

# Eyal Shahr

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## Education

*Media Lab, MIT, Cambridge, MA, USA*  
S.M. in Media Arts and Sciences

Jun. '12

*Tel Aviv University, Tel Aviv, Israel*  
B.Sc. in Electrical Engineering

Dec. '03

## Work Experience – Technology

*Exploratorium | New Media Group, San Francisco, CA, USA*

**Senior New Media Exhibit Developer**

**New Exhibit Developer**

- Designing and interactive developed technology-driven experiences for an, open-ended, science learning environment

Aug. '18 - Present

Mar. '14 - Aug. '18

*Musikara, Oakland, CA, USA*

**Software/DSP Engineer**

- Designed music information retrieval algorithms, applying machine learning techniques and developing backend infrastructure for online music collaboration platforms

Jul. '13 - Jul. '14

*Le Laboratoire, Paris, France*

**Engineering Consultant**

- Conducted and assisted design and development of electronics, software, and interactions for exhibitions a startup company incorporating science, design and art

Sep. '12 - Mar. '13

*MIT | Media Lab | Opera of the Future Group, Cambridge, MA, USA*

**Research Assistant**

- music and technology related research, with focus on tangible music composition and tools for distributed music learning

Sep. '10 - Jun. '12

*JamRT, Tel Aviv, Israel*

**DSP Engineer**

- research, design and application of DSP algorithms in a start-up company developing "TubeHero", an online social music game

Aug. '09 - May '10

*Neocraft | Core Team, Ramat Gan, Israel*

**DSP Engineer**

- Conducted research, design and application of DSP algorithms in a start-up company developing products for the pro and semi-pro audio market

Jan. '07 - Dec. '08

## Work Experience – Leadership/Teaching

*University of San Francisco | Department of Art + Architecture, San Francisco, CA, USA*

### **Adjunct Professor**

- Teaching MUSE 608: Museums and Technology Practicum

**Jan. '20 - present**

*Aviv High School robotics class, Ra'anana, Israel*

### **Mentor**

- Taught design, construction and programming of robots in preparation for the international FIRST Robotics Competition

**Sep. '09 - Jun. '10**

*Hed College of Contemporary Music | Electronic Music Department, Tel Aviv, Israel*

### **Manager**

- Managed team of 4 teachers
- Developed academic programs and marketing initiatives and strategies
- Taught in the Electronic Music, Sound Engineering and Contemporary Music departments

**Dec. '02 - May '06**

## Work Experience – Music

*Self Employed, Tel Aviv, Israel*

### **Independent Music Professional**

- Performed as tour band member, playing keyboards, samplers and computers
- Provided sound design and music programming services for platinum-record-selling Israeli artists and T.V. commercials on national and international scale
- Produced and arranged music in lead recording studios
- Earned a total of 5 platinum and gold albums

**Oct. '98 - Aug. '10**

## Publications

*Project Reliability Engineering: Pro Skills for Next Level Maker Projects*, ISBN 978-1-4842-5018-1, Apress Media.

**Oct. '19**

Ma, J., **Shahar, E.**, Metha, G., Eliceiri, K., Yu, K. *Shedding Light: Integrating Bioimaging Technologies into the Design of an Interactive Museum Exhibit*, Proceedings of the Designing Interactive Systems Conference 2019, San Diego, CAus

**Jun. '19**

**Shahar, E.** *SoundStrand: Composing with a Tangible Interface* Proceedings of the 12th international conference on New interfaces for musical expression, Ann Arbor, MA

**May '12**

## Conference Posters

Raheja, G, Shusterman, A. A., Martin, S., **Shahar, E.**, Laughner, J. L., Turner, A. J., Miller, M. K., Cohen, R. C. *Imagining CO<sub>2</sub>: development and assessment of interactive visualizations for high resolution greenhouse gas observations collected by BEACO<sub>2</sub>N*. American Geophysical Union fall meeting, San Francisco, CA **Dec. '16**

Ma, J., **Shahar, E.**, Dai B., Metha, G., Eliceiri, K., Yu, K. *Seeing Scientifically: Scaffolding scientific observation in a museum setting*. American Society of Cell Biology annual meeting, San Francisco, CA **Dec. '16**

## Patents

Edwards, D. A., Field, R. D., Yin, A. M., **Shahar, E.** 2018. *Systems, methods and articles to provide olfactory sensations*. U.S. Patent 9,931,425, filed March 14, 2014, and issued April 3, 2018. **Apr. '18**

Edwards, D. A., Field, R. D., Yin, A. M., **Shahar, E.** 2018. *Systems, methods and articles to provide olfactory sensations* (Pending). U.S. Patent Application US16/208,174. Filed December 03, 2018. **Mar. '18**

## Talks

*Web Dashboards for Single-Board Computers*, Maker Faire Bay Area, San Mateo, CA **May '18**

Moderator and presenter, "*Smart Exhibits*" - *Using Technology to Create Dynamic Content and Enhance Visitor Engagement*, Association of Science - Technology Centers Annual Conference, San Jose, CA **Oct. '17**

Microsoft Israel: Think Next, Tel Aviv, Israel **Apr. '14**

Pecha Kucha, Tel Aviv, Israel **May '13**

*Music, Technology, and Ghostbusting*, The Interaction Lab, Holon Institute of Technology, Holon, Israel **Jul. '12**

## Exhibits and Installations

*Cells to Self*, Exploratorium, San Francisco, CA **Oct '19**  
***Is It Genetic?***  
*Collaborators: Kevin Boyd*  
A touchscreen kiosk discussing the range of human traits and how they are affected by genetic and environmental factors

*Cells to Self*, Exploratorium, San Francisco, CA **Oct '19**  
***What Are the Chances?***  
*Collaborators: Kevin Boyd, Paul Dancstep*  
A touchscreen kiosk demonstrating the affects of genetics, life choices, and chance on the risk of developing lung disease

*Cells to Self*, Exploratorium, San Francisco, CA

***Microscope Imaging Station***

**Jan '17**

*Collaborators: Kristina Yu, Joyce Ma*

A touchscreen and physical controls kiosk giving visitors control over a scientific grade microscope while using machine vision to provide the visitor with scaffolding and guidance.

*Cells to Self*, Exploratorium, San Francisco, CA

***Searching for the Sweet Spot***

**Jan '17**

Touchscreen demonstrating the principal of chemotaxis in E.Coli bacteria

*Cells to Self*, Exploratorium, San Francisco, CA

***Cell Mirror***

**Jan '17**

A conceptual piece that served as an attractor for the Cells to Self exhibition

*Wired Pier*, Exploratorium, San Francisco, CA

***Ship Chatter***

**Oct '16**

An exhibit demonstrating how navigation systems on ships communicate with one another

*Wired Pier*, Exploratorium, San Francisco, CA

***Sensing CO<sub>2</sub>***

**Feb '16**

*Collaborators: Sebastian Martin, Alexis Shusterman*

An interactive data visualization demonstrating levels of CO<sub>2</sub> in the San Francisco Bay area, projected on a raised-relief map

*Wired Pier*, Exploratorium, San Francisco, CA

***Changing Shorelines***

**Feb '16**

*Collaborators: Sebastian Martin, Lindsay Irving*

An interactive data visualization demonstrating changes in sea levels of CO<sub>2</sub> in the San Francisco Bay area over the past 20,000 years, projected on a raised-relief map

*Science of Sharing*, Exploratorium, San Francisco, CA

***Team Snake***

**Oct '14**

*Collaborators: Christian Cerrito*

A large-scale collaborative version of popular mobile game Snake

*Sleep No More*, New York, NY

***Extending Sleep No More***

**May '12**

*Collaborators: Peter Torpey, Ben Bloomberg, Elena Jessop, Jason Haas, Akito van Torny, Gershon Dublon, Brian Mayton,*

A set of digital portals connecting an immersive-theater audience member with an online spectator

*Figment*, Boston, MA

***Cicadence***

**Jun '11**

*Collaborators: Catherine Winfield*

A sound making sculpture created in a biomimetic process

*FAST – Festival of Art, Science, and Technology, MIT, Cambridge, MA*

***Chroma District***

*Collaborators: Akito van Troyer*

A set of illuminated, sound emitting lanterns

**May '11**

**Technical Skills**

- **Software:** C/C++, Java, Python, JavaScript, HTML/CSS, Assembly, Matlab
- **Frameworks:** Node, Django, JQuery, Express, Easel, Vue, Electron
- **Electronics:** electronic circuits, microcontrollers, Eagle
- **Fabrication:** SolidWorks, machining, CNC, laser cutting, 3D printing
- **Music Software:** Ableton Live, Reaktor, Cubase/Nuendo, Logic, Protools
- **Prototyping:** Arduino, Processing, Max/MSP

**Miscellaneous**

- American and Israeli citizenships
- Verbal and written English and Hebrew at native tongue level