Romain Michon, Stanford University, Center for Computer Research in Music and Acoustics (CCRMA, https://ccrma.stanford.edu/)

New Tools for Mobile Development and Physical Modeling of Musical Instruments in the Faust Programming Language

During this lecture, we'll present recent developments done in the Faust programming language at Stanford University's Center for Computer Research in Music and Acoustics (CCRMA) to facilitate the development of musical mobile apps and physical models of musical instruments.

faust2api is a tool to generate custom DSP engines for a wide range of platforms and standards using Faust. Faust DSP objects can easily be turned into MIDI-controllable polyphonic synthesizers or audio effects with built-in sensors support, etc. The various elements of the DSP engine can be accessed through a high-level API, made uniform across platforms and languages.

faust2smartkeyb is a Faust tool to generate ready-to-use musical Android and iOS applications with a SmartKeyboard user interface (UI). The SmartKeyboard UI allows to implement a wide range of controllers (basic keyboards, isomorphic keyboards, pads, X/Y controllers, etc.) on a touch-screen and can be configured directly in the Faust code.

The Faust Physical Modeling ToolKit is a collection of tools to facilitate the design of physical models of musical instruments with the Faust programming language. Its two main components are the Faust Physical Modeling Library and mesh2faust: a tool to turn CAD files into modal physical models using finite element analysis.

Romain Michon is a Ph.D. candidate at Stanford's CCRMA (Center for Computer Research in Music and Acoustics). His research focuses on programming languages for digital signal processing and computer music, human computer interaction, physical modeling of musical instruments, mobile devices used as musical instruments, hybrid lutherie and musical instrument design. He is also a musician, and has been singing (tenor), playing saxophone and piano, composing and conducting ensembles for many years.

Zeit: Mittwoch, den 10.5., 18:15 – 19:45
Ort: Leibniz-Institut für Europäische Geschichte (IEG), Alte Universitätsstraße 19, 55116 Mainz

Der Vortrag findet im Rahmen der Ringvorlesung des Studiengangs „Digitale Methodik in den Geistes- und Kulturwissenschaften" statt.