HC MULTI- DISCIPLINE FACULTY STAFF MIXER

February 9, 2021

Oregon State University

College of Engineering and HC Thesis Mixer

Oregon State University
College of Engineering

Teaching

- *Introduction to CBEE*
- *Polymer Science &Engineering*
- *Transport Phenomena (3rd Yr CBEE)*
- *UHC Colloquia –*
  - *Plastics for Poets (Sp)*
  - *Energy IQ (W)*
  - *STEM Outreach (Sp)*

Skip Rochefort
School of Chemical, Biological, and Environmental Engineering
Gleeson 205
541-737-2408
skip.rochefort@oregonstate.edu

Research

Anything related to POLYMERS!

Plastics Processing and Recycling
Biomaterials
Environmental Sustainability
Engineering Education
K-12 Outreach

Thesis Topic Ideas/Opportunities

- *Waste Plastics to Fuel (Pyrolysis/Gasification)*
- *Fire Resistant Roof Design for Wildfire areas*
- *Hydrogels for Delivery of Botanicals*
- *Menstrual Health & Hygiene - Botswana (Bill and Melinda Gates Foundation)*

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No Teaching by Torres

Check out our the GEMM Lab blog:
https://blogs.oregonstate.edu/gemmlab/

Leigh Torres

Marine Mammal Institute, GEMM Lab

Dept. Fisheries and Wildlife

Leigh.torres@oregonstate.edu
https://mmi.oregonstate.edu/gemm-lab

Rebecca A. Hutchinson

School of EECS / Dept. of Fisheries, Wildlife, & Conservation Sciences

rah@oregonstate.edu

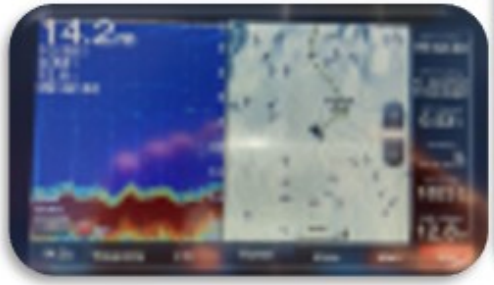
Research

Torres: The GEMM Lab focuses on the ecology, behavior, health, and conservation of marine megafauna. We aim to fill knowledge gaps about species behavior and distribution patterns so that conservation efforts can be more directed and effective at reducing space-use conflicts with human activities.

Hutchinson: My research is at the intersection of machine learning and ecology. I am part of the computational sustainability community, trying to find ways that computer science can contribute to promoting the health of the Earth's ecosystems and bringing interesting new problems back to computer science.

♥ Thesis Topic Ideas/Opportunities

Apply computer science techniques (i.e., machine learning) to analyze large spatial datasets on whale prey or vessel traffic to relate to whale distribution data, and thus help us understand drivers of habitat use patterns and spatial threats to whales.



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Raffaele de Amicis

School of Electric Engineering and Computer Science;
2061, Kelley Engineering Center
+1 541 737 0741
raffaele.deamicis@oregonstate.edu

Teaching

- ***Software Engineering***
- ***Virtual Reality and Augmented Reality***

Thesis Topic Ideas/Opportunities

- ***Data analytics using Virtual Globe.***
- ***Interactive Geo-data visualization.***
- ***Novel User Interfaces navigating Virtual Globe.***
- ***Interactive Spatiotemporal Reasoning.***

- ***Virtual Reality to improve Construction Engineering.***
- ***Building inspirational virtual environments.***
- ***Generative Design in virtual environments.***
- ***Design review in virtual environments.***
- ***Virtual Reality in the architectural design process.***

Research

Dr. De Amicis' research focuses on the possibilities provided by Mixed Reality technologies in the area of design, creativity, and analytics.

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Undergraduate Teaching

Spring 2021:
MATS 413 *Thermodynamics & Phase Equilibria of Materials* (4 cr)

Proposed for AY 2021/22:
HC 407 *Materials, Art, & Culture* (1 cr)

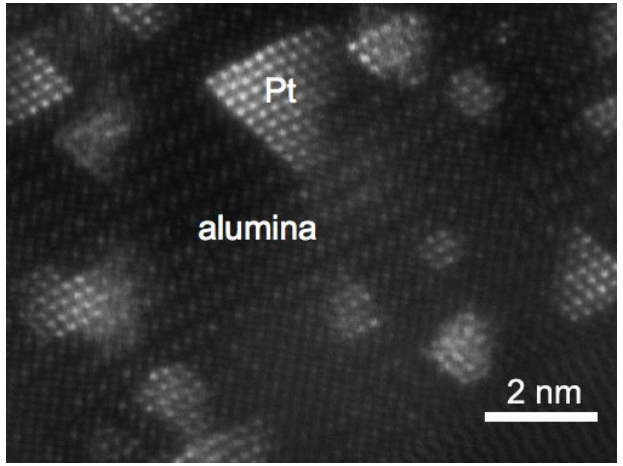
Melissa K. Santala

Assistant Professor
School of MIME
307 Dearborn Hall
melissa.santala@oregonstate.edu

Research

Microscopy plays a key role in the Santala group for studying materials, including:

- materials' structure
- phase transformations



Thesis Topic Opportunities

Undergraduate projects can be developed focus on the characterization of:

- light-weight, high-strength metal alloys
- bulk metallic glasses
- materials for memory devices

Todd Pugatch

- School of Public Policy (Economics)
- Webpage: people.oregonstate.edu/~pugatcht
- Contact: todd.pugatch@oregonstate.edu

Todd Pugatch
School of Public Policy (Economics)

- Research:
  - International economic development
  - Economics of education
- Big question: how can education systems work better, and for more people?

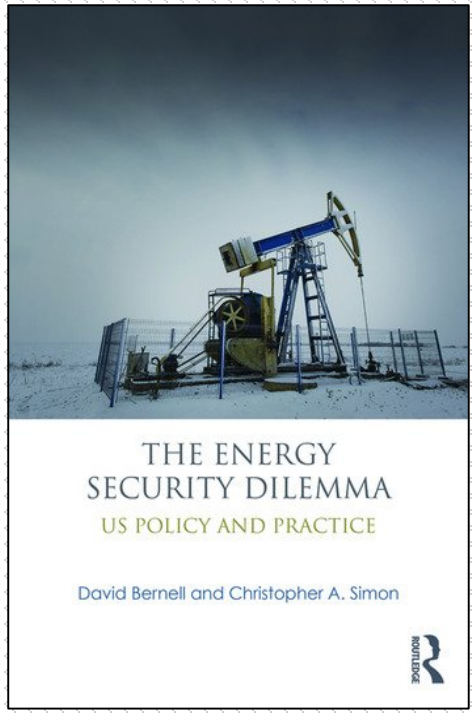
Webpage: people.oregonstate.edu/~pugatcht

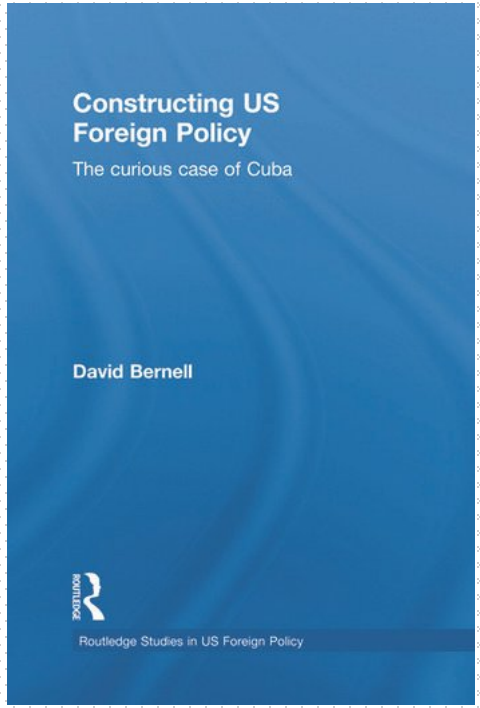
Contact: todd.pugatch@oregonstate.edu

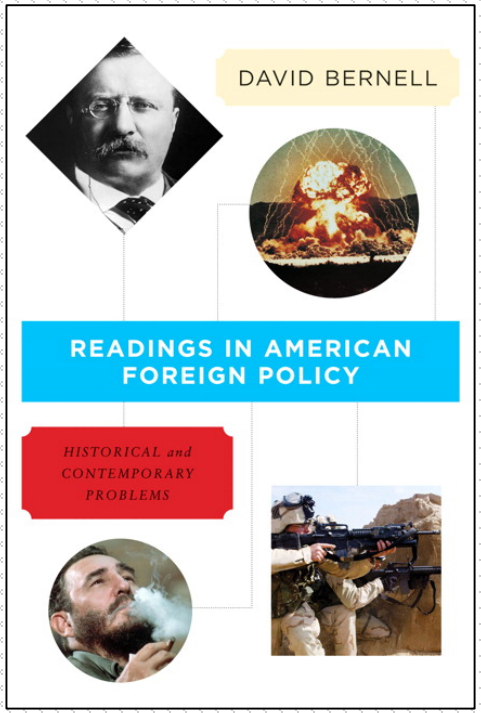
Dr. David Bernell

OSU School of Public Policy

david.bernell@oregonstate.edu







Classes Taught

US Energy Policy
Terrorism and Global Security
Nuclear Nonproliferation
US Foreign Policy
International Political Economy

Thesis advising for topics involving energy policy, international relations, US foreign policy, and American politics.

PATRICIA FIFITA, PhD

Department of Ethnic Studies & Anthropology

RESEARCH AREAS & INTERESTS:

- Interdisciplinary and Intersectional scholarship
- Anthropology (medical and environmental) in/of the Pacific Islands/Oceania
- Indigenous theory and methodologies
- Gender studies & Women's Health
- Community Based Participatory Research
- Health and environmental justice
- Traditional Ecological Knowledge (TEK)
- Climate change and food insecurity

Vatia, American Samoa

Plant press – ethnobotanical research

Courses Taught:

ES 101: Introduction to Ethnic Studies
ES 260: Introduction to Pacific Islands Studies
ES 399: Race, Globalization, and Pacific Island Societies
ES/FCSJ 464: Food and Ethnic Identity: Decolonizing Food and the Body
ANTH 317: Peoples of the World – Pacific
ANTH 380H: Introduction to Medical Anthropology (Honors)

DAVID BIESPIEL

Poet-in-Residence

Poetry
Painting
Creativity + Imagination
Interpretation of Dreams
Search for the Good Life

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History and Hope
Authoritarianism and the Individual
United States of Poetry
Poetry of Sex, Drugs, and Rebellion
Poetry Workshop

David DOT biespiel
AT oregonstate DOT edu

DAVID BIESPIEL

Poet-in-Residence at OSU

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Research Interests

Poetry Writing
Creativity + Imagination
Dream Studies

Recent Courses

History and Hope
Authoritarianism and the Individual
United States of Poetry
Poetry of Sex, Drugs, and Rebellion
Poetry Workshop

David DOT biespiel
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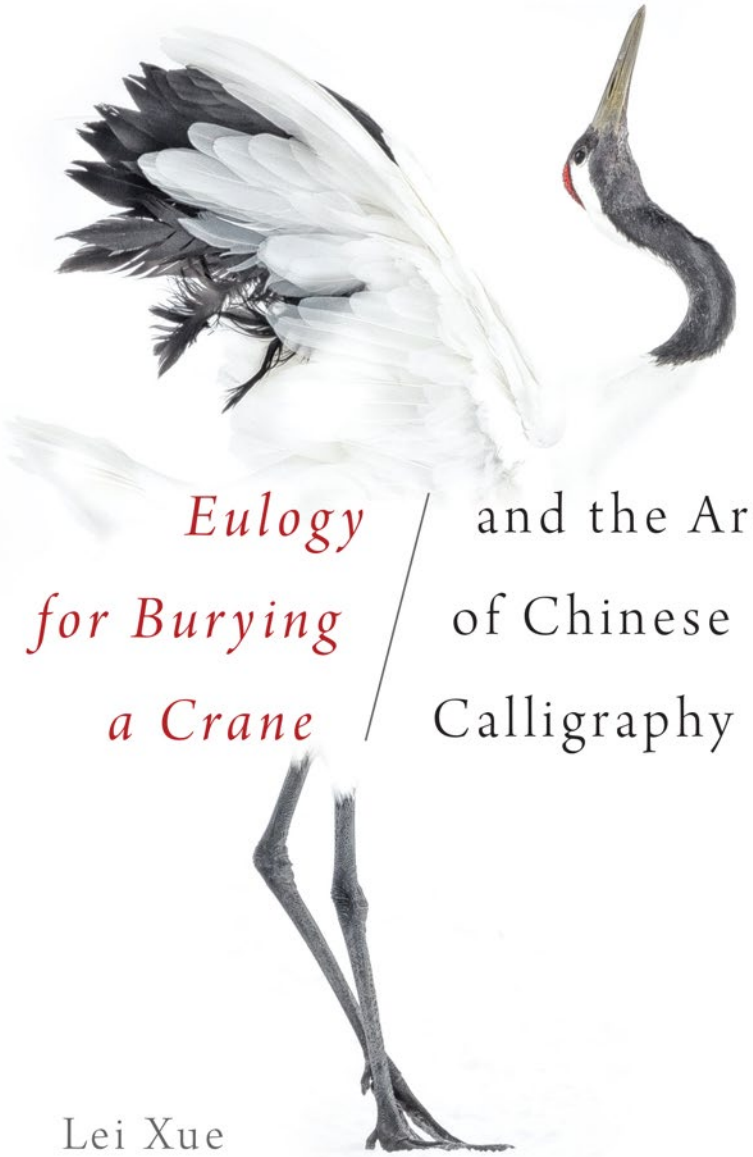
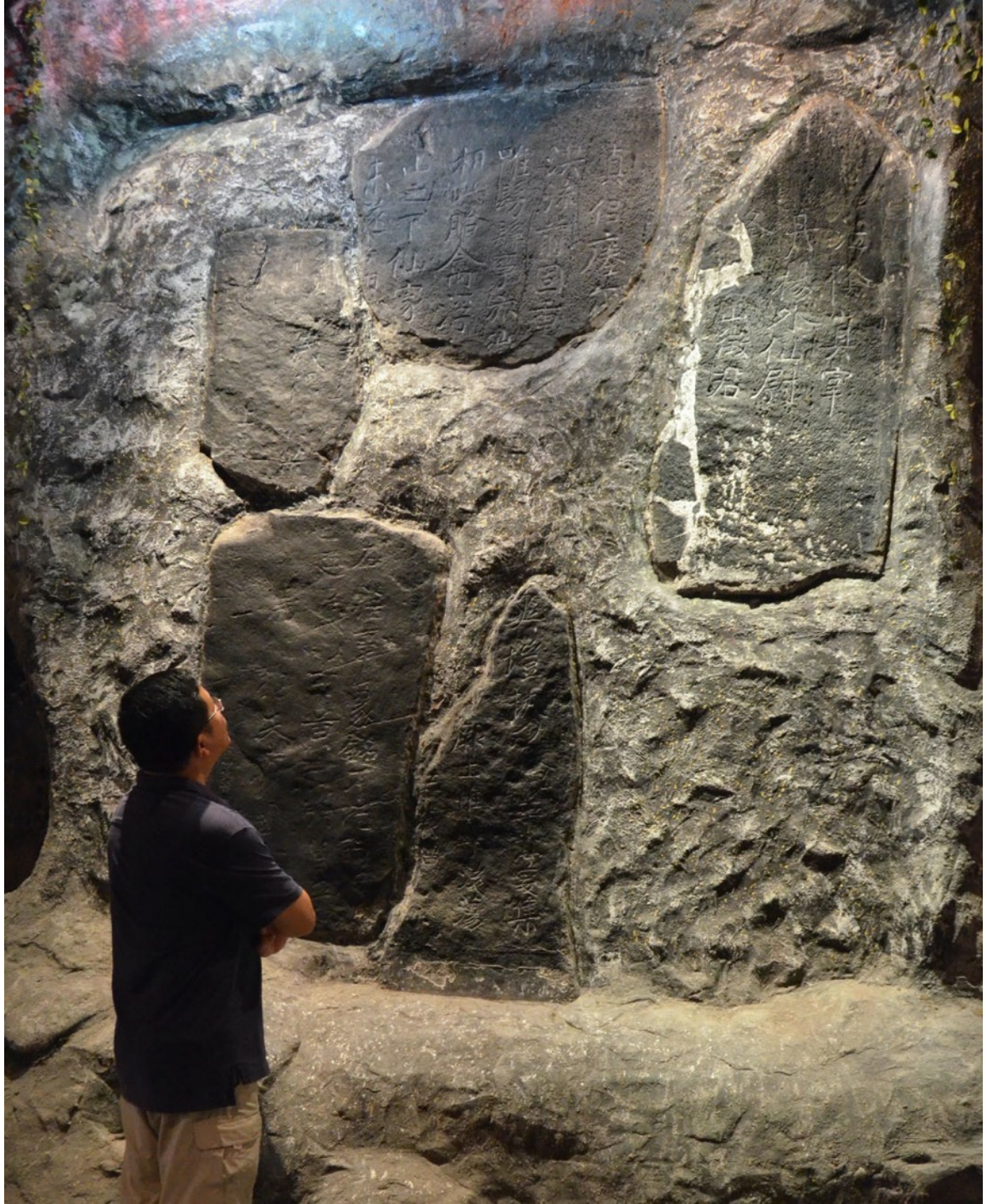


Eulogy for Burying a Crane / and the Art of Chinese Calligraphy

Lei Xue



College of Science and UHC Thesis Mixer

Vrushali Bokil
Mathematics

Kidder 048
sites.science.oregonstate.edu/~bokilv
bokilv@oregonstate.edu

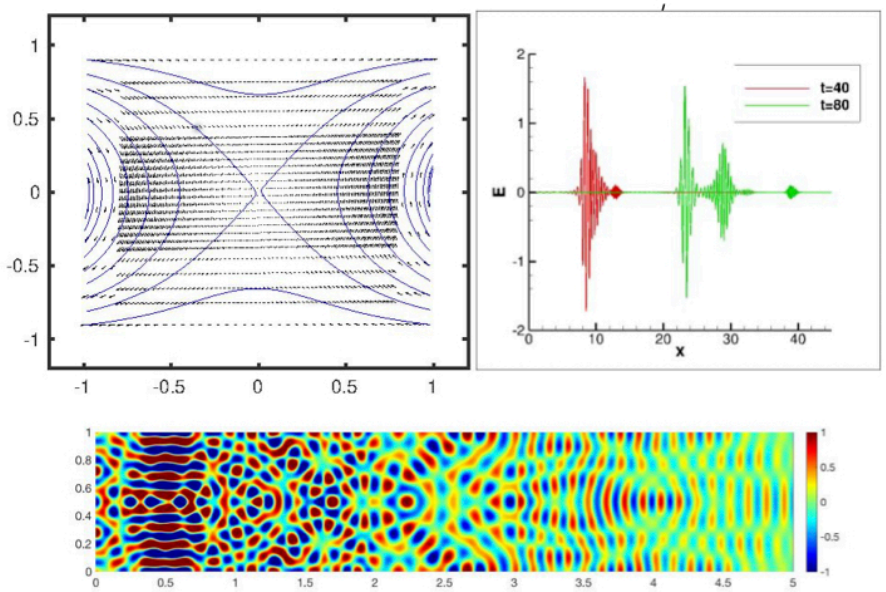
- *Applied Mathematics*
- *Computational Mathematics*
- *Scientific Computing*

APPLICATIONS

Magneto-hydro-dynamics	*Nonlinear Optics*	*Micro-Magnetics*

Possible Thesis Topics

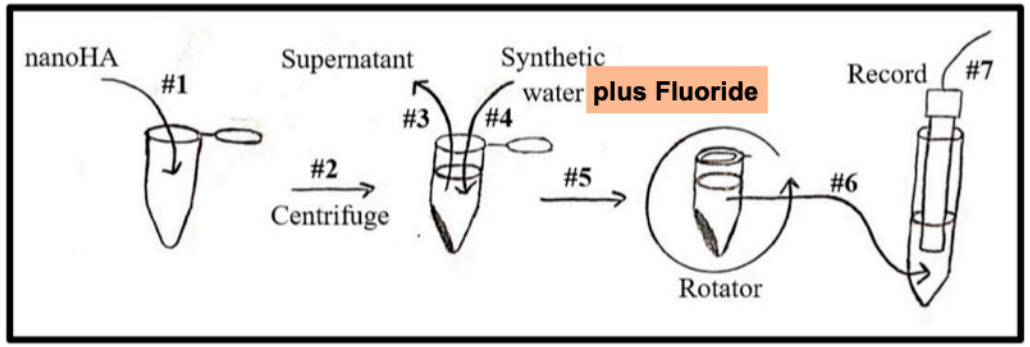
Modeling of Plasma Dynamics	Numerical Simulation of Solitons	Multi-Scale Modeling of Magnetic Materials



Skills??

Math Modelling with Differential Equations (ODEs, PDEs)		*Electro-magnetics*
Numerical Methods	*Computation: MATLAB, C, Python*	*Nonlinear Waves*

"Hard" Protein Chemistry
Phil McFadden lab in the Department of Biochemistry and Biophysics



2. EXPERIMENTAL SYSTEM Fluoride exposure testing

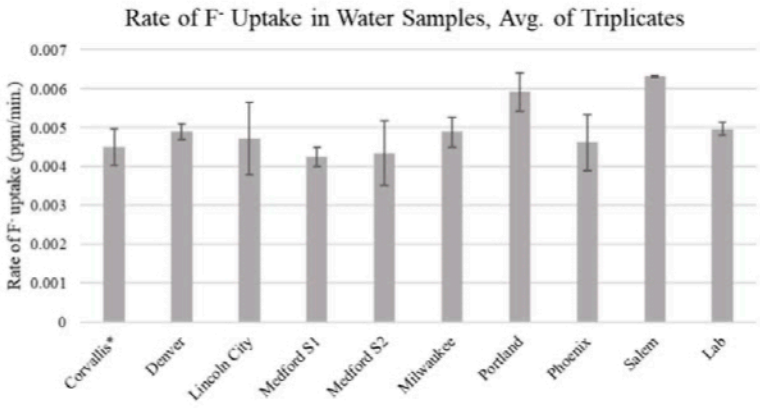
1. QUESTION

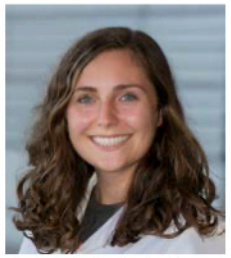
While it is known that tooth enamel is strengthened by fluoride, what is the effect of the background water?

Hydroxyapatite

3. RESULTS

pH 6 is optimal, but aside from that, ten different water sources showed remarkably similar fluoridation potentials.





4. Karissa Renyer
D.M.D. Candidate, Class of 2024
OHSU School of Dentistry

QUESTIONS?