



Now Hiring

Senior Research Engineer, Gesture Modeling for Virtual Musical Instruments

Job Description and Key Responsibilities

You will be responsible for developing parameter specifications to quantify performance behavior on acoustic musical instruments, beginning with the double bass and saxophone. You will use gesture acquisition systems (including low-cost motion capture, capacitive sensing, and accelerometers/gyroscopes) to develop and implement performance languages and gesture mapping techniques to control state-of-the-art physically-modeled virtual instruments in order to accurately re-create the performances of specific musicians.

Thrive in a fun, fast-paced, informal working environment? To this end, you should be highly self-directed, yet capable of forming close collaborative working relationships. Excellent oral and written communication skills are a must.

Required Qualifications

- Research experience in acquisition and articulatory modeling of performance gestures involved with playing acoustic musical instruments.
- Extensive experience (10+ years) performing at a high level on one or more acoustic musical instruments (especially strings and woodwinds).
- Experience with fabrication and use of gesture acquisition systems involving capacitive sensors, accelerometers/gyroscopes, motion capture, OSC, MIDI, UDP and other data streaming protocols; collection and synchronization of multiple heterogeneous data streams.
- Familiarity with statistical signal processing and exploratory data analysis tools.
- Ability to use C++, MATLAB, and MAX/MSP or equivalent to process multimodal sensor data.
- Research experience in musical acoustics, music cognition, and music performance behavior.
- Demonstrated outstanding ability to perform innovative and significant research in the form of technical papers, theses, or patents.
- Experience with various types of synthesis and physical modeling of musical instruments.

Education Requirements

- Ph.D. or D.M.A. in computer music or a related field, with strong background in physical interaction design and musical acoustics.

This is a full-time position, working in the Research Triangle Park area in North Carolina.

Excellent pay, stock options, full medical and dental benefits, IRA matching.

Interested? Contact us at: ZenphJobs@gmail.com