Amos Dudley • Seattle, WA • amosdudley@gmail.com • (513) 435-2244 • amosdudley.com

Work

Hardware Prototyping Engineer - IC5 **Nov 2021 — Jul 2023**
Meta Reality Labs, Seattle.

- Spearheaded hundreds of prototyping projects with varied and unique demands in collaboration with a wide range of engineering teams within Meta Reality Labs (RL) and RL Research
- SME on prototyping projects requiring 3D printing + ancillary fabrication methods incl. molding, CNC, electrodeposition
- Collaborative R&D:
    - Engineered and validated new hybrid tooling, enabled selective finishing of near-net 3DP parts via 5-axis CNC - reducing machine and programming time by up to 60% vs multi-setup strategies.
    - Developed novel process for tool-less prototyping of thin (10-300µm) conductive flexes and antennas. Reduced lead time from 2 weeks to 2-3 days.
- Established AM partnerships - Deployed cutting edge, direct-print thiol-ene silicone 3DP materials 1-2 years ahead of global availability
- Improved processes - Created tools to help HW Eng & Prod Design teams to make more informed decisions when interacting with the service-bureau team, and improve reliability of 3D print farm output

Vertical Product Manager **Jan 2019 — Nov 2021**
Formlabs, Somerville MA.

- Responsible for Formlabs' investment cast mfg. vertical and Formlabs' composite material projects. Brought three specialized 3D printing resins to market.
- Work closely with materials science team and provide applications-based product feedback throughout R&D.
- Cultivated strategic partnerships with equipment manufacturers to outsource product validation

Applications Research Engineer **June 2016 — Present**
Formlabs, Somerville MA.

- Hands-on development and optimization of burnout, debinding and sintering processes for composite resins, and protocols for analysis of IC refractory molds, via test design, fluid simulation, and metrology
- Development and optimization of processing techniques for composite ceramic SLA materials.
- Contributed to mechanical design of Fuse SLS printer. Designed master-sketch driven sheet metal components and replaceable heater/filter assemblies based on COMSOL studies.

3D Designer **June 2011 — September 2011**
Lippincott, New York.

- 3D Concept design and visualization of new branding, retail interiors for Samsung, Nissan, Comcast, United Airlines, and Mastercard.

Education

New Jersey Institute of Technology **Graduated May 2016**
Bachelor of Arts in Design and Digital Arts

University of Cincinnati, College of Design, Art, Architecture and Planning **3 years**
Bachelor of Science in Architecture

Software

Solidworks, Onshape, Fusion360 (CAM) N-Topology Platform, COMSOL (Composite Mechanics, Electrochemistry, Optimization Modules), Blender, Maya, Adobe CC, Keyence VK Analyzer, GOM Inspect

Skills

CAD/CAM, Materials test design, Part design for AM, Lost-resin metal investment casting, Ceramics debinding and sintering, Metrology, Multiphysics simulation, Topology optimization, Technical writing