Aaron Togelang

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Education

University of California, Berkeley

BS in Mechanical Engineering/Materials Science and Engineering ***Expected May 2020***

Minor in Electrical Engineering and Computer Science
GPA: 3.3

Work Experience

Liwei Lin Lab (PI Renxiao Xu)

Mechanical Analysis Researcher ***August 2017 - present***

- Design and improve self-similar patterns used in stretchable electronics.
- Simulate patterns as Copper-Polyimide composite layups and analyze stress-strain characteristics with Abaqus CAE.

SB Furniture

Mechanical Department Internship ***July 2016 - August 2016***

- Assisted with resource planning (ERP) and automating assembly line processes.
- Hands on experience inspecting and repairing mass productions systems.

Jisan Research Institute

Research Team Lead and Technical Writer ***June 2013 - December 2015***

- Studied the impact of increased airflow path on solar updraft tower efficiency, published and presented a paper based on results.
- Designed, built, and managed an upgraded testing structure. Replaced an aging outdoor single-chamber solar collection box with an indoor multiple-chamber modular solar collection box. Revised structure reduced time needed to reconfigure by 3 hours and allowed more control over environmental factors such as light, wind, and rain.

Projects and Activities

Space Sciences Laboratory Sponsored Research

Propulsion Research ***June 2017 - present***

- Design and build a test platform for solid and liquid rocket motors (1000lbs thrust)
- Test solid and liquid rocket motors with help from Ventions, LLC.
- Integrate MiniPIX Radiation Camera into Cosmic Ray Altitude Distribution (C-RAD) payload for a 30K+ sounding rocket

UC Berkeley Space Technogies and Rocketry (UCB STAR)

Logistics and Outreach ***August 2016 - present***

- Organize trips (local and interstate) for 100+ members, and shipping for a competition rocket.
- Manage budgeting for the team, specifically: defined funding periods, assigned and monitored internal subteam allocations, and handled purchase requests and reimbursements for the team.
- Work with various companies to secure over $10,000 worth of donations.
- Secured a private building at the Richmond Field Station and manage maintainance, acquisitions, and safety.

UCB STAR Ursa Major (NASA Student Launch 2017 Rocket)

Payload ***August 2016 - April 2017***

- Designed and built a mechanism to land a 38" portion of a rocket upright, after locating and identifying three different ground targets. Structure was 3d-printed and controlled via an onboard Raspberry Pi.

Skills

Software	AutoCAD, Inventor, Fusion 360, Illustrator, Photoshop, Solidworks, Abaqus CAE, MS Office/Google Docs, OpenRocket
Programming	C, Java, bash, LaTeX, MatLab
Manufacturing	Composite Materials, Silicone Molding, 3D Printers, Laser Cutting, Welding, Enterprise Resource Planning, Machine Shop Tools, CAM, FEA
Electronics	Raspberry Pi, Arduino, Soldering, Wiring, Data Collection, Actuators (Motors, Solenoids, Pneumatics)

Publications

S. Kazadi, M. Liang, A. Togelang, D. Chan Low Cost Solar Chimney Performance-Improving Enhancement. ICCE2015 Proceedings (September 14-16, 2015, Ottawa, Canada), p.43-49, 2015.