

# Alex Horvath

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## EDUCATION

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**University of Connecticut** *Graduate Student in Materials Science and Engineering (Ph.D.)* May 2026

**University of Wisconsin – Madison** *Bachelor of Science in Materials Science and Engineering* May 2019

### Advanced Coursework in Materials Science

- Deformations of Materials : *Stress Mechanisms, Mechanical Behavior of Materials*
- Transport Phenomena : *Navier-stokes Solutions, COMSOL Simulations*
- Introduction to Computational Methods in Materials Science: *Molecular Dynamics and Monte-Carlo Simulations*
- Electrical, Optical, and Magnetic Materials : *Electronic Band Structure Diagrams, Quantitative descriptions*

### Capstone/Senior Design Project(s)

- Proposal of Novel Annealing Cycles for More Efficient Spheroidizing of 1043 and 1045 Steels: *Conceptualized novel Annealing Cycles and Mechanical Tested Specimens. Presented Results to Steel Manufacturer*
- Comparison of CFRP and WE43 alloy vs Traditional Steels and other Materials for use in Vehicle Components

**Zoet and Marcott Labs (Geosciences) – University of Wisconsin–Madison** 09/14 – 05/19

- Designed experiments for measurement of activation energy of stress mechanisms in glacial ice. Fabricated equipment using variety of hand tools and machine shop equipment.
- Collection and processing of glacial erratic samples from the Adirondack Mountains
- Completed graduate level courses in glacial mechanics and attended graduate seminars in regional glacial geology.
- Awarded Hilldale-Holstrom Research Fellowship.

## RECOGNITION

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**Hilldale-Holstrom Undergraduate Research Fellowship** *Material Properties of Debris-Laden Ice* 05/2016

## WORK EXPERIENCE

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**New Haven Reads** Part-time Reading Tutor – *New Haven, CT* 8/21 – 04/22

**Amazon Logistics (AMZL) Manager – Nashua, NH** 6/20 – 01/21

- Managed staff of 48 – 65 associates to deliver over 30,000 packages daily.
- Used excel, Amazon-designed programs, and other programs for shift analysis and reporting
- Troubleshooted computers and ZEBRA devices

## PROFESSIONAL SKILLS, SOFTWARE KNOWLEDGE

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**MATLAB, Python, R, SQL:** Data analysis, constructing graphs statistical analyses, database management

**LAMMPS, HPC :** Running molecular dynamics simulations on High Performance Computing Cluster

**DSC, FT-IR, XRD, SEM, Sputtering Chambers:** Familiarity with materials testing and fabrication equipment

**Lathe, CNC Mill, Drill Press, Micrometer, Hand Tools:** Experience with technician shop equipment

## OTHER ACTIVITIES

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**UW-Madison Rowing** 13<sup>th</sup> in 3<sup>rd</sup> Varsity Eight at 2014 IRA regatta 2013 – 2014

**UW-Madison Jazz Orchestra** *Tenor Saxophonist* 2016 – 2019

## REFERENCES

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<b>Avinash Dongare</b>	Associate Prof. of Materials Science and Engineering University of Connecticut	dongare@uconn.edu
<b>Dane Morgan</b>	Harvey D. Spangler Professor of Engineering, Materials Science and Engineering Assistant	smarcott@wisc.edu
<b>Shaun Marcott</b>	Associate Prof. of Geosciences (Climatology) University of Wisconsin-Madison	ddmorgan@wisc.edu
<b>Lucas Zoet</b>	Assistant Prof. of Geosciences (Glaciology) University of Wisconsin-Madison	lzoet@wisc.edu