# Paul M. Khoury

www.linkedin.com/in/khoury-p • (718) 666-0436 • pkhoury1618@gmail.com

## EDUCATION

**Rensselaer Polytechnic Institute -** Troy, NY *Aug. 2022 - May 2026*

- Mechanical Engineering Major; Cognitive Science Minor
- 3.72 Cumulative GPA; *Magna Cum Laude*; Dean's List; Founders Award of Excellence Honoree

## WORK EXPERIENCE

**Limbitless Solutions Inc.** - Orlando, FL *May 2025 - Aug. 2025*

*R&D Intern and NSF-backed REU Scholar*

- Designed and prototyped a wearable vibrotactile array to provide **intuitive sensory feedback** for **pediatric prosthetic** arm users during functional tasks, conveying an **artificial sense of touch**
- Established protocol to test patient localization of vibrotactile stimuli; secured **IRB** approval for **human subject research**
- **Contributed as a co-author** on conference paper (BMES); presented research findings at Research Symposium

**Medline, NAMIC Division** - Glens Falls, NY *Aug. 2024 - Dec. 2024*

*Co-op Engineer, Manufacturing*

- Designed and built a Cartesian **6-axis robot** for precision fluid dispensing in adhesive bonding processes
- Undertook **corrective and preventive action** (CAPA) to significantly reduce particulate contamination in cleanrooms to meet stringent **medical device regulatory standards** in the US, EU, and Japan
- Enhanced **workplace safety** on production floor with custom dividers, fixtures, and light curtains around machinery
- Integrated actuator components into a fully automated production line and programmed them using **PLC ladder logic**
- Reverse-engineered aging machinery and produced detailed part designs, adhering to internal **document** standards
- Resolved **wave damping** issue in blood pressure monitoring product by designing a custom valve

**RPI Lab for Accelerated Computing in Engineering and Science** - Troy, NY *Jan. 2024 - Jan. 2025*

*Undergraduate Researcher*

- Conducted **finite element modeling** of pelvic fractures to evaluate efficacy of **orthopaedic surgical fixtures**
- Collaborated with a physician to improve upon existing **biomechanical** models

**NYS Institute for Basic Research** - Staten Island, NY *May 2023 - Aug. 2023*

*Laboratory Summer Intern*

- **Programmed Arduino** actuators to automate lab assays thereby **expediting experimental workflows**
- Investigated mechanisms of aberrant neurodevelopment in response to lead and PFOA exposure
- Employed **advanced imaging techniques** to study effects of psychoactive compound Muscimol on animal models

**Zalpha** (formerly 'Invest-ed') - New York, NY *Nov. 2021 - Aug. 2023*

*Product Team Lead*

- Contributed to the early development of an ed-tech **startup** that delivered an innovative paper trading **mobile app**
- Spearheaded **Product** and **UX design**, collaborating with developers and stakeholders to refine the app's interface

## PROJECTS

**"Thread the Loop" Surgery Skill with Robot arm** *Sept. 2025 -Present*

- Implemented inverse-kinematics-based control of a 6-DOF robotic arm for maneuvers relevant to laparoscopic surgery.

**EMG Classification using Machine Learning** *Jan. 2025 - May 2025*

- Developed a classification model to infer gestures based on noisy sEMG signals collected from the wrist/forearm.

**Historical Facade Restoration** *Sept. 2024 - May 2025*

- Digitally reconstructed and manufactured decorative facade elements for a fire-damaged historic residence.

## LEADERSHIP & VOLUNTEERING

Former RPI **Undergraduate Council President;** RPI **Biomedical Engineering Society** Project Team; Volunteer Dispatcher (BRAVO Volunteer Ambulance, Brooklyn, NY); Lector at RPI University Chapel + Cultural Center

## SKILLS & CERTIFICATIONS

**Siemens NX, AutoCAD Certified User;** SOLIDWORKS CAD Design Associate (CSWA); Six Sigma Green Belt; **Matlab** and **Simulink;** PLC Programming, LTSpice; Microsoft **Excel;** Office 365 Suite; Abaqus **FEA;** HyperMesh **CFD; Machine Learning** Engineering with **Python; Conversational proficiency** in Polish, Russian; CITI Research & Ethics Training