Danny Tran

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Technical Skills

- CATIA V5
- MATLAB
- GD&T (ASME Y14.5)
- 3D Printing
- UV/VIS/NIR Spectroscopy
- SolidWorks
- Python
- Structured Light 3D Scan
- Metal Lathe
- Surfscan SP1
- AutoCAD
- JMP
- Laser Tracking
- Vertical Mill
- Klarity Defect
- ANSYS
- Ellipsometry
- ATOS Pro
- PVD/ALD
- Plasma Etch
- FMEA & RCA
- Four Point Probe
- Verisurf
- CMP
- Ion Beam Etch

Relevant Experience

Applied Materials, Inc. || Santa Clara, CA Dec 2021 - Present

Process Engineer I

- Secondary process owner of 150+ lots in PVD and 50+ lots in ALD to produce hard masks, protective barriers, and optical coatings for developing optical metamaterials
- Performed Statistical Process Control (SPC) using JMP/MATLAB/Python for chamber qualifications and performance tracking of PVD and ALD tools
- Resolved wafer processing and tool operation issues by troubleshooting and identifying root-cause of process and quality deviations; additionally implemented corrective actions using 8D methodology
- Wrote Python algorithms that sped up (5x) wafer contour mapping for analyzing deposited thin film properties
- Drafted and reviewed SOPs to help develop training material for CMP and PVD modules
- Improved deposition process quality and constancy by identifying problems, formulated and executed DOE to confirm hypotheses, and implemented resolutions

General Atomics Aeronautical Systems, Inc. (GA-ASI) || Poway, CA June 2019 - Aug 2019

Composite Tooling Intern

- Laminated and vacuum bagged 5 tools (prepreg: 4 carbon fiber & 1 fiberglass) for oven and autoclave cures
- Fabricated a prototype carbon fiber with nomex honeycomb core bulkhead for a MQ-9 Reaper (Predator B) drone to conduct a fit inspection within the drone's fuselage
- Executed assembly of components for a Predator B wing utilizing adhesives and composite wet layups techniques
- Repaired leak in landing gear layup mold for Predator B fuselage using a carbon fiber wet layup patch and structural adhesive paste
- Inspected and repaired 7 composite trim-and-drill assembly fixtures to ensure dimensional and contour integrity via model-based inspection using a laser tracker with Verisurf for QA per engineering drawing
- Mapped hole and trim profiles from CAD models onto 6 wing ribs meeting specified GD&T (ASME Y14.5) via structured light 3D scanning with ATOS Professional

DroneLab - Qualcomm Institute || La Jolla, CA Apr 2018 - June 2020

Aerodynamics & Aerospace Structural Research Assistant

- Spearheaded the development of 3D printable composite shrouds to improve noise reduction for mitigating environmental disturbances for a 6-rotor Unmanned Arial Vehicle (UAV)
- Co-authored 2 technical papers regarding aerodynamics and Computational Fluid Dynamics (CFD) supplementing the lab's UAV design initiatives
- Wrote grant proposal to secure $1000 for funding independent research in noise mitigation of the 6-rotor UAV
- Maintained, repaired, and diagnosed operation issues for 5 of the lab's Fused Deposition Modeling (FDM) 3D printers (3 Ultimakers & 2 3D Platforms) to ensure proper functioning for colleagues' on-demand needs

Professional Development

- *ANSYS, Inc. Certificate of Training:* Mechanical Heat Transfer, Mechanical Acoustics, Mechanical Structural Plastics

Education

Bachelor of Science (B.S.) in Aerospace Engineering - *University of California, San Diego* June 2020