# **“Hey Siri, let’s talk for real” – variability and flexibility in the perception of synthetic voices**

**Research Project Summary**Postdoctoral Researchers International Mobility Experience   
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Synthetic voices are invading our everyday life – via smart-home devices, navigation systems, or service hotlines. While these technological advances are undoubtedly exciting, little is known about our perception of and interaction with synthetic voices, and how this may shape our interaction in the future. A crucial feature in this context is the perceived naturalness of a voice, which is linked to perceived acceptability and trustworthiness of voices and therefore has a direct impact on communication quality. I want to understand how the impression of naturalness is formed for synthetic voices and how it is shaped through experience and exposure, i.e. due to daily contact with a smart-home-device. The present project comprises of three empirical studies which shed light on the variability and flexibility of synthetic voice perception from different angles: Study 1 will focus on long-term effects by exploring individual differences in experience with synthetic voices. Study 2 will test whether synthetic voice perception is amenable to short-term perceptual manipulation. Finally, Study 3 will combine both approaches in an intervention study, testing whether perception of synthetic voice features can be altered via three weeks of regular exposure to synthetic vs human voices (by listening to audiobooks). Together, they will provide unique and complementary insights into how rapid technological innovations such as synthetic voice implementation into everyday devices could shape our perceptual system, with potentially complex consequences for our interaction with machines, but also with other humans.

Keywords: voice perception, synthetic voices, naturalness, human-likeness

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