

References

- Ali, O., and Peynirciolu, Z. (2010). Intensity of emotions conveyed and elicited by familiar and unfamiliar music. *Music Perception: An Interdisciplinary Journal*, 27(3), 177–182.
- Alm, C. O. (2009). *Affect in Text and Speech*. Saarbrücken: VDM Verlag.
- Alm, C. O. (2010). Characteristics of high agreement affect annotation in text. *Proceedings of the 4th Linguistic Annotation Workshop at the 48th Annual Meeting of the Association for Computational Linguistics, Uppsala, Sweden*, 118-122.
- Alm, C. O. (2011). Subjective natural language problems: Motivations, applications, characterizations, and implications. *Proceedings of the 49th Annual Meeting of the Association for Computational Linguistics, Portland, OR*, 107-112.
- Alm, C. O. (2012). The role of affect in the computational modeling of *natural* language. *Language and Linguistics Compass (Computational and Mathematical)*, 6(7), 416-430.
- Alm, C. O., and Sproat, R. (2005). Emotional sequencing and development in fairy tales. In Tao, J., Tan, T., and Picard, R. W. (Eds.) *First International Conference on Affective Computing and Intelligent Interaction, Beijing, China*. LNCS 3784. Berlin Heidelberg: Springer-Verlag, 668-674.
- Alm-Arvius, C. (1998). *Introduction to Semantics*. Lund: Studentlitteratur.
- Aman, S., and Szpakowicz, S. (2007). Identifying expressions of emotion in text. In Matoušek, V., and Mautner, P. (Eds.) *Text, Speech and Dialogue*. LNCS 4629. Berlin Heidelberg: Springer-Verlag, 196–205.
- Anagnostopoulos, C.N., Iliou, T., and Giannoukos, I. (2015). Features and classifiers for emotion recognition from speech: A survey from 2000 to 2011. *Artificial Intelligence Review*, 43(2), 155–177.
- Anand, P., Walker, M., Abbott, R., Tree, J. E. F., Bowmani, R., and Minor, M. (2011). Cats rule and dogs drool!: Classifying stance in online debate. *Proceedings of the 2nd Workshop on Computational Approaches to Subjectivity and Sentiment Analysis, Portland, OR*, 1–9.
- Andreasen, N. G., and Pfohl, B. (1976). Linguistic analysis of speech in affective disorders. *Archives of General Psychiatry*, 33(11), 1361–1367.
- Avello, D. G. (2012). "I wanted to predict elections with Twitter and all I got was this lousy paper" – A balanced survey on election prediction using Twitter data. *arXiv*, 1204.6441.
- Baker, C. F., Fillmore, C. J., and Lowe, J. B. (1998). The Berkeley FrameNet project. *Proceedings of the Annual Meeting of the Association for Computational Linguistics, Stroudsburg, PA*, 86–90.
- Barrett, L. F. (2006). Are emotions natural kinds? *Perspectives on Psychological Science*, 1(1), 28–58.
- Bellegarda, J. (2010). Emotion analysis using latent affective folding and embedding. *Proceedings of the NAACL-HLT 2010 Workshop on Computational Approaches to Analysis and Generation of Emotion in Text, Los Angeles, CA*.
- Birmingham, A., and Smeaton, A. F. (2011). On using Twitter to monitor political sentiment and predict election results. *Proceedings of the IJCNLP Workshop on Sentiment Analysis where AI meets Psychology, Chiang Mai, Thailand*, 2–10.
- Besnier, N. (1990). Language and affect. *Annual Review of Anthropology*, 19, 419-451.

- Calvo, R. A., and D’Mello, S. (2010). Affect detection: An interdisciplinary review of models, methods, and their applications. *IEEE Transactions on Affective Computing*, 1(1), 18-37.
- Carvalho, P., Sarmiento, L., Silva, M. J., and De Oliveira, E. (2009). Clues for detecting irony in user-generated contents: Oh...!! It’s “so easy”;-). *Proceedings of the 1st International CIKM Workshop on Topic-sentiment Analysis for Mass Opinion, Hong-Kong, China*, 53–56.
- Castellano, G., Kessous, L., and Caridakis, G. (2008). Emotion recognition through multiple modalities: Face, body gesture, speech. In Peter, C., and Beale, R. (Eds.) *Affect and Emotion in Human-Computer Interaction: From Theory to Applications*. LNCS 4868. Berlin Heidelberg: Springer-Verlag, 92-103.
- Chaffar, S., and Inkpen, D. (2011). Using a heterogeneous dataset for emotion analysis in text. In Butz, C., and Lindgras, P. (Eds.) *Advances in Artificial Intelligence*. LNCS 6657. Berlin Heidelberg: Spring-Verlag, 62-67.
- Chen, Y., and Skiena, S. (2014). Building sentiment lexicons for all major languages. *Proceedings of the 52nd Annual Meeting of the Association for Computational Linguistics, Baltimore, MD*, 383–389.
- Chen, Y., Zhou, Y., Zhu, S., and Xu, H. (2012). Detecting offensive language in social media to protect adolescent online safety. *IEEE International Conference on Privacy, Security, Risk and Trust (PASSAT) and 2012 International Conference on Social Computing (SocialCom), Amsterdam*, 71–80.
- Cherry, C., Mohammad, S. M., and De Bruijn, B. (2012). Binary classifiers and latent sequence models for emotion detection in suicide notes. *Biomedical Informatics Insights*, 5(Suppl 1), 147.
- Chetviorkin, I., Moscow, L. G., and Loukachevitch, N. (2014). Two-step model for sentiment lexicon extraction from Twitter streams. *Proceedings of the Workshop on Computational Approaches to Subjectivity and Sentiment Analysis, Baltimore, MD*, 67–72.
- Cohen, S. H. (2003). Maximum difference scaling: Improved measures of importance and preference for segmentation. Technical report, Sawtooth Software, Inc., 1–17
- Collier, G. (1985). *Emotional Expression*. Hillsdale, N. J.: Lawrence Erlbaum Associates.
- Collobert, R., Weston, J., Bottou, L., Karlen, M., Kavukcuoglu, K., and Kuksa, P. (2011). Natural language processing (almost) from scratch. *Journal of Machine Learning Research*, 12, 2493–2537.
- Conover, M. D., Ratkiewicz, J., Francisco, M., Gonc, B., Flammini, A., and Menczer, F. (2011a). Political polarization on Twitter. *Networks*, 133(26), 89–96.
- Conover, M. D., Goncalves, B., Ratkiewicz, J., Flammini, A., and Menczer, F. (2011b). Predicting the political alignment of Twitter users. *IEEE 3rd International Conference on Privacy Security Risk and Trust and IEEE 3rd International Conference on Social Computing*, 192–199.
- Coppersmith, G., Dredze, M., and Harman, C. (2014). Quantifying mental health signals in Twitter. *Proceedings of the Workshop on Computational Linguistics and Clinical Psychology: From Linguistic Signal to Clinical Reality at the 52nd Annual Meeting of the Association for Computational Linguistics, Baltimore, MD, USA*, 51-60.
- Cornelius, R. R. (2000). Theoretical approaches to emotion. *Proceedings of the*

ISCA ITRW on Speech and Emotion (SpeechEmotion-2000), Newcastle, Northern Ireland, UK, 3-10.

- Cowie, R., Douglas-Cowie, E., Martin, J.-C., and Devillers, L. (2010). The essential role of human databases for learning in and validation of affectively competent agents. In Scherer, K. R., Bänziger, T., and Roesch, E. B. (Eds.) *Blueprint for Affective Computing: A Sourcebook*. Oxford: Oxford University Press, 151-165.
- Dadvar, M., Trieschnigg, D., Ordelman, R., and de Jong, F. (2013). Improving cyberbullying detection with user context. In Serdyukov et al. (Eds.) *Advances in Information Retrieval*. LNCS 7814. Berlin Heidelberg: Springer-Verlag, 693-696.
- Darwin, C. (1998 [1890]). The expression of the emotions in man and animals [selected excerpts]. In Jenkins, J. M., Oatley, K., and Stein, N. L. (Eds.) *Human Emotions: A Reader*. Oxford: Blackwell, 13-20.
- Davidson, L. and Duberman, L. (1982). Friendship: Communication and interactional patterns in same-sex dyads. *Sex Roles*, 8, 809-822.
- Davis, H., and Mohammad, S. (2014). Generating music from literature. *Proceedings of the 3rd Workshop on Computational Linguistics for Literature (CLFL), Gothenburg, Sweden*, 1-10.
- Deaux, K. and Major, B. (1987). Putting gender into context: An interactive model of gender-related behavior. *Psychological Review*, 94(3), 369-389.
- Dogan, H. (2012). Emotion, confidence, perception and expectation case of mathematics. *International Journal of Science and Mathematics Education*, 10(1), 49-69.
- Douglas-Cowie, E., Cowie, R., Sneddon, I., Cox, C., Lowry, O., McRorie, M., Martin, J.-C., Devillers, L., Abrilian, S., Batliner, A., Amir, N., Karpousiz, K., and Martin, J.-C. (2007). The HUMAINE database: Addressing the collection and annotation of naturalistic and induced emotional data. In Paiva, A., Prada, R., and Picard, R. W. (Eds.) *Second International Conference on Affective Computing and Intelligent Interaction, Lisbon, Portugal*. LNCS 4738. Berlin Heidelberg: Springer-Verlag, 488-500.
- Eagly, A. and Steffen, V. (1984). Gender stereotypes stem from the distribution of women and men into social roles. *Journal of Personality and Social Psychology*, 46(4), 735-754.
- Eichstaedt, J. C., Schwartz, H. A., Kern, M. L., Park, G., Labarthe, D. R., Merchant, R. M., Jha, S., Agrawal, M., Dziurzynski, L. A., Sap, M., Weeg, C., Larson, E. E., Ungar, L. H., and Seligman, M. E. (2015). Psychological language on Twitter predicts county-level heart disease mortality. *Psychological Science*, 26(2), 159-169.
- Ekman, P. (1992). An argument for basic emotions. *Cognition and Emotion*, 6(3), 169-200.
- Ekman, P. (1994). All emotions are basic. In Ekman, P., and Davidson, R. J. (Eds.) *The Nature of Emotion: Fundamental Questions*. New York: Oxford University Press, 15-19.
- Ekman, P., and Friesen, W. V. (1998 [1971]). Constants across culture in the face and emotion. In Jenkins, J. M., Oatley, K., and Stein, N. L. (Eds.) *Human Emotions: A Reader*. Oxford: Blackwell, 63-72.
- Esuli, A., and Sebastiani, F. (2006). SentiWordNet: A publicly available lexical resource for opinion mining. *Proceedings of 5th Conference on Language Resources and Evaluation, Genova, IT*, 417-422.

- Foolen, A. (1997). The expressive function of language: Towards a cognitive semantic approach. In Niemeier, S., and Dirven, R. (Eds.) *The Language of Emotions: Conceptualization, Expression, and Theoretical Foundation*, Amsterdam: John Benjamins, 15–31.
- Forbes-Riley, K., and Litman, D. (2011). Designing and evaluating a wizarded uncertainty-adaptive spoken dialogue tutoring system. *Computer Speech and Language*, 25(1), 105-126.
- Francisco, V., and Gervás, P. (2006). Automated mark up of affective information in English texts. In Sojka, P., Kopeček, I., and Pala, K. (Eds.) *Text, Speech and Dialogue*. LNCS 4188. Berlin Heidelberg: Springer-Verlag, 375–382.
- Frege, G. (1952 [1892]). On sense and reference. In Geach, P., and Black, M. (Eds.) *Translations from the Philosophical Writings of Gottlob Frege*. Oxford: Blackwell, 56–78.
- Frijda, N. H. (1988). The laws of emotion. *American Psychologist*, 43(5), 349.
- Genreux, M., and Evans, R. P. (2006). Distinguishing affective states in weblogs. *Proceedings of AAI-2006 Spring Symposium on Computational Approaches to Analysing Weblogs, Stanford, CA*, 27– 29.
- Go, A., Bhayani, R., and Huang, L. (2009). Twitter sentiment classification using distant supervision. Technical report, Stanford University. 1–6.
- Gobron, S., Ahn, J., Paltoglou, G., Thelwall, M., and Thalmann, D. (2010). From sentence to emotion: A real-time three-dimensional graphics metaphor of emotions extracted from text. *The Visual Computer*, 26(6-8), 505–519.
- Golbeck, J., and Hansen, D. (2011). Computing political preference among Twitter followers. *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems, New York, NY*, 1105–1108.
- González-Ibáñez, R., Muresan, S., and Wacholder, N. (2011). Identifying sarcasm in Twitter: A closer look. *Proceedings of the 49th Annual Meeting of the Association for Computational Linguistics, Portland, OR*, 581–586.
- Grijalva, E., and Harms, P. D. (2014). Narcissism: An integrative synthesis and dominance complementarity model. *The Academy of Management Perspectives*, 28(2), 108–127.
- Gunes, H., and Schuller, B. (2013). Categorical and dimensional affect analysis in continuous input: Current trends and future directions. *Journal of Image and Vision Computing*, 31(2), 120-136.
- Gupta, N., Gilbert, M., and Fabbrizio, G. D. (2013). Emotion detection in email customer care. *Computational Intelligence*, 29(3), 489–505.
- Halliday, M. A. K. (1996). Linguistic function and literary style: An inquiry into the language of William Golding’s *The Inheritors*. In Weber, J. J. (Ed.) *The Stylistics Reader: From Roman Jakobson to the Present*. London: Arnold, 56–86.
- Hartner, M. (2013). The lingering after-effects in the readers mind – An investigation into the affective dimension of literary reading. *Journal of Literary Theory Online*. [Review of Burke, M. (2011). *Literary Reading, Cognition and Emotion. An Exploration of the Oceanic Mind*. New York/London: Routledge.]
- Hasan, K. S., and Ng, V. (2013). Stance classification of ideological debates: Data, models, features, and constraints. *Proceedings of the 6th International Joint Conference on Natural Language Processing, Nagoya, Japan*, 1348–1356.
- Hatzivassiloglou, V., and McKeown, K. R. (1997). Predicting the semantic orientation of adjectives. *Proceedings of the 8th Conference of European Chapter of*

- the Association for Computational Linguistics, Madrid, Spain, 174–181.*
- Hatzivassiloglou, V., and Wiebe, J. M. (2000). Effects of adjective orientation and gradability on sentence subjectivity. *Proceedings of the 18th Conference on Computational Linguistics, Saarbrücken, Germany, 299–305.*
 - Hochberg, L., Alm, C. O., Rantanen, E. M., DeLong, C. M., and Haake, A. (2014a). Decision style in a clinical reasoning corpus. *Proceedings of the 2014 Workshop on Biomedical Natural Language Processing, Baltimore, MD, USA, 83–87.*
 - Hochberg, L., Alm, C. O., Rantanen, E. M., Yu, Q., DeLong, C. M., and Haake, A. (2014b). Towards automatic annotation of clinical decision-making style. *Proceedings of LAW VIII - The 8th Linguistic Annotation Workshop at the 25th International Conference on Computational Linguistics, Dublin, Ireland, 129–138.*
 - Holzman, L. E., and Pottenger, W. M. (2003). Classification of emotions in internet chat: An application of machine learning using speech phonemes. Technical report, Leigh University.
 - Homan, C. M., Johar, R., Liu, T., Lytle, M., Silenzio, V., and Alm, C. O. (2014). Toward macro-insights for suicide prevention: Analyzing fine-grained distress at scale. *Proceedings of the Workshop on Computational Linguistics and Clinical Psychology: From Linguistic Signal to Clinical Reality at the 52nd Annual Meeting of the Association for Computational Linguistics, Baltimore, MD, USA, 107–117.*
 - Howes, C., Purver, M., and McCabe, R. (2014). Linguistic indicators of severity and progress in online text-based therapy for depression. *Proceedings of the Workshop on Computational Linguistics and Clinical Psychology: From Linguistic Signal to Clinical Reality at the 52nd Annual Meeting of the Association for Computational Linguistics, Baltimore, MD, USA, 7–16.*
 - Hu, M., and Liu, B. (2004). Mining and summarizing customer reviews. *Proceedings of the 10th ACM SIGKDD International Conference on Knowledge Discovery and Data Mining, New York, NY, USA, 168–177.*
 - Hunter, P.G., Schellenberg, G., and Schimmack, U. (2008). Mixed affective responses to music with conflicting cues. *Cognition & Emotion, 22(2):327–352.*
 - Hunter, P.G., Schellenberg, G., and Schimmack, U. (2010). Feelings and perceptions of happiness and sadness induced by music: Similarities, differences, and mixed emotions. *Psychology of Aesthetics, Creativity, and the Arts, 4(1):47.*
 - Irsoy, O., and Cardie, C. (2014). Deep recursive neural networks for compositionality in language. *Proceedings of Advances in Neural Information Processing Systems, Montreal, Quebec, 2096–2104.*
 - Jakobson, R. (1996). Closing statement: Linguistics and poetics. In Weber, J. J. (Ed.) *The Stylistics Reader: From Roman Jakobson to the Present*. London: Arnold, 10–35.
 - Jashinsky, J., Burton, S. H., Hanson, C. L., West, J., Giraud-Carrier, C., Barnes, M. D., and Argyle, T. (2014). Tracking suicide risk factors through Twitter in the US. *Crisis, 35(1), 51–59.*
 - Jia, L., Yu, C., and Meng, W. (2009). The effect of negation on sentiment analysis and retrieval effectiveness. *Proceedings of the 18th ACM Conference on Information and Knowledge Management, New York, NY, USA, 1827–1830.*
 - John, D., Boucouvalas, A. C., and Xu, Z. (2006). Representing emotional momentum within expressive internet communication. *Proceedings of the 24th IASTED International Conference on Internet and Multimedia Systems and Applications, Anaheim, CA, 183–188.*

- Johnsen, J.A. K., Vambheim, S. M., Wynn, R., and Wangberg, S. C. (2014). Language of motivation and emotion in an internet support group for smoking cessation: explorative use of automated content analysis to measure regulatory focus. *Psychology Research and Behavior Management*, 7, 19–29.
- Jurgens, D., Mohammad, S. M., Turney, P., and Holyoak, K. (2012). Semeval-2012 Task 2: Measuring degrees of relational similarity. *Proceedings of the 6th International Workshop on Semantic Evaluation, SemEval'12, Montreal, Canada*, 356–364.
- Karpathy, A., Joulin, A., and Li, F.-F. (2014). Deep fragment embeddings for bidirectional image sentence mapping. *Proceedings of Advances in Neural Information Processing Systems, Montreal, Quebec*, 1889–1897.
- Katz, J. J., and Fodor, J. A. (1963). The structure of a semantic theory. *Language*, 39(2), 170–210.
- Kilgarriff, A. (1997). "I don't believe in word senses". *Computers and the Humanities*, 31(2), 91–113.
- Kirange, D. K., and Deshmukh, R. R.. (2013). Emotion classification of news headlines using SVM. *Asian Journal of Computer Science and Information Technology*, 2(5), 104-106.
- Kiritchenko, S., Zhu, X., and Mohammad, S. M. (2014). Sentiment analysis of short informal texts. *Journal of Artificial Intelligence Research*, 50, 723–762.
- Kleres, J. (2011). Emotions and narrative analysis: A methodological approach. *Journal for the Theory of Social Behaviour*, 41(2), 182–202.
- Kramer, A. D. (2012). The spread of emotion via Facebook. *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems*, 767–770.
- Ku, L.W., Liang, Y.T., and Chen, H.-H. (2006). Opinion extraction, summarization and tracking in news and blog corpora. *Proceedings of the AAAI Spring Symposium: Computational Approaches to Analyzing Weblogs, Vol. 100107*.
- Kunneman, F., Liebrecht, C., and van den Bosch, A. (2014). The (un)predictability of emotional hashtags in Twitter. *Proceedings of the 5th Workshop on Language Analysis for Social Media, Gothenburg, Sweden*, 26–34.
- Lamers, S. M. A., Truong, K. P., Steunenbergh, B., de Jong, F. and Westerhof, G. J. (2014). Applying prosodic speech features in mental health care: An exploratory study in a life-review intervention for depression. *Proceedings of the Workshop on Computational Linguistics and Clinical Psychology: From Linguistic Signal to Clinical Reality at the 52nd Annual Meeting of the Association for Computational Linguistics, Baltimore, MD, USA*, 61-68.
- Lampos, V., Preotiuc-Pietro, D., and Cohn, T. (2013). A user-centric model of voting intention from social media. *Proceedings of the 51st Annual Meeting of the Association for Computational Linguistics, Sofia, Bulgaria*, 993–1003.
- Lassen, D. S., and Brown, A. R. (2011). Twitter: The electoral connection? *Social Science Computer Review*, 29(4), 419–436.
- Lazaridou, A., Bruni, E., and Baroni, M. (2014). Is this a wampimuk? Cross-modal mapping between distributional semantics and the visual world. *Proceedings of the 52nd Annual Meeting of the Association for Computational Linguistics, Baltimore, MD, USA*, 1403–1414.
- Le, Q. V., and Mikolov, T. (2014). Distributed representations of sentences and documents. *arXiv preprint arXiv:1405.4053*.

- Lehrman, M. T., Alm, C. O., and Proaño, R. A. (2012). Detecting distressed vs. non-distressed affect states in short forum texts. *Proceedings of the Workshop on Language in Social Media at the Conference of the North American Chapter of the Association for Computational Linguistics-Human Language Technologies, Montreal, Canada*, 9-18.
- Li, J., Zhou, G., Wang, H., and Zhu, Q. (2010). Learning the scope of negation via shallow semantic parsing. *Proceedings of the 23rd International Conference on Computational Linguistics, Beijing, China*, 671-679.
- Li, X. G., Li, S. M., Jiang, L. R., and Zhang, S. B. (2013). Study of English pronunciation quality evaluation system with tone and emotion analysis capabilities. *Applied Mechanics and Materials*, 475-476, 318-323.
- Liberman, M., Davis, K., Grossman, M., Martey, N., and Bell, J. (2002). *Emotional Prosody Speech and Transcripts LDC2002S28*. Web Download. Philadelphia: Linguistic Data Consortium.
- Lin, C., He, Y., and Everson, R. (2011). Sentence subjectivity detection with weakly-supervised learning. *Proceedings of the 5th International Joint Conference on Natural Language Processing*, 1153-1161.
- Lindquist, K. A., Wager, T. D., Kober, H., Bliss-Moreau, E., and Barrett, L. F. (2012). The brain basis of emotion: A meta-analytic review. *Behavioral and Brain Sciences*, 35(3), 121-143.
- Liu, B., and Zhang, L. (2012). A survey of opinion mining and sentiment analysis. In Aggarwal, C. C., and Zhai, C. (Eds.) *Mining Text Data*. New York, NY: Springer Science+Business Media, 415-463.
- Liu, H., Lieberman, H., and Selker, T. (2003a). A model of textual affect sensing using real-world knowledge. *Proceedings of the International Conference on Intelligent User Interfaces, Miami, FL, USA*, 125-132.
- Liu, H., Selker, T., and Lieberman, H. (2003b). Visualizing the affective structure of a text document. *Proceedings of Conference on Human Factors in Computing Systems, Ft. Lauderdale, FL, USA*, 740-741.
- Lu, B., and Tsou, B. K. (2010). CityU-DAC: Disambiguating sentiment-ambiguous adjectives within context. *Proceedings of the 5th International Workshop on Semantic Evaluation*, 292-295.
- Lyons, J. (1995). *Linguistic Semantics: An Introduction*. Cambridge: Cambridge University Press.
- Makki, R., Brooks, S., and Milios, E. E. (2014). Context-specific sentiment lexicon expansion via minimal user interaction. *Proceedings of the International Conference on Information Visualization Theory and Applications, Rome, Italy*, 178-186.
- Malti, T., and Krettenauer, T. (2013). The relation of moral emotion attributions to prosocial and antisocial behavior: A meta-analysis. *Child Development*, 84(2), 397-412.
- Martinez-Camara, E., Martín-Valdivia, M. T., Urenalopez, L. A., and Montejoraez, A. R. (2012). Sentiment analysis in Twitter. *Natural Language Engineering*, 20(1), 1-28.
- Matykiewicz, P., Duch, W., and Pestian, J. P. (2009). Clustering semantic spaces of suicide notes and newsgroup articles. *Proceedings of the Workshop on Current Trends in Biomedical Natural Language Processing, Boulder, CO*, 179-184.

- Maynard, D., and Funk, A. (2011 [2012]). Automatic detection of political opinions in tweets. In Garcia-Castro, R. et al. (Eds.) *The Semantic Web: ESWC 2011 Workshops, Heraklion, Greece*. LNCS 7117, 88–99.
- Mihalcea, R., Banea, C., and Wiebe, J. (2007). Learning multilingual subjective language via cross-lingual projections. *Proceedings of the 45th Annual Meeting of the Association of Computational Linguistics, Prague, Czech Republic*, 976–983.
- Mihalcea, R., and Liu, H. (2006). A corpus-based approach to finding happiness. *Proceedings of AAAI-2006 Spring Symposium on Computational Approaches to Analysing Weblogs*, 139–144.
- Mikolov, T., Sutskever, I., Chen, K., Corrado, G. S., and Dean, J. (2013). Distributed representations of words and phrases and their compositionality. *Proceedings of Advances in Neural Information Processing Systems*, 3111–3119.
- Minamikawa, A., and Yokoyama, H. (2011a). Blog tells what kind of personality you have: egogram estimation from Japanese weblog. *Proceedings of the ACM 2011 Conference on Computer Supported Cooperative Work*, 217–220, Hangzhou, China.
- Minamikawa, A., and Yokoyama, H. (2011b). Personality estimation based on weblog text classification. In Mehtrota, K. G. et al. (Eds.) *Modern Approaches in Applied Intelligence*. LNCS 6704. Berlin Heidelberg: Springer-Verlag, 89–97.
- Mohammad, S. M. (2011). From once upon a time to happily ever after: Tracking emotions in novels and fairy tales. *Proceedings of the 5th ACL-HLT Workshop on Language Technology for Cultural Heritage, Social Sciences, and Humanities, Portland, OR, USA*, 105–114.
- Mohammad, S. M. (2012a). #Emotional tweets. *Proceedings of the 1st Conference on Lexical and Computational Semantics, Montreal, Canada*, 246–255.
- Mohammad, S. M. (2012b). From once upon a time to happily ever after: Tracking emotions in mail and books. *Decision Support Systems*, 53(4), 730–741.
- Mohammad, S. M. (2012c). Portable features for classifying emotional text. *Proceedings of the Conference of the North American Chapter of the Association for Computational Linguistics-Human Language Technologies, Montreal, Canada*, 587–591.
- Mohammad, S. M. (2015a). Imagisaurus: An interactive visualizer of valence and emotion in the Roget's Thesaurus. *Proceedings of the ACL Workshop on Computational Approaches to Subjectivity and Sentiment Analysis, Lisbon, Portugal*. Forthcoming.
- Mohammad, S. M. (2015b) Sentiment analysis: Detecting valence, emotions, and other affectual states from text. *Emotion Measurement*. Forthcoming.
- Mohammad, S. M., Dunne, C., and Dorr, B. (2009). Generating high-coverage semantic orientation lexicons from overtly marked words and a thesaurus. *Proceedings of the Conference on Empirical Methods in Natural Language Processing, Waikiki, Hawaii*, 599–608.
- Mohammad, S. M., and Kiritchenko, S. (2013a). Using hashtags to capture fine emotion categories from tweets. *Computational Intelligence*, 31(2), 301–326.
- Mohammad, S. M., and Kiritchenko, S. (2013b). Using nuances of emotion to identify personality. *Proceedings of the International Conference on Weblogs and Social Media (ICWSM-13), Boston, MA*, 27–30.
- Mohammad, S. M., Kiritchenko, S., and Zhu, X. (2013). NRC-Canada: Building the state-of-the-art in sentiment analysis of tweets. *Proceedings of the 7th International Workshop on Semantic Evaluation Exercises (SemEval-2013), Atlanta*,

GA, USA, 321-327.

- Mohammad, S. M., and Turney, P. D. (2010). Emotions evoked by common words and phrases: Using Mechanical Turk to create an emotion lexicon. *Proceedings of the NAACL-HLT 2010 Workshop on Computational Approaches to Analysis and Generation of Emotion in Text, Los Angeles, CA*, 26-34.
- Mohammad, S. M., and Turney, P. D. (2013). Crowdsourcing a word-emotion association lexicon. *Computational Intelligence*, 29 (3), 436-465.
- Mohammad, S. M., and Yang, T. (2011). Tracking sentiment in mail: How genders differ on emotional axes. *Proceedings of the 2nd Workshop on Computational Approaches to Subjectivity and Sentiment Analysis (WASSA 2.011), Portland, OR*, 70-79.
- Mohammad, S. M., Zhu, X., Kiritchenko, S., and Martin, J. (2015). Sentiment, emotion, purpose, and style in electoral tweets. *Information Processing and Management*, 51(4), 480-499.
- Montague, R. (1974). *Formal Philosophy: Selected Papers of Richard Montague*. Thomason, R. (Ed.) New Haven, CT: Yale University Press.
- Montero, C. S., Munezero, M., and Kakkonen, T. (2014). Investigating the role of emotion-based features in author gender classification of text. In Gelbukh, A. (Ed.) *Computational Linguistics and Intelligent Text Processing: 15th International Conference, CICLing 2014, Kathmandu, Nepal*. LNCS 8404. Berlin Heidelberg: Springer-Verlag, 98-114.
- Murakami, A., and Raymond, R. (2010). Support or oppose? Classifying positions in online debates from reply activities and opinion expressions. *Proceedings of the International Conference on Computational Linguistics, Beijing, China*, 869-875.
- Nalisnick, E. T., and Baird, H. S. (2013b). Extracting sentiment networks from Shakespeare's plays. *IEEE 12th International Conference on Document Analysis and Recognition (ICDAR)*, 758-762.
- Neviarouskaya, A., Prendinger, H., and Ishizuka, M. (2009). Compositionality principle in recognition of fine-grained emotions from text. *Proceedings of the 3rd International Conference on Weblogs and Social Media (ICWSM-09), San Jose, CA*, 278-281.
- Neviarouskaya, A., Prendinger, H., and Ishizuka, M. (2010). Recognition of affect, judgment, and appreciation in text. *Proceedings of the 23rd International Conference on Computational Linguistics, Beijing, China*, 806-814
- Orme, B. (2009). Maxdiff analysis: Simple counting, individual-level logit, and HB. Sawtooth Software, Inc.
- Ortony, A., Clore, G. L., and Collins, A. (1990). *The Cognitive Structure of Emotions*. Cambridge: Cambridge University Press.
- Osgood, C. E. (1969). On the whys and wherefores of E, P, and A. *Journal of Personality and Social Psychology*, 12 (3), 194-199.
- Osgood, C. E., Suci, G. J., and Tannenbaum, P. (1957). *The Measurement of Meaning*. Urbana, USA: University of Illinois Press.
- Pak, A., and Paroubek, P. (2010). Twitter as a corpus for sentiment analysis and opinion mining. *Proceedings of the 7th Conference on International Language Resources and Evaluation, Valletta, Malta*, 1320-1326.
- Pang, B., and Lee, L. (2008). Opinion mining and sentiment analysis. *Foundations and Trends in Information Retrieval*, 2(1-2), 1-135.
- Parrot, W. G. (Ed.) (2001). *Emotions in Social Psychology*. Philadelphia: Psychology

Press.

- Paul, M. J., and Dredze, M. (2011). You are what you tweet: Analyzing Twitter for public health. *Proceedings of the 5th International AAAI Conference on Weblogs and Social Media*, 265–272.
- Paul, W., Alm, C. O., Bailey, R., Geigel, J., and Wang, L. (2015). Stressed out: What speech tells us about stress. *Proceedings of Interspeech, Dresden, Germany*. Forthcoming.
- Pearl, L., and Steyvers, M. (2010). Identifying emotions, intentions, and attitudes in text using a game with a purpose. *Proceedings of the NAACL-HLT 2010 Workshop on Computational Approaches to Analysis and Generation of Emotion in Text, Los Angeles, CA*, 71-79.
- Pennebaker, J. W., Mehl, M. R., and Niederhoffer, K. G. (2003). Psychological aspects of natural language use: Our words, our selves. *Annual Review of Psychology*, 54(1), 547–577.
- Pestian, J. P., Matykiewicz, P., and Grupp-Phelan, J. (2008). Using natural language processing to classify suicide notes. *Proceedings of the Workshop on Current Trends in Biomedical Natural Language Processing, Columbus, OH*, 96-97.
- Picard, R. (1997). *Affective Computing*. Cambridge: MIT Press.
- Plutchik, R. (1962). *The Emotions*. New York: Random House.
- Plutchik, R. (1980). A general psychoevolutionary theory of emotion. *Emotion: Theory, Research, and Experience*, 1(3), 3–33.
- Plutchik, R. (2001). The nature of emotions: Human emotions have deep evolutionary roots, a fact that may explain their complexity and provide tools for clinical practice. *American Scientist*, 89(4), 344–350.
- Polanyi, L., and Zaenen, A. (2004). Contextual valence shifters. *Exploring Attitude and Affect in Text: Theories and Applications (AAAI Spring Symposium Series)*.
- Pontiki, M., Galanis, D., Pavlopoulos, J., Papageorgiou, H., Androutsopoulos, I., and Manandhar, S. (2014). SemEval-2014 Task 4: Aspect based sentiment analysis. *Proceedings of the 8th International Workshop on Semantic Evaluation (SemEval 2014) at the 25th International Conference on Computational Linguistics, Dublin, Ireland*, 27-35.
- Popescu, A.-M., and Etzioni, O. (2005). Extracting product features and opinions from reviews. *Proceedings of the Conference on Human Language Technology and Empirical Methods in Natural Language Processing, Vancouver, Canada*, 339–346.
- Poulin, C., Shiner, B., Thompson, P., Vepstas, L., Young-Xu, Y., Goertzel, B., Watts, B., Flashman, L., and McAllister, T. (2014). Predicting the risk of suicide by analyzing the text of clinical notes. *PLOS ONE* 9(1).e85733.
- Purver, M., and Battersby, S. (2012). Experimenting with distant supervision for emotion classification. *Proceedings of the 13th Conference of the European Chapter of the Association for Computational Linguistics, Avignon, France*, 482–491.
- Qadir, A. (2009). Detecting opinion sentences specific to product features in customer reviews using typed dependency relations. *Proceedings of the Workshop on Events in Emerging Text Types (eETTs '09), Borovets, Bulgaria*, 38–43.
- Quan, C., and Ren, F. (2009). Construction of a blog emotion corpus for Chinese emotional expression analysis. *Proceedings of the 2009 Conference on Empirical Methods in Natural Language Processing, Singapore*, 1446-1454.
- Quan, C., and Ren, F. (2014). Visualizing emotions from chinese blogs by textual emotion analysis and recognition techniques. *International Journal of Information*

- Technology and Decision Making*, 1–20.
- Ragin, A. B., and Oltmanns, T. F. (1983). Predictability as an index of impaired verbal communication in schizophrenic and affective disorders. *British Journal of Psychiatry*, 143(6), 578–583.
 - Reilly, J., and Seibert, L. (2003). Language and emotion. In Davidson, R. J., Scherer, K. R., and Goldsmith, H. H. (Eds.) *Handbook of Affective Sciences*. Oxford: Oxford University Press, 535–559.
 - Ren, F., and Quan, C. (2012). Linguistic-based emotion analysis and recognition for measuring consumer satisfaction: An application of affective computing. *Information Technology and Management*, 13(4), 321–332.
 - Reyes, A., Rosso, P., and Veale, T. (2013). A multidimensional approach for detecting irony in Twitter. *Language Resources and Evaluation*, 47(1), 239–268.
 - Riloff, E., and Wiebe, J. (2003). Learning extraction patterns for subjective expressions. *Proceedings of the 2003 Conference on Empirical Methods in Natural Language Processing, Sapporo, Japan*, 105–112.
 - Rosenthal, S., Nakov, P., Kiritchenko, S., Mohammad, S. M., Ritter, A., and Stoyanov, V. (2015). SemEval-2015 Task 10: Sentiment analysis in Twitter. *Proceedings of the 9th International Workshop on Semantic Evaluation (SemEval-2015) Denver, CO*, 451–463.
 - Rosenthal, S., Nakov, P., Ritter, A., and Stoyanov, V. (2014). SemEval-2014 Task 9: Sentiment Analysis in Twitter. *Proceedings of the 8th International Workshop on Semantic Evaluation (SemEval-2014) at the 25th International Conference on Computational Linguistics, Dublin, Ireland*, 73–80.
 - Rude, S., Gortner, E.-M., and Pennebaker, J. (2004). Language use of depressed and depression-vulnerable college students. *Cognition and Emotion*, 18(8), 1121–1133.
 - Russell, B. (1912). *The Problems of Philosophy*. Oxford: Oxford University Press.
 - Russell, J. A. (1980). A circumplex model of affect. *Journal of Personality and Social psychology*, 39(6), 1161.
 - Russell, J. A., and Fernández-Dols, J. M. (1998 [1997]). What does a facial expression mean? [selection]. In Jenkins, J. M., Oatley, K., and Stein, N. L. (Eds.) *Human Emotions: A Reader*. Oxford: Blackwell, 73–77.
 - Salameh, M., Mohammad, S. M., and Kiritchenko, S. (2015). Sentiment after translation: A case-study on Arabic social media posts. *Proceedings of the North American Chapter of Association of Computational Linguistics, Denver, CO*, 767–777.
 - Scherer, K. R. (2003). Vocal communication of emotion: A review of research paradigms. *Speech Communication*, 40(1-2), 227–256.
 - Scherer, K. R., Bänziger, T., and Roesch, E. B. (Eds.) (2010). *Blueprint for Affective Computing: A Sourcebook*. Oxford: Oxford University Press.
 - Schrading, N., Alm, C. O., Ptucha, R., and Homan, C. M. (2015). #WhyIStayed, #WhyILeft: Microblogging to make sense of domestic abuse. *Proceedings of Human Language Technologies: The Annual Conference of the North American Chapter of the Association for Computational Linguistics, Denver, CO, USA*, 1281–1286.
 - Schröder, M., Baggia, P., Burkhardt, F., Pelachaud, C., Peter, C., and Zovato, E. (2011). EmotionML - An upcoming standard for representing emotions and related states. *Proceedings of the 4th International Conference on Affective Computing and Intelligent Interaction, Memphis, TN*, 316–325.

- Schuller, B., and Batliner, A. (2014). *Computational Paralinguistics: Emotion, Affect and Personality in Speech and Language Processing*. Chichester: Wiley.
- Schwartz, H., Eichstaedt, J., Kern, M., Dziurzynski, L., Agrawal, M., Park, G., Lakshmikanth, S. K., Jha, S., Seligman, M. E. P., Ungar, L. H., and Lucas, R. E. (2013a). Characterizing geographic variation in well-being using tweets. *Proceedings of the 7th International AAAI Conference on Weblogs and Social Media, Ann Arbor, MI*, 583-591.
- Schwartz, H. A., Eichstaedt, J. C., Kern, M. L., Dziurzynski, L., Ramones, S. M., Agrawal, M., Shah, A., Kosinski, M., Stillwell, D., Seligman, M. E., and Ungar, L. H. (2013b). Personality, gender, and age in the language of social media: The open-vocabulary approach. *PloS One*, 8(9), 1-16.
- Schwartz, H. A., Eichstaedt, J. C., Kern, M. L., Park, G., Sap, M., Stillwell, D., Kosinski, M., and Ungar, L. H. (2014). Towards assessing changes in degree of depression through Facebook. *Proceedings of the Workshop on Computational Linguistics and Clinical Psychology: From Linguistic Signal to Clinical Reality at the 52nd Annual Meeting of the Association for Computational Linguistics, Baltimore, MD, USA*, 118-125.
- Socher, R., Perelygin, A., Wu, J. Y., Chuang, J., Manning, C. D., Ng, A. Y., and Potts, C. (2013). Recursive deep models for semantic compositionality over a sentiment treebank. *Proceedings of the Conference on Empirical Methods in Natural Language Processing, Seattle, WA*, 1631-1642.
- Somasundaran, S. and Wiebe, J. (2009). Recognizing stances in online debates. *Proceedings of the Joint conference of the 47th Annual Meeting of the Association for Computational Linguistics and the 4th International Joint Conference on Natural Language Processing of the Asian Federation of Natural Language Processing, Singapore*, 226-234.
- Sridhar, Dhanya, Getoor, Lise, and Walker, Marilyn. (2014). Collective stance classification of posts in online debate forums. *Proceedings of the Joint Workshop on Social Dynamics and Personal Attributes in Social Media, Baltimore, MD*, 109-117.
- Stone, P., Dunphy, D. C., Smith, M. S., Ogilvie, D. M. (1966). *The General Inquirer: A Computer Approach to Content Analysis*. Cambridge: MIT Press.
- Strapparava, C., and Mihalcea, R. (2007). SemEval-2007 Task 14: Affective text. *Proceedings of SemEval-2007, Prague, Czech Republic*, 70-74.
- Strapparava, C., and Mihalcea, R. (2010). Annotating and identifying emotions in text. In Armano, G., et al. (Eds.) *Intelligent Information Access, SCI 301*. Berlin Heidelberg: Springer-Verlag, 21-38.
- Strapparava, C., and Valitutti, A. (2004). WordNet-Affect: An affective extension of WordNet. *Proceedings of the 4th International Conference on Language Resources and Evaluation, Lisbon, Portugal*, 1083-1086.
- Su, F., and Markert, K. (2008). From words to senses: a case study of subjectivity recognition. *Proceedings of the 22nd International Conference on Computational Linguistics, Manchester, UK*, 825-832.
- Su, Q., Xiang, K., Wang, H., Sun, B., and Yu, S. (2006). Using pointwise mutual information to identify implicit features in customer reviews. *Proceedings of the 21st International Conference on Computer Processing of Oriental Languages, Singapore*, 22-30.
- Suero Montero, C., and Suhonen, J. (2014). Emotion analysis meets learning

- analytics: On-line learner profiling beyond numerical data. *Proceedings of the 14th Koli Calling International Conference on Computing Education Research*, 165–169.
- Sun, Y., Quan, C., Kang, X., Zhang, Z., and Ren, F. (2014). Customer emotion detection by emotion expression analysis on adverbs. *Information Technology and Management*, 1–9.
 - Suttles, J., and Ide, N. (2013). Distant supervision for emotion classification with discrete binary values. *Computational Linguistics and Intelligent Text Processing, Samos, Greece*. Berlin Heidelberg: Springer-Verlag, 121– 136.
 - Taboada, M., Brooke, J., Tofiloski, M., Voll, K., and Stede, M. (2011). Lexicon-based methods for sentiment analysis. *Computational Linguistics*, 37(2), 267–307.
 - Tang, D., Wei, F., Qin, B., Liu, T., and Zhou, M. (2014a). Coooolll: A deep learning system for twitter sentiment classification. *Proceedings of the 8th International Workshop on Semantic Evaluation (SemEval 2014), Dublin, Ireland*, 208–212.
 - Tang, D., Wei, F., Qin, B., Zhou, M., and Liu, T. (2014b). Building large-scale Twitter-specific sentiment lexicon: A representation learning approach. *Proceedings of the International Conference on Computational Linguistics, Dublin, Ireland*, 172–182.
 - Thelwall, M., Buckley, K., and Paltoglou, G. (2011). Sentiment in Twitter events. *Journal of the American Society for Information Science and Technology*, 62(2), 406–418.
 - Thomas, B., Dhanya, K. A., and Vinod, P. (2014). Synthesized feature space for multiclass emotion classification. *IEEE 1st International Conference on Networks and Soft Computing (ICNSC), Guntur*, 188–192.
 - Thomas, M., Pang, B., and Lee, L. (2006). Get out the vote: Determining support or opposition from congressional floor-debate transcripts. *Proceedings of the Conference on Empirical Methods in Natural Language Processing, Sydney, Australia*, 327–335.
 - Tumasjan, A., Sprenger, T. O., Sandner, P. G., and Welpe, I. M. (2010). Election forecasts with Twitter: How 140 characters reflect the political landscape. *Social Science Computer Review*, 29(4), 402–418.
 - Turney, P. D. (2002). Thumbs up or thumbs down? Semantic orientation applied to unsupervised classification of reviews. *Proceedings of the 40th Annual Meeting of the Association for Computational Linguistics, Philadelphia, PA*, 417–424.
 - Turney, P., and Littman, M. L. (2003). Measuring praise and criticism: Inference of semantic orientation from association. *ACM Transactions on Information Systems*, 21(4), 315–346.
 - Vaassen, F., and Daelemans, W. (2011). Automatic emotion classification for interpersonal communication. *Proceedings of the ACL Workshop on Computational Approaches to Subjectivity and Sentiment Analysis, Portland, OR*, 104–110.
 - Vaidyanathan, P., Prud'hommeaux, E., Alm, C. O., Pelz, J. B., and Haake, A. (2015). Alignment of eye movements and spoken language for semantic image understanding. *Proceedings of the 11th International Conference on Computational Semantics, London, UK*, 76–81.
 - Wang, C., and Wang, F. (2012). A bootstrapping method for extracting sentiment words using degree adverb patterns. *IEEE International Conference on Computer Science and Service System (CSSS)*, 2173–2176.

- Wang, L., Bailey, R., Geigel, J., Alm, C. O., Bethamcherla, V., Krithika, S., John, B., and Kilroy, T. (2014). Sensor fusion for cognitive load and stress monitoring and detection. *RIT-VA, Canandaigua, NY*. Poster.
- Wang, W., Chen, L., Thirunarayan, K., and Sheth, A. P. (2012). Harnessing Twitter "big data" for automatic emotion identification. *Proceedings of the 2012 ASE/IEEE International Conference on Social Computing and 2012 ASE/IEEE International Conference on Privacy, Security, Risk and Trust, Washington, DC*, 587–592.
- Wang, X., and Fu, G.-H. (2010). Chinese subjectivity detection using a sentiment density-based naive Bayesian classifier. *IEEE International Conference on Machine Learning and Cybernetics (ICMLC), Vol. 6*, 3299–3304.
- Wang, Z. (2014). Segment-based fine-grained emotion detection for chinese text. *Proceedings of the 3rd CIPS-SIGHAN Joint Conference on Chinese Language Processing, Wuhan, China*. 52–60.
- Walker, M. A., Anand, P., Abbott, R., and Grant, R. (2012). Stance classification using dialogic properties of persuasion. *Proceedings of the Conference of the North American Chapter of the Association for Computational Linguistics-Human Language Technologies, Montreal, Canada*, 592–596.
- Warriner, A. B., Kuperman, V., and Brysbaert, M. (2013). Norms of valence, arousal, and dominance for 13,915 English lemmas. *Behavior Research Methods*, 45(4), 1191–1207.
- Webster, G. and Weir, C. (2005). Emotional responses to music: Interactive effects of mode, texture, and tempo. *Motivation and Emotion*, 29(1), 19–39.
- Whissell, C. (2000). Phonoemotional profiling: A description of the emotional flavour of English texts on the basis of the phonemes employed in them. *Perceptual and Motor Skills*, 91(2), 617–648.
- Wiebe, J., and Riloff, E. (2005). Creating subjective and objective sentence classifiers from unannotated texts. *Proceedings of the 6th International Conference on Computational Linguistics and Intelligent Text Processing, Mexico City, Mexico*, 486–497.
- Wiebe, J., and Riloff, E. (2011). Finding mutual benefit between subjectivity analysis and information extraction. *IEEE Transactions on Affective Computing*, 2(4), 175–191.
- Wiebe, J., Wilson, T., Bruce, R., Bell, M., and Martin, M. (2004). Learning subjective language. *Computational Linguistics*, 30(3), 277–308.
- Wilson, T., Hoffmann, P., Somasundaran, S., Kessler, J., Wiebe, J., Choi, Y., Cardie, C., Riloff, E., and Patwardhan, S. (2005). Opinionfinder: A system for subjectivity analysis. *Proceedings of the Conference on Empirical Methods in Natural Language Processing, Interactive Demonstrations, Vancouver, Canada*, 34–35.
- Wilson, T., Kozareva, Z., Nakov, P., Rosenthal, S., Stoyanov, V., and Ritter, A. (2013). SemEval-2013 Task 2: Sentiment analysis in Twitter. *Proceedings of the 7th International Workshop on Semantic Evaluation (SemEval-2013), Atlanta, GA*, 312–320.
- Womack, K., McGowen, V., Alm, C. O., Pelz, J., Haake, A., and Shi, P. (2014). Analyzing multimodal behaviors of students with autism spectrum disorders. *Effective Access Technology Conference, Rochester, NY*. Poster.
- Zhang, L., Liu, B., Lim, S. H., and O'Brien-Strain, E. (2010). Extracting and ranking product features in opinion documents. *Proceedings of the 23rd International Conference on Computational Linguistics, Beijing, China*, 1462–1470.

(Mohammad and Alm, 2015)

- Zhu, X., Guo, H., Mohammad, S., and Kiritchenko, S. (2014). An empirical study on the effect of negation words on sentiment. *Proceedings of the 52nd Annual Meeting of the Association for Computational Linguistics, Baltimore, Maryland*, 304–313.
- Zhu, X., Sobhani, P., and Guo, H. (2015). Long short-term memory over recursive structures. *International Conference on Machine Learning, Lille, France*.