

**Contact Details**

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**Current Position**

Since February 2013 Senior Lecturer, Computer Science, Bar Ilan University.

2011 – February 2013 Research Scientist (post-doc), Google Research New York.

**Education**

2007-2011 **PhD** in Computer Science (Natural Language Processing)  
Thesis: “*Automatic Syntactic Processing of Modern Hebrew.*”  
Department of Computer Science  
Ben Gurion University, Beer Sheva, Israel  
Thesis advisor: Prof. Michael Elhada

2005-2007 **MSc** (*Magna cum laude*) in Computer Science, Ben Gurion University

2002-2005 **BSc** in Computer Science, Computer Science department  
Ben Gurion University of the Negev, Beer Sheva, Israel

**Scientific Interests (highlights)**

- Natural Language Processing, including Hebrew, Syntax (Parsing and Machine Translation), Coordination, Morphology, Efficient Computation, Linguistic Creativity.
- Machine Learning, including Structured Prediction, Feature Representation, Unsupervised and Semi-Supervised learning, Confidence Estimation, Imitation Learning.
- Word-representation, word embeddings, sentence representations.
- Neural Network and Deep Learning methods in language processing and machine learning.
- Sentence Processing and Syntactic-representation in humans.

**Grants**

My work is funded by:

- Israeli Science Foundation (ISF Grant).
- DIP (Grant, German-Israeli Project Cooperation).
- Google Research Award (Award)
- AI2 (Sponsored Research Agreement)
- Intel ICRI-CI (Sponsored Research Agreement)

**Honors and Awards**

- **Krill Prize** for Excellence in Scientific Research (2017). The Wolf Fund.
- **Outstanding Paper** (ACL 2016). Work with Vered Shwartz and Ido Dagan.
- **Best Short Paper Award** (NAACL 2016). Work with Sigrid Klerke and Anders Sogaard.

- **Best Paper Award** (CoNLL 2014). Work with Omer Levy.
- **Best Student-Paper Award** (ACL-2012 Student-research workshop). Work with Raphael Cohen and Michael Elhadad.
- **Best Paper Award** (RECOMB-2011). Work with Shay Zakov, Michal Ziv-Ukelson and Michael Elhadad.
- **Fulbright post-doctoral fellowship** (2011). The United States-Israel Educational Foundation (declined, as I ended up taking an offer from Google Research).
- **Outstanding Teaching Assistant Award**. Computer Science Department, Ben Gurion University (2011).
- **NEGEV Scholarship** for Outstanding PhD students. Ben Gurion University.
- **Wolf Prize** for Outstanding MSc students. The Wolf Foundation.
- **Yossi Friedman Award** for incoming MSc students, based on outstanding undergraduate project. Department of Computer Science, Ben Gurion University.

### Academic Professional Activities

- **Co-developer** of the *DyNet* neural-networks software toolkit, used in over 50 research publications worldwide.
- **Editorial Board Member**. Computational Linguistics Journal (2016—2018).
- **Co-Organizer** of RepEval-2017, The Second Workshop on Evaluating Vector Space Representations for NLP (with Sam Bowman, Felix Hill, Angeliki Lazaridou, Omer Levy, Roi Reichart, Anders Sogaard).
- **Co-Organizer / Co-Program Chair** of the CoNLL 2016 conference (with Stefan Riezler).
- **Co-Organizer** of RepEval-2016, The First Workshop on Evaluating Vector Space Representations for NLP (with Omer Levy, Felix Hill, Anna Korhonen, Kyunghyun Cho, Roi Reichart, Antoine Bordes).
- **Co-Organizer** of the 5<sup>th</sup> Workshop of Parsing Morphologically-rich Languages (with Ines Rehbein, Yanick Versley and Yuval Marton). Workshop was held in conjunction with COLING 2014.
- **Co-Organizer** of the 4<sup>th</sup> Workshop of Parsing Morphologically-rich Languages (with Ines Rehbein, Yanick Versley and Yuval Marton). Workshop was held in conjunction with EMNLP 2013.
- **Area Chair** for EACL 2017.
- **Area Chair** for NIPS 2016.
- **Area Chair** for EMNLP 2013 Syntax and parsing (co-chaired with Jennifer Foster).
- **Co-Organizer** of NAACL 2010 Workshop on Statistical Parsing of Morphologically Rich Languages.
- **Reviewer** for ISF grants.
- **Reviewer** for GIF grants
- **Reviewer** for EACL (2011, 2012, 2013, 2014), CoNLL (2010, 2011, 2012, 2013, 2014), ACL (2011, 2012, 2013, 2014, 2015, 2016, 2017), IJCAI (2011, 2013), EMNLP (2011, 2012, 2013, 2015, 2016, 2017), IWPT (2011, 2013), NAACL (2012, 2013, 2014, 2016), COLING (2012, 2014, 2016).
- **Reviewer** for Computational Linguistics Journal and for AI Journal.
- **Guest Editorial Board**, Computational Linguistics Journal special issue on parsing morphologically rich languages.
- **Program Committee member**, ESSLI 2011 Workshop on Lexical Resources.
- **Co-Organizer** of ISCOL 2008, 2013, 2015 (Israeli Seminar on Computational Linguistics).
- **Co-Organizer** of BGU Computer-science weekly Graduate Seminar (2008-2010).

- I was a **contributor** to the *NLTK* open-source project.

### **Students' Thesis (MSc and PhD, graduated)**

1. Hagai Drory. MSc. “RNA Secondary Structure Prediction Using Machine Learning Techniques”. 2015. Ben-Gurion University of the Negev. Co-Advised with Prof. Michal Ziv-Ukelson.
2. Omer Levy. PhD. “Understanding Word Embeddings and their Role in Recognizing Textual Entailment”. 2016. Bar-Ilan University. Co-Advised with Prof. Ido Dagan.

I currently supervise 4 PhD students.

### **Publications**

My h-index is 23, and my i10-index is 45.

For an up-to-date list of publications, see my Google Scholar page.

### **Book**

1. *Neural Network Models for Natural Language Processing*. **Yoav Goldberg**. Morgan and Claypool Publishers. April 2017. 308pp.

### **Journal Publications**

1. Tal Linzen, Emmanuel Dupoux, **Yoav Goldberg**. *Assessing the Ability of LSTMs to Learn Syntax-Sensitive Dependencies*. Transactions of the Association for Computational Linguistics. 4:521—535, 2016.
2. Eliyahu Kiperwasser, **Yoav Goldberg**. *Simple and Accurate Dependency Parsing Using Bidirectional LSTM Feature Representations*. Transactions of the Association for Computational Linguistics. 4:313—327, 2016.
3. Eliyahu Kiperwasser, **Yoav Goldberg**. *Easy-first Dependency Parsing with Hierarchical Tree LSTMs*. Transactions of the Association for Computational Linguistics. 4:445—461, 2016.
4. **Yoav Goldberg**. *A Primer on Neural Network Models for Natural Language Processing*. Journal of Artificial Intelligence Research (JAIR). 57:345—419, 2016. (submitted 9/15, published 11/16)
5. Miguel Ballesteros, Chris Dyer, **Yoav Goldberg**, Noah Smith. *Greedy Transition-based Dependency Parsing with Stack-LSTMs*. Computational Linguistics. 43(2), 2017 (forthcoming, accepted for publication June, 2016).
6. Omer Levy, **Yoav Goldberg**, Ido Dagan. *Improving Distributional Similarity with Lessons Learned from Word Embeddings*. Transactions of the Association for Computational Linguistics. 3:211—225, 2015.

7. **Yoav Goldberg**, Francesco Sartorio, Giorgio Satta. *A Tabular Method for Dynamic Oracles in Transition-Based Parsing*. Transactions of the Association for Computational Linguistics. 2(April):119—130, 2014.
8. Joakim Nivre, **Yoav Goldberg**, Ryan McDonald. *Constrained Arc-Eager Dependency Parsing*. Computational Linguistics. 40(2):249—257. 2013
9. **Yoav Goldberg**, Joakim Nivre. *Training Deterministic Parsers with Non-Deterministic Oracles*. Transactions of the Association for Computational Linguistics. 1(October):403—414, 2013
10. **Yoav Goldberg**, Michael Elhadad. *Word Segmentation, Unknown-word Resolution, and Morphological Agreement in a Hebrew Parsing System*. Computational Linguistics. 1(March):121—160, 2013
11. Shay Zakov, **Yoav Goldberg**, Michael Elhadad, Michal Ziv-Ukelson. *Rich Parameterization improves RNA Structure Prediction*. Journal of Computational Biology. November 2011: 18(11) 1525—1542.

Conference Publications (peer reviewed, competitive acceptance rate)

1. Yossi Adi, Einat Kermany, Yonatan Belinkov, Ofer Lavi and **Yoav Goldberg**. *Fine-grained Analysis of Sentence Embeddings Using Auxiliary Prediction Tasks*. Proceedings of ICLR, 2017. (accepted for publication).
2. Roei Aharoni and **Yoav Goldberg**. *Towards string-to-tree neural machine translation*. Proceedings of ACL, 2017. Vancouver, Canada. (short. accepted for publication).
3. Roei Aharoni and **Yoav Goldberg**. *Sequence to Sequence Transduction with Hard Monotonic Attention*. Proceedings of ACL, 2017. Vancouver, Canada. (long. accepted for publication).
4. Jessica Fidler and **Yoav Goldberg**. *Improving a Strong Neural Parser with Conjunction-Specific Features*. Proceedings of EACL, 2017. Valencia, Spain. 343—348.
5. Oded Avraham and **Yoav Goldberg**. *The Interplay of Semantics and Morphology in Word Embeddings*. Proceedings of EACL, 2017. Valencia, Spain. 422—426.
6. Omer Levy, Anders Søgaard and **Yoav Goldberg**. *A Strong Baseline for Learning Cross-Lingual Word Embeddings from Sentence Alignments*. Proceedings of EACL, 2017. Valencia, Spain. 765—774.
7. Hila Gonen, **Yoav Goldberg**. *Semi Supervised Preposition-Sense Disambiguation using Multilingual Data*. Proceedings of COLING, 2016. Osaka, Japan. 2718—2729.
8. Jessica Fidler, **Yoav Goldberg**. *A Neural Network for Coordination Boundary Prediction*. Proceedings of ACL, 2016. Berlin, Germany. 23—32.
9. Miguel Ballesteros, **Yoav Goldberg**, Chris Dyer, Noah Smith. *Training with Exploration Improves a Greedy Stack-LSTM Parser*. Proceedings of EMNLP, 2016. Austin, Texas. 2005—2010.

10. Vered Shwartz, **Yoav Goldberg**, Ido Dagan. *Improving Hypernymy Detection with an Integrated Path-based and Distributional Method*. Proceedings of ACL, 2016. Berlin, Germany. 2389—2398. **OUTSTANDING PAPER**.
11. Jessica Fidler, **Yoav Goldberg**. *Coordination Annotation Extension in the Penn Tree Bank*. Proceedings of ACL, 2016. Berlin, Germany. 834—842.
12. Jessica Fidler, **Yoav Goldberg**. *Improved Parsing for Argument-Clusters Coordination*. Proceedings of ACL, 2016. Berlin, Germany. 72—76.
13. Anders Søgaard, **Yoav Goldberg**. *Deep multi-task learning with low level tasks supervised at lower layers*. Proceedings of ACL, 2016. Berlin, Germany. 231—235.
14. Barbara Plank, Anders Søgaard, **Yoav Goldberg**. *Multilingual Part-of-Speech Tagging with Bidirectional Long Short-Term Memory Models and Auxiliary Loss*. Proceedings of ACL, 2016. Berlin, Germany. 412—418.
15. Sigrid Klerke, **Yoav Goldberg**, Anders Søgaard. *Improving Sentence Compression by Learning to Predict Gaze*. Proceedings of NAACL, 2016. San-Diego, California. 1528—1533. **BEST PAPER AWARD**.
16. Eliyahu Kiperwasser, **Yoav Goldberg**. *Semi-supervised Dependency Parsing using Bilexical Contextual Features from Auto-Parsed Data*. Proceedings of EMNLP, 2015. Lisbon, Portugal. 1348—1353.
17. Hillel Taub-Tabib, **Yoav Goldberg**, Amir Globerson. *Template Kernels for Dependency Parsing*. Proceedings of NAACL, 2015. Denver, Colorado. 1422—1427.
18. Omer Levy, **Yoav Goldberg**. *Neural Word Embedding as Implicit Matrix Factorization*. Proceedings of NIPS, 2014. Montreal, Canada. 2177—2185.
19. Omer Levy, **Yoav Goldberg**. *Dependency Based Word Embeddings*. Proceedings of ACL, 2014. Baltimore, Maryland. 302—308.
20. Omer Levy, **Yoav Goldberg**. *Linguistic Regularities in Sparse and Explicit Word Representations*. Proceedings of CoNLL, 2014. Baltimore, Maryland. 171—180. **BEST PAPER AWARD**.
21. **Yoav Goldberg**. *Dynamic-oracle Transition-based Parsing with Calibrated Probabilistic Output*. Proceedings of IWPT, 2013. Nara, Japan. 82—90.
22. **Yoav Goldberg**, Kai Zhao, Liang Huang. *Efficient Implementation of Beam-Search Incremental Parsers*. Proceedings of ACL, 2013. Sofia, Bulgaria. 628—633.
23. Ryan McDonald, Joakim Nivre, Yvonne Quirnbach-Brundage, **Yoav Goldberg**, Dipanjan Das, Kuzman Ganchev, Keith Hall, Slav Petrov, Hao Zhang, Oscar Täckström, Claudia Bedini, Nuria Bertomeu Castello, Jungmee Lee. *Universal Dependency Annotation For Multilingual Parsing*. Proceedings of ACL, 2013. Sofia, Bulgaria. 92—97.
24. Matthew Honnibal, **Yoav Goldberg**, Mark Johnson. *A Non-Monotonic Arc-Eager Transition System for Dependency Parsing*. Proceedings of CoNLL, 2013. Sofia, Bulgaria. 163—172.

25. **Yoav Goldberg**, Jon Orwant. *Syntactic-Ngrams over Time from a Very Large Corpus of English Books*. Proceedings of \*SEM, 2013. Georgia, Atlanta. 241—247.
26. **Yoav Goldberg**, Joakim Nivre. *A Dynamic Oracle for Arc-Eager Dependency Parsing*. Proceedings of CoLING, 2012. Bombay, India. 959—976.
27. Shu Cai, David Chiang, **Yoav Goldberg**. *Language-Independent Parsing with Empty Elements*. Proceedings of ACL, 2011. Portland, Oregon. 212—216.
28. **Yoav Goldberg**, Michael Elhadad. *Joint Hebrew Segmentation and Parsing using a PCFG/LLA Lattice Parser*. Proceedings of ACL, 2011. Portland, Oregon. 704—709.
29. Shay Zakov, **Yoav Goldberg**, Michael Elhadad, Michal Ziv-Ukelson. *Rich Parameterization Improves RNA Structure Prediction*. Proceedings of RECOMB, 2011. Vancouver, Canada. 546—562. **BEST PAPER AWARD**
30. **Yoav Goldberg**, Michael Elhadad. *Inspecting the Structural Biases of Dependency Parsing Algorithms*. Proceedings of CoNLL, 2010. Uppsala, Sweden. 234—242.
31. **Yoav Goldberg**, Michael Elhadad. *An Efficient Algorithm for Easy-First Non-Directional Dependency Parsing*. Proceedings of NAACL, 2010. Los Angeles, California. 742—750.
32. **Yoav Goldberg**, Michael Elhadad. *Hebrew Dependency Parsing: Initial Results*. Proceedings of IWPT, 2009. Paris, France. 129—133.
33. **Yoav Goldberg**, Michael Elhadad. *On the Role of Lexical Features in Sequence Labeling*. Proceedings of EMNLP, 2009. Singapore. 1142—1151.
34. **Yoav Goldberg**, Reut Tsarfaty, Meni Adler, Michael Elhadad. *Enhancing Unlexicalized Parsing Performance using a Wide Coverage Lexicon, Fuzzy Tag-set Mapping, and EM-HMM-based Lexical Probabilities*. Proceedings of EACL, 2009. Athens, Greece. 327—335.
35. **Yoav Goldberg**, Meni Adler, Michael Elhadad. *EM Can Find Pretty Good HMM POS-Taggers (When Given a Good Start)*. Proceedings of ACL, 2008. Columbus, Ohio. 746—754.
36. **Yoav Goldberg**, Reut Tsarfaty. *A Single Generative Model for Joint Morphological Segmentation and Syntactic Parsing*. Proceedings of ACL, 2008. Columbus, Ohio. 371—379.
37. Meni Adler, **Yoav Goldberg**, David Gabbay, Michael Elhadad. *Unsupervised Lexicon-Based Resolution of Unknown Words for Full Morphological Analysis*. Proceedings of ACL, 2008. Columbus, Ohio. 728—736.
38. **Yoav Goldberg**, Michael Elhadad. *splitSVM: Fast, Space-Efficient, non-Heuristic, Polynomial Kernel Computation for NLP Applications*. Proceedings of
39. Meni Adler, Yael Netzer, **Yoav Goldberg**, David Gabbay, Michael Elhadad. *Tagging a Hebrew Corpus: The Case of Participles*. Proceedings of LREC, 2008. Marrakech, Morocco. 3164—3174.

40. Reut Tsarfaty, **Yoav Goldberg**. *Word-Based or Morpheme-Based? Annotation Strategies for Modern Hebrew Clitics*. Proceedings of LREC, 2008. Marrakech, Morocco. 1421—1427.
41. **Yoav Goldberg**, Michael Elhadad. *Identification of Transliterated Foreign Words in Hebrew Script*. Proceedings of CiCLing, 2008. Haifa, Israel.
42. **Yoav Goldberg**, Michael Elhadad. SVM Model Tampering and Anchored Learning: A Case Study in Hebrew NP Chunking. Proceedings of ACL, 2007. Prague, Czech Republic. 224—231.
43. **Yoav Goldberg**, Meni Adler, Michael Elhadad. *Noun Phrase Chunking in Hebrew Influence of Lexical and Morphological Features*. Proceedings of ACL, 2006. Sydney, Australia. 327—325.

Edited Volumes

1. Proceedings of The 20th SIGNLL Conference on Computational Natural Language Learning (CoNLL). 2016. Association for Computational Linguistics. **Yoav Goldberg** and Stefan Riezler eds. 323pp.
2. Proceedings of the First Joint Workshop on Statistical Parsing of Morphologically Rich Languages and Syntactic Analysis of Non-Canonical Languages. 2014. Association for Computational Linguistics. **Yoav Goldberg**, Yuval Marton, Ines Rehbein, Yannick Versley, Özlem Çetinoglu, Joel Tetrault, eds. 111pp.
3. Proceedings of the Fourth Workshop on Statistical Parsing of Morphologically-Rich Languages. 2013. Association for Computational Linguistics. **Yoav Goldberg**, Yuval Marton, Ines Rehbein and Yannick Versley, eds. 118pp.

Workshop Papers (peer reviewed)

1. Oded Avraham, **Yoav Goldberg**. “*Improving Reliability of Word Similarity Evaluation by Redesigning Annotation Task and Performance Measure*”. ACL 2016 workshop on evaluating vector space representations for NLP.
2. Gabriel Stanovsky, Jessica Fidler, Ido Dagan and **Yoav Goldberg**. “*Intermediary Semantic Representation Through Proposition Structures*”. ACL 2014 Semantic Parsing Workshop.
3. Raphael Cohen, **Yoav Goldberg** and Michael Elhadad. “*Domain adaptation of a dependency parser with a class-class selectional preference model*”. ACL 2012 Student-Research Workshop. **Best Student Paper Award**.
4. Reut Tsarfaty, Djame Seddah, **Yoav Goldberg**, Sandra Kubler, Marie Candito, Jenniffer Foster, Yannick Versley, Ines Rehbein, and Lamia Tounsi. “*Statistical Parsing of Morphologically Rich Languages: What, How and Whither.*” NAACL 2010 Workshop on Parsing Morphologically Rich Languages.
5. **Yoav Goldberg** and Michael Elhadad. “*Easy First Dependency Parsing of Modern Hebrew.*” NAACL 2010 Workshop on Parsing Morphologically Rich Languages.

6. Yael Netzer, David Gabay, **Yoav Goldberg** and Michael Elhadad. “*Gaiku: Generating Haiku with Word Association Norms*”. *CALC-2009 (NAACL Workshop on Computational Approaches to Linguistic Creativity)*
7. Yael Netzer, David Gabay, Meni Adler, **Yoav Goldberg** and Michael Elhadad. “*Ontology Evaluation Through Text Classification*”. ENQOIR 2009
8. Yael Netzer, Ofer Biller, Michael Elhadad and **Yoav Goldberg**. “Generating Language from BlissSymbols Using Semantic Authoring”. *ISSAC 2006*

### **Invited Talks and Tutorials (selected)**

1. EMNLP 2016 Tutorial on “Practical Neural Networks for NLP: From Theory to Code”. 2016. Together with Graham Neubig and Chris Dyer.
2. 3rd Continuous Vector Space Models and their Constitutionality Workshop, Invited Talk, 2015, Word embeddings what, how and whither.
3. Saarbrücken University and DFKI, Invited Tutorial, 2016, "Neural Networks for NLP".
4. University of Copenhagen, Center for Language Technology Seminar, 2015, "Word embeddings what, how and whither".
5. Université Paris Diderot - INRIA / ALPAGE, Colloquium Invited Talk, 2015, "Understanding Neural Word Embeddings".
6. University of Trento, CLIC Research Colloquium invited Talk, 2015, "Understanding Neural Word Embeddings" (together with Omer Levy).
7. Intel ICRI-CI, Retreat Invited Talk, 2015, "Better Syntactic Parsing with Lexical-Semantic Features from Auto-parsed Data".
8. Johns Hopkins University, Center of Language and Speech Processing Lecture Series, 2012, "Advances in Deterministic Dependency Parsing”

### **Academic Internships / Research Assistantship**

#### Summer 2010:

**Internship at USC/ISI**, working with Kevin Knight, David Chiang and Liang Huang on Minimized Models for Syntax-based Machine Translation.

#### 2008 - 2011:

**Research Assistant**, Deutsche Telekom laboratories at Ben Gurion University. Work on various projects related to Semantic Search, Faceted Search, Sentiment Analysis and Ontology-based reasoning.

### **Teaching**

#### As Senior Lecturer in Bar Ilan University

- Developed and teaching a graduate level elective course on Deep Learning models for text and sequences.
- Developed and teaching a graduate level elective course on Machine Translation.



- Developed and teaching the Introduction to Natural Language Processing course together with Prof. Ido Dagan.
- Teaching Introduction to Object Oriented Programming course (the course went through a major re-design in order to better fit current industry needs).

During Msc and Phd studies at Ben Gurion University

- Spring 2011 - Lab Instructor for System Programming Lab, BGU  
 - Design and TA a course on scalable computing in cloud environments, BGU
- Fall 2011 - Head Teaching Assistant for System Programming, BGU
- Spring 2010 - Lab Instructor for System Programming Lab, BGU
- Fall 2010 - Teaching Assistant for System Programming, BGU
- Spring 2009 - Lab Instructor for System Programming Lab, BGU  
 - Grader for Machine Learning, BGU
- Fall 2009 - Teaching Assistant for System Programming, BGU
- Spring 2008 - Lab Instructor for System Programming Lab, BGU  
 - Teaching Assistant for System Programming for IAF, BGU/IAF
- Fall 2008 - Teaching Assistant for System Programming, BGU
- Spring 2007 - Lab Instructor for System Programming Lab, BGU
- Fall 2007 - Teaching Assistant for System Programming, BGU
- Spring 2006 - Teaching Assistant for Object Oriented Software Design, BGU
- Fall 2006 - Grader for Compiler Construction, BGU

**Non-Academic/Non-Research Professional Experience**

Since 2013

I consult to various companies on topics in Machine Learning, Natural Language Processing, Deep Learning and Data Analysis.

2004-2006:

**Consultant**, Picscout inc., Israel.

My main role there was the design and creation of a web crawler which can handle dynamic web pages and flash content. I also advised them on many Internet / security related issues.

Later, I worked on the foundations of the *picapp* engine, as well as on an NLP pilot of attaching relevant pictures to SMS messages.

2002-2005:

**Consultant**, IDF Intel. Corp.

1999-2002:

Military service in the IDF Intel. Corp, technology unit.

I worked as a programmer and an analyst on various teams and projects.

During my last year I was a **team-leader of 5 people**.

### **Some Past Projects**

- Hebrew Dialect of the Scheme Programming Language (joint work with Dr. Mayer Goldberg). This is intended as a foundation for a course teaching computer-science concepts to Israeli school-kids.
- Design and Implementation of a Blissymbolics lexicon software (part of a PhD thesis by Yael Netzer). Blissymbolics is a symbol based Augmentative Communication language. The lexicon (and the special queries it provides) is used for building intelligent communication boards for Bliss users.

### **Technical Skills**

- Programming Languages: Python, Java, C#, Perl, Scheme, 8086-Assembly, C++, C, Scala.
- Various "web" languages: Javascript, CSS, DHTML, PHP etc, with a security perspective.
- Expertise in computer security, esp. of web-based applications and web related technologies.

### **Languages**

Hebrew	native
English	fluent