

Frame Semantics across Languages: Towards a Multilingual FrameNet

Collin Baker, Michael Ellsworth, Miriam R L Petruck and Swabha Swayamdipta

August 20, 2018

References

- ABEILLÉ, ANNE, & NICOLAS BARRIER. 2004. Enriching a french treebank. In *Proceedings of the Fourth International Conference on Language Resources and Evaluation (LREC'04)*. European Language Resources Association (ELRA).
- ABEND, OMRI, & ARI RAPPOPORT. 2013. Universal conceptual cognitive annotation (ucca). In *Proceedings of the 51st Annual Meeting of the Association for Computational Linguistics (Volume 1: Long Papers)*, 228–238. Association for Computational Linguistics.
- AGARWAL, APOORV, SRIRAMKUMAR BALASUBRAMANIAN, ANUP KOTALWAR, JIEHAN ZHENG, & OWEN RAMBOW. 2014. Frame semantic tree kernels for social network extraction from text. In *Proc. of EACL*.
- AKBIK, ALAN, MARINA DANILEVSKY, YUNYAO LI, SHIVAKUMAR VAITHYANATHAN, HUAIYU ZHU, & OTHERS. 2015. Generating high quality proposition banks for multilingual semantic role labeling. In *Proc. of ACL*.
- , & YUNYAO LI. 2016. Polyglot: Multilingual semantic role labeling with unified labels. *Proceedings of ACL-2016 System Demonstrations* 1–6.
- AMMAR, WALEED, GEORGE MULCAIRE, YULIA TSVETKOV, GUILLAUME LAMPLE, CHRIS DYER, & NOAH A SMITH, 2016. Massively multilingual word embeddings. arXiv:1602.01925.
- BAKER, COLLIN, MICHAEL ELLSWORTH, & KATRIN ERK. 2007. SemEval'07 Task 19: Frame semantic structure extraction. In *Proc. of SemEval*.
- BAKER, COLLIN F., CHARLES J. FILLMORE, & JOHN B. LOWE. 1998. The Berkeley FrameNet project. In *Proc. of ACL*.
- BANARESCU, LAURA, CLAIRE BONIAL, SHU CAI, MADALINA GEORGESCU, KIRA GRIFFITT, ULF HERMJAKOB, KEVIN KNIGHT, PHILIPP KOEHN, MARTHA PALMER, & NATHAN SCHNEIDER. 2013. Abstract meaning representation for sembanking. In *Proc. of Linguistic Annotation Workshop and Interoperability with Discourse*.
- BARONI, MARCO, GEORGIANA DINU, & GERMÁN KRUSZEWSKI. 2014. Don't count, predict! a systematic comparison of context-counting vs. context-predicting semantic vectors. In *Proceedings of the 52nd Annual Meeting of the Association for Computational Linguistics (Volume 1: Long Papers)*, 238–247. Association for Computational Linguistics.
- BARZDINS, GUNTIS. 2014. Framenet CNL: A knowledge representation and information extraction language. In *International Workshop on Controlled Natural Language*, 90–101. Springer.
- BJÖRKELUND, ANDERS, BERND BOHNET, LOVE HAFDELL, & PIERRE NUGUES. 2010. A high-performance syntactic and semantic dependency parser. In *Proc. of COLING*.

- BJÖRKE LUND, ANDERS, LOVE HAFDELL, & PIERRE NUGUES. 2009. Multilingual semantic role labeling. In *Proc. of CoNLL*.
- BOAS, HANS C. (ed.) 2009a. *Multilingual FrameNets in Computational Lexicography: Methods and Applications*. Mouton de Gruyter.
- 2009b. Semantic frames as interlingual representations for multilingual lexical databases. In *Multilingual FrameNets in Computational Lexicography: Methods and Applications*, ed. by Hans C. Boas, 59–100. Mouton de Gruyter.
- 2014. Zur Architektur einer konstruktionsbasierten Grammatik des Deutschen. In *Grammatik als Inventar von Konstruktionen? Sprachliches Wissen im Fokus der Konstruktionsgrammatik*, ed. by A. Ziem & A. Lasch. Berlin/New York: de Gruyter.
- , RYAN DUX, & ALEXANDER ZIEM. 2016. Frames and Constructions in an online learner’s dictionary of German. In *Applied Construction Grammar*, ed. by S. De Knop & Gaefanelle Guilquin, 303–326. de Gruyter.
- BOJANOWSKI, PIOTR, EDOUARD GRAVE, ARMAND JOULIN, & TOMAS MIKOLOV. 2016. Enriching word vectors with subword information. *arXiv preprint arXiv:1607.04606*.
- BORIN, LARS, DANA DANÉLLS, MARKUS FORSBERG, DIMITRIOS KOKKINAKIS, & MARIA TOPOROWSKA GRONOSTAJ. 2010. The Past Meets the Present in Swedish FrameNet++. In *Proceedings of EURALEX 14*, 269–281. EURALEX.
- , MARKUS FORSBERG, KARIN FRIBERG HEPPIN, RICHARD JOHANSSON, & ANNIKA KJELLANDSSON. 2012. Search result diversification methods to assist lexicographers. In *Proceedings of the Sixth Linguistic Annotation Workshop*, 113–117. Association for Computational Linguistics.
- , MARKUS FORSBERG, & LENNART LÖNNGREN. 2013. SALDO: a touch of yin to WordNet’s yang. *Language Resources and Evaluation* 47.1191–1211.
- BOTSCHEN, TERESA, IRYNA GUREVYCH, JAN-CHRISTOPH KLIE, HATEM MOUSSELY SERGIEH, & STEFAN ROTH. 2018. Multimodal frame identification with multilingual evaluation. In *Proc. of ACL*.
- , HATEM MOUSSELY-SERGIEH, & IRYNA GUREVYCH. 2017. Prediction of frame-to-frame relations in the FrameNet hierarchy with frame embeddings. In *Proceedings of the 2nd Workshop on Representation Learning for NLP (ReplANLP)*, 146–156.
- BRANTS, SABINE, STEFANIE DIPPER, SILVIA HANSEN, WOLFGANG LEZIUS, & GEORGE SMITH. 2002. The TIGER Treebank. In *Proceedings of the Workshop on Treebanks and Linguistic Theories*, Sozopol.
- BRYL, VOLHA, SARA TONELLI, CLAUDIO GIULIANO, & LUCIANO SERAFINI. 2012. A Novel FrameNet-based Resource for the Semantic Web. In *Proceedings of ACM Symposium on Applied Computing (SAC)*, Riva del Garda (Trento), Italy.
- BURCHARDT, ALJOSCHA, KATRIN ERK, ANETTE FRANK, ANDREA KOWALSKI, SEBASTIAN PADÓ, & MANFRED PINKAL. 2009a. Using FrameNet for the semantic analysis of German: Annotation, representation, and automation. In *Multilingual FrameNets in Computational Lexicography*, ed. by Hans C. Boas, 209–244. Mouton.
- , & ANETTE FRANK. 2006. Approaching textual entailment with lfg and framenet frames. In *Proc. of PASCAL RTE Challenge Workshop*. Citeseer.
- , & MARCO PENNACCHIOTTI. 2008. FATE: a FrameNet-Annotated Corpus for Textual Entailment. In *Proceedings of LREC 2008*.
- , MARCO PENNACCHIOTTI, STEFAN THATER, & MANFRED PINKAL. 2009b. Assessing the impact of frame semantics on textual entailment. *Natural Language Engineering* 15.527–550.

- CANDITO, MARIE, PASCAL AMSILI, LUCIE BARQUE, FARAH BENAMARA, GAËL DE CHALENDAR, MARIANNE DJEMAA, PAULINE HAAS, RICHARD HUYGHE, YVETTE YANNICK MATHIEU, PHILIPPE MULLER, & OTHERS. 2014. Developing a French FrameNet: Methodology and first results. In *LREC-The 9th edition of the Language Resources and Evaluation Conference*.
- , & DJAMÉ SEDDAH. 2012. Le corpus Sequoia: annotation syntaxique et exploitation pour l’adaptation d’analyseur par pont lexical. In *TALN 2012-19e conférence sur le Traitement Automatique des Langues Naturelles*.
- CARPUAT, MARINE. 2009. One translation per discourse. In *Proceedings of the Workshop on Semantic Evaluations: Recent Achievements and Future Directions*, 19–27. Association for Computational Linguistics.
- CARRERAS, XAVIER, & LLUÍS MÀRQUEZ. 2005. Introduction to the CoNLL-2005 shared task: Semantic role labeling. In *Proc. of CoNLL*.
- CARUANA, RICH. 1997. Multitask learning. *Machine Learning* 28.
- CHANG, NANCY, PRAVEEN PARITOSH, DAVID HUYNH, & COLLIN BAKER. 2015. Scaling Semantic Frame Annotation. In *Proceedings of The 9th Linguistic Annotation Workshop*, 1–10, Denver, Colorado, USA. Association for Computational Linguistics.
- CHE, WANXIANG, ZHENGHUA LI, YUXUAN HU, YONGQIANG LI, BING QIN, TING LIU, & SHENG LI. 2008. A cascaded syntactic and semantic dependency parsing system. In *Proc. of CoNLL*.
- , ZHENGHUA LI, YONGQIANG LI, YUHANG GUO, BING QIN, & TING LIU. 2009. Multilingual dependency-based syntactic and semantic parsing. In *Proc. of CoNLL*.
- CHEN, YUN-NUNG, WILLIAM YANG WANG, & ALEXANDER I RUDNICKY. 2013. Unsupervised induction and filling of semantic slots for spoken dialogue systems using frame-semantic parsing. In *Proc. of ASRU-IEEE*.
- CIARAMITA, MASSIMILIANO, GIUSEPPE ATTARDI, FELICE DELL’ORLETTA, & MIHAI SURDEANU. 2008. DeSRL: A linear-time semantic role labeling system. In *Proc. of CoNLL*.
- COLLOBERT, RONAN, JASON WESTON, LÉON BOTTOU, MICHAEL KARLEN, KORAY KAVUKCUOGLU, & PAVEL KUKSA. 2011. Natural language processing (almost) from scratch. *Journal of Machine Learning Research* 12.2493–2537.
- CONNEAU, ALEXIS, GUILLAUME LAMPLE, MARC’AURELIO RANZATO, LUDOVIC DENOYER, & HERVÉ JÉGOU. 2017. Word translation without parallel data. arXiv:1710.04087.
- COPESTAKE, ANN, & DAN FLICKINGER. 2000. An open source grammar development environment and broad-coverage English grammar using HPSG. In *Proc. of LREC*.
- COSTA, ALEXANDRE DINIZ, & TIAGO TIMPONI TORRENT. 2017. A modelagem computacional do domínio dos esportes na FrameNet Brasil (the computational modeling of the sports domain in FrameNet Brasil)[in portuguese]. In *Proceedings of the 11th Brazilian Symposium in Information and Human Language Technology*, 201–208.
- COYNE, BOB, ALEX KLAPEHEKE, MASOUD ROUHIZADEH, RICHARD SPROAT, & DANIEL BAUER. 2012. Annotation tools and knowledge representation for a text-to-scene system. In *Proc. of COLING*.
- CROCE, DANILO, CRISTINA GIANNONE, PAOLO ANNESI, & ROBERTO BASILI. 2010. Towards open-domain semantic role labeling. In *Proc. of ACL*, 237–246. Association for Computational Linguistics.
- DA COSTA, ALEXANDRE DINIZ, MAUCHA ANDRADE GAMONAL, VANESSA MARIA RAMOS LOPES PAIVA, CÃO NATÁLIA DUARTE MAR}, SIMONE RODRIGUES PERON-CORRÊA, VÂNIA GOMES DE ALMEIDA, ELY EDISON DA SILVA MATOS, & TIAGO TIMPONI TORRENT. 2018. FRAMENET-BASED MODELING OF THE DOMAINS OF TOURISM AND SPORTS FOR THE DEVELOPMENT OF A PERSONAL TRAVEL ASSISTANT APPLICATION. In *Proceedings of the International FrameNet Workshop 2018: Multilingual FrameNets and Constructions*.

- DAS, DIPANJAN, DESAI CHEN, ANDRÉ F. T. MARTINS, NATHAN SCHNEIDER, & NOAH A. SMITH. 2014A. FRAME-SEMANTIC PARSING. *Computational Linguistics* 40.
- , DESAI CHEN, ANDRÉ FT MARTINS, NATHAN SCHNEIDER, & NOAH A SMITH. 2014B. FRAME-SEMANTIC PARSING. *Computational linguistics* 40.9–56.
- , ANDRÉ F. T. MARTINS, & NOAH A. SMITH. 2012. AN EXACT DUAL DECOMPOSITION ALGORITHM FOR SHALLOW SEMANTIC PARSING WITH CONSTRAINTS. IN *Proc. of *SEM*.
- , NATHAN SCHNEIDER, DESAI CHEN, & NOAH A. SMITH. 2010. PROBABILISTIC FRAME-SEMANTIC PARSING. IN *Proceedings of the North American Chapter of the Association for Computational Linguistics Human Language Technologies Conference*, LOS ANGELES.
- , & NOAH A SMITH. 2011. SEMI-SUPERVISED FRAME-SEMANTIC PARSING FOR UNKNOWN PREDICATES. IN *Proc. of ACL*.
- DAVIS, R., H. SHROBE, & P. SZOLOVITS. 1993. WHAT IS A KNOWLEDGE REPRESENTATION? *AI Magazine* 14.17–33.
- DOLBEY, ANDREW, 2009. *BioFrameNet: a FrameNet Extension to the Domain of Molecular Biology*. UC BERKELEY DISSERTATION.
- DOWTY, DAVID. 1991. THEMATIC PROTO-ROLES AND ARGUMENT SELECTION. *language* 67.547–619.
- DUMITRACHE, ANCA, LORA AROYO, & CHRIS WELTY, 2018. CAPTURING AMBIGUITY IN CROWDSOURCING FRAME DISAMBIGUATION. ARXIV:1805.00270 [CS.CL].
- DUNIETZ, JESSE, 2018. *Annotating and Automatically Tagging Constructions of Causal Language*. CARNEGIE MELON UNIVERSITY DISSERTATION.
- , LORI LEVIN, & MIRIAM R. L. PETRUCK. 2017. CONSTRUCTION DETECTION IN A CONVENTIONAL NLP PIPELINE. TECHNICAL REPORT SS-17-02, AAAI.
- ERK, KATRIN, DIANA MCCARTHY, & NICHOLAS GAYLORD. 2013. MEASURING WORD MEANING IN CONTEXT. *Computational Linguistics* .
- FILLMORE, CHARLES J. 1976A. FRAME SEMANTICS AND THE NATURE OF LANGUAGE. *Annals of the New York Academy of Sciences: Conference on the Origin and Development of Language and Speech* 280.20–32.
- 1976B. FRAME SEMANTICS AND THE NATURE OF LANGUAGE. *Annals of the New York Academy of Sciences* 280.20–32.
- 2012. ENCOUNTERS WITH LANGUAGE. *Computational Linguistics* 38.701–718.
- , & COLLIN F. BAKER. 2010. A FRAMES APPROACH TO SEMANTIC ANALYSIS. IN *Oxford Handbook of Linguistic Analysis*, ED. BY BERND HEINE & HEIKO NARROG, 313–341. OUP. THIS IS CHAPTER 13 IN 1ST EDITION, 33 IN 2ND EDITION.
- FILLMORE, CHARLES, J. 2008. BORDER CONFLICTS: FRAME NET MEETS CONSTRUCTION GRAMMAR. IN *Proceedings of the 13th Euralex International Congress*, ED. BY ELISANDA BERNAL & JANET DECESARIS, 49–48. UNIVERSITAT POMPEU FABRA, UNIVERSITAT POMPEU FABRA.
- , RUSSELL LEE-GOLDMAN, & RUSSELL RHODES. 2012A. THEFRAME NET CONSTRUCTICON. IN *Sign-based Construction Grammar*, ED. BY HANS C. BOAS & IVAN S. SAG, 309–372. CSLI.
- , —, & —. 2012B. THEFRAME NET CONSTRUCTICON. IN *Sign-based Construction Grammar*, ED. BY HANS C. BOAS & IVAN S. SAG, 309–372. CSLI.
- FIRTH, J. R. 1957. *Papers in Linguistics 1934–1951*. LONDON: OXFORD UNIVERSITY PRESS.

- FITZGERALD, NICHOLAS, JULIAN MICHAEL, LUHENG HE, & LUKE ZETTMAYER. 2018. LARGE-SCALE QA-SRL PARSING. IN *Proc. of ACL*.
- , OSCAR TÄCKSTRÖM, KUZMAN GANCHEV, & DIPANJAN DAS. 2015. SEMANTIC ROLE LABELING WITH NEURAL NETWORK FACTORS. IN *Proc. of EMNLP*.
- FOLAND, WILLIAM R., & JAMES MARTIN. 2015. DEPENDENCY BASED SEMANTIC ROLE LABELING USING CONVOLUTIONAL NEURAL NETWORKS. IN *Proc. of *SEM*.
- FONTENELLE, THIERRY (ED.) 2003. *International Journal of Lexicography—Special Issue on FrameNet*, VOLUME 16. OXFORD UNIVERSITY PRESS.
- FÜRSTENAU, HAGEN, & MIRELLA LAPATA. 2012. SEMI-SUPERVISED SEMANTIC ROLE LABELING VIA STRUCTURAL ALIGNMENT. *Computational Linguistics* 38.135–171.
- GALE, WILLIAM A, KENNETH W CHURCH, & DAVID YAROWSKY. 1992. USING BILINGUAL MATERIALS TO DEVELOP WORD SENSE DISAMBIGUATION METHODS. IN *Proceedings of the International Conference on Theoretical and Methodological Issues in Machine Translation*, 101–112.
- GESMUNDO, ANDREA, JAMES HENDERSON, PAOLA MERLO, & IVAN TITOV. 2009. A LATENT VARIABLE MODEL OF SYNCHRONOUS SYNTACTIC-SEMANTIC PARSING FOR MULTIPLE LANGUAGES. IN *Proc. of CoNLL*.
- GILDEA, DANIEL, & DANIEL JURAFSKY. 2002. AUTOMATIC LABELING OF SEMANTIC ROLES. *Computational Linguistics* 28.245–288.
- , & MARTHA PALMER. 2002. THE NECESSITY OF PARSING FOR PREDICATE ARGUMENT RECOGNITION. IN *Proc. of ACL*.
- GIMÉNEZ, JESÚS, & LLUÍS MÀRQUEZ. 2007. LINGUISTIC FEATURES FOR AUTOMATIC EVALUATION OF HETEROGENOUS MT SYSTEMS. IN *Proc. of Workshop on SMT*, 256–264. ASSOCIATION FOR COMPUTATIONAL LINGUISTICS.
- GIMPEL, KEVIN, & NOAH A. SMITH. 2010. SOFTMAX-MARGIN CRFS: TRAINING LOG-LINEAR MODELS WITH COST FUNCTIONS. IN *Proc. of NAACL*.
- GOLDBERG, YOAV, 2015. A PRIMER ON NEURAL NETWORK MODELS FOR NATURAL LANGUAGE PROCESSING. ARXIV:1510.00726.
- GORMLEY, MATTHEW R., MARGARET MITCHELL, BENJAMIN VAN DURME, & MARK DREDZE. 2014. LOW-RESOURCE SEMANTIC ROLE LABELING. IN *Proc. of ACL*.
- GRUZITIS, NORMUNDS, & DANA DANNÉLLS. 2017. A MULTILINGUAL FRAMENET-BASED GRAMMAR AND LEXICON FOR CONTROLLED NATURAL LANGUAGE. *Language Resources and Evaluation* 51.37–66.
- , GUNTA NESPORE-BERZKALNE, & BAIBA SAULITE. 2018A. CREATION OF LATVIAN FRAMENET BASED ON UNIVERSAL DEPENDENCIES. IN (TORRENT *et al.* 2018A).
- , LAUMA PRETKALNINA, BAIBA SAULITE, LAURA RITUMA, GUNTA NESPORE-BERZKALNE, ARTURS ZNOTINS, & PETERIS PAIKENS. 2018B. CREATION OF A BALANCED STATE-OF-THE-ART MULTILAYER CORPUS FOR NLU. IN *Proceedings of LREC 2018*.
- HAHM, YOUNGGUN, YOUNGSIK KIM, YOUSUNG WON, JONGSUNG WOO, JIWOO SEO, JISEONG KIM, SEONGBAE PARK, DOSAM HWANG, & KEY-SUN-CHOI. 2014. TOWARD MATCHING THE RELATION INSTANTIATION FROM DBPEDIA ONTOLOGY TO WIKIPEDIA TEXT: FUSING FRAMENET TO KOREAN. IN *Proceedings of the 10th International Conference on Semantic Systems*, 13–19.

- HAHM, YOUNGGYUN, JISEONG KIM, SUNGGOO KWON, & KEY-SUN CHOI. 2018. SEMI-AUTOMATIC KOREAN FRAME_{NET} ANNOTATION OVER KAIST TREEBANK. IN *Proceedings of the Eleventh International Conference on Language Resources and Evaluation (LREC 2018)*, ED. BY NICOLETTA CALZOLARI (CONFERENCE CHAIR), KHALID CHOUKRI, CHRISTOPHER CIERI, THIERRY DECLERCK, SARA GOGGI, KOITI HASIDA, HITOSHI ISAHARA, BENTE MAEGAARD, JOSEPH MARIANI, HÉLÈNE MAZO, ASUNCION MORENO, JAN ODIJK, STELIOS PIPERIDIS, & TAKENOBU TOKUNAGA, MIYAZAKI, JAPAN. EUROPEAN LANGUAGE RESOURCES ASSOCIATION (ELRA).
- HAIJČ, JAN, MASSIMILIANO CIARAMITA, RICHARD JOHANSSON, DAISUKE KAWAHARA, MARIA ANTÒNIA MARTÍ, LLUÍS MÀRQUEZ, ADAM MEYERS, JOAKIM NIVRE, SEBASTIAN PADÓ, JAN ŠTĚPÁNEK, PAVEL STRAŇÁK, MIHAI SURDEANU, NIANWEN XUE, & YI ZHANG. 2009. THE CoNLL-2009 SHARED TASK: SYNTACTIC AND SEMANTIC DEPENDENCIES IN MULTIPLE LANGUAGES. IN *Proc. of CoNLL*.
- HARRIS, ZELIG S. 1954. DISTRIBUTIONAL STRUCTURE. *Word* 10.146–62.
- HARTMANN, SILVANA, ILIA KUZNETSOV, TERESA MARTIN, & IRYNA GUREVYCH. 2017. OUT-OF-DOMAIN FRAME_{NET} SEMANTIC ROLE LABELING. IN *Proc. of EACL*.
- HASHIMOTO, KAZUMA, CAIMING XIONG, YOSHIMASA TSURUOKA, & RICHARD SOCHER. 2017. A JOINT MANY-TASK MODEL: GROWING A NEURAL NETWORK FOR MULTIPLE NLP TASKS. IN *Proc. of EMNLP*.
- HAYOUN, AVI, & MICHAEL ELHADAD. 2016. THE HEBREW FRAME_{NET} PROJECT. IN *Proceedings of the Tenth International Conference on Language Resources and Evaluation (LREC 2016)*, ED. BY NICOLETTA CALZOLARI (CONFERENCE CHAIR), KHALID CHOUKRI, THIERRY DECLERCK, SARA GOGGI, MARKO GROBELNIK, BENTE MAEGAARD, JOSEPH MARIANI, HELENE MAZO, ASUNCION MORENO, JAN ODIJK, & STELIOS PIPERIDIS, PARIS, FRANCE. EUROPEAN LANGUAGE RESOURCES ASSOCIATION (ELRA).
- HE, LUHENG, KENTON LEE, OMER LEVY, & LUKE ZETTMEOYER. 2018A. JOINTLY PREDICTING PREDICATES AND ARGUMENTS IN NEURAL SEMANTIC ROLE LABELING. IN *Proc. of ACL*.
- , ——, ——, & —— . 2018B. JOINTLY PREDICTING PREDICATES AND ARGUMENTS IN NEURAL SEMANTIC ROLE LABELING. IN *Proc. of ACL*.
- , KENTON LEE, MIKE LEWIS, & LUKE ZETTMEOYER. 2017. DEEP SEMANTIC ROLE LABELING: WHAT WORKS AND WHAT’S NEXT. IN *Proc. of ACL*.
- , MIKE LEWIS, & LUKE ZETTMEOYER. 2015. QUESTION-ANSWER DRIVEN SEMANTIC ROLE LABELING: USING NATURAL LANGUAGE TO ANNOTATE NATURAL LANGUAGE. IN *Proc. of EMNLP*.
- HENDERSON, JAMES, PAOLA MERLO, GABRIELE MUSILLO, & IVAN TITOV. 2008. A LATENT VARIABLE MODEL OF SYNCHRONOUS PARSING FOR SYNTACTIC AND SEMANTIC DEPENDENCIES. IN *Proc. of CoNLL*.
- , PAOLA MERLO, IVAN TITOV, & GABRIELE MUSILLO. 2013. MULTI-LINGUAL JOINT PARSING OF SYNTACTIC AND SEMANTIC DEPENDENCIES WITH A LATENT VARIABLE MODEL. *Computational Linguistics* 39.949–998.
- HERMANN, KARL MORITZ, & PHIL BLUNSON. 2014. MULTILINGUAL MODELS FOR COMPOSITIONAL DISTRIBUTED SEMANTICS. IN *Proceedings of the 52nd Annual Meeting of the Association for Computational Linguistics (Volume 1: Long Papers)*, 58–68. ASSOCIATION FOR COMPUTATIONAL LINGUISTICS.
- , DIPANJAN DAS, JASON WESTON, & KUZMAN GANCHEV. 2014. SEMANTIC FRAME IDENTIFICATION WITH DISTRIBUTED WORD REPRESENTATIONS. IN *Proc. of ACL*.
- HOCHREITER, SEPP, & JÜRGEN SCHMIDHUBER. 1997. LONG SHORT-TERM MEMORY. *Neural Computation* 9.1735–1780.
- HONG, JISUP, & COLLIN F. BAKER. 2011. HOW GOOD IS THE CROWD AT “REAL” WSD? IN *Proceedings of the 5th Linguistic Annotation Workshop*, 30–37, PORTLAND, OREGON, USA. ASSOCIATION FOR COMPUTATIONAL LINGUISTICS.

- JOHANNSSEN, ANDERS, HÉCTOR MARTÍNEZ ALONSO, & ANDERS SØGAARD. 2015. ANY-LANGUAGE FRAME-SEMANTIC PARSING. IN *Proc. of EMNLP*, 2062–2066.
- JOHANSSON, RICHARD. 2009. STATISTICAL BISTRATAL DEPENDENCY PARSING. IN *Proc. of EMNLP*.
- , & PIERRE NUGUES. 2007. LTH: SEMANTIC STRUCTURE EXTRACTION USING NONPROJECTIVE DEPENDENCY TREES. IN *Proc. of SemEval*.
- , & ———. 2008. DEPENDENCY-BASED SYNTACTIC-SEMANTIC ANALYSIS WITH PROPBANK AND NOMBANK. IN *Proc. of CoNLL*.
- KINGSBURY, PAUL, & MARTHA PALMER. 2002. FROM TREEBANK TO PROPBANK. IN *Proc. of LREC*.
- KOEVA, SVETLA. 2010. LEXICON AND GRAMMAR IN BULGARIAN FRAME_{NET}. IN *Proceedings of the Seventh conference on International Language Resources and Evaluation (LREC'10)*, ED. BY NICOLETTA CALZOLARI (CONFERENCE CHAIR), KHALID CHOUKRI, BENTE MAEGAARD, JOSEPH MARIANI, JAN ODJIK, STELIOS PIPERIDIS, MIKE ROSNER, & DANIEL TAPIAS, VALLETTA, MALTA. EUROPEAN LANGUAGE RESOURCES ASSOCIATION (ELRA).
- KÖHN, ARNE. 2015. WHAT'S IN AN EMBEDDING? ANALYZING WORD EMBEDDINGS THROUGH MULTILINGUAL EVALUATION. IN *Proceedings of the 2015 Conference on Empirical Methods in Natural Language Processing*, 2067–2073.
- . 2016. EVALUATING EMBEDDINGS USING SYNTAX-BASED CLASSIFICATION TASKS AS A PROXY FOR PARSER PERFORMANCE. IN *Proceedings of the 1st Workshop on Evaluating Vector-Space Representations for NLP*, 67–71.
- KONSTAS, IOANNIS, & FRANK KELLER. 2015. SEMANTIC ROLE LABELING IMPROVES INCREMENTAL PARSING. IN *Proc. of ACL*.
- KSHIRSAGAR, MEGHANA, SAM THOMSON, NATHAN SCHNEIDER, JAIME CARBONELL, NOAH A. SMITH, & CHRIS DYER. 2015A. FRAME-SEMANTIC ROLE LABELING WITH HETEROGENEOUS ANNOTATIONS. IN *Proceedings of the 53rd Annual Meeting of the Association for Computational Linguistics and the 7th International Joint Conference on Natural Language Processing (Volume 2: Short Papers)*, 218–224, BEIJING, CHINA. ASSOCIATION FOR COMPUTATIONAL LINGUISTICS.
- , SAM THOMSON, NATHAN SCHNEIDER, JAIME CARBONELL, NOAH A SMITH, & CHRIS DYER. 2015B. FRAME-SEMANTIC ROLE LABELING WITH HETEROGENEOUS ANNOTATIONS. IN *Proc. of NAACL*.
- LEE-GOLDMAN, RUSSELL, & MIRIAM R. L. PETRUCK. 2018. THEFRAME_{NET} CONSTRUCTICON IN ACTION. IN *Constructicography: Constructicon development across languages*, ED. BY BENJAMIN LYNKFELT, LARS BORIN, KYOKO OHARA, & TIAGO TIMPONI TORRENT, 19–40. JOHN BENJAMINS PUBLISHING COMPANY.
- LEI, TAO, YUAN ZHANG, LLUÍS MÀRQUEZ I VILLODRE, ALESSANDRO MOSCHITTI, & REGINA BARZILAY. 2015. HIGH-ORDER LOW-RANK TENSORS FOR SEMANTIC ROLE LABELING. IN *Proc. of NAACL*.
- LENCI, ALESSANDRO, MARTINA JOHNSON, & GABRIELLA LAPESA. 2010. BUILDING AN ITALIAN FRAME_{NET} THROUGH SEMI-AUTOMATIC CORPUS ANALYSIS. IN *Proceedings of the Seventh conference on International Language Resources and Evaluation (LREC'10)*, ED. BY NICOLETTA CALZOLARI (CONFERENCE CHAIR), KHALID CHOUKRI, BENTE MAEGAARD, JOSEPH MARIANI, JAN ODJIK, STELIOS PIPERIDIS, MIKE ROSNER, & DANIEL TAPIAS, VALLETTA, MALTA. EUROPEAN LANGUAGE RESOURCES ASSOCIATION (ELRA).
- LI, JIHONG, RUIBO WANG, & YAHUI GAO. 2010A. SEQUENTIAL TAGGING OF SEMANTIC ROLES ON CHINESE FRAME_{NET}. IN *Proceedings of the Eighth Workshop on Asian Language Resources*, 22–29. COLING 2010 ORGANIZING COMMITTEE.
- LI, JUNHUI, GUODONG ZHOU, & HWEE TOU NG. 2010B. JOINT SYNTACTIC AND SEMANTIC PARSING OF CHINESE. IN *Proc. of ACL*.

- LINDÉN, KRISTER, HEIDI HALTIA, JUHA LUUKKONEN, ANTTI O LAINE, HENRI ROIVAINEN, & NIINA VÄISÄNEN. 2017. FINNFN 1.0: THE FINNISH FRAME SEMANTIC DATABASE. *Nordic Journal of Linguistics* 40.287–311.
- LLUÍS, XAVIER, XAVIER CARRERAS, & LLUÍS MÀRQUEZ. 2013. JOINT ARC-FACTORED PARSING OF SYNTACTIC AND SEMANTIC DEPENDENCIES. *Transactions of the ACL* 1.219–230.
- LLUÍS, XAVIER, & LLUÍS MÀRQUEZ. 2008. A JOINT MODEL FOR PARSING SYNTACTIC AND SEMANTIC DEPENDENCIES. IN *Proc. of CoNLL*.
- LÖNNEKER-RODMAN, BIRTE, COLLIN BAKER, & JISUP HONG. 2008. THE NEW FRAME NET DESKTOP: A USAGE SCENARIO FOR SLOVENIAN. IN (WEBSTER *et al.* 2008), 147–154.
- LOPER, EDWARD, & STEVEN BIRD. 2002. NLTK: THE NATURAL LANGUAGE TOOLKIT. IN *In Proceedings of the ACL Workshop on Effective Tools and Methodologies for Teaching Natural Language Processing and Computational Linguistics*. Philadelphia: Association for Computational Linguistics.
- LUONG, THANG, HIEU PHAM, & CHRISTOPHER D MANNING. 2015. BILINGUAL WORD REPRESENTATIONS WITH MONOLINGUAL QUALITY IN MIND. IN *Proc. of Workshop of VSM in NLP*, 151–159.
- LYNGFELT, BENJAMIN, LARS BORIN, KYOKO OHARA, & TIAGO TIMPONI TORRENT (EDS.) 2018. *Constructicography: Constructicon development across languages*. JOHN BENJAMINS PUBLISHING COMPANY.
- MARCHEGGIANI, DIEGO, JOOST BASTINGS, & IVAN TITOV. 2018. EXPLOITING SEMANTICS IN NEURAL MACHINE TRANSLATION WITH GRAPH CONVOLUTIONAL NETWORKS. IN *Proc. of NAACL*.
- MARCUS, MITCHELL P., MARY ANN MARCINKIEWICZ, & BEATRICE SANTORINI. 1993. BUILDING A LARGE ANNOTATED CORPUS OF ENGLISH: THE PENN TREEBANK. *Computational Linguistics* 19.313–330.
- MATOS, ELY, & TIAGO TORRENT. 2016. A FLEXIBLE TOOL FOR AN ENRICHED FRAME NET. IN *9th International Conference on Construction Grammar (ICCG9)*. FEDERAL UNIVERSITY OF JUIZ DE FORA.
- MEYERS, ADAM, RUTH REEVES, CATHERINE MACLEOD, RACHEL SZEKELY, VERONIKA ZIELINSKA, BRIAN YOUNG, & RALPH GRISHMAN. 2004. THE NOMBANK PROJECT: AN INTERIM REPORT. IN *Proc. of NAACL*.
- MIKOLOV, TOMAS, KAI CHEN, GREGORY S. CORRADO, & JEFFREY DEAN, 2013. EFFICIENT ESTIMATION OF WORD REPRESENTATIONS IN VECTOR SPACE. ARXIV:1301.3781.
- MOHIT, BEHRANG, NATHAN SCHNEIDER, RISHAV BHOWMICK, KEMAL OFLAZER, & NOAH A. SMITH. 2012. RECALL-ORIENTED LEARNING OF NAMED ENTITIES IN ARABIC WIKIPEDIA. IN *Proc. of EACL*.
- MOSCHITTI, ALESSANDRO. 2008. KERNEL METHODS, SYNTAX AND SEMANTICS FOR RELATIONAL TEXT CATEGORIZATION. IN *Proc. of CIKM*, 253–262. ACM.
- , SILVIA QUARTERONI, ROBERTO BASILI, & SURESH MANANDHAR. 2007. EXPLOITING SYNTACTIC AND SHALLOW SEMANTIC KERNELS FOR QUESTION ANSWER CLASSIFICATION. IN *Proc. of ACL*, 776–783.
- MULCAIRE, PHOEBE, SWABHA SWAYAMDIPTA, & NOAH SMITH. 2018. POLYGLOT SEMANTIC ROLE LABELING. IN *Proc. of ACL*.
- NAIR, VINOD, & GEOFFREY E. HINTON. 2010. RECTIFIED LINEAR UNITS IMPROVE RESTRICTED BOLTZMANN MACHINES. IN *Proc. of ICML*.
- NARADOWSKY, JASON, SEBASTIAN RIEDEL, & DAVID A. SMITH. 2012. IMPROVING NLP THROUGH MARGINALIZATION OF HIDDEN SYNTACTIC STRUCTURE. IN *Proc. of EMNLP*.
- NARAYANAN, SRINI, & SANDA HARABAGIU. 2004. QUESTION ANSWERING BASED ON SEMANTIC STRUCTURES. IN *Proc. of ICCL*, p. 693. ASSOCIATION FOR COMPUTATIONAL LINGUISTICS.

- NIMB, SANNI. 2018. THE DANISH FRAMENET LEXICON: METHOD AND LEXICAL COVERAGE. IN *Proceedings of the International FameNet Workshop 2018: Multilingual FrameNets and Constructions*, 48–52.
- OEPEN, STEPHAN, MARCO KUHLMANN, YUSUKE MIYAO, DANIEL ZEMAN, DAN FLICKINGER, JAN HAJIC, ANGELINA IVANOVA, & YI ZHANG. 2014. SEMEVAL 2014 TASK 8: BROAD-COVERAGE SEMANTIC DEPENDENCY PARSING. IN *Proc. of SemEval*.
- OHARA, KYOKO. 2012. SEMANTIC ANNOTATIONS IN JAPANESE FRAME_{NET}: COMPARING FRAMES IN JAPANESE AND ENGLISH. IN *Proceedings of the Eight International Conference on Language Resources and Evaluation (LREC'12)*, ED. BY NICOLETTA CALZOLARI (CONFERENCE CHAIR), KHALID CHOUKRI, THIERRY DECLERCK, MEHMET UGUR DOGAN, BENTE MAEGAARD, JOSEPH MARIANI, JAN ODIJK, & STELIOS PIPERIDIS, ISTANBUL, TURKEY. EUROPEAN LANGUAGE RESOURCES ASSOCIATION (ELRA).
- , SEIKO FUJII, SHUN ISHIZAKI, TOSHIO OHORI, HIROAKI SAITO, & RYOKO SUZUKI. 2004. THE JAPANESE FRAME_{NET} PROJECT; AN INTRODUCTION. IN *Proceedings of the Workshop on Building Lexical Resources from Semantically Annotated Corpora*, ED. BY CHARLES J. FILLMORE, MANFRED PINKAL, COLLIN F. BAKER, & KATRIN ERK, 9–12, LISBON. LREC 2004.
- PADÓ, SEBASTIAN, & MIRELLA LAPATA. 2009. CROSS-LINGUAL ANNOTATION PROJECTION FOR SEMANTIC ROLES. *Journal of Artificial Intelligence Research* 36.307–340.
- PALMER, ALEXIS, & CAROLINE SPORLEDER. 2010. EVALUATING FRAMENET-STYLE SEMANTIC PARSING: THE ROLE OF COVERAGE GAPS IN FRAMENET. IN *Proc. of COLING*.
- PALMER, MARTHA, DANIEL GILDEA, & PAUL KINGSBURY. 2005A. THE PROPOSITION BANK: AN ANNOTATED CORPUS OF SEMANTIC ROLES. *Computational Linguistics* 31.71–106.
- , ——, & —— . 2005B. THE PROPOSITION BANK: AN ANNOTATED CORPUS OF SEMANTIC ROLES. *Computational Linguistics* 31.71–106.
- PAVLICK, ELLIE, TRAVIS WOLFE, PUSHPENDRE RASTOGI, CHRIS CALLISON-BURCH, MARK DREDZE, & BENJAMIN VAN DURME. 2015. FRAMENET+: FAST PARAPHRASTIC TRIPLING OF FRAMENET. IN *Proc. of ACL*, VOLUME 2, 408–413.
- PEDERSEN, BOLETTE, SANNI NIMB, ANDERS SØGAARD, MAREIKE HARTMANN, & SUSSI OLSEN. 2018. A DANISH FRAMENET LEXICON AND AN ANNOTATED CORPUS USED FOR TRAINING AND EVALUATING A SEMANTIC FRAME CLASSIFIER. IN *Proc. of LREC*.
- PENG, HAO, SAM THOMSON, & NOAH A. SMITH. 2017. DEEP MULTITASK LEARNING FOR SEMANTIC DEPENDENCY PARSING. IN *Proc. of ACL*.
- , SAM THOMSON, SWABHA SWAYAMDIPTA, & NOAH A. SMITH, 2018. LEARNING JOINT SEMANTIC PARSERS FROM DISJOINT DATA. ARXIV:1804.05990.
- PETRUCK, MIRIAM. 2009. TYPOLOGICAL CONSIDERATIONS IN CONSTRUCTING A HEBREW FRAME_{NET}. IN *Multilingual FrameNets in Computational Lexicography*, ED. BY HANS C. BOAS, 183–205. MOUTON.
- PETRUCK, MIRIAM R. L., 2014. THE SISTERHOOD OF FRAME SEMANTICS AND CONSTRUCTION GRAMMAR. PAPER PRESENTED AT THEME SESSION IN HONOR OF CHARLES J. FILLMORE, INTERNATIONAL CONFERENCE ON CONSTRUCTION GRAMMAR (ICCG-8).
- PRADHAN, SAMEER, ALESSANDRO MOSCHITTI, NIANWEN XUE, HWEI TOU NG, ANDERS BJÖRKELUND, OLGA URYUPINA, YUCHEN ZHANG, & ZHI ZHONG. 2013. TOWARDS ROBUST LINGUISTIC ANALYSIS USING ONTONOTES. IN *Proc. of CoNLL*.
- , ALESSANDRO MOSCHITTI, NIANWEN XUE, OLGA URYUPINA, & YUCHEN ZHANG. 2012. CoNLL-2012 SHARED TASK: MODELING MULTILINGUAL UNRESTRICTED COREFERENCE IN ONTONOTES. IN *Proc. of EMNLP*.

- PUNYAKANOK, VASIN, DAN ROTH, & WEN-TAU YIH. 2008. THE IMPORTANCE OF SYNTACTIC PARSING AND INFERENCE IN SEMANTIC ROLE LABELING. *Computational Linguistics* 34.257–287.
- QIAN, FENG, LEI SHA, BAobao CHANG, LU CHEN LIU, & MING ZHANG. 2017. SYNTAX AWARE LSTM MODEL FOR SEMANTIC ROLE LABELING. IN *Proc. of EMNLP*.
- RASTOGI, PUSHPENDRE, & BENJAMIN VAN DURME. 2014. AUGMENTING FRAMENET VIA PPDB. IN *Proc. of Workshop on EVENTS*.
- REISINGER, DREW, RACHEL RUDINGER, FRANCIS FERRARO, CRAIG HARMAN, KYLE RAWLINS, & BENJAMIN VAN DURME. 2015. SEMANTIC PROTO-ROLES. *Transactions of the Association for Computational Linguistics* 3.475–488.
- ROTH, MICHAEL, 2017. IMPROVING FRAME SEMANTIC PARSING VIA DEPENDENCY PATH EMBEDDINGS.
- , & MIRELLA LAPATA. 2015A. CONTEXT-AWARE FRAME-SEMANTIC ROLE LABELING. *Transactions of the Association for Computational Linguistics* 3.449–460.
- , & ——. 2015B. CONTEXT-AWARE FRAME-SEMANTIC ROLE LABELING. *Transactions of the ACL* 3.449–460.
- , & ——. 2016. NEURAL SEMANTIC ROLE LABELING WITH DEPENDENCY PATH EMBEDDINGS. ARXIV:1605.07515.
- , & KRISTIAN WOODSEND. 2014. COMPOSITION OF WORD REPRESENTATIONS IMPROVES SEMANTIC ROLE LABELLING. IN *Proc. of EMNLP*.
- RUPPENHOFER, JOSEF, MICHAEL ELLSWORTH, MIRIAM RL PETRUCK, CHRISTOPHER R JOHNSON, & JAN SCHEFFCZYK, 2010A. FRAME_{NET} II: EXTENDED THEORY AND PRACTICE.
- , JONAS SUNDE, & MANFRED PINKAL. 2010B. GENERATING FRAME_{NETS} OF VARIOUS GRANULARITIES: THE FRAME_{NET} TRANSFORMER. IN *Proceedings of the Seventh conference on International Language Resources and Evaluation (LREC'10)*, ED. BY NICOLETTA CALZOLARI (CONFERENCE CHAIR), KHALID CHOUKRI, BENTE MAEGAARD, JOSEPH MARIANI, JAN ODIJK, STELIOS PIPERIDIS, MIKE ROSNER, & DANIEL TAPIAS, VALLETTA, MALTA. EUROPEAN LANGUAGE RESOURCES ASSOCIATION (ELRA).
- SARAWAGI, SUNITA, WILLIAM W COHEN, & OTHERS. 2004. SEMI-MARKOV CONDITIONAL RANDOM FIELDS FOR INFORMATION EXTRACTION. IN *Proc. of NIPS*, VOLUME 17.
- SATO, HIROAKI. 2008. NEW FUNCTIONS OF FRAME_{SQL} FOR MULTILINGUAL FRAME_{NETS}. IN *Proceedings of the Sixth International Language Resources and Evaluation (LREC'08)*, ED. BY EUROPEAN LANGUAGE RESOURCES ASSOCIATION (ELRA), MARRAKECH, MOROCCO.
- SHEN, DAN, & MIRELLA LAPATA. 2007. USING SEMANTIC ROLES TO IMPROVE QUESTION ANSWERING. IN *Proc. of EMNLP-CoNLL*.
- SIKOS, JENNIFER, & SEBASTIAN PADÓ. 2018. USING EMBEDDINGS TO COMPARE FRAMENET FRAMES ACROSS LANGUAGES. IN *Proceedings of the First Workshop on Linguistic Resources for Natural Language Processing*, 91–101. ASSOCIATION FOR COMPUTATIONAL LINGUISTICS.
- SØGAARD, ANDERS, & YOAV GOLDBERG. 2016. DEEP MULTI-TASK LEARNING WITH LOW LEVEL TASKS SUPERVISED AT LOWER LAYERS. IN *Proc. of ACL*.
- , BARBARA PLANK, & HECTOR MARTINEZ ALONSO. 2015. USING FRAME SEMANTICS FOR KNOWLEDGE EXTRACTION FROM TWITTER. IN *Proc. of AAAI*.
- STEEDMAN, MARK. 2000. INFORMATION STRUCTURE AND THE SYNTAX-PHONOLOGY INTERFACE. *Linguistic Inquiry* 31.649–689.

- STRUBELL, EMMA, PATRICK VERGA, DANIEL ANDOR, DAVID WEISS, & ANDREW MCCALLUM. 2018. LINGUISTICALLY-INFORMED SELF-ATTENTION FOR SEMANTIC ROLE LABELING. ARXIV:1804.08199.
- SUBIRATS, CARLOS. 2009. SPANISH FRAME_{NET}: A FRAME-SEMANTIC ANALYSIS OF THE SPANISH LEXICON. IN *Multilingual FrameNets in Computational Lexicography: Methods and Applications*, ED. BY HANS BOAS, 135–162. BERLIN/NEW YORK: MOUTON DE GRUYTER.
- SURDEANU, MIHAI, SANDA HARABAGIU, JOHN WILLIAMS, & PAUL AARSETH. 2003. USING PREDICATE-ARGUMENT STRUCTURES FOR INFORMATION EXTRACTION. IN *Proc. of ACL*.
- , RICHARD JOHANSSON, ADAM MEYERS, LLUÍS MÀRQUEZ, & JOAKIM NIVRE. 2008. THE CoNLL-2008 SHARED TASK ON JOINT PARSING OF SYNTACTIC AND SEMANTIC DEPENDENCIES. IN *Proc. of CoNLL*.
- SUTSKEVER, ILYA, ORIOL VINYALS, & QUOC V LE. 2014. SEQUENCE TO SEQUENCE LEARNING WITH NEURAL NETWORKS. IN *Proc. of NIPS*.
- SUTTON, CHARLES, & ANDREW MCCALLUM. 2005. JOINT PARSING AND SEMANTIC ROLE LABELING. IN *Proc. of CoNLL*.
- SWAYAMDIPTA, SWABHA, MIGUEL BALLESTEROS, CHRIS DYER, & NOAH A. SMITH. 2016. GREEDY, JOINT SYNTACTIC-SEMANTIC PARSING WITH STACK LSTMS. IN *Proc. of CoNLL*.
- , SAM THOMSON, CHRIS DYER, & NOAH A. SMITH, 2017. FRAME-SEMANTIC PARSING WITH SOFTMAX-MARGIN SEGMENTAL RNNs AND A SYNTACTIC SCAFFOLD. ARXIV:1706.09528.
- TÄCKSTRÖM, OSCAR, KUZMAN GANCHEV, & DIPANJAN DAS. 2015. EFFICIENT INFERENCE AND STRUCTURED LEARNING FOR SEMANTIC ROLE LABELING. *Transactions of the ACL* 3.29–41.
- TAN, ZHIXING, MINGXUAN WANG, JUN XIE, YIDONG CHEN, & XIAODONG SHI. 2018. DEEP SEMANTIC ROLE LABELING WITH SELF-ATTENTION. IN *Proc. of AAAI*.
- TITOV, IVAN, JAMES HENDERSON, PAOLA MERLO, & GABRIELE MUSILLO. 2009. ONLINE GRAPH PLANARISATION FOR SYNCHRONOUS PARSING OF SEMANTIC AND SYNTACTIC DEPENDENCIES. IN *Proc. of IJCAI*.
- , & ALEXANDRE KLEMENTIEV. 2012. A BAYESIAN APPROACH TO UNSUPERVISED SEMANTIC ROLE INDUCTION. IN *Proc. of EACL*.
- TONELLI, SARA, & EMANUELE PIANTA. 2008. FRAME INFORMATION TRANSFER FROM ENGLISH TO ITALIAN. IN *Proceedings of the Sixth International Language Resources and Evaluation (LREC'08)*, ED. BY EUROPEAN LANGUAGE RESOURCES ASSOCIATION (ELRA), MARRAKECH, MOROCCO.
- , & ——. 2009. A NOVEL APPROACH TO MAPPING FRAME_{NET} LEXICAL UNITS TO WORD_{NET} SYNSETS. IN *Proceedings of IWCS-8*, TILBURG, THE NETHERLANDS.
- TORRENT, TIAGO TIMPONI, LARS BORIN, & COLLIN F. BAKER (EDS.) 2018A. *Proceedings of the International FameNet Workshop 2018: Multilingual FrameNets and Constructions*, MIYAZAKI, JAPAN.
- , ELY EDISON DA SILVA MATOS, LUDMILA LAGE, ADRIELI LAVIOLA, TATIANE DA SILVA TAVARES, VÂNIA GOMES DE ALMEIDA, & NATÁLIA SIGILIANO. 2018B. TOWARDS CONTINUITY BETWEEN THE LEXICON AND THE CONSTRUCTION IN FRAME_{NET} BRASIL. *Constructicography: Constructicon development across languages* 22.107.
- , MICHAEL ELLSWORTH, COLLIN F. BAKER, & ELY EDISON DA SILVA MATOS. 2018C. THE MULTILINGUAL FRAME_{NET} SHARED ANNOTATION TASK: A PRELIMINARY REPORT. IN *Proceedings of the International FrameNet Workshop 2018: Multilingual FrameNets and Constructicons*, ED. BY TIAGO TIMPONI TORRENT, LARS BORIN, & COLLIN F. BAKER, 62–68. LREC.

- , MARIA MARGARIDA MARTINS SALOMÃO, & SIMONE R PERON. 2014. COPA 2014 FRAMENET BRASIL: A FRAME-BASED TRILINGUAL ELECTRONIC DICTIONARY FOR THE FOOTBALL WORLD CUP. IN *Proceedings of 25th COLING: System Demonstrations*.
- TOUTANOVA, KRISTINA, ARIA HAGHIGHI, & CHRISTOPHER D. MANNING. 2008. A GLOBAL JOINT MODEL FOR SEMANTIC ROLE LABELING. *Computational Linguistics* 34.161–191.
- TOWNS, J., T. COCKERILL, M. DAHAN, I. FOSTER, K. GAITHER, A. GRIMSHAW, V. HAZLEWOOD, S. LATHROP, D. LIFKA, G. D. PETERSON, R. ROSKIES, J. R. SCOTT, & N. WILKINS-DIEHR. 2014. XSEDE: ACCELERATING SCIENTIFIC DISCOVERY. *Computing in Science & Engineering* 16.62–74.
- TSVETKOV, YULIA, MANAAL FARUQUI, WANG LING, GUILLAUME LAMPLE, & CHRIS DYER. 2015. EVALUATION OF WORD VECTOR REPRESENTATIONS BY SUBSPACE ALIGNMENT. IN *Proceedings of the 2015 Conference on Empirical Methods in Natural Language Processing*, 2049–2054.
- UPADHYAY, SHYAM, KAI-WEI CHANG, MATT TADDY, ADAM KALAI, & JAMES ZOU. 2017. BEYOND BILINGUAL: MULTI-SENSE WORD EMBEDDINGS USING MULTILINGUAL CONTEXT. IN *Proceedings of the 2nd Workshop on Representation Learning for NLP*, 101–110. ASSOCIATION FOR COMPUTATIONAL LINGUISTICS.
- , MANAAL FARUQUI, CHRIS DYER, & DAN ROTH. 2016. CROSS-LINGUAL MODELS OF WORD EMBEDDINGS: AN EMPIRICAL COMPARISON. IN *Proceedings of the 54th Annual Meeting of the Association for Computational Linguistics (Volume 1: Long Papers)*, 1661–1670. ASSOCIATION FOR COMPUTATIONAL LINGUISTICS.
- ČULO, OLIVER. 2013. CONSTRUCTIONS-AND-FRAMES ANALYSIS OF TRANSLATIONS: THE INTERPLAY OF SYNTAX AND SEMANTICS IN TRANSLATIONS BETWEEN ENGLISH AND GERMAN. *Constructions and Frames* 5.143–167.
- VENTURI, GIULIA, ALESSANDRO LENCI, SIMONETTA MONTEMAGN, EVA MARIA VECCHI, MARIA TERESA SAGRI, & DANIELA TISCORNIA. 2009. TOWARDS A FRAMENET RESOURCE FOR THE LEGAL DOMAIN. IN *Proceedings of the Third Workshop on Legal Ontologies and Artificial Intelligence Techniques*, BARCELONA, SPAIN.
- VIRK, SHAFQAT MUMTAZ, PHILIPPE MULLER, & JULIETTE CONRATH. 2016. A SUPERVISED APPROACH FOR ENRICHING THE RELATIONAL STRUCTURE OF FRAME SEMANTICS IN FRAMENET. IN *Proceedings of COLING 2016, the 26th International Conference on Computational Linguistics: Technical Papers*, 3542–3552, OSAKA, JAPAN. THE COLING 2016 ORGANIZING COMMITTEE.
- , & K. V. S. PRASAD. 2018. TOWARDS HINDI/URDU FRAMENETS VIA THE MULTILINGUAL FRAMENET. IN *Proceedings of the International FameNet Workshop 2018: Multilingual FrameNets and Constructions*, 66–71.
- VOSSEN, PIEK, ANTSKE FOKKENS, ISA MAKS, & CHANTAL VAN SON. 2018. TOWARDS AN OPEN DUTCH FRAMENET LEXICON AND CORPUS. IN *Proceedings of the International FameNet Workshop 2018: Multilingual FrameNets and Constructions*.
- WEBSTER, JONATHAN, NANCY IDE, & ALEX CHENGYU FANG (EDS.) 2008. *Proceedings of The First International Conference on Global Interoperability for Language Resources*, HONG KONG. CITY UNIVERSITY.
- WEISCHEDL, RALPH, MARTHA PALMER, MITCHELL MARCUS, EDUARD HOVY, SAMEER PRADHAN, LANCE RAMSHAW, NIANWEN XUE, ANN TAYLOR, JEFF KAUFMAN, MICHELLE FRANCHINI, & OTHERS. 2013. ONTONOTES RELEASE 5.0 LDC2013T19. *Linguistic Data Consortium, Philadelphia, PA*.
- WU, DEKAI, & PASCALE FUNG. 2009. SEMANTIC ROLES FOR SMT: A HYBRID TWO-PASS MODEL. IN *Proc. of ACL*, 13–16. ASSOCIATION FOR COMPUTATIONAL LINGUISTICS.
- XUE, NIANWEN, & MARTHA PALMER. 2004. CALIBRATING FEATURES FOR SEMANTIC ROLE LABELING. IN *Proc. of EMNLP*.

- YANG, BISHAN, & TOM MITCHELL. 2017. A JOINT SEQUENTIAL AND RELATIONAL MODEL FOR FRAME-SEMANTIC PARSING. IN *Proc. of EMNLP*.
- YOU, LIPING, & KAIYING LIU. 2005. BUILDING CHINESE FRAME_{NET} DATABASE. *Natural Language Processing and Knowledge Engineering, 2005. IEEE NLP-KE '05. Proceedings of 2005 IEEE International Conference on* 301–306.
- ZAREMBA, WOJCIECH, ILYA SUTSKEVER, & ORIOL VINYALS, 2014. RECURRENT NEURAL NETWORK REGULARIZATION. ARXIV:1409.2329.
- ZAWISŁAWSKA, MAGDALENA, MAGDALENA DERWOJEDOWA, & JADWIGA LINDE-USIEKNIEWICZ. 2008. A FRAME_{NET} FOR POLISH. IN *Converging Evidence: Proceedings to the Third International Conference of the German Cognitive Linguistics Association (GCLA'08)*, 116–117.
- ZETTMLOYER, LUKE S, & MICHAEL COLLINS. 2005. LEARNING TO MAP SENTENCES TO LOGICAL FORM: STRUCTURED CLASSIFICATION WITH PROBABILISTIC CATEGORIAL GRAMMARS. IN *Proc. of UAI*.
- ZHAO, HAI, WENLIANG CHEN, JUN'ICHI KAZAMA, KIYOTAKA UCHIMOTO, & KENTARO TORISAWA. 2009A. MULTILINGUAL DEPENDENCY LEARNING: EXPLOITING RICH FEATURES FOR TAGGING SYNTACTIC AND SEMANTIC DEPENDENCIES. IN *Proc. of CoNLL*.
- , WENLIANG CHEN, CHUNYU KIT, & GUODONG ZHOU. 2009B. MULTILINGUAL DEPENDENCY LEARNING: A HUGE FEATURE ENGINEERING METHOD TO SEMANTIC DEPENDENCY PARSING. IN *Proc. of CoNLL*.
- , & CHUNYU KIT. 2008. PARSING SYNTACTIC AND SEMANTIC DEPENDENCIES WITH TWO SINGLE-STAGE MAXIMUM ENTROPY MODELS. IN *Proc. of CoNLL*.
- ZHOU, JIE, & WEI XU. 2015. END-TO-END LEARNING OF SEMANTIC ROLE LABELING USING RECURRENT NEURAL NETWORKS. IN *Proc. of ACL*.
- ZIEM, ALEXANDER. 2014. *Frames of Understanding in Text and Discourse: Theoretical foundations and descriptive applications*. AMSTERDAM AND PHILADELPHIA: JOHN BENJAMINS PUBLISHING COMPANY.