

Hochschule für Musik

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## Introducing OSPW 2.0

Mit Thomas Resch und Clemens Fiechter (Vortrag, Live-Demonstration)

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**Freitag, 20. März 2020, 18 Uhr**

Musik-Akademie Basel, Studio Eckenstein (Haus1)

Eintritt frei

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**Thomas Resch:** *Virtual Acoustic Spaces – A cross platform C-library for (dynamic) binaural (room) synthesis, corresponding ready-to-use tools for Max/MSP, Pure Data and Unity and its usage in current research projects at the Hochschule für Musik FHNW*

**Clemens Fiechter:** *Introduction to OSPW - A Linux-based open software platform, designed for rapid prototyping and the development of digital signal processing (DSP) audio algorithms and corresponding user interfaces*

The Open Signal Processing Workstation (OSPW) 2.0 is an open source DSP platform – a programmable multi-effect processor based on Linux. Algorithms can be implemented with the software Pure Data, the corresponding user interfaces (UIs) are generated automatically as web interfaces. All connected UI web-clients are synchronized among each other. This enables the simultaneous operation of applications by multiple users.

OSPW 2.0 offers an enormously wide field of application for multimedia composition and performance: this applies in particular to artistic projects with a very large number of channels (e.g. multi-channel pieces for loudspeaker orchestras) and/or realtime interactivity (e.g. interactive sound installations for which individual user interfaces can be developed using OSPW 2.0).

In a first presentation the Virtual Acoustic Spaces (VAS) Library will be introduced. VAS is a C Library by Thomas Resch, which is used for two applications already developed for OSPW and also in other projects of the research department. This is followed by a presentation by Clemens Fiechter on implementation details, functionality and use of the OSPW with examples and demonstrations.

**Thomas Resch** has been working as a research assistant at the Hochschule für Musik FHNW in Basel since 2010. His research focuses on interactive audio and virtual acoustics. He worked at the FHNW in numerous projects with different objectives as a researcher and/or head of software development. In addition to his work as a research associate, he is working on his doctorate, which is being conducted in cooperation with the Audio Communication Department of the Technical University of Berlin. Thomas Resch is a lecturer and



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teaches "Real time audio programming in C" at the TU Berlin and "Game Audio" at the University of the Arts Zurich.

**Clemens Fiechter** has been working on the OSPW 2.0 project at the Hochschule für Musik FHNW in Basel since autumn 2018. He was already involved in a preliminary project and is now working on another project on virtual acoustics with a focus on human and machine communication. In addition, he is studying audio design in the master's degree program at the Electronic Studio of the Hochschule für Musik FHNW in Basel, where he has already carried out his own projects in the field of hardware and software development.