

LAILA EL MOSELHY

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EDUCATION

Scarsdale High School, Scarsdale, NY | *Class of 2027*

- Highest available course levels across subjects; accelerated one year in mathematics.
- Advanced coursework: Multivariable Calculus (LSU dual enrollment), Linear Algebra, Statistics, Chemistry.

WORK EXPERIENCE

Louisiana State University | Research Intern, Prof. Kazemian's Recast Lab | *Summer 2026*

- Programmed UR20e robotic-arm print paths for construction-scale 3D printing using Grasshopper and C#.
- Developed C# scripts to adjust print speed in real time over TCP; programmed multilayer and curved toolpaths.
- Co-authored a paper on printability of asphalt-based materials (citation below).

University of Alberta | Research Intern, Modular Construction Research Group | *August 2026*

- Introduced to modular-construction research and automated wood-frame wall fabrication, including robotic material handling and BIM-to-manufacturing workflows.
- Independently learned Revit and AutoCAD; created a Revit house model and AutoCAD floor plan, including custom families, attribute blocks, and scaled drawings.
- Built Excel practice tools for project schedules and submittal tracking; explored construction documentation and manufacturing workflows.

Free 3D Hands, Phillip Island, Australia | Intern | *Summer 2025*

- Worked with founder Mat Bowtell on 3D-printed prosthetics: assembly, quality assurance, and design modifications.
- Prototyped functional adaptations, including a shopping aid; performed weight and stress testing on prototypes.
- Featured in local news, an international documentary, and a book (citations below).

Hand in Hand NGO, Cairo, Egypt | Intern | *Summer 2024*

- Participated in the entire process of producing free prosthetic limbs for patients.
- This process includes patient measurement, 3D scanning, CAD customization, fabrication, fitting, and delivery.

VOLUNTEERING AND COMMUNITY IMPACT

3D Print with Purpose | Independent Designer and e-NABLE Volunteer | *2023–Present*

- Produced custom 3D-printed prosthetics for 19 recipients across 10 countries; coordinated remotely to address individual fit and functional needs.
- Contributed the Kinetic Arm model to NIH 3D (794 downloads; 1,330 views, as reported in project records). [\[Link\]](#)
- Created 3dprintwithpurpose.com with project documentation and instructional assembly videos [\[Link\]](#)
- Invited to present work at the e-NABLE's town hall meeting. [\[Meeting YouTube\]](#)

Hand in Hand NGO | Fundraising | *2025–Present*

- Raised \$3,500 for prosthetic production through community cookie sales and online fundraising (October 2026 total).

Stormwater Research | *Spring 2026*

- Researched local stormwater infrastructure and addressed Scarsdale Village officials (May 2026), advocating green infrastructure for the Sheldrake watershed. [\[Scarsdale10583 article\]](#)

LEADERSHIP

- Senior Class President, Scarsdale High School (Class of 2027).

- Peer Leader, Scarsdale High School (2025–2027): Mentor ninth-grade students through orientation and small-group discussions on decision-making and social challenges.
- Class Representative, Scarsdale High School (freshman and sophomore years).
- Varsity Gymnastics Team Captain.
- Officer, SHS Muslim Youth Club; helped organize the community Iftar (2026). [[Scarsdale10583 article](#)]
- Presenter, SHS Global Citizenship Day: 3D-printed assistive devices.
- Selected for NY Senator Shelley B Mayer’s Youth Advisory Council.

HONORS AND AWARDS

- National Merit Commended Student.
- Signifer Honor Society, Scarsdale High School: Inducted for academic achievement and school/community involvement.
- AP Scholar.
- Scarsdale High School 2027 Commencement Speaker.
- Junior League of Central Westchester Service Award (2026).
- LoHud Gymnastics Watch List (2024).
- NYSPHSAA Scholar-Athlete (2024–2026).
- Gymnastics All-Section (2024, 2025).

MEDIA FEATURES

- Chuck Hull 3D Printing Documentary & Companion Book | Interviewed for documentary and companion book by Wayne Drash; final inclusion to be confirmed. [[Website Link](#)]
- Pressing:On Podcast | Interviewed about accessible 3D-printed prosthetics and assistive technology. [[Spotify Link](#)]
- LSU College of Engineering | Featured for research in robotic construction-scale 3D printing. [[Instagram](#)]
- Phillip Island Newspaper | Featured for prosthetics work with Free 3D Hands. [[PDF](#)]
- Free3Dhands Instagram | Featured for 3D printed prosthetics across the globe. [[Instagram](#)]

PUBLICATIONS

Manosalvas, C., Banijamali, K., **El Moselhy, L.**, & Kazemian, A. “Construction-Scale 3D Printing with Asphalt-Based Materials: Printability and Process Characterization.” Manuscript in preparation; intended for submission to Progress in Additive Manufacturing (Springer).

TECHNICAL SKILLS

CAD: SolidWorks, Blender, Revit, AutoCAD, Grasshopper.

Other: Excel.

Fabrication: C# for UR20e robotics, FDM 3D printing, CAD customization.