Xin Wen

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EDUCATION

Massachusetts Institute of Technology (MIT) GPA: 4.7/5.0 Sep 2015 - Present
Candidate for B. Sc. in Electrical Engineering & Computer Science, Minor in Design
Scholarship: MIT EECS — Texas Instruments Undergraduate Research and Innovation Scholar; Member of Tau Beta Pi

PUBLICATION & RESEARCH EXPERIENCE

Wen, X., Punpongsanon, P., Mueller, S.: Personalized Nutrition/Reducing Calorie Intake by Automating Insights from Food Perception Research via 3D Printing (Full paper, in preparation for ACM UIST 2018)
MIT CSAIL – HCI Engineering Group (HCIE). Advisor: Stefanie Mueller Sep 2017 – Present
This project explores a new concept of passive dieting – regulating a user's daily calorie intake without the user noticing it – by leveraging recent developments in both food 3D printing and food perception research.

Punpongsanon, P., **Wen, X.,** Kim, D., Mueller, S: ColorFab: Recoloring 3D Printed Objects using Photochromic Inks (Full Paper, submitted to ACM CHI 2018)
MIT CSAIL – HCI Engineering Group (HCIE). Advisor: Stefanie Mueller May – Sep 2017
ColorFab is a method for changing the color of a 3D-printed object even after fabrication. It works based on photochromic inks that can switch their appearance between transparent to colored when exposed to light of certain wavelengths. The process is fully reversible, allowing for dynamic product design.
I designed and implemented an user interface in Blender that allows user to convert any 3D model to be coated with photochromic material for 3D printing and to paint the digital model in order to update the physical model. I also contributed to the writing of the paper.

Brain Controlled Interface for the Motile Control of Spermatozoa
MIT Media Lab – Design Fiction Group. Advisors: Sputniko!, Ani Liu Feb – May 2017
This project is an expression of female empowerment by having a women control something inherently and symbolical male, spermatozoa, with the agency of her thoughts.
I engineered a system to control the movement of sperm by using openBCI, a brain-computer interface, to read the user's alpha brainwave to moderate an Arduino controlled circuit where the sperm is placed.

TEACHING AND MENTORING

MIT MakerLodge Mentor Feb 2016 - Present
Train freshmen on introductory maker tools, e.g. laser cutter, 3D printer, bandsaw, drill press, etc..

MIT Associate Advisor Sep 2017 - Present
Support freshmen living in my resident hall and facilitate the faculty advisor to ensure their smooth transition to MIT

MIT Department of Electrical Engineering and Computer Science Lab Assistant Sep 2017 - Present
Hold office hour for Fundamentals of Programming to answer questions on weekly labs and provide checkoffs to ensure students' thorough understanding of course material

MIT Global Teaching Lab Israel Jan 2017
Designed a curriculum teaching entrepreneurship and product design to Israeli high school students and taught at four high schools in central Israel; each class consisted of 25 to 40 students

STUDENT VOLUNTEERING

2017 ACM UIST Student Volunteering: conference support, e.g. paper session recording, Student Innovation Contest setup

SKILLS

Programming: Python; Java; MATLAB; Processing
Visualization and Machining: Blender, Rhinoceros, Fusion360, Illustrator, Photoshop, 3D Printing, Milling, Laser cutting