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ALEXANDER Reben

education

Massachusetts Institute of Technology Cambridge, MA - May 2010
Master of Science in Media Arts & Sciences (The Media Laboratory).
MIT Art Scholar. Center for Future Storytelling Fellow.
GPA 5.0/5.0

SUNY Stony Brook Stony Brook, NY - May 2008
Bachelor of Science in Applied Math, Graduated Cum Laude.
Tau Beta Pi Engineering Honor Society Member.
Golden Key International Honour Society Member.
GPA 3.55/4.00

projects / experience

Massachusetts Institute of Technology Cambridge, MA - Sep 2008 - May 2010
Research Assistant

- > Worked on a system which took in situ high-speed biomechanical data measurements from players on the Red Sox baseball team during spring training.
- > Built a software framework, which visualized both dense sensor network data and social interactions using the SPINNER ubiquitous media and sensor platform.
- > Led a team of international and cross-disciplinary students at design charrette in Taiwan (MIT+SCU). Completed a project from inception to implementation.

Eyebeam Art and Technology Center Chelsea, NY - Dec 2007 - Aug 2008
Intern in R&D lab

- > Designed and prototyped robotic furniture using state of the art prototyping tools.
- > Worked closely with artists developing pieces for exhibition.

NASA Ames Research Center Moffett Field, CA - May 2007 - Aug 2007
Robotics Academy Team Lead

- > Lead of a team working with the GigaPan project.
- > Worked on firmware development, online Wiki and forum creation, testing, characterization and evaluation of system components and documentation.
- > Co-authored an internal NASA document outlining the LSSS (Lunar Student Science Solution). Researched and suggested payload apparatus.

Brookhaven National Laboratory Upton, NY - Jun 2004 - Aug 2004
DOE Laboratory Research Internship

- > Designed and built a custom computer controlled robotic system to change samples and calibration devices in the LEAF (Laser Electron Accelerator Facility).

exhibitions

2009

"Ubiquitous Sensor Network Navigator" ARS Electronica Festival. ARS Electronica, Linz Austria. A multi-user sensor network explorer that provided a haptic, aural and visual experience, allowing viewers to experience sensor data ported from other spaces.

"School of The Streets" Photography Exhibit. MIT Weisner Gallery, Cambridge MA. An exhibit with a focus on street photography.

"Debt Reducer" Pixilerations. RISD Sol Koffer gallery, Providence RI. Fabricated a robotic corset which would squeeze a mannequin based on the debt the viewer has. In this way, a financial squeeze was visualized as a literal squeeze in the piece.

2008

"James Chimpton" Whitney Biennial. The Whitney Museum of American Art, New York NY. Fabricated an animatronic anthropomorphic ape at Eyebeam Art and Technology Center to interview artists on radio. Part of Neighborhood Public Radio (NPR).

"Suspect Device" URECA Exhibition. SAC Gallery, Stony Brook NY. An unmarked box is presented to the viewer. Without knowledge of function the box presents infinite possibilities that boil down to one real conclusion if the button is pressed. The viewer may find that they become the viewed.

"A Break" LICA Long Island College Art Competition. SAC Gallery, Stony Brook NY. An image depicting two blue collar workers on a break, showing both a literal break and a break in social class from those around them.

publications

Reben, A., Laibowitz, M., Paradiso, J. (2009) **"Responsive Music Interfaces for Performance"**. NIME Conference on New Interfaces for Musical Expression.

Wainer, J., Reben, A., Sudano, M., Dang, S., OTHERS, Mark León, (2007) **"Guidelines for a Lunar Student Satellite Solution (LSSS)"**. NASA Internal.

Reben A., (2004) **"Laser Electron Facility Sample Changer"**. DOE Journal of Undergraduate Research.

teaching

- > Instructor for MIT class: PATD Promoting Art Through Design.
- > MIT Undergraduate Research Opportunities Program (UROP) advisor.
- > Mentor and volunteer for high school students through the F.I.R.S.T. Robotics Competition (6 years).
- > Mentor for the WISE (Women In Science and Engineering) program.
- > Taught a workshop "Creative Physical Computing" for artists.
- > TA for applied linear algebra and engineering science design.

interests & skills

Interaction Design, Robotics, Interactive Art / Kinetic Sculpture, Prototyping / Design, HCI, Photography, Video, Embedded Systems

C/C++, Java, Processing, Embedded C, Arduino, Circuit Design, Final Cut Pro, Adobe Photoshop / Illustrator / Premiere, Fabrication / Machining, Mecatronics