

Deanna Ko

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Professional Summary

I am pursuing a career in experimental fluids testing and research. I am currently in the graduate program at Rensselaer Polytechnic Institute (RPI) and seek to obtain a PhD. in Mechanical Engineering. During my undergraduate studies, I concentrated on courses pertaining to aerospace and fluid dynamics. I worked at Knolls Atomic Power Laboratory (KAPL) in the Naval Nuclear Laboratories (NNL). I am familiar with reactor cores and thermal systems. In addition, I have volunteered for the NNL Apprentice Program to learn more about welding and manufacturing. My rotation at NNL with the Fluid Dynamics Experiment Unit allowed me to gain experience in fluids research. Several primary skills I have include having experience in presenting to committees and in writing concise reports.

Education

Rensselaer Polytechnic Institute, Troy, NY
PhD., Mechanical Engineering

August 2018- Present

Rutgers University New Brunswick, New Brunswick, NJ
B.S., Mechanical Engineering, Art History Minor- *Graduated with high honors*

September 2014 - May 2015

Professional Experience

Naval Nuclear Laboratory (NNL) – Knolls Atomic Power Laboratory, Schenectady, NY (January 2016 – August 2018)
Engineer

- ❖ New Design, S9G Reactor Performance Unit
 - Used computational analysis models to monitor performance and maximize capability of reactor cores
 - Provided consistent reliable operation of VIRGINIA class submarines
 - Supported construction and reactor testing in other units
- ❖ NNL Apprentice Program Project – Reactor Servicing
 - Objective: Design a universal automatic welding machine for varying circumferences
 - Used PTC Creo to create conceptual models
 - Created a whitepaper and presentation for GM of laboratory
- ❖ Reactor Testing, Fluid Dynamics Experiment Unit - Rotation
 - conducted experiments to develop a thermal measurement instrument
 - developed a test chamber to test future development of thermal measurement instrument

Research Experience

Dr. Michael Amitay, Watervliet, NY
PhD. Student

August 2018 – Present

- ❖ Currently conducting experimental testing in wind tunnel on reverse flow around helicopter blades

Dr. Mitsunori Denda, Piscataway, NJ
Undergraduate Research Assistant

September 2013 - May 2014

- ❖ Studied insect flight and other related areas such as structural analysis of insect wings and fluid-structure interaction analysis to design flapping wings for Micro Aerial Vehicles

Dr. Aaron Mazzeo, Piscataway, NJ
Undergraduate Research Assistant

Summer 2014

- ❖ Researched flexible electronics and helped in designing a disposable cellulose-based, capacitive touch pad that will break down in bubble flow; helped with MATLAB coding to analyze break down of touch pads

Dr. Haim Baruh, Piscataway, NJ
Undergraduate Independent Study

September 2014-May 2015

- ❖ *Scholarly Thesis:* By using the shape of a bird's wing and feather shape, the ancestry of a bird and flight habit may be recovered with application of Professor Michael Leyton's Process Grammar; Bird Flight Habits and Group Patterns were also researched
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Key Skills

- ❖ *Software Programs:* RELAP5, PTC Creo, Solidworks, Matlab
- ❖ *Technical:* Microsoft Office (Word, Excel, Powerpoint), Machine Shop Training
- ❖ *Personal:* Strong communication skills; High Organizational skills
- ❖ *Language:* Proficient in Mandarin and Cantonese, Familiar with Spanish