentation and Assistance'' (Co- Principal Investigator with A. van Dam), \$891,084.
1981-1984	NSF, ``Research on Natural Language Processing (Frame Selection)'', \$131,920.

1982-1987	NSF, ``An Integrated Experimental Environment for Research in Computer Science' (Co-principal investigator with A. van Dam, J.E. Savage, P. Wegner, R. Sedgewick, T.W. Doeppner, S.P. Reiss, J.S. Vitter and P.C. Kanellakis), \$2,771,311.
1983-1985	DARPA/ONR, ``Ideographics" (Co-principal investigator with J.E. Savage, A. van Dam, G.M. Baudet, B.M. Chazelle, T.W. Doeppner, P.C. Kanellakis, S.P. Reiss, R. Sedgewick, J.S. Vitter and P. Wegner), \$700,000.
1983-1986	ITT, ``Digital Design Understanding as Motivation Comprehension," \$49,600.
1986-1989	NSF, ``A Single-Semantic-Process Theory of Parsing," \$295,240.
1985-1987	NSF, ``An Approach to Adductive Inference in Artificial Intelligence Systems," \$120,818.
1988-1990	ONR, ``Language Comprehension," \$171,895.
1988-1993	NSF, ``Multiparadigm Design Environments," \$3,469,574 (Co-PI).
1989-1992	NSF, ``A Probabilistic Approach to Natural Language Understanding," \$180,000.
1990-1993	ONR, ``A Probabilistic Approach to Text Understanding," \$277,879.
1991-1994	DARPA, ``High-Performance Computing Environments," \$2,697,175.
1994-1997	NSF, ``Improved Statistical Language Models," \$224,914.
1996-1999	ONR, ``AI Approaches to Statistical Language Models," \$304,384.
1997-2000	NSF, ``Structured Statistical Learning'' (with M. Johnson, J. Donoghue, S. Geman, and D. Mumford), \$775,420.
2000-2004	NSF, "Robust Knowledge Discovery from Parallel Speech and Text" (with large group from Brown, Johns Hopkins, etc.) \$300,000.
2001-2004	NSF-ITR Learning Syntactic Semantic Knowledge for Parsing (\$500,000)

## 8. Teaching

1993-94	Natural Language Understanding (CS241)
1994-95	Statistical Models in Natural-Language Processing (CS241)
1995-96	Statistical Models in Natural-Language Processing (CS241)
1996-97	Statistical Models in Natural-Language Processing (CS241) Syllabus: <a href="http://www.cs.brown.edu/courses/cs241">http://www.cs.brown.edu/courses/cs241</a>
1997-98	Statistical Models in Natural-Language Processing (CS241)
1998-99	Concepts & Challenges of Computer Science (CS2)

My home page is <http://www.cs.brown.edu/~ec>

2003-04	Robotics (CS148) Introduction to Statistical Language Processing (CS241)
2004-05	Theory of Computation (CS51) Robotics (CS148) Introduction to Statistical Language Processing (CS241)
2005-06	Theory of Computation (CS51) Introduction to Statistical Language Processing (CS241)
2007	Introduction to Statistical Language Processing (CS241)
2007	Introduction to Computational Linguistics (CS144)
2009	Topics in Computational Linguistics (CS295-K)
2009	Special topic --- Split –Merge Parsing (CS146, CS290)
2011	Introduction to Computational Linguistics (CS1460) Special Topics in Computational Linguistics (CS 295K)
2012	Introduction to Computational Linguistics (CS146) Special Topics in Computational Linguistics (CS 295K)
2013	Introduction to Computational Linguistics (CS146) Topics in Grounded Language for Robotics with Stefanie Tellex (CS295K)
2014	Introduction to Computational Linguistics (CS146) Special Topics in Computation Linguistics (CS295K)
2015	Computational Linguistics (CS146)

*Theses Directed*

1981	Douglas Wong, ``On the Unification of Language Comprehension with Problem Solving''
1983	Graeme Hirst, ``Semantic Interpretation against Ambiguity''
1985	James Hendler, ``Integrating Marker-Passing and Problem-Solving: A Spreading-Activation Approach to Improved Choice in Planning''
1987	Robert McCartney, ``Synthesizing Algorithms with Performance Constraints''
1989	Mary Harper, ``The Representation of Noun Phrases in Logical Form''
1990	Randall J. Calistri, ``Classifying and Detecting Plan-Based Misconceptions for Robust Plan Recognition''

Robert P. Goldman, ``A Probabilistic Approach to Language Understanding"

Felix W. Yen, ``CI-2, A Logic for Plural Representation"

1991 Solomon E. Shimony, ``A Probabilistic Framework for Explanation"

1992 Eugene Santos, ``A Linear Constraint Satisfaction Approach for Abductive Reasoning"

1995 Glenn A. Carroll, ``Learning Probabilistic Grammars for Language Modeling"

2000 Niyu Ge, "An Approach to Anaphoric Pronouns"

2001 Sharon A. Caraballo, "Automatic Construction of a Hypernym-Labeled Noun Hierarchy from Text"

2004 Donald P. Blaheta, "Function Tagging"

2005 Dmitriy Genzel "Creating Algorithms for Parsers and Taggers for Resource Poor Languages Using a Related Resource-Rich Language"

## 9. Corpora and Research Materials

"BLLIP 1987-89 WSJ Corpus Release 1"

A two CD-ROM corpus consisting of a complete, Treebank-style parsing of the Three-year WSJ archive from the ACL/DCI corpus -- about 30 million words of text. Distributed by the Linguistic Data Consortium (LDC). Together with Don Blaheta, Niyu Ge, Keith Hall, John Hale and Mark Johnson

## 10. Date Prepared

January, 2016