# R. CHRIS **EHEMANN**

Ph.D., Data Scientist

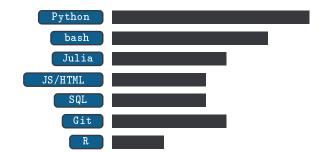




Driven, creative, and charismatic computational problem-solver

# **C** TOOLS & TECHNIQUES





### **EXPERIENCE**

May 2019 -Present

# MANUFACTURING DATA SCIENTIST

**Owens Corning** 

Primary data scientist in Owens Corning's Advanced Manufacturing organization. Supported organizational objectives of productivity and cost take-out by building predictive models of manufacturing processes, partnering with SMEs to test "tribal knowledge" with big data and visualization, performing numerous statistical analyses and mentoring other analytics practitioners. As a corporate resource, also provided analytics support to product development and marketing teams throughout OC.

Python

Julia

SQL

Jan 2018 -May 2019

# **DATA SCIENTIST**

**Owens Corning** 

Formative member of a data science team in Owens Corning Science & Technology. Focused on accelerating product development by building predictive and prescriptive applications for product performance/optimization and leveraging large historical datasets for statistical analyses published and/or presented internally. Led three interns while managing multiple projects with competing priorities.

Python JavaScript

2010 & 2011 June - August

# INTERN, ATOMIC & MOLECULAR PHYSICS

Oak Ridge National Laboratory

Leveraged world-class supercomputing resources to model the interaction of hydrogen atoms with carbon nano-structures using classical and semi-classical simulation techniques.

HPC

bash

Fortran

# **EDUCATION**

December 2018 PH.D. The Ohio State University

Physics, 4.0, Specialization: Computational materials physics

Utilized high-performance computing to optimize physical models of atomic-level interactions in metals using evolutionary algorithms.

Python bash C++

May 2015

MASTER OF SCIENCE

The Ohio State University

Physics, 4.0

May 2012

**BACHELOR OF SCIENCE** 

Middle Tennessee State University

Physics and Mathematics, 3.9

# **PUBLICATIONS**

- Using Analytics to Stay Ahead of the Curve in B2B Markets. C. Skinner and R. C. Ehemann, 2018 BGSU Business Anallytics Symposium (2018).
- Force-matched interatomic potentials for tungsten and titanium-niobium. The Ohio State University, December 2017.
- Force-matched empirical potential for martensitic transitions and plastic deformation in Ti-Nb alloys. R. C. Ehemann and J. W. Wilkins. *Physical Review B* **96**, 184105 (2017)
- Ab initio based empirical potential applied to tungsten at high pressure. R. C. Ehemann, J. W. Nicklas, H. Park and J. W. Wilkins. *Physical Review B* **95**, 184101 (2017)
- Detection of hydrogen using graphene. R. C. Ehemann, P. S. Krstic, J. Dadras, P. R. Kent and J. Jakowski. *Nanoscale Research Letters* **7**, 198 (2012)

### PRESENTATIONS

- Artificial Intelligence and Machine Learning: Theory and Application in Owens Corning S&T, Owens Corning S&T Tech Talk, April and May 2019.
- It's a Bird, It's a Blade, it's Super-H!, Poster (co-author), Owens Corning Science & Technology Poster Session, 2018. Awarded best poster.
- *Innovating Innovation*, Poster, Owens Corning Science & Technology Poster Session, 2018.
- A Novel Empirical Potential for Modeling Martensitic Transformations in Ti-Nb Alloys, Poster, OSU Materials Week 2016. Awarded best poster.
- Atomistic Modeling of Ti-Nb Alloys, Poster, Ohio Supercomputing Center Statewide Users Group Meeting 2015. Awarded best poster.
- Toward a Versatile Molecular Dynamics Potential for the Ti-Nb Alloy System, Poster, OSU Materials Week 2015.

#### **★** AWARDS & HONORS

- Slater Innovation Award, Owens Corning Science & Technology, 2018. Awarded for the development of a high-impact predictive model
- Trumbull Asphalt Breakthrough Award, Owens Corning, 2018.
- Winner, Owens Corning Science & Technology Poster Session, 2018
- University Fellowship, The Ohio State University Graduate School, 2012–2016
- Fowler Fellowship, The Ohio State University Department of Physics, 2012–2014
- Barry M. Goldwater Scholarship, Barry Goldwater Scholarship & Excellence in Education Foundation. 2011–2012

#### **LANGUAGES**

English - native German - proficient Polish - rudimentary

#### HOBBIES

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#### NON PROFIT

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