

## DAGA 2026

23 - 26 March 2026

**Place:**

Dresden, Germany

**Title:**

Towards AI-Supported Active Sound Design: Architecture, Assumptions and Evaluation for ASD Agents

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**Abstract:**

Previous work in active sound design (ASD) has enabled development processes to be carried out in the virtual space. Regarding the design process of synthetic sounds itself, there is potential for the use of "artificial intelligence" (AI) methods to accelerate the development process furthermore. However, it is unclear to what extent "AI agents" can be used in the field of ASD and analysis. This article summarizes the activities during this research. A framework was developed that allows the application and evaluation of these methods. It can create synthetic driving sounds generated by text input using a "large language model" (LLM) within the capabilities of the ASD synthesizer. The developed "ASD agent" forms the interface between the LLM and the synthesizer, which can control the technical synthesis parameters. Here, the user is not dependent on technical terminology or synthesizer details, as the LLM can interpret and implement semantic prompts. This opens the system to both experts and non-experts. The limitations and capabilities of the "ASD agent" will be evaluated in a listening test series. The aim is to investigate the extent to which the sound definitions generated by the "ASD agent" correspond to the test subjects' perceptual impressions.

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