Marwa AlAlawi - CV

Ph.D. Candidate
MIT Mechanical Engineering Department
MIT Computer Science and Artificial Intelligence Lab
32 Vassar Street, Cambridge, MA 02139 USA, Room 32-211
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Education

Massachusetts Institute of Technology, Cambridge, MA 2023- Present
Ph.D. in Mechanical Engineering
MIT Mechanical Engineering Department
MIT Computer Science and Artificial Intelligence Lab
Advisor: Professor Stefanie Mueller

Massachusetts Institute of Technology, Cambridge, MA 2021- 2023
M.Sc. in Mechanical Engineering
MIT Mechanical Engineering Department
MIT Computer Science and Artificial Intelligence Lab
Advisor: Professor Stefanie Mueller

Massachusetts Institute of Technology, Cambridge, MA 2016 - 2020
B.Sc. in Mechanical Engineering & Concentration in Japanese Studies
MIT Mechanical Engineering Department
Additional Coursework in EECS and Japanese Studies
Advisor: Dr. Brian Anthony

Languages

Arabic (Native Fluent)
English (Bilingual Fluent)
Japanese (Advanced, JLPT N2 Certification)
Korean (Elementary, 1+ year, Ongoing)
Chinese (Elementary, 1+ year, Ongoing)

Publications

[9] **M. AlAlawi,** Regina Zheng, Sooyeon Ahn, Katherine Yan, Ticha Sethapakdi, Junyi Zhu*, Stefanie Mueller*. “Meta-antenna: Mechanically Frequency Reconfigurable Metamaterial Antennas,” In Proceedings of UIST 2025. **(To be Presented in Busan, South Korea)**

[8] **M. AlAlawi,** Kexin Wang, Regina Zheng, Adelene Chan, Martin Feick, Stefanie Mueller. “Ori-TENG: 3D Printed Origami Tessellations as Triboelectric Nanogenerators for Self-powered Sensing and Energy Harvesting” In Proceedings of UIST Extended Abstract 2025. **(To be Presented in Busan, South Korea)**

[7] **M. AlAlawi** . “Research, Reflections and Rants: A Comic Book About MIT Graduate Student Experiences” **(Published by MIT MindHandHeart and Office of the Chancellor, 2025)**

[6] **M. AlAlawi.** “Hybrid Functional Identities for Mechanical Elements”. In Proceedings of CHI 2025. **(Presented in Yokohama, Japan)**

[5] M. Ozdemir, **M. AlAlawi** , M. Doga Dogan, J. Francisco Martinez Castro, Stefanie Mueller & Zjenja Doubrovski. “Speed-Modulated Ironing: A Method for High-Resolution Shade and Texture Gradients in Single-Material 3D Printing" In Proceedings of UIST 2024. **(Presented in Pittsburgh, USA) [🎖 BEST DEMO NOMINEE]**

[4] D. Ozbek, **M. AlAlawi**, T. Max Eckroth & Michael Wessely. “Demonstration of AcceloPrint: Fabricating Accelerometers with Multi-Material 3D Printing,” SCF 2024 Adjunct, July 2024 **(Presented in Aarhus, Denmark)**

[3] **M. AlAlawi**, N. Pacik-Nelson, J. Zhu, B. Greenspan, A. Doan, B, Wong, B., Owen-Block, S. Mickens, W. Schoeman, M. Wessely, A.Danielescu, Stefanie Mueller. “MechSense: A Design and Fabrication Pipeline for Integrating Rotary Encoders into 3D Printed Mechanisms,” In Proceedings of CHI 2023. **(Presented in Berlin, Germany)**

[2] **M. AlAlawi** & B. Wong “LeviCircuits: Adhoc Electrical Circuit Prototyping using Ultrasound Levitation,” UIST '22 Adjunct, SIC, October 2022 **(Presented in Oregon, USA)**

[1] **M. AlAlawi** ,“Design of a Virtual Environment for Physiological and Subjective Monitoring of User Presence in VR,” B.Sc. thesis, Massachusetts Institute of Technology, May 2020 **(Presented Online)**

Selected Press Features

[11] **“インターンシップ研修生としてMarwa AlAlawiさんが研究室に加わりました!”**

(Marwa AlAlawi has joined our laboratory as an intern!), University of Tokyo, Kawahara Lab News, July 2025

[10] **Scene at MIT: Artfinity brings artistic celebration to campus**, MIT News, March 2025

[9] **CRAFT, COMMUNITY, AND CLIMATE,** Arts at MIT, November 2024

[8] **New 3D Printing Technique Creates Unique Objects Quickly and with Less Waste,** MIT News, October 2024

[7] **New 3D Printing Technique by TU Delft and MIT Delivers High-Resolution Textures from a Single Materials,** TU Delft, October 2024

[6] **MISTI, A Launchpad Into MIT Students’ Careers While Helping them Become Global Citizens,** MIT Science & Technology Initiative, June 2023

[5] **MIT Creates New Way to Incorporate Sensors Into 3D-printed Designs**, All About Circuits, March 2023

[4] **MIT Develops 3D Printed Sensors that Sense Rotation,** 3D Printing.com, March 2023

[3] **3D-Printed Revolving Devices can Sense How They are Moving,** MIT News, March 2023

[2] **In a First for GCC, MISTI Program to Be Launched in Bahrain,** Bahrain News Agency, December 2022

[1] **Marwa AlAlawi, MechE, class of 2020 @ Gree Japan,** MIT Japan Program, January 2022

Research Internships

XLab, University of Tokyo, Japan 2025

Device Realization Group , MIT Mechanical Engineering 2019-2020

Personal Robots Group, MIT Media Lab 2019

MIT Biomimetics Lab, MIT Mechanical Engineering 2017

Work Experience

REACT NEURO, Cambridge, MA, USA 2020-2021
Virtual Reality Experience Designer, supervisor: Dr. Shaun Patel

GREE , Tokyo, Japan 2018
XR Intern, Supervisor: Ken Watanabe

Teaching Experience

Teaching Assistantship

[6]	**2.00**	**Introduction to Design**, MIT	Fall 2024
[5]	**2.00b**	**Toy Product Design**, MIT	Spring 2022
[4]	**2.009**	**Product Engineering Processes**, MIT	Fall 2020
[3]	**2.00b**	**Toy Product Design**, MIT	Spring 2020
[2]	**Bootcamp**	**MehtA+ Introduction to ML**, MehtA+	Summer 2020
[1]	**8.01**	**Mechanics**, MIT	Fall 2017

Co-instructing/Curriculum Development

[4]	**MISTI**	**MIT International Science & Tech Initiative** , Bahrain	Winter 2025
[3]	**MISTI**	**MIT International Science & Tech Initiative** , Japan.	Summer ’24+’25
[2]	**MISTI**	**MIT International Science & Tech Initiative** , Bahrain	Winter 2023
[1]	**MISTI**	**MIT International Science & Tech Initiative** , Jordan	Winter 2020

Shop Training

MIT Makerworkshop	**Student Machine Shop Mentor,** MIT	2019- Present
MIT Makerlodge	**Student Machine Shop Mentor,** MIT	2017-2018

Mentoring

All students are co-advised by Professor Stefanie Mueller

Undergraduate Research Assistants (UROP)

[1] Wilhelm Schoeman	2022	[6] Adelene Chan	2023
[2] Shanti Mickens	2022	[8] Katherine Yan	2024
[3] Benjamin Owen-Block	2022	[9] Audrey Garon	2024
[4] Andrew Doan	2022	[10] Nathan Syvash	2024
[5] Brandon Wong	2022-2023	[11] Regina Zheng	2024-current

Invited Talks

University of Tokyo, *Digital Fabrication, hosted by ASPIRE Group* *2025*

Bahrain Now, MIT Global Teaching Labs in Bahrain, hosted by Bahrain National Television 2025

University of Tokyo, *A Design & Fabrication Pipeline for 3D Printing Rotary Encoders, hosted by AdCorp and Takeo Igarashi Group* 2024

MIT, **MISTI Tech Re-unions,** *MISTI: Supporting Global Changemakers* 2023

3D Micro Printing, *3D-Printed Revolving Devices with Integrated Sensors* 2023

MIT, International Women's Day, *Networking & Building Community*, 2023
hosted by MIT Japan & MIT South Asia | India

American University of Bahrain, *Novel Material Technologies* 2023, 2024

MIT, MISTI Alumni Career Panel, *Career, Culture and Language Barriers,* 2021
hosted by Eduardo Rivera

CleverPlay, The STEMCast, *Mechanical Engineering Through HER Eyes,* 2021
hosted by Latifa AlKhalifa

The National Space Science Agency, NSSA Symposium, *Women in STEM:* 2021
Investigating Space Through Virtual Reality , hosted by Latifa AlKhalifa

The Hill Editorial, *Aspiration and Resilience: The New Space Age,* hosted by 2021
Steve Clemons and Embassy of the United Arab Emirates

MIT, MIT Nano Explorations, *Design of a Virtual Environment for Physiological and Subjective Monitoring of User Presence in VR,* hosted by Dr. Brian Anthony 2020

University of Bahrain, UOB Pep Talks, *KanKan: Kanji to Katakana Physical OCR Translator,*
hosted by The English Language Center (ELC) 2019

Awards

1st Place at Sixth Annual New England Korean Speech Competition , MA, hosted by the
Koran Consulate on New England 2025

UIST Best Demo Nominee , Pittsburgh 2024
MIT Mind Hand Heart Recipient (PhD Comic Book), MIT 2024
MIT Arts Festival Recipient (Interwoven Exhibition), MIT 2024
MIT MISTI Ambassador Award, MIT 2023
Crown Prince International Scholarship, Bahrain 2014 - Present
Pi Tau Sigma (PTS) Mechanical Engineering Honor Society, MIT

Volunteering

MIT MEGAWomen President (Mechanical Engineering Graduate Assc. Of Women)	Current
MIT Japan Student Ambassador	2018-current
Japanese Guest Liaison (Anime Boston), Boston, MA	2023, 2024
Showa Japan Women's University Friendship Circle, Boston, MA	2024
Showa Japan Women's University College Connection Mentor, Boston, MA.	2022-2023
Fellowship for Japanese High School Students, Boston, MA	2023
UIST Conference Student Volunteer, Bend Oregon	2022
Academic Paper Reviewing	2022- Current

References

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