

Jeffrey A. Whitridge

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Education**Bachelor of Science: Nano Engineering, with a focus in Materials Science, 2016**

University of California, San Diego - Jacobs School of Engineering

Associates of Science: Drafting, 2010

Saddleback Community College

Technical Skills**Programing Languages:**

PYTHON

MATLAB

C / C++

VBA

CAD Software:

AUTOCAD

SOLIDWORKS

OS:

Windows

Linux

Additional:

Proficient in Microsoft Office suite, especially Microsoft Word and Microsoft Excel

Experience**Research Assistant, Dr. Fenning Research Group, University of California, San Diego, 2016**

- Assisted postdoctoral researcher (Dr. Kargar) in investigating the electrochemical reduction of carbon dioxide to hydrocarbons such as methane. The hydrocarbons were measured using gas chromatography and formed at low overpotentials via nanoscale morphological modification of the cathode surface.
- Prepared electrolytic solutions and formed nano-structured Cu and Cu-Zn-Sn alloy cathode samples via electroplating at different voltages and amperages.
- Used SEM and optical microscopy, and EDX spectroscopy to examine samples.
- Proposed, via sketches and computer renderings, a new design for an electrochemical cell which allowed for easier loading of samples and a consistent area of sample exposure. This proposal led to the fabrication of a new setup.
- Modified MATLAB files to automatically import integration parameters for various chemicals from a series of ASCII chromatograph output files, and plot the results for each chemical.
- Trained other research assistant.

Research Assistant, Materials Research Center, University of California, San Diego, 2015

- Assisted in assembling and ordering components for a high-temperature analysis Hopkinson Bar.
- Assisted graduate student's research in spark-erosion steel nanoparticle synthesis.

Tutor, Learning Assistance Program, Saddleback Community College, 2011

- Tutored students in math, chemistry, and physics, and acted as a mentor toward other newer students.

Draftsman, Azizi Architects, Inc., 2009

- Arranged drawings and corrected graphical and typographical errors on construction documents.

Upper Division Coursework

Mechanics:

- NANO 150: Mechanics of Nanomaterials (Lect.)
- NANO 174: Mechanical Behavior of Materials (Lect.)
- CENG 101A: Fluid Mechanics (Lect.)

Materials Science:

- NANO100L: Physical Properties of Materials (Lab.)
- NANO 158: Phase Transformations & Kinetics (Lect.)
- NANO 148: Thermodynamics of Materials (Lect.)
- NANO 168: Electrical, Dielectric and Magnetic Properties of Materials (Lect.)

Electrical Engineering:

- ECE 35: Analog Design (Lect. & Lab.)
- ECE 25: Digital Design (Lect. & Lab.)
- ECE 65: Components and Circuits (Lect. & Lab.)

Nano Engineering:

- NANO 101: Introduction to Nano Engineering (Lect.)
- NANO 102: Foundation of Nano Engineering: Chemical Principles (Lect.)
- NANO 103: Foundation of Nano Engineering: Biochemical Principles (Lect.)
- NANO 104: Foundation of Nano Engineering: Physical Principles (Lect.)
- NANO 110: Modeling of Nanoscale Systems (Lect.)
- NANO 111: Characterization of Nanoscale Systems (Lect.)
- NANO 112: Synthesis & Fabrication of Nanoscale Systems (Lect.)
- NANO 120A: NanoEngineering Systems Design I. (Lab.)
- NANO 120B: NanoEngineering Systems Design II. (Lab.)

Lower Division Coursework

Physics:

- PHYS 4A: Mechanical (Lect. & Lab.)
- PHYS 4B: Electrical (Lect. & Lab.)
- PHYS 4C: Optical, Thermodynamic and Quantum (Lect. & Lab.)
- PHYS 2D: Relativity and Quantum Physics (Lect.)

Chemistry:

- CHEM 1A: General Chemistry I. (Lect. & Lab.)
- CHEM 1B: General Chemistry II. (Lect. & Lab.)
- CHEM 12A: Organic Chemistry I. (Lect. & Lab.)
- CHEM 12B: Organic Chemistry II. (Lect. & Lab.)

Mathematics:

- MATH 3A: Calculus I. (Lect.)
- MATH 3B: Calculus II. (Lect.)
- MATH 3C: Calculus III. (Lect.)
- MATH 20E: Vector Calculus (Lect.)
- MATH 10: Statistics (Lect.)
- MATH 287: Linear Algebra & Differential Equations (Lect.)

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NOTE: ADD CAD CLASSES FROM SADDLEBACK (USE OLD RESUME) ??

- Clean and simple formatting: Avoid special characters or elaborate fonts.
- Descriptions of qualifications and experiences most relevant to the job.
- Descriptions of projects you've worked on and how you contributed.
- Sufficient length to allow for a complete picture of your skills and experience.

<http://www.lockheedmartinjobs.com/sharing-your-resume.aspx#sthash.IvuY7EMe.dpuf>

Desired skills

Knowledge of fundamental engineering mechanics, such as engineering Statics, Dynamics, Strength of Materials, Fracture and Fatigue is desired.

Knowledge of computer programming languages is highly desired.

Experience and proficiency with Microsoft Office suite, especially Microsoft Word and Microsoft Excel is required.

Exposure and experience with Linux OS, and skilled in one or more programming languages such as VBA, MATLAB, C#, SQL, PERL or PYTHON is desired. Familiarity with aircraft load paths and stability of structure is desired. Knowledge of CAD and Finite Element Modeling applications such as NASTRAN, PATRAN, ABAQUS, CATIA a plus.

Req ID :

407026BR

Job Code/Title :

E1451:Aeronautical Engineer Asc

Job Description :

Durability and Damage Tolerance (DaDT) Analyst for the Air Mobility and Maritime Missions (AMMM) Structural Integrity team. Employee will be responsible for performing analysis on new and modified designs of airframe structure, and mechanisms.

Responsibilities include performing damage tolerance analysis, fatigue analysis, and residual strength analysis of structure and mechanisms.

Employee will provide support to Production during airframe manufacture as well as help support the various AMMM Force Management programs involving fleet monitoring and Individual Aircraft Tracking. Employee will write computer code to automate or enhance assignments. Employee will be mentored / instructed by more senior structural analysts familiar with LM Aero tools and processes.

Basic Qualifications

Bachelor's degree in mechanical, aeronautical, or civil engineering or related technical field.