

VOICE AND EMOTION

Informal syllabus for the lecture by Maciej Karpiński, Institute of Applied Linguistics, AMU
(academic year 2019/20)

In this class we will explore how emotions are expressed, conveyed and perceived in language, especially in spoken utterances. The participant of the course will learn how to design empirical studies of emotions and how to measure emotional behaviour. A number of applications in speech technology and other areas will be discussed as well.

Grading system components

- active participation in classes
- a brief presentation on a selected topic (e.g. on the basis of a research paper)
- test (for those who fail to get a grade on the basis of the first two criteria)

Content

1. **Emotions in language.** Course content and organisation overview. Requirements and grading system. Contributions from participants.
2. **Affects, emotions, feelings, moods, attitudes...** How they arise and how they influence cognition (e.g. perception, critical thinking, decision making). Evolutionary origin of emotions. Individual development. Cultural impact. Emotions in animals.
3. **Theories of emotions.** From ancient to contemporary approaches. Embodied or embodied?
4. **Emotions in experimental studies.** Inducing, modifying, controlling, and measuring emotions.
5. **Expression of emotions in speech.** Facial and bodily expressions of emotions. Hearing a smile and a wry face. Physiology and resulting voice parameters. Singing as emotional speech.
6. Expert, naive and crowdsourcing **identification and annotation of emotions.**
7. **Measuring emotions.** Acoustic parameters. Pitch frequency, intensity, duration/timing, voice quality related parameters.
8. **Applications.** Emotional in speech synthesis and recognition. Emotion detection. Emotional agents. Affective computing. Speaker recognition. Forensic applications.

Reading *

- Argstatter, H. (2016). Perception of basic emotions in music: Culture-specific or multicultural?. *Psychology of Music*, 44(4), 674-690.
- Bachorowski, J. A. (1999). Vocal expression and perception of emotion. *Current directions in psychological science*, 8(2), 53-57.
- Cornelius, R. R. (2000). Theoretical approaches to emotion. In *ISCA Tutorial and Research Workshop (ITRW) on Speech and Emotion*.
- Ekman, P., & Keltner, D. (1997). Universal facial expressions of emotion. *Seegerstrale U, P. Molnar P, eds. Nonverbal communication: Where nature meets culture*, 27-46.
- Polzin, T. S., & Waibel, A. (1998, January). Detecting emotions in speech. In *Proceedings of the CMC* (Vol. 16).
- Sobin, C., & Alpert, M. (1999). Emotion in speech: The acoustic attributes of fear, anger, sadness, and joy. *Journal of psycholinguistic research*, 28(4), 347-365.
- Strongman, K. T. (1996). *The psychology of emotion: Theories of emotion in perspective*. New York: Wiley.
- Strongman, K. T., & Kemp, S. (1991). Autobiographical memory for emotion. *Bulletin of the Psychonomic Society*, 29(3), 195-198.
- Tahon, M., Lecorvé, G., & Lolive, D. (2018). Can we Generate Emotional Pronunciations for Expressive Speech Synthesis?. *IEEE Transactions on Affective Computing*.
- Williams, C. E., & Stevens, K. N. (1972). Emotions and speech: Some acoustical correlates. *The Journal of the Acoustical Society of America*, 52(4B), 1238-1250. [I know it's old – it's just to show some early instrumental research]

*) All the texts are freely available on the web. More texts may be suggested by the lecturer on demand.