Destynn Keuchel

dkeuchel@seas.upenn.edu | www.linkedin.com/in/destynn-keuchel

EDUCATION

University of Pennsylvania, School of Engineering and Applied Science, Philadelphia, Pennsylvania *Expected Dec '26*
B.S.E, Materials Science and Engineering & Computer Engineering (dual major)

- **Teaching Assistant**: Intro to Functional Materials (Spring '25), Intro to Computer Systems MCIT Graduate class (Fall '24)
- **Penn Engineering Entrepreneurship Fellow:** One of 12 Engineering undergrad and master's students selected for '25 1-year work-study program to develop entrepreneurship skills in analyzing, creating, growing, and leading highly technical ventures

Hawken High School | Cum Laude, Gates Mills, Ohio *Jun '22*

PROFESSIONAL EXPERIENCE

Arkema Inc., King of Prussia, Pennsylvania | *High Performance Polymers Intern* *Jun '24 – Aug '24*

- Improved structural properties of PVDF membranes for deployment in battery cell separators and water ultrafiltration modules
- Published 20-page executive report outlining novel hollow-fiber PVDF membrane recycling precedent and procedure

DumoLab, UPenn Design/Architecture, Philadelphia, Pennsylvania | *Researcher* & Project Lead *May '23 – Apr '24*

- Devised cross-linking organic bio-polymer composite using epoxidized vegetable oils as a renewable concrete alternative
- Led design and fabrication of human-scale chitosan bio-composite arch, leveraging polyhedral graphic statics structural optimization
  Publications/Conferences:
  - L. Lasting, M. Akbari, *D. Keuchel*, et al. "Terrene 2.0: Biomaterial Systems for Augmented Earthen Construction" Materials and Design, 2024
  - *D. Keuchel*, et al. "Terrene 3.0: Biodegradable Earthen Composite Shells" Responsive Cities (Conference), 2023

Spunfab Ltd., Cuyahoga Falls, Ohio | *Student Researcher & Engineering Technician* *Jul '20 –Aug '22*

- Developed & manufactured novel antimicrobial ASTM, NIOSH, and FFP2-grade facemasks using copper + silver ions
- Assisted auditor with quality processes and procedures in an AS 9100/ISO 9001 quality audit
- Problem-solved composite bonding trials for >10 customers on-site and conducted TMA, DSC, and tensile polymer characterization
- Exhibited at JEC World, Techtextil North America, and Foam Expo North America trade shows

NASA, Hampton, Virginia | *Student Researcher* *Aug '18 – Jan '22*

- Improved structural and thermal stability of solar sail seams with high-strength polyester and low-melt co-polyamide adhesive yarns
- Developed novel thermoset powder electrostatic deposition system, garnering over $110,000 in scholarships and prizes

ACADEMIC AND EXTRACURRICULAR EXPERIENCE

UPenn Chess Club, Philadelphia, Pennsylvania | *President (May '23 – Jan '25)* *Sep '22 – Present*

- Managed 8-person executive board to run meetings and tournaments for >150 students, alumni, and the general Philadelphia public
- Placed top 10 individually in 2024 Collegiate Pan-Ams Blitz Championship and second place in 2023 & 2024 Inter-Ivy Championships

Student Committee on Undergraduate Education, Philadelphia, Pennsylvania | *Membership Coordinator ('23)* *Sep '22 – Present*

- Elected member of the executive board responsible for professional and social events, recruiting members, and group collaborations
- Collaborated with Preparatory Programs and Education Committees to host school-wide study halls, focus groups, and info sessions

Chess Clubs, Summer Camps, and Private Lessons, Cleveland, Ohio | *Chess Instructor* *Oct '14 – Present*

- Instructed over 250 K-8 students with 9 top individual and team performances at state-level tournaments

Keep COVID-19 in Check, Virtual | *Co-Founder* *Apr '20 – Jul '23*

- Recruited and led 19 titled chess players and teachers from 11 countries to raise over $47,000 to fund over 284,000 meals through remote teaching chess, garnering Ohio Senate Commendation for Community Service

Projects

- Authored local LLM learning module utilized in Wharton AI in Business and Society class *Aug* '24
- Developed local LLM software for secure patient history diagnostic aid utilized by UPenn Vet Hospital *Aug* '24

AWARDS AND ACHIEVEMENTS

- National Chess Master (top <1% of US rated players) - 2x National and 12x State Scholastic Champion - US Chess Federation Scholar-Chessplayer Award (1 of 5 recipients annually)
- International Science and Engineering Fair '22 (ISEF) Finalist - top Materials Science Project selected by the US Air Force
- American Junior Academy of Science Fellow - selected to present research to over 80 students, faculty, and Nobel Laureates
- UPenn PURM Research Award - presented at UPenn Fall '23 Undergrad Research Symposium
- 2x State Debate Champion - 7th in the US - coached top 15 debater in the US

CODING, SOFTWARE, AND MATERIALS ANALYSIS PROFICIENCY

CODING/SOFTWARE: C, Java, Python, MatLab, ImageJ, Fusion360, LTspice, Rhino3D & Grasshopper
MATERIAL ANALYSIS: SEM, TMA, DSC, FEA, Compression, Tensile, Hardness, 3-Point Bend, Air-Permeability