

# EMPAC



**FRI / MAY 13 / 8 PM**

# WITHIN

**TAREK ATOUI**

WITH:

Julia Alsarraf

Jad Atoui

Johannes Goebel

Rob Hamilton

Jeff Lubow

Leaf Miller

Matt O'Hare

Pauline Oliveros

Evan-Daniel Rose-González



Rensselaer



## **WITHIN** Tarek Atoui

Artist Tarek Atoui leads a performance throughout the EMPAC building featuring newly invented musical instruments created in Troy, NY and Berkeley, CA. Expanding our understanding of listening beyond the function of the ear, the three sonically complementary instruments will immerse the audience, encouraging the exploration of the full spectrum of sound from subsonic to high-end frequencies.

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*Supported by Meyer Sound*

*Presented in partnership with UC Berkeley Art Museum and Pacific Film Archive (BAMPFA)*

*With special thanks to Apsara DiQuinzio, Perrin Meyer, Pauline Oliveros, Greg Neimeyer, Jeff Lubow, and Council: Sandra Terdjman and Grégory Castéra*

This work-in-progress performance is part of Tarek Atoui's multi-year research and performance project to develop tools and techniques for performing sound for both deaf and hearing audiences. The audience will be encouraged to explore the acoustic relationships between individual instruments and the architecture that they inhabit.

Atoui presented the project's first public incarnation as a series of performances during the Sharjah Biennial in 2013 in collaboration with deaf students. *WITHIN* has since been developed through residencies, performances, and workshops in multiple institutions, including museums, festivals, and universities—Electronic Music Studio Stockholm, BAMPFA, UC Berkeley, Meyer Sound Laboratories, ZKM Karlsruhe, Bergen Assembly, Sharjah Art Foundation, and EMPAC at Rensselaer—as well as in dialogue with fields not directly concerned with instrument making, such as music therapy. This dense field of expertise has given context to the project, and has facilitated real situations (concerts, performances, or workshops) for deaf and hearing audiences to work with these new instruments.

Since 2013 Atoui has been collaborating with Council—Paris-based curators Sandra Terdjman and Grégory Castéra—to explore what hearing is, what hearing implies, and the extent to which we hear. This led to an exploration of instrumentation that can address both deaf and hearing persons. Through researching principals of sonic architecture in the development of instrument-building techniques, Atoui and his many collaborators have explored the sonic connections between acoustics, instrumentation, vibration, spatialization, and the body.

In fall 2015, Atoui worked in collaboration with Rensselaer's Distinguished Research Professor of Music Pauline Oliveros and her students from the "New Instrumentation for Performance" (NIP) seminar to think through propositions for new instruments and performance techniques. Following Oliveros' commitment to "deep listening" techniques, their combined pedagogical approach explores the difference between hearing and listening.

Concurrently, Atoui worked with curator Apsara DiQuinzio at UC Berkeley Art Museum and Pacific Film Archive, in partnership with Center for New Media at University of California, Berkeley, and Meyer Sound to develop the Zero Point Nine, an instrument that was premiered in a series of performances presented by BAMPFA in November 2015.

At EMPAC, the Zero Point Nine will be performed alongside The Sit-thesizer, a prototype square-wave synthesizer conceived by Rensselaer alumna Julia Alsarraf. The SubBassProtoTon, a walk-in organ pipe designed by EMPAC director Johannes Goebel, will join these two newly developed instruments.

The instruments from these two research and development phases in Troy and Berkeley will be presented together during Norway's 2016 Bergen Assembly, organized by Atoui as artistic director.



## INSTRUMENTS

**Zero Point Nine** is a networked group of three Meyer sub speakers encased by a platform on which the performer stands, with a gestural interface, not dissimilar to a Theremin. For the EMPAC performance, three Zero Point Nine's are installed in the 7th floor lobby and can be played as individual instruments or networked together as one.

"Tarek Atoui developed the Zero Point Nine, in collaboration with Greg Niemeyer and Perrin Meyer of Meyer Sound, Jeff Lubow from Berkeley's Center for New Music and Audio Technologies (CNMAT), and UC Berkeley sophomore Mitchell Karchemsky. The instrument is in essence a novel bass synthesizer that produces ultra-low-frequency electronic sounds that are physically felt, perhaps even before they are heard. Tones are generated through interference that occurs among the nine channels of speakers that emit sonic frequencies in the range of 30 to 160 Hz. The musician stands on a platform above the speakers and performs gestures that relate to conducting and sign language that in turn generate audible sensations. For the concert, performers will activate several connected subwoofer speakers to create a subsonic experience variously perceptible to deaf and hearing members of the audience."

— APSARA DIQUINZIO,  
CURATOR OF MODERN AND CONTEMPORARY ART  
AND PHYLLIS C. WATTIS MATRIX CURATOR, BAMPFA



WITHIN, TAREK ATOUI AT BERKELEY ART MUSEUM  
PHOTO BY PETER CAVAGNARO, BERKELEY ART MUSEUM AND PACIFIC FILM ARCHIVE (BAMPFA)

**The Sit-thesizer** is a single subwoofer on which the performer sits. The parameters of the sound are manipulated by interacting with conductive paint that is drawn on a paper interface attached to either side of the instrument. As a square-wave synthesizer, it is a simple module that plays with both how we feel sound through vibration and also hear high-end sounds. It can be connected to other modular synthesizers or to digital software to be further processed.

At EMPAC, the Sit-thesizer will be presented as a prototype instrument in development. It was conceived by Julia Alsarraf in collaboration with Tarek Atoui and Pauline Oliveros during the NIP seminar for which Julia was an auditor.





**SubBassProtoTon** is a walk-in cubical organ pipe that allows up to two visitors to be “inside” the very low sounds it produces. From inside the pipe, one can play with a range of frequencies at the bottom end of hearing, where one can only feel them with the whole body.

First constructed in Germany in 1987, the SubBassProtoTon has since been re-fabricated for exhibitions throughout Europe. In fall 2015, Tarek Atoui experienced the new version created at EMPAC and invited Johannes Goebel to reproduce the SubBassProtoTon at ZKM Karlsruhe, Germany as part of an exhibition of the instruments in development for *WITHIN*. For this performance, the ProtoTon will be played from the inside with the sounds amplified in order for the ProtoTon to be used as an “instrument” in complement with the Zero Point Nine, and the Sit-thesizer.

The SubBassProtoTon at EMPAC will be open to the public over the coming months.



## BIOGRAPHIES

**Tarek Atoui** was born in Lebanon in 1980 and moved to France in 1998 where he studied sound art and electroacoustic music. In 2006, he released his first solo album as part of the Mort Aux Vaches series for Staalplaat Records, and, in 2008, he served as artistic director of the STEIM Studios in Amsterdam, a center for the research and development of new electronic musical instruments. Atoui has presented his work internationally at the Sharjah Biennial in the United Arab Emirates (2009 and 2013), New Museum of Contemporary Art in New York (2010), Mediacity Biennial in Seoul (2010), Haus Der Kunst in Munich (2010), Performa 11 in New York (2011), dOCUMENTA 13 in Kassel, Germany (2012), the Serpentine Gallery in London (2012), and the 8th Berlin Biennial (2014).

**Julia Alsarraf** is a Troy-based artist. She graduated from Rensselaer in 2012.

**Jad Atoui** is a Lebanese music composer and electronic sound experimentalist. Using bio-sensors and field recordings, he composes and performs music in the styles of ambient, rhythmic, and glitch. The sonic feel in this body of work shifts from acoustic to purely electronic, harsh yet hypnotizing sounds. His work has been featured in Pompidou Center (2012, Paris). Atoui has performed with artists like John Zorn, Ikue Morie, and Erik Friedlander. Currently, he is investigating plants as musical instruments and incorporating bio sonification of behaviors as a compositional tool.

**Rob Hamilton** is a researcher and composer who explores the converging spaces between sound, music, and interaction. His creative practice includes mixed-reality performance works built within fully rendered, networked game environments, procedural music engines and mobile musical ecosystems. His research focuses on the cognitive implications of sonified musical gesture and motion and the role of perceived space in the creation and enjoyment of sound and music. Dr. Hamilton received his PhD from Stanford University's Center for Computer Research in Music and Acoustics (CCRMA) and has joined the Rensselaer community this year, serving as Assistant Professor of Music and Media in the Department of Arts.

**Jeffrey M. Lubow** is an interdisciplinary artist and researcher concerned with the space between body and technology. His influences are spread among a number of mentors and colleagues and collaborators, including David Wessel, Adrian Freed, Leslie Stuck, John Bischoff, Pauline Oliveros, and Patrick Clancy. Jeffrey studied conceptual art at KCAI, and electronic music practice at Mills College in Oakland, California. Since then, he has worked with various organizations, like Cycling '74 and Starkey Hearing laboratories. In 2008, Jeffrey commenced a research position at CNMAT (The Center for New Music and Audio Technologies) at UC Berkeley, focusing on instrument building, music technology, pedagogy, and software development.

**Leaf Miller** is a professional musician, teacher, and instrument builder, playing drums and percussion in the World Music Tradition for over 35 years. She is the musical director of Women Who Drum, a multi-media project dedicated to women's world drumming traditions. Leaf has been an occupational therapist since 1988. In her work with children with special needs, she strives to incorporate the healing benefits of drumming with her clinical training in human movement and development. She is currently collaborating with Pauline Oliveros and the Deep Listening Institute on the AUMI (Adaptive Use Musical Instrument) Project, with the goal of developing and providing alternative musical instruments for people with physical challenges. Leaf is also on the faculty of Potential Unlimited, a music, dance, and performing arts organization for artists with developmental disabilities.

**Matt O'Hare** is a digital artist and performer based in Troy, NY. Projects include self-help videos for people that are dating holograms, psychedelic artificial intelligences, and an online labyrinth for when you need to calm down a little. His most recent performance, *We The New Community*, blended science-fiction doomsday cults with virtual realities and Casio keyboard chant music. Matt has a Master's of Music Technology from NYU and is currently pursuing his PhD at RPI in the Electronic Arts program. [oharema.org](http://oharema.org)

**Pauline Oliveros** is a senior figure in contemporary American music. Her career spans 50 years of boundary-dissolving music making. In the '50s she was part of a circle of iconoclastic composers, artists, poets gathered together in San Francisco. Recently awarded the John Cage award for 2012 from the Foundation of Contemporary Arts, Oliveros is Distinguished Research Professor of Music at Rensselaer Polytechnic Institute, Troy, NY, and Darius Milhaud Artist-in-Residence at Mills College. Oliveros has been as interested in finding new sounds as in finding new uses for old ones—her primary instrument is the accordion, an unexpected visitor perhaps to the musical cutting edge, but one which she approaches in much the same way that a Zen musician might approach the Japanese shakuhachi. Oliveros is the founder of "Deep Listening," which comes from her childhood fascination with sounds and from her works in concert music with composition, improvisation, and electro-acoustics. Pauline Oliveros describes Deep Listening as a way of listening in every possible way to everything possible to hear no matter what you are doing. Oliveros is founder of Deep Listening Institute, formerly Pauline Oliveros Foundation, now Center For Deep Listening at Rensselaer.

**Evan-Daniel Rose-González** is a New York-based multi-instrumentalist composer, game composer, improviser, instrumentalist, and installation artist working under the name Opaque Body. The primary focus within his work is the idea of bridging gray areas within the world of sound and exploring them through experimental methodologies, techniques, and goals. Through studying Deep Listening practices and recontextualizing traditional Western music theory, he strives to create immersive environments by breaking sound down into its most basic form, vibration; examining new sound sources and sound generation methods; examining unique listening practices; examining the human relationship with, and the physicalization of, sound; examining the idea of familiarity; examining perception; and examining the sheer power sonic information carries.

## STAFF

Geoff Abbas / Director for Stage Technologies  
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Kimberly Gardner / Manager, Administrative Operations  
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Shannon Johnson / Design Director  
Carl Lewandowski / Production Technician  
Eric Chi-Yeh Lin / Lead Stage Technician  
Stephen McLaughlin / Senior Event Technician  
Josh Potter / Marketing and Communications Manager  
Alena Samoray / Event Technician  
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Kim Strosahl / Production Coordinator  
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