Stefanie Mueller - CV

Associate Professor, MIT EECS/MechE
MIT Computer Science and Artificial Intelligence Lab
32 Vassar Street, Cambridge, MA 02139 USA, Room 32-211
stefanie.mueller@mit.edu, http://people.csail.mit.edu/stefaniemueller

Employment

Massachusetts Institute of Technology, Cambridge, MA
Associate Professor, July 2021 -
Assistant Professor, Jan 2017 – June 2021
Electrical Engineering and Computer Science, Joint with Mechanical Engineering
Member of MIT CSAIL

Education

Hasso Plattner Institute, Germany, April 2011 – Dec 2016
Ph.D., Computer Science / Human Computer Interaction, summa cum laude
Thesis: Interacting with Personal Fabrication Machines
Advisor: Patrick Baudisch

Publications

[40] Mustafa Doga Dogan, Ahmad Taka, Michael Lu, Yunyi Zhu, Akshat Kumar, Aakar Gupta, Stefanie Mueller. "InfraredTags: Embedding Invisible AR Markers and Barcodes Using Low-Cost, Infrared-Based 3D Printing and Imaging Tools." In *Proceedings of ACM CHI 2022* (to appear).

[39] Faraz Faruqi, Kenneth Friedman, Leon Cheng, Michael Wessely, Sriram Subramanian, Stefanie Mueller. "SliceHub: Augmenting Shared 3D Model Repositories with Slicing Results for 3D Printing." arXiv:2109.14722, 2021.

[38] Jiani Zeng*, Honghao Deng*, Yunyi Zhu*, Michael Wessely, Axel Kilian, Stefanie Mueller. "Lenticular Objects: 3D Printed Objects with Lenticular Lens Surfaces that Can Change their Appearance Depending on the Viewpoint." In *Proceedings of ACM UIST 2021*, 1184–1196. [* equal contribution]

[37] Mustafa Doga Dogan, Varnika Sinha, Steven Vidal Acevedo Colon, Kaan Akşit, Stefanie Mueller. "SensiCut: Material-Aware Laser Cutting Using Speckle Sensing." In *Proceedings of ACM UIST 2021*, 24–38.

[36] Jun Gong, Olivia Seow, Cedric Honnet, Jack Forman, Stefanie Mueller. "MetaSense: Integrating Sensing Capabilities into Mechanical Metamaterial." In *Proceedings of ACM UIST 2021*, 1063–1073.

[35] Junyi Zhu, Jackson C. Snowden, Joshua Verdejo, Emily Chen, Paul Zhang, Hamid Ghaednia, Joseph H. Schwab, Stefanie Mueller. "EIT-kit: An Electrical Impedance Tomography Toolkit for Health and Motion Sensing." In *Proceedings of ACM UIST 2021*, 400–413.

[34]   Dishita Turakhia, Andrew Wong, Yini Qi, Lotta-Gili Blumberg, Yoonji Kim, Stefanie Mueller. "Adapt2Learn: A Toolkit for Configuring the Learning Algorithm for Adaptive Physical Tools for Motor-Skill Learning." In *Proceedings of ACM DIS* 2021, 1301–1312.

[33]   Dishita Turakhia, Harrison Mitchell Allen, Kayla DesPortes, Stefanie Mueller. "FabO: Integrating Fabrication with a Player's Gameplay in Existing Digital Games." In *Proceedings of ACM C&C* 2021, Art. No. 21, 1-10.

[32]   Ticha Sethapakdi, Daniel Anderson, Adrian Reginald Chua Sy, Stefanie Mueller. "Fabricaide: Fabrication-Aware Design for 2D Cutting Machines." In *Proceedings of ACM CHI 2021*, Art. No. 664, 1-12.

[31]   Martin Nisser, Christina Chen Liao, Yuchen Chai, Aradhana Adhikari, Steve Hodges, Stefanie Mueller. "LaserFactory: An Electromechanical Assembly and Fabrication Platform Integrated with a Laser Cutter to make Functional Devices and Robots." In *Proceedings of ACM CHI 2021*, Art. No. 663, 1-15.

[30]   Michael Wessely, Yuhua Jin, Cattalyya Nuengsigkapian, Aleksei Kashapov, Isabel P. S. Qamar, Dzmitry Tsetserukou, Stefanie Mueller. "ChromoUpdate: Locally Updating Photochromic Multi-Color Textures for Fast Design Iterations." In *Proceedings of ACM CHI 2021*, Art. No. 666, 1-13.

[29]   Dishita Turakhia, Yini Qi, Lotta-Gili Blumberg, Andrew Wong, Stefanie Mueller. "Can Physical Tools that Adapt their Shape based on a Learner's Performance Help in Motor Skill Training?" In *Proceedings of ACM TEI* 2021, Art. No 17, 1-12.

[28]   Junyi Zhu, Yunyi Zhu, Jiaming Cui, Leon Cheng, Jackson C Snowden, Mark Chounlakone, Michael Wessely, Stefanie Mueller. "MorphSensor: A 3D Electronic Design Tool for Reforming Sensor Modules." In *Proceedings of ACM UIST* 2020, 541-553.

[27]   Junyi Zhu, Lotta-Gili Blumberg, Yunyi Zhu, Martin Nisser, Ethan Levi Carlson, Xin Wen, Kevin Shum, Jessica Ayeley Quaye, Stefanie Mueller. "CurveBoards: Integrating Breadboards into Physical Objects to Prototype Function in the Context of Form." In *Proceedings of ACM CHI 2020*, 1-13.

[26]   Michael Wessely, Ticha Sethapakdi, Carlos Castillo, Jackson C Snowden, Ollie Hanton, Isabel Qamar, Mike Fraser, Anne Roudaut, Stefanie Mueller. "Sprayable User Interfaces: Prototyping Large-Scale Interactive Surfaces with Sensors and Displays." In *Proceedings of ACM CHI 2020*, 1-12.

[25]   Mustafa Doga Dogan, Faraz Faruqi, Andrew Day Churchill, Kenneth Friedman, Leon Cheng, Sriram Subramanian, Stefanie Mueller. "G-ID: Identifying 3D Prints Using Slicing Parameters." In *Proceedings of ACM CHI 2020*, 1-13.

[24]   Ying-Ju Lin, Parinya Punpongsanon, Xin Wen, Daisuke Iwai, Kosuke Sato, Marianna Obrist, Stefanie Mueller. "FoodFab: Creating Food Perception Tricks using Food 3D Printing." In *Proceedings of ACM CHI 2020*, 1-13.

[23]   Ollie Hanton, Michael Wessely, Stefanie Mueller, Mike Fraser, Anne Roudaut. "ProtoSpray: Combining 3D Printing and Spraying to Create Objects with Interactive Displays." In *Proceedings of ACM CHI 2020*, 1-13. **[BEST PAPER NOMINEE]**

[22]   Yasaman Tahouni, Isabel Qamar, Stefanie Mueller. "NURBSforms: A Modular Shape-Changing Interface for Prototyping Curved Surfaces." In *Proceedings of ACM TEI 2020, 403-409.*

[21]   Yuhua Jin, Isabel Qamar, Michael Wessely, Aradhana Adhikari, Katarina Bulovic, Parinya Punpongsanon, Stefanie Mueller. "Photo-Chromeleon: Re-Programmable Multi-Color Textures Using Photochromic Dyes." In *Proceedings of ACM UIST 2019,* 701-712. **[BEST PAPER]**

[20]   Junichi Yamaoka, Mustafa Doga Dogan, Katarina Bulovic, Kazuya Saito, Yoshihiro Kawahara, Yasuaki Kakehi, Stefanie Mueller. "FoldTronics: Creating 3D Objects with Integrated Electronics Using Foldable Honeycomb Structures." In *Proceedings of ACM CHI 2019*, Art. No. 628, 1-14.

[19]   Martin Nisser, Junyi Zhu, Tianye Chen, Katarina Bulovic, Parinya Punpongsanon, Stefanie Mueller. "Sequential Support: 3D Printing Dissolvable Support Material for Time-Dependent Mechanisms." In *Proceedings of ACM TEI 2019,* 669-676.

[18]   Stefanie Mueller, Anna Seufert, Huaishu Peng, Robert Kovacs, Kevin Reuss, Francois Guimbretiere, Patrick Baudisch. "FormFab: Continuous Interactive Fabrication." In *Proceedings of ACM TEI 2019,* 315-323.

[17]   Paul Worgan, Kevin Reuss, Stefanie Mueller. "Integrating Electronic Components into Deformable Objects Based on User Interaction Data." In *Proceedings of ACM TEI 2019,* 345-350.

[16]   Xiuming Zhang, Tianfan Xue, Tali Dekel, Andrew Owens, Jiajun Wu, Stefanie Mueller, William Freeman. "MoSculp: Interactive Visualization of Shape and Time." In *Proceedings of ACM UIST 2018*, 275-285.

[15]   Parinya Punpongsanon, Xin Wen, David Kim, and Stefanie Mueller. "ColorMod: Recoloring 3D Printed Objects using Photochromic Inks." In *Proceedings of ACM CHI 2018*, Paper No. 213.

[14]   Huaishu Peng, Cheng-Yao Wang, James Briggs, Kevin Guo, Joseph Kider, Stefanie Mueller, Patrick Baudisch, François Guimbretière. "RoMA: Interactive Fabrication with a Robotic Arm 3D Printer." In *Proceedings of ACM CHI 2018*, Paper No. 579.

[13]   Patrick Baudisch, Stefanie Mueller. "Personal Fabrication." *Foundations and Trends (F&T) in Human–Computer Interaction* 10, 3–4, 165-293 (ca. 130 pages), 2017.

[12]   Saiganesh Swaminathan, Thijs Roumen, Robert Kovacs, David Stangl, Stefanie Mueller, Patrick Baudisch. "Linespace: A Sensemaking Platform for the Blind." In *Proceedings of ACM CHI 2016,* 2175-2185.

[11]   David Eickhoff, Stefanie Mueller, and Patrick Baudisch. "Destructive Games: Creating Value by Destroying Valuable Physical Objects." In *Proceedings of ACM CHI 2016*, 3970-3974.

[10]   Alexander Teibrich, Stefanie Mueller, Robert Kovacs, Stefan Neubert, François Guimbretière, Patrick Baudisch. "Patching Physical Objects." In *Proceedings of ACM UIST 2015,* 83-91.

[9]   Udayan Umapathi, Hsiang-Ting Chen, Stefanie Mueller, Ludwig Wall, Anna Seufert, Patrick Baudisch. "LaserStacker: Fabricating 3D Objects by Laser Cutting and Welding." In *Proceedings of ACM UIST 2015,* 575-582.

[8]   Harshit Agrawal, Udayan Umapathi, Robert Kovacs, Johannes Frohnhofen, Hsiang-Ting Chen, Stefanie Mueller, Patrick Baudisch. "Protopiper: Physically Sketching Room-Sized Objects at Actual Scale." In *Proceedings of ACM UIST 2015,* 427-436.

[7]   Dustin Beyer, Serafima **Gurevich, Stefanie Mueller, Hsiang**-Ting Chen, Patrick Baudisch. "Platener: Low-Fidelity Fabrication of 3D Objects by Substituting 3D Print with Laser-Cut Plates." In *Proceedings of ACM CHI 2015,* 1799-1806.
        [BEST PAPER NOMINEE]

[6]   Stefanie Mueller, Martin Fritzsche, Jan Kossmann, Maximilian Schneider, Jonathan Striebel, Patrick Baudisch. "Scotty: Relocating Physical Objects Across Distances Using Destructive Scanning, Encryption, and 3D Printing." In *Proceedings of ACM TEI 2015*, 233-240.

[5]   Stefanie Mueller, Sangha Im, Serafima Gurevich, Alexander Teibrich, Lisa Pfisterer, François Guimbretière, Patrick Baudisch. "WirePrint: 3D printed previews for fast prototyping." In *Proceedings of ACM UIST 2014,* 273-280.

[4]   Stefanie Mueller, Tobias Mohr, Kerstin Guenther, Johannes Frohnhofen, Patrick Baudisch. "faBrickation: fast 3D printing of functional objects by integrating construction kit building blocks." In *Proceedings of ACM CHI 2014,* 3827-3834. **[BEST PAPER NOMINEE]**

[3]   Stefanie Mueller, Bastian Kruck, Patrick Baudisch. "LaserOrigami: laser-cutting 3D objects. "In *Proceedings of ACM CHI 2013,* 2585-2592. **[BEST PAPER]**

[2]   Stefanie Mueller, Pedro Lopes, Patrick Baudisch. "Interactive construction: interactive fabrication of functional mechanical devices." In *Proceedings of ACM UIST 2012,* 599-606.

[1]   Liwei Chan, Stefanie Mueller, Anne Roudaut, and Patrick Baudisch. CapStones and "ZebraWidgets: sensing stacks of building blocks, dials and sliders on capacitive touch screens." In *Proceedings of ACM CHI 2012,* 2189-2192.

Conference Service

General Chair & Conference Founder
ACM Symposium on Computational Fabrication General Co-Chair 2017 and Conference Founder

Paper Chair and Subcommittee Chair
ACM CHI Paper Chair 2023
ACM UIST Program Chair 2020
ACM CHI Subcommittee Chair 2020
ACM CHI Subcommittee Chair 2019

Program Committee Member
ACM SIGGRAPH technical papers committee 2019
ACM UIST program committee 2016, 2017, 2018
ACM CHI program committee 2015, 2016, 2017, 2018, 2022

Chairing Poster, SV, SIC
ACM UIST demo co-chair 2018/2019
ACM UIST doctoral symposium faculty panelist 2017, 2021
ACM UIST poster co-chair 2016/2017
ACM UIST student innovation contest co-chair 2015
ACM UIST student volunteer co-chair 2014

Steering Committee
ACM UIST Steering Committee
ACM Symposium on Computational Fabrication Steering Committee

Editor
Guest Editor, IEEE Special Issue 'Fabricating Pervasive Computing Systems', 2019.
Guest Editor, Computers and Graphics Journal, Special Issue on 'Computational Fabrication', 2018.
Guest Editor, ACM XRDS Crossroads 01/2016, Special Issue on Personal Fabrication, 2016.
Member of the Editorial Board IEEE Pervasive Magazine, Editor of 'Personal Fabrication' Column, 2017.

Chairing Workshops, Courses, Tutorials
General Co-Chair, ACM SIGCHI Summer School on 'Computational Fabrication and Smart Matter', 2017
Workshop Chair, ACM CHI Workshop 'CrossFab: Bridging the Gap between Personal Fabrication
Research in HCI, Computer Graphics, Robotics, Design, Art, Architecture, and Material Science', 2016.
Course Chair, ACM CHI Course 'Personal Fabrication: State of the Art & Future Research', 2016.
Tutorial Chair, ACM ITS Tutorial 'Hot Topics in Personal Fabrication Research', 2014.

Reviewer
ACM UIST (2012 – 2018, 2021), ACM CHI (2012 - 2018), ACM SIGGRAPH (2013, 2015), ACM
SIGGRAPH Asia (2016), ACM TEI (2013 - 2015), GI (2016), ACM ITS/ISS (2015, 2016), ACM DIS
(2014), ACM C&C (2015), ACM MobileHCI (2011), WorldHaptics 2017, ACADIA (2017)

Awards and Honors

MIT Technology Review 'Innovators Under 35' 2022

Alfred P. Sloan Fellowship 2020

Microsoft Research Faculty Fellowship Finalist 2020

ACM UIST Best Paper Award 2019

ACM UIST Best Talk Award 2019

NSF CAREER Award 2019

MIT Teaching with Digital Technology Award Nominee 2019

MIT EECS Outstanding Educator Award 2018

ACM Doctoral Dissertation Award Honorable Mention 2018

ACM SIGCHI Best Dissertation Award 2018

Forbes 30 under 30 in Science 2017

GI Dissertation-Award for best Computer Science Thesis in Germany, Austria, and Swiss 2017

ACM Conference Founder: Symposium on Computational Fabrication 2017

ACM CHI Best Paper Nominee 2015

ACM CHI Best Paper Nominee 2014

ACM CHI Best Paper Award 2013

Selected Invited Talks

2021
[57]   **University of Calgary,** invited by Lora Oehlberg and Ryo Suzuki
[56]   **University College London,** invited by Sriram Subramanian

2020
[55]   **University of Indonesia**
[54]   **Bandung Institute of Technology**

2019
[53]   **LMU Munich,** invited by Albrecht Schmidt
[52]   **Google Research Talk,** invited by Michael Terry

2018
[51]   **Stanford David H. Liu Memorial Lecture Series in Design,** invited by Erin MacDonald
[50]   **Hewlett Packard Invited Talk,** invited by Tico Ballagas
[49]   **MIT-Portugal Symposium, University of Minho, Keynote Speaker**

2017
[48]   **RSS 2017 Women in Robotics III Workshop,** invited by Maya Cakmak
[47]   **FUSE conference, Panel: Leveraging Material Behavior in Design,** with Skylar Tibbits
[46]   **Northwestern University,** invited by Jake Pollock
[45]   **GI Dissertation Award Committee**
[45]   **Keynote Speaker at MIT's LevelUp: Career Pathways in STEM 2017**
[44]   **Keynote Speaker at MIT's RoboCon 2017**

2016
[43]   **Max Planck Institute for Informatics,** hosted by Juergen Steimle
[42]   **FabCon 3.D.,** hosted by Florian Horsch
[41]   **Technion (Israel Institute of Technology)**
[40]   **Cornell Tech,** hosted by Shiri Azenkot
[39]   **Cornell University,** hosted by François Guimbretière
[38]   **Columbia University,** hosted by Steven K. Feiner
[37]   **Princeton University,** hosted by Szymon Rusinkiewicz
[36]   **Carnegie Mellon University,** hosted by Chris Atkeson
[35]   **University of Michigan Ann Arbor,** hosted by Mark Ackerman
[34]   **Brown University,** hosted by Jeff Huang
[33]   **University of Illinois Urbana Champaign,** hosted by Karrie Karahalios
[32]   **University of Toronto,** hosted by Daniel Wigdor
[31]   **Harvard University**, hosted by Krzysztof Gajos
[30]   **University of California San Diego,** hosted by Scott Klemmer
[29]   **University of British Columbia,** hosted by Karon McLean
[28]   **University of Washington,** hosted by James Fogarty
[27]   **MIT EECS,** hosted by Srini Devadas
[26]   **MIT Mechanical Engineering,** hosted by David Wallace

[25]   **Yale University,** hosted by Holly Rushmeier
[24]   **Stanford University,** hosted by James Landay
[23]   **UC Berkeley,** hosted by Bjoern Hartmann
[22]   **Max Planck Research Group Symposium**
[21]   **Adobe Research, CTL,** hosted by Mira Dontcheva

2015
[20]   **Royal College of Art,** hosted by Kevin Walker
[19]   **University of California San Diego**, hosted by Scott Klemmer
[18]   **FXPAL**, hosted by Daniel Avrahami
[17]   **MIT CSAIL,** hosted by Wojciech Matusik
[16]   **MIT Media Lab,** hosted by Hiroshi Ishii
[15]   **Cornell Tech,** hosted by Shiri Azenkot
[14]   **Carnegie Mellon University,** hosted by Scott Hudson
[13]   **Newcastle University,** hosted by Patrick Olivier
[12]   **University of Bristol,** hosted by Mike Fraser
[11]   **Institute of Science and Technology Austria (IST),** hosted by Bernd Bickel
[10]   **The Hebrew University of Jerusalem,** hosted by Amit Zoran
[9]   **Adobe Research San Francisco,** hosted by David Salesin

2013/2014
[8]   **University of Tokyo,** hosted by Jun Rekimoto
[7]   **Rakuten Institute of Technology,** hosted by Adiyan Mujibiya
[6]   **École Polytechnique Fédérale de Lausanne (EPFL),** hosted by Mark Pauly
[5]   **Disney Research Zürich / ETH Zürich,** hosted by Stelian Coros
[4]   **University of Washington,** dub lunch talk
[3]   **Microsoft Research Redmond,** Natural Interaction Group
[2]   **University of Applied Sciences Upper Austria,** hosted by Michael Haller
[1]   **Microsoft Research Cambridge**

Selected Diversity & Outreach

Rising Stars in EECS – Academic Workshop for Underrepresented Genders, MIT, Co-Chair	2021
Grace Hopper Celebration, CRA-W 'Finding your Dream Job with a PhD' panel	2019
Rising Stars in EECS – Academic Career Workshop for Women, MIT, Co-Chair	2018
Beaver Works Summer Institute (BWSI) Course: Additive Manufacturing, High School Seniors	2018
MIT Society of Women Engineers, Meet the Professors Dinner	2018
SheHacks Boston, Invited Project Judge	2018
Erin M.A. Aylward Community Dinner, Graduate Women in EECS, GW6	2017
MIT New Graduate Women in EECS Seminar Series, Faculty Participant	2017
MIT Society of Women Engineers, Meet the Professors Dinner	2017
MIT CONVERGE, Preview Weekend for Underrepresented Minorities, Faculty Contact	2017
Rising Stars in EECS, Stanford, Panelist: Junior Women Faculty	2017
MIT Equity and Community Dinner, Faculty Participant	2017

ACM CHI Conference, Diversity Lunch Table Leader		2017
LevelUp - Career Pathways in STEM, MIT Society of Women Engineers, Keynote Speaker		2017
RSS – Women in Robotics Workshop, Invited Talk		2017
The Tech, MIT Newspaper, Immigrant Members of the MIT community, Interview		2017
ACM CHI Conference, Diversity Lunch Table Leader		2016

Funding

$360,000	MIT GIST Seed Fund	2021
$75,000	MIT Research Support Committee	2021
$250,000	MIT Accenture Seedfunds	2021
$45,000	MIT Portugal Seedfund	2021
$75,000	Sloan Fellowship	2020
$200,000	Microsoft Research Faculty Fellowship	2020
$20,000	MIT Indonesia Seed Fund	2020
$125,000	NSF Medium Discovery and Exploration of Design Trade-Offs	2020
$60,000	MIT MechE Seedfund	2020
$200,000	MIT-Skoltech Seedfund	2020
$90,000	MIT Portugal Seedfund	2020
$350,000	NSF Small: Learning Maker Skills By Building Game Props	2020
$60,000	AFFOA (Advanced Functional Fabrics of America)	2020
$150,000	MIT.nano Sense	2019
$300,000	MIT Ford Initiative	2019
$75,000	MIT International Design Center	2019
$90,000	MIT Portugal Program Seed Fund	2019
$525,000	NSF CAREER: Adaptive Physical Interfaces	2019
$47,000	MIT International Design Center	2018
$200,000	MIT Learning Initiative	2018
$75,000	MIT Research Support Committee	2018
$75,000	MIT Skoltech Seedfund	2018
$125,000	MIT-Portugal Program Seed Fund	2018
$452,000	NSF CHS: Small: An Integrated Editing Environment for 3D Printing	2017
$75,000	MIT Skoltech Seedfund	2017
$100,000	NSF Eager: Cybermanufacturing (together with Emmanuel Sachs)	2017

= ca. $4.16 million

Reviewing: NSF Panel Reviewer 2019, 2021

Selected Press

Adafruit. A Smart Laser Cutter That Automatically Identifies What it's Cutting.		2021

Yahoo! News. MIT's toolkit lets anyone design their own muscle-sensing wearables.	2021
VentureBeat. MIT CSAIL taps AI to reduce sheet metal waste.	2021
BBC News. Star Trek inspired device sees drones fly off factory line.	2021
Engadget. MIT researchers created a system that prints functional drones and robots.	2021
SciTechDaily. MIT's "Programmable Matter" Technique: A Zap of Light Switches Colors.	2021
3D Printing Industry. MIT researchers develop novel design software for embedded electronics.	2020
Science Daily. Integrating electronics onto physical prototypes.	2020
Digital Trends. This spray paint lets you turn on your lights with a touch.	2020
Gizmodo. 3D Printing Foods With Complex Designs Can Trick Diners Into Eating Less.	2020
FastCompany. MIT's new color-changing ink lets you customize your stuff.	2019
BusinessInsider. Scientists have invented an unbelievable 'reprogrammable' ink.	2019
ExtremeTech. MIT Creates Light-Sensitive 'Reprogrammable' Ink.	2019
SlashGear. MIT creates reprogrammable ink that changes colors using light	2019
MIT News. Creating 3-D-printed "motion sculptures" from 2-D videos.	2018
3DPrint. MIT CSAIL Creates 3D Printable Sculptures of the Body in Motion.	2018
CNN. MIT develops ink that changes the color of 3D printed objects.	2018
MIT News. Changing the color of 3-D printed objects.	2018
New Scientist. 3D-printed display lets blind people explore images by touch.	2016
Creative Applications. New software Platener speeds up prototyping process.	2015
Wired Design. Cool 3-D Printing Software Just Makes the Skeletons of Your Stuff	2014
Gizmodo. 3D Printing Just Wireframe Models Can Vastly Speed Up Prototyping.	2014
MAKE Magazine. faBrickation: 3D Printing + Lego for Fast Prototyping.	2014
The Atlantic. 3D Printing and Legos: Perfect Together.	2014
BBC. LaserOrigami: How lasers are quicker on the draw than 3D printing.	2013
New Scientist. Freehand laser cutter creates instant flat-pack design.	2012

Teaching

For my contributions to teaching at MIT, I was awarded the MIT EECS Outstanding Educator Award 2018.

6.810	**Engineering Interactive Technologies**	**fall 2017/2018/2020/2021**
	main instructor & course developer	
	ca. 50 students (undergrad)	

Teaches how to build cutting edge interactive technologies and provides an overview of each field. Topics covered include multitouch, augmented reality, haptics, wearables, brain computer interfaces, tangibles, fabrication, and more.

6.08	**Interconnected Embedded Systems**	**spring 2018-2022**
	co-instructor with Joe Steinmeyer	
	ca. 200-300 students (undergrad)	

This course strives to expose its students to a breadth of EECS concepts by working

within an infrastructure of mobile embedded systems, and engineering across different platforms.

6.813 / 6.138 **User Interface Design and Implementation**   spring 2017
co-instructor with Robert C. Miller
ca. 300 students (undergrad, master, PhD)

Covers design principles, prototyping techniques, evaluation techniques, and the implementation of graphical user interfaces. Deliverables include short programming assignments and a semester-long group project.

Advising

Postdocs

[9] Mackenzie Leake — 2021
[8] Yoonji Kim — 2020
[7] Michael Wessely — 2019
[6] Isabel Qamar — 2018
[5] Yuhua Jin — 2018
[4] Junichi Yamaoka — 2018
[3] Paul Worgan — 2017
[2] Antonio Gomes — 2017
[1] Parinya Punpongsanon — 2017

PhD Students

[9] Cedric Honnet — 2022
[8] Marwa AlAlawi — 2021
[7] Yunyi Zhu — 2021
[6] Faraz Faruqi — 2020
[5] Ticha Sethapakdi — 2019
[4] Mustafa Doga Dogan — 2018
[3] Dishita Turakhia — 2018
[2] Junyi Zhu — 2017
[1] Martin Nisser — 2017

Undergraduate Researcher

[67] Aashini Shah — 2022
[66] Kathryn Jin — 2022
[65] Andrew Kyoungwan Woo — 2022
[64] Richard Qi — 2022
[63] Lucian Covarrubias — 2022
[62] Jack O'Leary — 2022
[61] Neha Pant — 2022
[60] Shua Cho — 2022
[59] Luca Musk — 2022

Visiting Students

[11] Paulo Nascimiento — 2022
[10] Oleg Sautenkov — 2022
[9] Yoonji Kim — 2020
[8] Paolo Boni — 2020
[7] Walther Jensen — 2020
[6] Alexey Kashapov — 2019
[5] YuChen Chai — 2019
[4] Christian deWeck — 2018
[3] Kevin Reuss — 2017
[2] Mustafa Doga Dogan — 2017
[1] Jiamin He — 2017

Master Thesis Students

[16] Yuxuan Lei — 2021
[15] Veerapatr Yotamornsunthorn — 2021
[14] Amadou Bah — 2021
[13] Mihir Trivedi — 2021
[12] Leon Chen — 2020
[11] Joshua Verdejo — 2020
[10] Sabina Chen — 2020
[9] Yunyi Zhu — 2020
[8] Adrian Sy — 2019
[7] Christina Liao — 2019
[6] Cattalyya Nuengsigkapian — 2019
[5] Aradhana Adhikari — 2019
[4] Carolyn Lu — 2018
[3] Lotta Blumberg — 2018
[2] Kenneth Friedman — 2017
[1] Yini Kelly Qi — 2017

[58] Ahmed Katary	2022		[28] Kevin Tang	2020	
[57] Raiphy Jerez	2022		[27] Steven Acevedo	2020	
[56] Benjamin Owen-Block	2022		[26] Varnika Sinha	2020	
[55] Lleyton Elliott	2022		[25] Dimitri Tskhovrebadze	2020	
[54] Andrew Doan	2022		[24] Gila R Schein	2020	
[53] Wilhelm Schoeman	2022		[23] Gianna Torpey	2020	
[52] Shanti Mickens	2022		[22] Grace Tang	2020	
[51] Emily Chen	2021		[21] Daniela Zaidenberg	2020	
[50] Wenhao Wang	2021		[20] Suparmaaya Prasad	2019	
[49] Ishita Bhimavarapu	2021		[19] Mojolaoluwa Oke	2019	
[48] Ahmad Taka	2021		[18] Bobby Rauch	2019	
[47] Thomas Adebiyi	2021		[17] Linnea Rylander	2019	
[46] Tiffany Chen	2021		[16] Jiaming Cui	2019	
[45] Michael Lu	2021		[15] Kevin Shum	2019	
[44] Kristen Palmer	2021		[14] Jackson Snowden	2019	
[43] Yashaswini Makaram	2021		[13] Carlos Castillo Lozada	2019	
[42] Zipei Tan	2021		[12] Harrison Allen	2019	
[41] Ivy Wang	2021		[11] Andrew Churchill	2018	
[40] Brian Huang	2021		[10] Andrew Wong	2018	
[39] Sohini Kar	2021		[9] Cowboy Lynk	2018	
[38] Brent Liu	2021		[8] Toru Lin	2018	
[37] Daniel Wang	2021		[7] Katarina Bulovic	2018	
[36] Alicia Guo	2021		[6] Lotta Blumberg	2017	
[35] Laura Huang	2021		[5] Loren Maggiore	2017	
[34] Leon Cheng	2020		[4] Tianye Chen	2017	
[33] Harrison Allen	2020		[3] Xin Wen	2017	
[32] Julia Wang	2020		[2] Megan Chao	2017	
[31] Jenny Chan	2020		[1] Carolyn Lu	2017	
[30] Marvin Zetina-Jimenez	2020				
[29] Aiden Padilla	2020				

Previously at Hasso Plattner Institute (2011 – 2016)

Master thesis (6 month fulltime)

[8]	Anna Seufert	2016
[7]	Saiganesh Swaminathan (Paper at CHI'16)	2015
[6]	Alexander Teibrich (Paper at UIST'15)	2015
[5]	Dustin Beyer (Paper at CHI'15, Best Paper Nominee)	2014
[4]	Bernhard Rabe	2014
[3]	Tobias Mohr (Paper at CHI'14, Best Paper Nominee)	2014
[2]	David Eickhoff (Note at CHI'16)	2013
[1]	Konstantin Kaefer	2013

Bachelor thesis / project (12 month fulltime in student team)

[10]	Sven Mischkewitz	2016	[5]	Arthur Silber	2015
[9]	Lukas Wagner	2016	[4]	Stefan Neubert	2015

[8]	Klara Seitz	2016	[3]	Adrian Sieber	2015
[7]	Amadeus Glöckner	2016	[2]	Yannis Kommana	2015
[6]	Dimiti Schmid	2016	[1]	Johannes Deselaers	2015

Research project students (semester course, approximately 1 day per week)

[25]	Carl Goedecken	2016	[10]	Lisa Pfisterer	2013
[24]	Kevin Reuss	2016	[9]	Maximilian Schneider	2013
[23]	Tobias Wollowski	2016	[8]	Martin Fritzsche	2013
[22]	Anna Seufert	2014, 2015	[7]	Jan Kossmann	2013
[21]	Kai-Adrian Rollmann	2014, 2015	[6]	Konstantin Kaefer	2012
[20]	Sijing You	2015	[5]	Bastian Kruck	2012
[19]	Steffen Kötte	2015	[4]	David Eickhoff	2012
[18]	Maximilian Brehm	2015	[3]	Nils Kenneweg	2012
[17]	Markus Dücker	2015	[2]	Johannes Villmow	2012
[16]	Alexander Franke	2014	[1]	Fabian Eckert	2012
[15]	Elina Zarisheva	2014			
[14]	Pascal Crenzin	2014			
[13]	Jonathan Striebel	2013			
[12]	Kerstin Guenther	2013			
[11]	Alexander Teibrich	2013			