

## Elliot J. Shin

### Summary of Qualifications

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| <ul style="list-style-type: none"> <li>▪ Failure analysis</li> <li>▪ Aluminum finishing</li> </ul> | <ul style="list-style-type: none"> <li>▪ Audit supplier/internal processes per ASTM</li> <li>▪ Work instructions</li> </ul> |
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### Experience

Feb 2019 to Present	SAFE, Inc.	Monument, CO
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#### Engineer

- Fracture failure analysis of non-ferrous alloys

Jan 2016 to Feb 2019	Woodward, Inc.	Loves Park, IL
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#### Materials Engineer

- Investigated over 100 cases of fracture/failure of various aircraft engine components with SEM, EDS, FTIR, 3D optical profiler, optical microscopy, and metallography to determine root cause of failure on returned field unit and development parts
- Conducted analytic tests such as aluminum surface treatment, diamond like coating, nitride coating and paint evaluations, microstructure evaluation and macro/micro hardness tests of various metals intergranular attack, and corrosion failure
- Audited suppliers and internal processes to evaluate the compliance to company/industrial specification and provided written reports to maintain Nadcap accreditation
- Collaborated with coworkers to develop and implement work instructions and operating procedures to address standard lab testing and nonconformance
- Trained lab personnel to perform day to day testing for aluminum production lines
- Lead over 100 conformance tests for aluminum surface treatment under ASM, ASTM, and MIL spec

May 2014 to Jan 2015	CAMECA Instruments, Inc.	Madison, WI
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#### Intern

- Achieved 50% increase in accuracy of 3D atom probe models by analyzing pre-existing data and making data-driven technical decisions
- Trained to perform Scanning Electron Microscopy (SEM) imaging of prepared samples to obtain higher quality data
- Presented and discussed the modified system values with the research group for further improvement to the technology

### Projects

Aug 2014 to May 2015	University of Wisconsin – Madison	Madison, WI
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#### Reduction of Burr formation in Titanium at Cryogenic Temperature

- Designed and organized a project to reduce burr formation on titanium implants
- Performed tensile test on titanium samples to create stress-strain curves at various temperatures
- Documented and presented 85% reduction of burr by altering temperature and ductility

### Education

Aug 2011 to Dec 2015	University of Wisconsin – Madison	Madison, WI
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#### BS – Materials Science and Engineering