#### Curriculum Vitae

# Shlomo Engelson Argamon

argamon@iit.edu January 9, 2024

### Research Interests

Natural language processing and computational linguistics, particularly metaphor analysis, systemic functional linguistics, shallow parsing, and discourse structure. Computational stylistics, including text categorization by writing style, gender issues in linguistic expression, forensic linguistics, and sociolinguistics, with applications to humanities scholarship, cybersecurity, and counterterrorism. Data mining and machine learning from very large textual corpora, including intelligent text retrieval, categorization, summarization, and document search. Digital humanities, particularly application of machine learning and natural language processing to literary textual analysis and visualization.

## Academic and Research Appointments

Touro University, New York, NY.

2024—present: Associate Provost for Artificial Intelligence

2024-present: Professor of Computer Science

Illinois Institute of Technology, Chicago, IL.

2020–2023: Chair and Professor, Department of Computer Science

2019–2020: Interim Chair and Professor, Department of Computer Science

2013–2023: Professor (tenured), Department of Computer Science

2013–2020: Founding Director, Master of Data Science

**2002–2013:** Associate Professor (tenured 2006), Department of Computer Science *Jerusalem College of Technology*, Jerusalem, Israel.

1999–2002: Senior Assistant Professor, Department of Computer Science Bar-Ilan University, Ramat Gan, Israel.

1999–2002: Research Associate, Department of Mathematics and Computer Science

1996–1999: Research Scientist, Department of Mathematics and Computer Science

**1994–1996:** Fulbright Fellow, Department of Mathematics and Computer Science *Rutgers University*, Piscataway, NJ.

Summer 1998: Visiting Research Scientist, Center for Computational Design. *University of Chicago*, Chicago, IL.

Summer 1994: Postdoctoral Fellow, Department of Computer Science

### Education

### Yale University

Ph.D. Computer Science/Artificial Intelligence, May, 1994.

Dissertation Advisor: Drew V. McDermott.

M.Phil. Computer Science/Artificial Intelligence, December, 1991.

### Carnegie-Mellon University

B.S. Applied Mathematics/Computer Science, May, 1988.

## Fellowships & Awards

- Fellow of the British Computer Society, elected 2014.
- Distinguished Lecturer in Forensic Linguistics, Aston University, 2014.
- Senior Fellow, Brain Sciences Foundation (Providence, RI), 2011–present.
- Senior Fellow, Center for Advanced Defense Studies (Washington, DC), 2005–2016.
- Israel Science Foundation New Immigrant Scientist Fellow (Bar-Ilan University, Israel), 1999-2002.
- Computational Design Fellow, Center for Computational Design, Rutgers, 1998.
- Fulbright Postdoctoral Fellow (Bar-Ilan University, Israel), CIES/USIEF, 1994-1996.
- Fannie and John Hertz Foundation Graduate Fellow (Yale University), 1990-1994.

## Research Funding

- **IARPA:** AUTHOR: Attribution, and Undermining the Attribution, of Text While Providing Human-Oriented Rationales; \$1,655,553 from 09/19/22 through 06/18/26. PI.
- **Department of Energy:** Deep-learning approaches for the analysis of synchrotron data of materials used in energy and environmental applications, Idaho National Laboratory subcontract; 8/1/2018 through 9/30/19, co-PI.
- **IBM:** Empirical Analysis of the Data Science Job Market; 8/1/16 through 10/31/16 (\$15,000). PI.
- Intelligence Community Postdoc: Computational Cognitive Stylistics for Multi-Modal Identity Analytics; 7/8/13 through 7/7/15 (\$238,719). PI.
- **IARPA:** Scalable Cross-Lingual Metaphor Identification and Conceptual Analysis; 01/3/12 through 01/2/14 (\$2,667,148). PI.
- NIH/NLM SBIR: Automated matching of relevant research studies to patient records for Evidence Based Medicine, Parity Computing, Inc. subcontract; 08/15/11 through 09/15/12 (\$44,944). PI.
- NSF CISE/CRI: Community Resources for Authorship Attribution Research (joint with Duquesne U.); 08/01/08 through 01/31/10 (\$41,798). PI.
- NSF CISE/CRI: Community Resources for Authorship Attribution Research: REU Supplement; 04/01/09 through 03/31/10 (\$12,000). PI.
- Binational Science Foundation (BSF): Collaborative Proposal: Automated Text Analytic Methods to Assess Psychological Attributes of Authors (joint with Bar-Ilan University and University of Texas at Austin); 9/1/04 through 2/29/08 (\$90,000). PI. and James Pennebaker (U. Texas).
- **ARDA Challenge Workshop:** Complex Document Information Processing (CDIP); 1/1/05 to 12/31/06 (\$1,069,000). co-PI.
- NSF CISE/CRI: Community Resources for Research in Automated Authorship Attribution (joint with Rutgers U.); 7/15/05 through 6/30/06 (\$43,476). PI.

- **IBM/EAS KDD Challenge:** Meta-Learning and Computational Stylistics for Authorship Entity Recognition; 7/15/05 to 9/30/05 (\$61,575). PI.
- NSF CISE/EI: An Undergraduate CS Specialization in Knowledge Management Systems; 10/1/04 to 9/30/08 (\$269,999). PI.
- NSF CISE/EI: An Undergraduate CS Specialization in Knowledge Management Systems: REU Supplement; 10/1/04 to 9/30/08 (\$12,000). PI.

# Memberships

Fellow, British Computer Society (BCS);

Senior Member, IEEE;

Member, Association for Computing Machinery (ACM); Association for the Advancement of Artificial Intelligence (AAAI); Association for Computational Linguistics (ACL); International Association of Forensic Linguists (IAFL), American Association for the Advancement of Science (AAAS).

#### Postdoctoral Advisees

- Dr. Jonathan Dunn (PhD in Linguistics, Purdue University), Computational Cognitive Stylistics for Multi-Modal Identity Analytics, 2014–2015. Assistant Professor of Linguistics at University of Canterbury, Canterbury, New Zealand.
- Dr. Lisa Gandy (PhD in Computer Science, Northwestern University), Scalable Cross-Lingual Metaphor Identification and Conceptual Analysis, 2012-13. Assistant Professor of Computer Science at Central Michigan University.

## **Graduated Research Students**

- Dr. Rodney Summerscales, Ph.D. 2013 (IIT), Andrews University.
   Dissertation: Automatic Summarization of Clinical Abstracts for Evidence-Based Medicine
- 2. Dr. Navot Akiva, Ph.D. 2013 (Co-advisor; studied at Bar-Ilan U.), iKNOWtice. Dissertation: Unsupervised algorithms for corpus-based morphological analysis
- 3. Dr. Kenneth Bloom, Ph.D. 2011 (IIT), Google Cambridge.
  Dissertation: Sentiment Analysis Based on Appraisal Theory and Functional Local Grammars
- 4. Khush Deoja, M.S. 2015 (IIT), Sears Holding Company. Project: Correlation analysis of political orientation
- 5. Amin Rasooli, M.S. 2014, CCC Information Services. Project: *High-accuracy dependency parsing for Farsi*
- 6. Nandhi Prabhu Mohan, M.S. 2013 (IIT), Here / Nokia. Project: Annotating linguistic information in medical research abstracts
- 7. Paul Chase, M.S. 2010 (IIT), IBM. Project: Automated stylistic segmentation of texts
- 8. Sterling Stein, M.S. 2008 (IIT), Google.
  Project: Empirical comparison of probabilistic models for authorship attribution

- 9. Sobhan Raj Hota, M.S. 2008 (IIT), Fidelity Investments.

  Project: Determining gender and class of characters in Shakespeare's plays
- 10. Navendu Garg, M.S. 2007 (IIT), Slalom LLC. Project: Shallow systemic functional parsing using SQL
- 11. Shlomo Levitan, M.S. 2007 (IIT), One Kings Lane. Project: Function words and collocations for authorship analysis
- 12. Sushant Dhawle, M.S. 2006 (IIT), KMR Group Inc. Project: *Linguistic correlates of personality traits*
- 13. Andrew Holloway B.S. 2005 (IIT), Bronto Software.
  Project: Correlating language use and sexual preference using computational stylistics
- 14. Prafulla Srinivasan, M.S. 2004 (IIT), Discover Financial Services. Project: A database approach for ARFF generation in ATMan
- 15. Marin Šarić, B.S. 2003 (IIT), CEO, Optimoroute (PhD, KTH). Project: Storing and manipulating linguistically annotated texts in Java
- 16. Evgeny Shulgin, M.S. 2002 (Bar-Ilan U., co-advisor Moshe Koppel), Entrepreneur. Thesis: A neural network for day-trading stocks (in Hebrew)
- 17. Anat Shimoni, M.S. 2001 (Bar-Ilan U., co-advisor Moshe Koppel). Thesis: *Computational stylistics using Winnow* (in Hebrew)
- 18. Galit Avineri, M.S. 2000 (Bar-Ilan U., co-advisor Moshe Koppel). Thesis: Genre identification by machine learning (in Hebrew)
- 19. Revital Vaknin, M.S. 1999 (Bar-Ilan U., co-advisor Sarit Kraus).

  Thesis: Environment mapping by a robot while executing tasks (in Hebrew)
- 20. Yair Altman, M.S. 1998 (Bar-Ilan U., co-advisor Moshe Koppel). Thesis: Competitive neural learning for robotic mapping
- 21. Sigalit Sina, M.S. 1997 (Bar-Ilan U., co-advisor Sarit Kraus). Thesis: *Task execution in an unknown environment* (in Hebrew)
- 22. Joel Spolsky, B.S. 1991 (Yale U., supervisor Drew McDermott). Thesis: Active variables for automatic user-interface generation

#### Professional Service

#### **Journals**

- Founding Co-Chief Editor: Frontiers in Artificial Intelligence: Language and Computation, Frontiers.
- Associate editor: Register Studies, John Benjamin.
- Guest editor: Special topic section of *Journal of the American Society for Information Sciences and Technology* on Computational Analysis of Style, **57**(11), September, 2006.
- Reviewing: Communications of the ACM, Computational Intelligence, Digital Humanities Quarterly, Foundations and Trends in Information Retrieval, IEEE Transactions on Internet Systems, IEEE Transactions on Pattern Analysis and Machine Intelligence, IEEE Transactions on Robotics and Automation,, Journal of

Artificial Intelligence Research, Journal of Computer-Mediated Communication, Journal of Machine Learning Research, Journal of the American Society for Information Sciences and Technology, Literary and Linguistic Computing, Machine Learning.

## Conference Organizing

- Cofounder: Chicago Colloquium on Digital Humanities and Computer Science; Program Chair, 2006; Organizational Cochair, 2007; General Chair 2009.
- Program Cochair: Big Data Computing and Communications, Taiyuan, China, 2015.
- Program Cochair: Biennial Israeli Symposium on Foundations of Artificial Intelligence (BISFAI), 2007.
- Cochair, SIGIR 2006 Workshop Stylistics for Text Retrieval in Practice, Seattle, WA, August 2006.
- Workshop Chair: ACM Conference on Information and Knowledge Management, 2004 and 2005.
- Cochair, SIGIR 2005 Workshop Textual Stylistics in Information Access, Salvador, Brazil, August 2005.
- Cochair, AAAI 2004 Fall Symposium Style and Meaning in Language, Art, Music, and Design, Washington, DC, October 22-24, 2004.
- Special session organizer: "Intelligent Text Processing" at the *Eighth International Symposium on Artificial Intelligence and Mathematics*, January 2004.
- Chair, IJCAI-03 Workshop Doing it With Style: Computational Approaches to Style Analysis and Synthesis, Acapulco, MX, August 10, 2003.

### Program committees

- NAACL/HLT: 16th Annual Conference of the North American Chapter of the Association for Computational Linguistics: Human Language Technologies, 2018
- BigCom 2018: Big Data Computing and Communications, Chicago, IL, 2018.
- Twenty-Seventh AAAI Conference on Artificial Intelligence, 2013.
- First Workshop on Metaphor in NLP, at NAACL 2013.
- International Workshop on Plagiarism Analysis, Authorship Identification, and Near-Duplicate Detection, at CLEF 2011, 2012, and 2013.
- EMNLP-10: Empirical Methods in Natural Language Processing, 2010.
- First International Workshop on Opinion Mining for Business Intelligence, 2010.
- SEPLN'09 Workshop PAN. Uncovering Plagiarism, Authorship and Social Software Misuse, 2009.
- Conference of the Association for Computational Linguistics (ACL), 2007.
- Association for Artificial Intelligence, 2007.
- ACM SIGIR Conference on Research & Development on Information Retrieval, Senior Program Committee, 2008.
- ACM SIGIR Conference on Research & Development on Information Retrieval, 2006, 2007.
- Chicago Colloquium on Digital Humanities and Computer Science, 2006–2009.
- International Workshop on Plagiarism Analysis, Authorship Identification, and Near-Duplicate Detection, at ACM SIGIR 2007.

- 18th International Conference on Pattern Recognition (ICPR), 2006.
- International Conference on Human Language Technology Empirical Methods in Natural Language Processing, 2005.
- International Joint Conference on Artificial Intelligence, Senior Program Committee (poster track), Edinburgh, Scotland, July/August 2005.
- International Computational Systemic Functional Linguistics Conference, Sydney, Australia, July 2005.
- ACM Conference on Information and Knowledge Management, 2004, 2005.
- Biennial Israeli Symposium on Foundations of Artificial Intelligence, Ramat Gan, Israel; 1999, 2005.

#### **Professional Societies**

• Association for Computational Linguistics Ad Hoc Committee on Name Change Policy, 2022.

### **Funding Review**

- National Science Foundation: Reviewer and panelist for individual and multidisciplinary proposals, 2008—present
- Binational Science Foundation, US/Israel: Reviewer for funding proposals, 2007–present

#### **Tutorials**

"Authorship Attribution and Sentiment Analysis," invited one-day tutorial at the University of Neuchâtel, Switzerland, May 2011 (with Moshe Koppel).

## University Service

### Department Chair:

IIT Department of Computer Science, 2019–2023. (Interim Chair, 2019–2020.)

### Director and founder:

IIT Master of Data Science program, 2013–2020.

#### Committee Chair:

IIT Computer Science Undergraduate Curriculum Committee, 2009–2016; 2018-2019.

IIT Computer Science Strategic Planning Committee, 2011–2012; 2015–2018.

IIT Computer Science Best Student Paper Award Committee, 2006–2008.

### Representative:

IIT College of Science University Strategic Planning Committee, 2018–2023.

IIT Computer Science University Undergraduate Studies Committee, 2018–2023.

IIT Computer Science College of Science Strategic Planning Committee, 2017–2023.

IIT College of Science University Strategic Planning Committee, 2013–2014.

IIT Computer Science University Faculty Council, 2007–2010.

#### Committee Member:

Steering Committee, IIT Center for the Study of Ethics in the Professions, 2015-2017.

IIT Computer Science Undergraduate Curriculum Committee, 2004–2023. IIT Computer Science Graduate Curriculum Committee 2002–2004.

## Courses Taught

### Undergraduate courses

- Algorithms and Computational Complexity
- Artificial Intelligence: Language Understanding
- Artificial Intelligence: Planning and Control
- Computer Science: Introduction to the Profession
- Database Organization
- Formal Languages and Automata
- Functional and Logic Programming
- Information Retrieval
- Information and Knowledge Management Systems
- Intelligent Robotics
- Mathematical Logic for Computer Science
- Software Engineering

#### Graduate courses

- Data Science Practicum
- Machine Learning
- Natural Language Processing
- Systemic Functional Linguistics

### Corporate Advisory Boards

Knack (San Francisco; Israel); Séntisis (Madrid); Visual Process (Israel); AskWhai (Chicago).

### Expert Casework

### 2018-19 Naftogaz v. Gazprom

Engaged by Roschier (Stockholm) for forensic linguistic text analysis on behalf of defendant, Gazprom, in appeal. Analyzed authorship, using linguistic and statistical methods, of sections of arbitration decision to determine if critical sections were likely authored by an individual not on the arbitration panel. A full expert report was submitted, but ultimately not entered into evidence.

## 2018 United States v. Rocquel Bradley [2015 CF1 1270]

Engaged by Public Defender Service for the District of Columbia. Analyzed and validated expert witness's text analytic authorship analysis of short online texts as evidence in murder case.

2014 Qiang Wang v. Palo Alto Networks, Nir Zuk, and Fengmin Gong [No. C 12-05579 WHA]

Engaged and proposed by counsel, Durie Tangri LLP and Niro, Haller, & Niro, and ordered for hearing review for appointment as a Rule 706 expert witness for the analysis of network security technology patent infringement, specifically scanning for byte signatures in a data stream. Order granted summary judgement under the statute of limitations before experts were appointed.

- 2012 Texaco Exploration & Production Inc. v. Hilcorp Energy Company et al. 15th
  Judicial District Court, No. 98-71298-C, Vermilion Parish, LA
  Engaged by ILS eDiscovery Services on behalf of Smith Stagg LLC, counsel for the plaintiff, to analyze sufficiency of search terms used to locate documents responsive to discovery requests, relative to a set of required subject areas for discovery.
  Preliminary analyses done, but appeal was denied before a full expert report or testimony were required.
- 2011 People of the State of California v. Daniel Carlos Garcia et. al
  Engaged by Robin Sax, legal advisor to defendant, Mr. Garcia, to analyze text
  messages for authorship verification, and linguistic evidence for or against
  conspiracy to murder. After preliminary report submitted, neither a full expert
  report nor testimony were requested.
- **2010** Confidential investigation

Engaged for authorship analysis of text messages including death threats as part of a legal investigation. Preliminary expert report submitted; a full report and testimony were not required.

## Patents

Ely Razin and Sean Engelson, "A Method for Standardizing Phrasing". U.S. Patent #6,098,034, August 1, 2000 (filed March 18, 1996). Assigned to Expert Ease Development, Ltd.

## **Publications**

#### Peer-Reviewed Journals

- Jeff Terry, Miu Lun Lau, Jiateng Sun, Chang Xu, Bryan Hendricks, Julia Kise, Mrinalini Lnu, Sanchayni Bagade, Shail Shah, Priyanka Makhijani, Adithya Karantha, Travis Boltz, Max Oellien, Matthew Adas, Shlomo Argamon, Min Long, Donna Post Guillen. Analysis of Extended X-ray Absorption Fine Structure (EXAFS) Data Using Artificial Intelligence Techniques. Applied Surface Science, 547, 149059 https://doi.org/10.1016/j.apsusc.2021.149059, 2021.
- 2. <u>Shlomo Engelson Argamon</u>. Computational Forensic Authorship Analysis: Promises and Pitfalls. *Language and Law=Linguagem e Direito*, **5**(2):7–37, 2019.
- 3. Shlomo Engelson Argamon. Register in Computational Linguistics. Register Studies, 1(1):100-135, 2019. Preprint at https://arxiv.org/abs/1901.02543
- 4. Daniel Lakens, Federico G Adolfi, Casper J Albers, Farid Anvari, Matthew AJ Apps, Shlomo E Argamon, et al. Justify Your Alpha. *Nature Human Behaviour*, **2**:168—171, 2018.

220 citations.\*

- 5. Jonathan Dunn, <u>Shlomo Argamon</u>, Amin Rasooli, and Geet Kumar. Profile-Based Authorship Analysis. *Digital Scholarship in the Humanities*, **22**, 2015. 10 citations.
- 6. Shlomo Argamon and Moshe Koppel, A Systemic Functional Approach to Automated Authorship Analysis. *Journal of Law & Policy*, **12**:299–315, 2013. 27 citations.
- 7. Moshe Koppel, Jonathan Schler, and Shlomo Argamon. Authorship Attribution: What's Easy and What's Hard? Journal of Law & Policy, 12:317–331, 2013. 46 citations.
- 8. Neuman, Yair, Dan Assaf, Yohai Cohen, Mark Last, <u>Shlomo Argamon</u>, Newton Howard, and Ophir Frieder. Metaphor Identification in Large Texts Corpora. *PLOS ONE* 8(4), 2013:
  - http://www.plosone.org/article/info%3Adoi%2F10.1371%2Fjournal.pone.0062343. 102 citations.
- 9. Moshe Koppel, Jonathan Schler, <u>Shlomo Argamon</u>, and Yaron Winter. The Fundamental Problem of Authorship Attribution. *English Studies* (Special issue on stylometry and authorship attribution), **93**(3):284–291, 2013. 66 citations.
- 10. Moshe Koppel, Jonathan Schler, and <u>Shlomo Argamon</u>. Authorship Attribution in the Wild. *Language Resources and Evaluation*, **45**(1):83–94, published online 13 January, 2010. *246 citations*.
- 11. Shlomo Argamon and Mark Olsen. Words, Patterns and Documents: Experiments in Machine Learning and Text Analysis. *Digital Humanities Quarterly*, **3**(2), 2009.
- 12. <u>Shlomo Argamon</u>, Jean-Baptiste Goulain, Russell Horton, Mark Olsen. Vive la <u>Différence!</u> Text Mining Gender Difference in French Literature. *Digital Humanities Quarterly*, **3**(2), 2009.

25 citations.

<sup>\*</sup>Citation rates are as estimated by Google Scholar: http://scholar.google.com/citations?user=mjsJxhQAAAAJ.

13. Shlomo Argamon, Charles Cooney, Russell Horton, Mark Olsen, Sterling Stein. Gender, Race, and Nationality in Black Drama, 1950–2006: Mining Differences in Language Use in Authors and their Characters. *Digital Humanities Quarterly*, **3**(2), 2009.

19 citations.

- 14. Moshe Koppel, Jonathan Schler, and Shlomo Argamon. Computational methods in authorship attribution. Journal of the American Society for Information Sciences and Technology, **60**(1):9–26, 2009.

  655 citations.
- 15. Shlomo Argamon and Moshe Koppel. Automatically profiling the author of an anonymous text. Communications of the Association for Computing Machinery, 52(2), 2009.

  516 citations.
- 16. Jeff Dodick, <u>Shlomo Argamon</u>, and Paul Chase. Understanding scientific methodology in the historical and experimental sciences via linguistic analysis. *Science and Education*, **18**(8), August 2009. 51 citations.
- 17. Shlomo Argamon. Interpreting Burrows's Delta: Geometric and probabilistic considerations. Literary and Linguistic Computing, 23: 131-147, 2008.

  159 citations.
- 18. <u>Shlomo Argamon</u>, Jeff Dodick, and Paul Chase. Language use reflects scientific methodology: A corpus-based study of peer-reviewed journal articles. *Scientometrics*, **75**(2):203-238, 2008. *39 citations*.
- 19. Shlomo Argamon, Moshe Koppel, James W. Pennebaker, and Jonathan Schler. Mining the Blogosphere: Age, gender and the varieties of self-expression First Monday, 12(9), September 2007. http://firstmonday.org/issues/issue12\_9/argamon/index.html 268 citations.
- 20. Shlomo Argamon, Casey Whitelaw, Navendu Garg, Paul Chase, Sushant Dhawle, and Shlomo Levitan. Stylistic text classification using functional lexical features. Journal of the American Society for Information Sciences and Technology, 58(6), April 2007.
  243 citations.
- 21. Shlomo Argamon and Mark Olsen. Toward meaningful computing. Communications of the Association for Computing Machinery, April, 2006.

  13 citations.
- 22. Shlomo Argamon, Moshe Koppel, Jonathan Fine, Anat Rachel Shimoni. Gender, Genre, and Writing Style in Formal Written Texts. *Text*, **23**(3), 2003. 688 citations.
- 23. Moshe Koppel, Shlomo Argamon, Anat Rachel Shimoni. Automatically Categorizing Written Texts by Author Gender. *Literary and Linguistic Computing*, **17**(4), 2003. 761 citations.
- 24. Julio Ortega, Moshe Koppel, and Shlomo Argamon-Engelson. Arbitrating among competing classifiers using learned referees. Knowledge and Information Systems, 3(4):470–490, 2001.
  110 citations.
- 25. Shlomo Argamon-Engelson, Moshe Koppel, and Hillel Walters. Maximizing theory

- accuracy through selective reinterpretation. Machine Learning, 41(2):123–152, 2000.
- 26. Shlomo Argamon-Engelson, Ido Dagan, and Yuval Krymolowsky. A memory-based approach to learning shallow natural-language patterns. Journal of Experimental and Theoretical Artificial Intelligence, 11:369–390, 1999. 183 citations.
- 27. Shlomo Argamon-Engelson and Ido Dagan. Committee-based sample selection for probabilistic classifiers. Journal of Artificial Intelligence Research, 11:335-360, 1999. 195 citations.
- 28. Shlomo Argamon-Engelson, Sarit Kraus, and Sigalit Sina. Interleaved vs. a priori exploration for repeated navigation in random graphs. International Journal of Pattern Recognition and Artificial Intelligence, 13(7):963–986, 1999.
- 29. Shlomo Argamon-Engelson and Moshe Koppel. Tractability of theory patching. Journal of Artificial Intelligence Research, 8:39–65, 1998. 10 citations.
- 30. Shlomo Argamon-Engelson, Sarit Kraus, and Sigalit Sina. Utility-based on-line exploration for repeated navigation in an embedded graph. Artificial Intelligence, **101**(1–2):267–284, 1998. 13 citations.
- 31. Shlomo Argamon-Engelson. Using image signatures for place recognition. Pattern Recognition Letters, 19(10):941–951, 1998. 26 citations.
- 32. Thomas Dean, Dana Angluin, Kenneth Basye, Sean Engelson, Leslie Kaelbling, Evangelos Kokkevis, and Oded Maron. Inferring finite automata with stochastic output functions and an application to map learning. Machine Learning, 18:81–108, 1995.

102 citations.

## Refereed Book Chapters

- 33. Shlomo Argamon and Moshe Koppel. The Rest of the Story: Finding Meaning in Stylistic Variation. In Shlomo Argamon, Kevin Burns, and Shlomo Dubnov, eds. The Structure of Style: Algorithmic Approaches to Understanding Manner and Meaning, Springer, 2010.
  - 37 citations.
- 34. Kenneth Bloom and Shlomo Argamon. Unsupervised Extraction of Appraisal Expressions. In Atefeh Farzindar and Vlado Kešelj, eds. Lecture Notes in Computer Science, Volume 6085/2010, pp. 290-294, Springer, 2010. 15 citations.
- 35. Mathieu Guidère, Newton Howard, and Shlomo Argamon. Rich Language Analysis for Counterterrorism. In Shlomo Argamon and Newton Howard, eds., Computational Methods for Counterterrorism, Springer, 2009.
- 36. Shlomo Argamon, Ken Bloom, Andrea Esuli, and Fabrizio Sebastiani. Automatically Determining Attitude Type and Force for Sentiment Analysis. In Zygmunt Vetulani and Hans Uszkoreit, eds., Human Language Technology: Challenges of the Information Society, Lecture Notes in Computer Science vol. 5603. Springer, 2009. 86 citations.
- 37. Jeff Dodick and Shlomo Argamon. Rediscovering the Historical Methodology of the Earth Sciences by Understanding Scientific Communication Styles. In Catherine

Manduca and David Mogk, eds., Earth and Mind: How Geologists Think and Learn about the Earth, Geological Society of America Special Paper 413, pp. 105–120; Boulder, CO, 2006.

15 citations.

- 38. Shlomo Argamon and Jeff Dodick. A Corpus-Based Study of Scientific Methodology: Comparing the Historical and Experimental Sciences. In J. G. Shanahan, Y. Qu, J. Wiebe, eds., Computing Attitude and Affect in Text, Springer, Dordrecht, The Netherlands, 2005.
- 39. Sean Engelson and Ido Dagan. Sample selection in natural language learning. In S. Wermter, E. Riloff, G. Scheler, eds., Symbolic, Connectionist, and Statistical Approaches To Learning For Natural Language Processing, Springer-Verlag, 1996.

### **Edited Books**

- 40. Yu Wang, Hui Xiong, Shlomo Argamon, Xiang Yang Li, and Jian Zhong Li, eds. Big Data Computing and Communications: First International Conference, BigCom 2015, Taiyuan, China, August 1-3, 2015, Proceedings. Vol. 9196. Springer, 2015. ISBN 978-3-319-22047-5.
- 41. Shlomo Argamon and Newton Howard, eds. Computational Methods for Counterterrorism.
  - Springer, 2009. ISBN: 978-3-642-01140-5.
- 42. Shlomo Argamon, Kevin Burns, and Shlomo Dubnov, eds. The Structure of Style: Algorithmic Approaches to Manner and Meaning. Springer, 2010. ISBN 978-3-642-12337-5.

### **Book Reviews**

- Book review of Scalability Issues in 43. Shlomo Argamon. Attribution. Literary and Linguistic Computing, published online December 12, 2011.
- 44. Shlomo Argamon. Book review of **Opinion Mining and Sentiment Analysis**. Computational Linguistics, **35**(2), June 2009.

## **High-Impact Refereed Conferences**

Acceptance rates in these conferences are typically 30% or less; exact rates are given when available.

- 45. Hannah Ringler and Shlomo Argamon. Telescopic Reading: A Methodology for Interpreting Computational Models of Corpora. Digital Humanities 2022 (long presentation). Tokyo, July 2022.
- 46. Lisa Gandy, Nadji Allan, Mark Atallah, Ophir Frieder, Newton Howard, Sergey Kanareykin, Moshe Koppel, Mark Last, Yair Neuman, Shlomo Argamon. Automatic identification of conceptual metaphors with limited knowledge. In Proc. Twenty-Seventh AAAI Conference on Artificial Intelligence (AAAI-13), Bellevue, WA, July 2013.

43 citations.

47. Rodney Summerscales, Shlomo Argamon, Shangda Bai, Jordan Hupert, and Alan Schwartz. Automatic summarization of results from clinical trials. Paper in Proc. IEEE BIBM 2011, Atlanta, GA, November 2011.

Chosen as one of 8 (out of 59) papers invited to be included in a special issue of *BMC Genomics* journal.

Acceptance rate: 59/299 = 20% 36 citations.

- 48. Maojin Jiang and Shlomo Argamon. Exploiting subjectivity analysis in blogs to improve political leaning categorization. Poster in *Proc. 31st Annual International ACM SIGIR Conference on Research & Development on Information Retrieval*, Singapore, August 2008, pp. 725-726.

  19 citations.
- 49. Kenneth Bloom, Navendu Garg, and Shlomo Argamon. Extracting appraisal expressions. In *Proc. Human Language Technologies: Conference of the North American Association for Computational Linguistics (NAACL-HLT)*, Rochester, New York, April, 2007.

Acceptance rate: 72/298 = 24%180 citations.

- 50. Shlomo Argamon, Gady Agam, Ophir Frieder, David Grossman, David Lewis. A Complex Document Information Processing Prototype. Poster in Proc. 29th Annual International ACM SIGIR Conference on Research & Development on Information Retrieval, Seattle, WA, August 2006.
- 51. Paul Chase, Shlomo Argamon. Stylistic Text Segmentation. Poster in *Proc. 29th Annual International ACM SIGIR Conference on Research & Development on Information Retrieval*, Seattle, WA, August 2006.
- 52. Navendu Garg, Kenneth Bloom, Shlomo Argamon. Appraisal Expression Finder. Demonstration in Proc. 29th Annual International ACM SIGIR Conference on Research & Development on Information Retrieval, Seattle, WA, August 2006.
- 53. Moshe Koppel, Shlomo Argamon, Jonathan Schler. Authorship Attribution with Thousands of Candidate Authors. Poster in Proc. 29th Annual International ACM SIGIR Conference on Research & Development on Information Retrieval, Seattle, WA, August 2006.

  114 citations.
- 54. David Lewis, Shlomo Argamon, Gady Agam, Ophir Frieder, David Grossman. Building a Test Collection for Complex Document Information Processing. Poster in Proc. 29th Annual International ACM SIGIR Conference on Research & Development on Information Retrieval, Seattle, WA, August 2006. 130 citations.
- 55. Sterling Stein, Shlomo Argamon, Ophir Frieder. The effect of OCR on Stylistic Text Classification. Poster in Proc. 29th Annual International ACM SIGIR Conference on Research & Development on Information Retrieval, Seattle, WA, August 2006.
- 56. Casey Whitelaw, Navendu Garg, and <u>Shlomo Argamon</u>. Using appraisal groups for sentiment analysis. In *Proc. Conference on Information and Knowledge Management*, Bremen, Germany, November 2005.
  Acceptance rate: 76/425 = 18%

Acceptance rate: 76/425 = 747 citations.

- 57. Shlomo Argamon, Paul Chase, and Jeff Dodick. The languages of science: A corpus-based study of experimental and historical science articles. Poster in *Proc. 27th Annual Meeting of the Cognitive Science Society*, Stresa, Italy, August 2005.
- 58. <u>Shlomo Argamon</u>, Navot Akiva, Amihood Amir, and Oren Kapah. Efficient Unsupervised Recursive Word Segmentation Using Minimum Description Length.

- In Proc. 20th International Conference on Computational Linguistics (COLING), Geneva, Switzerland, August 2004.

  40 citations.
- 59. Shlomo Argamon and Jeff Dodick. Linking Rhetoric and Methodology in Formal Scientific Writing. Poster in *Proc. 26th Annual Meeting of the Cognitive Science Society*, Chicago, IL, August 2004.
- 60. Khelan Bhatt, Martha Evens, and Shlomo Argamon. Hedged Responses and Expressions of Affect in Human/Human and Human/Computer Tutorial Interactions. Poster in *Proc. 26th Annual Meeting of the Cognitive Science Society*, Chicago, IL, August 2004.

  61 citations.
- 61. Shlomo Argamon, Marin Sarić, and Sterling S. Stein. Style mining of electronic messages for multiple author discrimination. Poster in Proc. ACM Conference on Knowledge Discovery and Data Mining, Washington, DC, August 2003. Combined acceptance rate for presentations and posters: (34+36)/258 = 27% 181 citations.
- 62. Shlomo Argamon-Engelson, Ido Dagan, and Yuval Krymolowsky. A Memory-Based Approach to Learning of Shallow Natural Language Patterns. *Proc. of the Conference of the Association of Computational Linguistics*. Montreal, Quebec, August 1998. 183 citations.
- 63. Sean Engelson and Ido Dagan. Minimizing manual annotation cost in supervised training from corpora. Proc. 34th Annual Meeting of the Association for Computational Linguistics, June 1996.

  108 citations.
- 64. <u>Sean Engelson</u> and Moshe Koppel. Identifying the information contained in a flawed theory. *Proc. Int'l Conference on Machine Learning*, July 1996.
- 65. Sean Engelson. Learning robust plans for mobile robots from a single trial.  $\overline{Proc.\ AAAI\ National\ Conference}$  on Artificial Intelligence, August 1996. Acceptance rate: 197/640 = 31%
- 66. <u>Sean Engelson</u> and Moshe Koppel. Distilling reliable information from unreliable theories. *Proc. International Conference on Machine Learning*, July 1995. *Acceptance rate:* 68/213 = 32%
- 67. Ido Dagan and Sean Engelson. Committee-based sampling for training probabilistic classifiers. *Proc. International Conference on Machine Learning*, July 1995. 536 citations.
  - Acceptance rate: 68/213 = 32%
- 68. Thomas Dean, Dana Angluin, Kenneth Basye, <u>Sean Engelson</u>, Leslie Kaelbling, Evangelos Kokkevis, and Oded Maron. Inferring finite automata with stochastic output functions and an application to map learning. *Proc. AAAI National Conference on Artificial Intelligence*, pages 208–214, San Jose, CA, July 1992. 103 citations.

Acceptance rate: 133/636 = 21%

## Other Refereed Conferences

69. Shlomo Argamon. It's the Autonomy, Stupid! On reasonable and unreasonable risk-assessment of AI. Presented at *Brain-based and Artificial Intelligence: Socio-ethical Conversations in Computing and Neurotechnology*, Chicago, IL, May 2018.

- 70. Dan Assaf, Yair Neuman, Yohai Cohen, Shlomo Argamon, Newton Howard, Mark Last, Ophir Frieder, and Moshe Koppel. Why "Dark Thoughts" aren't really Dark: A Novel Algorithm for Metaphor Identification. IEEE Symposium Series on Computational Intelligence 2013, Singapore, April 2013.
  26 citations.
- 71. Rodney L. Summerscales, <u>Shlomo Argamon</u>, Jordan Hupert, and Alan Schwartz. Identifying Treatments, Groups, and Outcomes in Medical Abstracts. *The Sixth Midwest Computational Linguistics Colloquium*, May 2009.
- 72. Maojin Jiang and Shlomo Argamon. Finding Political Blogs and Their Political Leanings. Proc. SIAM International Conference on Data Mining, Text Mining Workshop, April 2008.
- 73. Maojin Jiang and Shlomo Argamon. Preliminary Semantic Analysis of Political Blogs. Proc. International Conference on Weblogs and Social Media, March/April 2008.
- 74. Kenneth Bloom and Shlomo Argamon. Learning appraisal extraction patterns. *Proc. Conf. American Association for Corpus Linguistics*, March, 2008. 23 citations.
- 75. Bart Dolega, Gady Agam, and Shlomo Argamon. Stroke frequency descriptors for handwriting-based writer identification. *Proceedings of SPIE Volume 6815 Document Recognition and Retrieval XV*, January, 2008.
- 76. Shlomo Argamon, Ken Bloom, Andrea Esuli, and Fabrizio Sebastiani. Automatically Determining Attitude Type and Force for Sentiment Analysis. 3rd Language and Technology Conference, Poznan, Poland, October 2007.
- 77. Ken Bloom, Sterling Stein, and Shlomo Argamon. Appraisal Extraction for News Opinion Analysis at NTCIR-6. NTCIR 6, Tokyo, Japan, May 2007. 28 citations.
- 78. Shlomo Argamon, Moshe Koppel, James W. Pennebaker, Jonathan Schler.

  Automated Authorship Profiling. International Association of Forensic Linguists

  Conference 8, Seattle, WA, July 2007.
- 79. Shlomo Argamon, Kenneth Bloom, Andrea Esuli, Fabrizio Sebastiani. Building a Lexicon for Sentiment Analysis by Automatically Analyzing Dictionary Glosses. Conference of the Dictionary Society of North America, Chicago, IL, June 2007.
- 80. Gady Agam, Shlomo Argamon, Ophir Frieder, David Grossman, and David Lewis. Content-based document image retrieval in complex document collections. Proceedings of SPIE – Volume 6500 Document Recognition and Retrieval XIV, January, 2007.
- 81. Sobhan Raj Hota, <u>Shlomo Argamon</u>, Rebecca Chung. Gender in Shakespeare: Automatic Stylistics Gender Classification Using Syntactic, Lexical, and Lemma features. *Chicago Colloquium on Digital Humanities and Computer Science (DHCS 2006)*, Chicago, IL, November 2006.
- 82. Maojin Jiang, Shlomo Argamon, Abdur Chowdhury and Kush Sidhu. ZED: Explaining Temporal Variations in Query Volume. In *Proc. 2nd International Conference on Advanced Data Mining and Applications*, Xi'An, China, August 2006.
- 83. Sobhan Hota, Shlomo Argamon, Moshe Koppel, Iris Zigdon. Performing Gender: Automatic Stylistic Analysis of Shakespeare's Characters. Extended abstract in *Proc. Digital Humanities*, Paris, France, July 2006.
- 84. Shlomo Levitan, Shlomo Argamon. Fixing the Federalist: Correcting Results and Evaluating Editions for Automated Attribution. Extended abstract in *Proc. Digital*

- Humanities, Paris, France, July 2006.
- 85. Sterling Stein, Shlomo Argamon. A Mathematical Explanation of Burrows's Delta. Extended abstract in *Proc. Digital Humanities*, Paris, France, July 2006. 30 citations.
- 86. Shlomo Argamon, Sushant Dhawle, Moshe Koppel, and James Pennebaker. Lexical Predictors of Personality Type. In *Proc. 2005 Conference of the Classification Society of North America*, St. Louis, June 2005.

  Invited paper.
  - 231 citations.
- 87. David Madigan, Alexander Genkin, David D. Lewis, Shlomo Argamon, Dmitriy Fradkin, Li Ye. Author Identification on the Large Scale. In *Proc. 2005 Conference of the Classification Society of North America*, St. Louis, June 2005.

  Invited paper.

  136 citations.
- 88. Shlomo Argamon and Shlomo Levitan. Measuring the Usefulness of Function Words for Authorship Attribution. Extended abstract in *Proc. 2005 Conference of the Association for Computing in the Humanities & Literary and Linguistic Computing*, June, 2005.

  189 citations.
- 89. Casey Whitelaw, Navendu Garg, and Shlomo Argamon. Using Appraisal Taxonomies for Sentiment Analysis. In *Proc. Second Midwest Computational Linguistic Colloquium (MCLC 2005)*, Columbus, Ohio, May 2005.

  44 citations.
- 90. Gady Agam, Shlomo Argamon, Ophir Frieder, David Grossman, and David Lewis. Complex Document Information Processing: Towards Software and Test Collections. Extended abstract in *Proc. 2005 Conference on Intelligence Analysis*, May, 2005.
- 91. Shlomo Argamon, Nazli Goharian, David Grossman, Ophir Frieder, and Nambury Raju. A Specialization in Information and Knowledge Management Systems for the Undergraduate Computer Science Curriculum. In Proc. IEEE International Conference on Information Techniques on Coding & Computing (ITCC), April 2005. Acceptance rate: 260/524 = 50%
- 92. Maojin Jiang, Eric Jensen, Steven Beitzel, Shlomo Argamon. Choosing the Right Bigrams For Information Retrieval. In *Proc. Meeting of the International Federation of Classification Societies (IFCS)*, Chicago, IL, July 2004.
- 93. Steven Beitzel, Eric Jensen, Maojin Jiang, and Shlomo Argamon. Effective Use of Phrases in Language Modeling to Improve Information Retrieval. *Proc. 8th AI and Mathematics Symposium*, Ft. Lauderdale, FL, January 2004.
- 94. Shlomo Argamon-Engelson, Sarit Kraus, and Sigalit Sina. Utility-Based On-Line Exploration for Repeated Tasks. At *The Fifth Bar-Ilan Symposium on the Foundations of Artificial Intelligence*. Ramat Gan, Israel, June, 1997.
- 95. Sean Engelson. Passive mapping and intermittent exploration for mobile robots.

  At AIAA Conference On Intelligent Robots in Factory, Field, Space, and Service.

  Houston, Texas, March 1994.

  Invited paper.
- 96. Gregory Hager, <u>Sean Engelson</u>, and Sami Atiya. On comparing statistical and set-based methods in sensor data fusion. *Proc. IEEE Conference on Robotics and Automation*, 1993.

  26 citations.

- 97. Sean P. Engelson and Drew V. McDermott. Error correction in mobile robot map learning. *Proc. IEEE Conference on Robotics and Automation*, pages 2555–2560, Nice, France, May 1992. 219 citations.
- 98. <u>Sean P. Engelson</u>. Active methods for place recognition using image signatures. <u>Proc. SPIE Symposium on Intelligent Robotic Systems, Sensor Fusion V</u>, pages 393–404, Boston, MA, November 1992.
- Sean Engelson and Drew V. McDermott. Image signatures for place recognition and map construction. Proc. SPIE Symposium on Intelligent Robotic Systems, Sensor Fusion IV, pages 282–293, Boston, MA, November 1991.
   33 citations.
- 100. <u>Sean Engelson</u>. Perceptual integration of piloting and navigation. *Proc. IEEE Symposium on Intelligent Control*, pages 1026–1031, Philadelphia, PA, September 1990.

### Workshop Papers

- 101. Jonathan Dunn, Jon Beltran de Heredia, Maura Burke, Lisa Gandy, Sergey Kanareykin, Oren Kapah, Matthew Taylor, Dell Hines, Ophir Frieder, David Grossman, Newton Howard, Moshe Koppel, Scott Morris, Andrew Ortony and Shlomo Argamon. Language-Independent Ensemble Approaches to Metaphor Identification. In Proc. AAAI 2014 Workshop on Cognitive Computing for Augmented Human Intelligence, Quebec City, July 2014.
- 102. Shlomo Argamon and Patrick Juola. Overview of the First International Authorship Identification Competition. In *Proc. PAN 2011 Lab Uncovering Plagiarism*, Authorship, and Social Software Misuse, Amsterdam, September 2011.
- 103. Moshe Koppel, Jonathan Schler, Shlomo Argamon, James Pennebaker. Effects of Age and Gender on Blogging. In AAAI 2006 Spring Symposium on Computational Approaches to Analysing Weblogs, Stanford, CA, March 2006. 654 citations.
- 104. Casey Whitelaw and Shlomo Argamon. Systemic Functional Features in Stylistic Text Classification. At AAAI Fall Symposim on Style and Meaning in Language, Art, Music, and Design, Washington, DC, October 2004.

  12 citations.
- 105. Shlomo Argamon and Jeff Dodick. Conjunction and Modal Assessment in Genre Classification: A Corpus-Based Study of Historical and Experimental Science Writing. At AAAI Spring Symposium on Emotion, Attitude, and Affect in Text, Stanford, CA, March 2004.

  10 citations.
- 106. Shlomo Argamon, Marin Sarić, and Sterling S. Stein. Learning Algorithms for Multiple Authorship Discrimination At IJCAI-03 Workshop on Computational Approaches to Style Analysis and Synthesis, Acapulco, Mexico, August 2003.
- 107. Shlomo Argamon-Engelson, Ido Dagan, and Yuval Krymolowsky. A Memory-Based Method for Learning to Recognize/Disambiguate Shallow Natural Language Patterns. At Bar-Ilan Workshop on Knowledge Discovery in Databases. Ramat Gan, Israel, May 1998.
- 108. <u>Shlomo Argamon-Engelson</u>, Moshe Koppel, and Galit Avneri. Routing documents according to style. At First International Workshop on Innovative Internet

- Information Systems. Pisa, Italy, June 1998. 115 citations.
- 109. Shlomo Argamon-Engelson, Moshe Koppel, and Galit Avneri. Style-based Text Categorization: Which Newspaper Am I Reading? At AAAI/ML Workshop on Text Categorization. Madison, Wisconsin, July 1998.

  76 citations.
- 110. Moshe Koppel and <u>Sean Engelson</u>. Integrating multiple classifiers by finding their areas of expertise. At <u>AAAI-96 Workshop On Integrating Multiple Learned Models</u>, August 1996.

  47 citations.
- 111. Sean Engelson, Ronen Feldman, Moshe Koppel, Anil Nerode, and Jeffrey B. Remmel. FROST: A Forward Chaining Rule Ordering System For Reasoning With Nonmonotonic Rule Systems. At *IJCAI-95 Workshop On Applications and Implementations of Nonmonotonic Reasoning Systems*, Montreal, Canada, August 1995.
- 112. Ido Dagan and <u>Sean Engelson</u>. Selective sampling in natural language learning. At *IJCAI-95 Workshop On New Approaches to Learning for Natural Language Processing*, Montreal, Canada, August 1995.

  18 citations.
- 113. Sean Engelson. Continuous map learning for mobile robots. The 3rd French-Israeli Symposium on Robotics. Herzeliah, Israel, May 1995.

  Invited paper.
- 114. Sean P. Engelson. On-line learning and error correction. At *The Third Bar-Ilan Symposium on the Foundations of Artificial Intelligence*. Ramat Gan, Israel, June, 1993.
- 115. Sean P. Engelson and Drew V. McDermott. Maps considered as adaptive planning resources. At *The AAAI Fall Symposium on Applications of Artificial Intelligence to Autonomous Mobile Robots*, pages 35–44, Cambridge, MA, October 1992. 15 citations.

#### Dissertation

Passive Map Learning and Visual Place Recognition. Available as technical report TR-1032, Computer Science Department, Yale University, May 1994. 54 citations.

### Other Publications

- Shlomo Engelson Argamon. People Cause Replication Problems, Not Machine Learning. *American Scientist Macroscope*, April 5, 2019.
- Shlomo Engelson Argamon. Flimflam government stats can do a number on citizens. Op-Ed in the *Chicago Sun Times*, October 26, 2017.
- Shlomo Engelson Argamon. Don't Strengthen Statistical Significance—Abolish It. *American Scientist Macroscope*, October 17, 2017.
- Shlomo Engelson Argamon. The Myth of the Mythical Unicorn. *Information Management*, May 22, 2014.
- Shlomo Engelson Argamon. The Well-Rounded Data Scientist. *Information Management*, April 15, 2014.

### **Invited Talks**

- "Deeper' NLP: Style is Substance," Conference of the Chicago Chapter of the American Statistical Association (CCASA), November 2020.
- "Computational Stylistics and Beyond," Cognitive Science Seminar, Rensselaer Polytechnic Institute, September 2018.
- "Prospects in Data Science," SRM Institute of Science and Technology, Tamil Nadu, India, July 2018.
- "Computational Cognitive Stylistics," Keynote lecture at the First International Conference on Computational Methods & Software Engineering (CoMSE 2015), Anna University, Chennai, India, December 29, 2015.
- "What is a Metaphor?" Keynote lecture at IAS/AISB Joint Workshop on Figurative Language: Its patterns and meanings in domain-specific discourse, Birmingham, UK, August 18, 2014.
- "Computational Analysis of Cognitive Style," Distinguished Lecture in Forensic Linguistics, Centre for Forensic Linguistics, Aston University, Birmingham, UK, February 26, 2014.
- "Automated Methods in Forensic Authorship Analysis," At *Authorship Attribution Workshop*, Brooklyn Law School, October 11–12, 2012.
- "Authorship Analysis and Computational Stylistics," At 2012 Data Sciences Summer Institute, University of Illinois at Urbana-Champaign, June 2012.
- "Redefining Sentiment Analysis," At Sentiment Analysis Symposium, San Francisco, November 2011.
- "All the Men and Women: Automated Text Mining and Gender Construction in Shakespeare." Northwestern University, October 2007.
- "Who Wrote That? A Computational Approach to Style and Authorship." University of Chicago, September 2006.
- "Computational analysis of meaningful stylistic variation." Bar-Ilan University, Haifa University, and Hebrew University, January 2005.
- "Learning using a flawed theory." At the Second Meeting of the Israeli Association for Artificial Intelligence, March 1999.
- "Where am I, and where do I go from here? Map-learning for mobile robots." At *The Israeli Symposium on Artificial Intelligence and Computer Vision*. Ramat Gan, Israel, December 1993.

### **Industry Conferences**

- "Understanding Data Science Development and Recruiting," Business Intelligence Innovation Summit, Chicago, IL, October 31, 2018.
- "Right-sizing Data Science for Business Analysts," International Institute of Business Analysis, Chicagoland Chapter, Chicago, IL, August 1, 2018.
- Fireside Chat on "Defining the Future of Food," with Raj Karmani of Farmer's Fridge. 2018 Big Data & Analytics for Retail Summit, Chicago, IL, June 5, 2018.
- "Educating Well-Rounded T-Shaped Data Scientists," *T-Summit 2016*, National Academies, Washington DC, 2016.
- "Where to find Data Science Unicorns?," The Data Science Conference, Chicago, IL, April 21-22, 2015.
- "Linguistic Attribution: Identifying the Native Language of the Sony Hackers," Suits

- and Spooks, Washington DC, February 5, 2015.
- "Redefining Sentiment Analysis," Sentiment Analysis Symposium, San Francisco, CA, November 9, 2011.
- "Sentimental Market Segmentation," Sentiment Analysis Symposium, New York, NY, April 13, 2010.

## **Briefings and Tutorials**

- "Data-Driven Computational Pragmatics" with Jonathan Dunn. Course at the Linguistic Society of America 2015 Linguistic Summer Institute, Chicago, IL, July 6–17, 2015.
- "The Sony Hack: How Should We React?" Public panel discussion with Shlomo Argamon, Kevin Jin, and Richard Warner, Chicago, IL, January 27, 2015.
- "Big Data Science," *Illinois Science & Technology Leadership Luncheon* briefing to congressional staff, Washington DC, May 16, 2012.
- "Authorship Attribution and Sentiment Analysis," invited tutorial at the University of Neuchâtel, Switzerland, May 2011 (with Moshe Koppel).

## Selected Media Mentions

- Case (Almost) Closed on Who Wrote 'The Night Before Christmas', Justin Fox, Bloomberg, December 19, 2023.
- Language detectives see similarities between mysterious 'Arizona Audit' Twitter account, affiliated 'war room', Yvonne Wingett Sanchez, Arizona Republic, June 15, 2021.
- Testing Could Have Prevented Iowa Caucus App Failure, Experts Say, Angus Loten, Wall Street Journal, February 4, 2020.
- From Automation to Intelligence: Do We Have Anything to Fear in the Coming Techno Evolution? Illinois Tech's Curiosity Unplugged podcast, December 6, 2018.
- What If Ernest Hemingway Wrote the Bible? Joel Shurkin, Inside Science, November 15, 2018.
- *U of I joins U of C quantum research partnership*, John Pletz, Crain's Chicago Business, October 30, 2018.
- Forensic Linguist Says 'Lodestar' Can't Tell Us Who Burned Trump in New York Times Op-Ed, Lorenzo Franceschi-Bicchierai in Motherboard, September 6, 2018.
- Word detectives: Science may help finger opinion columnist, Seth Borenstein for AP, September 6, 2018.
- The Salaries Of Data Scientists Remain Steady But Still Sexy With AI On The Horizon, Gil Press in Forbes, May 4, 2018.
- AI didn't decode the cryptic Voynich manuscript it just added to the mystery, James Vincent in The Verge, February 1, 2018.
- How your digital style gives you away and how to hide it, Michael Erard in New Scientist, November 22, 2017.
- There's a debate raging in science about what should count as "significant", Cathleen O'Grady in Ars Technica, August 4, 2017.
- Big names in statistics want to shake up much-maligned P value, Dalmeet Singh Chawla in Nature | News, July 26, 2017.

- Data Analytics In Basketball, interview with Niala Boodhoo, The 21st Show, a production of Illinois Public Media, February 20, 2017.
- At Illinois Tech, data analytics play big part in basketball team's success, Shannon Ryan, Chicago Tribune, February 17, 2017.
- Second Snowden could be behind sale of NSA hacking tools, Andrew Kelly/Reuters, in New Scientist, August 24, 2016.
- The NSA Data Leakers Might Be Faking Their Awful English To Deceive Us, Lorenzo Francesci-Bicchierai, Motherboard, August 18, 2016.
- Is D.N.C. Email Hacker a Person or a Russian Front? Experts Aren't Sure, Charlie Savage and Nicole Perlroth, New York Times, July 22, 2016.
- New Study May Add to Skepticism Among Security Experts That North Korea Was Behind Sony Hack, Nicole Perlroth, New York Times, December 24, 2014.
- Language Doesn't Point to L.A.'s Satoshi Nakamoto as Bitcoin Inventor, Dennis Romero, LA Weekly, March 7, 2014.