

JEREMY K. THALLER

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EDUCATION

Ludwig Maximilians Universität München (LMU) & Technische Universität München (TUM)

Oct. 2019 – Present

- (In progress) MSci in Geomaterials and Geochemistry
- Erasmus Mundus: Masters in Materials Science Exploring Large Scale Facilities

Williams College

2015 – 2019

- B.A. in Physics with Honors
- Pre-engineering Studies
- Sigma Xi

Acton-Boxborough Regional High School

2011 – 2015

- National AP Scholar
- National Honors Society

TECHNICAL STRENGTHS

Programming Languages

MATLAB, Python, JAVA, HTML, Arduino (C/C++)

Python Packages

Pandas, sklearn, KERAS, NumPy, Seaborn

Data Software

Mathematica, Quantum Espresso, Excel, LabView, LoggerPro

Other Software

LaTeX, Solid Works, VESTA, Adobe Illustrator, Adobe Photoshop

Machining Experience

Bridgeport Milling, CNC Milling, 3D Printing, Laser Cutting,
Arc Melting, Fluorescent Confocal Microscopy, SEM, TEM, XRD

RESEARCH EXPERIENCE

Amorphous Solids, Metallic Glasses, & Metallurgy

Summer 2019

Postbac Researcher

Advised by Jan Schroers, Professor of Physics

Yale University

- Nanomolded crystalline metals to determine the underlying mechanism.
- Measured atomic surface properties with SEM and determined crystal orientation with TEM

Soft Condensed Matter Physics

May 2018 – June 2019

Undergraduate Honors Thesis

Advised by Katharine E. Jensen, Professor of Physics

Williams College

- Designed and built stretching apparatus to induce equibiaxial stretch in soft materials
- Collect data via Fluorescent Confocal Microscopy
- Data was analyzed through modified MATLAB scripts to measure the strain dependency of solid surface stress in soft materials via adhesion

Atomic, Molecular, and Optical Physics

Summer 2017

Undergraduate Research Assistant

Advised by Protik K. Majumder, Professor of Physics

Williams College

- Took data towards an ultra-precise measurement of the Electric Quadrupole (E2) amplitude within the $6S^2 6P^2 \ ^3P_0 \rightarrow \ ^3P_2$ transition in Pb
- Programed a PID controller in LabView to thermally regulate an oven to within $\pm 4^\circ$ C at temperatures around 950° C
- Designed a deposition-rate detector for an indium cell chamber based on the mass dependent frequency of Quartz Crystals

DATA SCIENCE SKILLS

Python
Pandas
NumPy
Data Visualization
Data Cleaning and Feature Engineering
Command Line (BASH)
SSH + EMACS
Git and Version Control
Probability and Statistics

TEACHING EXPERIENCE

Math and Science Resource Center Tutor

- Tutored all introductory physics and calculus courses Spring 2019

Physics/Math TA

- Introduction to Mechanics Fall 2017 & 2018
- Mathematical Methods for Scientists Spring 2018

Music Conducting

- George N. Parks Drum Major Academy staff member Summer 2015

OTHER WORK EXPERIENCE

Office of Information Technologies

June 2017 – Aug. 2017

- Student Technology Assistant *40 hr/week*

Williams College Wind Ensemble

Sept. 2016 – June 2017

- Teaching Assistant, Bassoonist *40 hr/week*

PROFESSIONAL MEMBERSHIPS

Sigma Xi Associate Member

June 2019 – Present

American Physical Society

July 2018 – Present

New England Complex Fluids Workgroup

May 2018 – Present

LEADERSHIP

Williams College Track Captain

2018 – 2019

WASA (College Rocketry Club) Founder/President

2017 – 2019

High School Track Captain

2014 – 2015

High School Head Drum Major

2013 – 2015

PUBLICATIONS

Toward and Adhesion Based Measurement of Strain-Dependent
Surface Stress in Soft Solids

Undergraduate Thesis

POSTERS AND PRESENTATIONS

Measuring Strain-Dependent Surface Stress in Soft Solids

- Williams College Undergraduate Thesis Defense *May 2019*
- APS March Meeting (Boston) *March 2019*
- Williams College Thesis Midyear Update *November 2018*
- UMASS Soft Matter Day *July 2018*

A Precise Measurement of the Electric Quadrupole Amplitude Within the $6S^26P^2 \rightarrow 3P_0 \rightarrow 3P_2$ Transition in Pb

- Williams College Summer Science *July 2017*

ADVANCED COURSEWORK

Condensed Matter Physics	Glass and Ceramics
Thermodynamics and Statistical Mechanics	Homogeneous Systems
Classical Mechanics/Fluid Dynamics (Tutorial)	Polymer Physics
Gravity	Structural Determination
Particle Physics (Tutorial)	Computational Materials Design
Quantum Mechanics	Materials Science
Philosophical Implications of Modern Physics	Machine Learning
Electricity and Magnetism	
Mathematical Methods for Scientists	
Vibrations, Waves, and Optics	

AWARDS AND ACHIEVEMENTS

Dean's List	<i>Williams College</i>
NESCAC Track & Field All-Conference	
Stratus Technologies Engineering Scholarship	
John Phillips Sousa Band Award	<i>Acton-Boxborough Regional High School</i>
Boston Globe Track & Field All-Scholastic	
Boston Herald Track & Field All-Scholastic	
Lowell Sun Track & Field All-Scholastic	

ADDITIONAL INFORMATION

Interests	Bassoon, Jazz Piano, Running, Bicycle Repair, Rocketry, Graphic Design
Languages	German (B1)