

# Michael Lenard

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## EDUCATION

- M.S.I. Information, University of Michigan School of Information, 2020
- M.S. Physical Chemistry, University of Michigan, 2017
- B.A. Political Science, Michigan State University, 2011
- B.S. Physics, Michigan State University, 2011

## PROFESSIONAL AND ACADEMIC INTERESTS

*Research data:* data curation and management, facilitating access to research data, data cleaning and processing, developing and documenting transparent data workflows

*Natural and social science informatics:* using the principles and techniques of information science to improve, analyze, & interpret data relevant to pressing problems

*Libraries' role in science:* outreach, open & equitable access to scientific research and resources, citizen & community science projects

*Semantics-based knowledge organization:* linked data, taxonomies, ontologies, thesauri, classification schemes, and controlled vocabularies

## WORK, RESEARCH, & PROJECT EXPERIENCE

- 2020– Summer Librarian, University of Michigan Biological Station
  - Provide reference services and instruction to UM Biostation students
  - Assist with collection development and Station data management projects
- 2019– Research Assistant, Thomer Lab, University of Michigan School of Information
  - Analyzed the applicability of the PROV ontology to unstructured dataset descriptions
  - Working on cleaning natural history data and fitting it to appropriate data models
- 2018–20 Resident & Program Assistant, Shapiro Design Lab, University of Michigan Library
  - Worked on creating data processing workflows for the Lab's Zooniverse projects
  - Worked on crosswalking Ann Arbor biodiversity data to Darwin Core for upload to GBIF
- 2019 Technical Services Project Assistant, University of Michigan Library
  - Analyzed BIBFRAME record dataset to determine data quality and fitness for use
- 2015–17 Research Assistant, Geva Group, University of Michigan Dept. of Chemistry

2013–14 Research Assistant, Hoogstraten Laboratory, Michigan State University Dept. of Biochemistry and Molecular Biology

## TEACHING EXPERIENCE

### University of Michigan

SI 666: Organization of Information Resources (Graduate Student Instructor)

SI 106: Programs, Information, and People (Graduate Student Instructor)

SI 699: Digital Curation Mastery Course (Tutor)

CHEM 125/126: General Chemistry Laboratory I & II (Graduate Student Instructor)

CHEM 453: Biophysical Chemistry I (Graduate Student Instructor)

CHEM 260/261: Chemical Principles & Introduction to Quantum Chemistry (Graduate Student Instructor)

CHEM 230: Physical Chemical Principles and Applications (Graduate Student Instructor)

### Michigan State University

PHY 184: Physics for Scientists and Engineers II (Teaching Assistant)

PHY 232: Introductory Physics II (Teaching Assistant)

PHY 191: Physics Laboratory for Scientists I (Teaching Assistant)

PHY 251: Introductory Physics Laboratory I (Teaching Assistant)

PHY 102: Physics Computations I (Teaching Assistant)

## PUBLICATIONS

### Articles

- 2017 Jafari, M.; Welden, A.; Williams, K.; Winograd, B.; Hendrickson, H.; Lenard, M.; Gottfried, A.; Geva, E. "Compute-to-Learn: Authentic Learning via Development of Interactive Computer Demonstrations within a Peer-Led Studio Environment." *J. Chem. Ed.* 2017 94 (12): 1896–1903. DOI: <https://pubs.acs.org/doi/10.1021/acs.jchemed.7b00032>
- 2015 Wiley, T.; Arruda, B.; Miller, N.; Lenard, M.; Sension, R. "Excited electronic states and internal conversion in cyanocobalamin." *CCL* 2015 26 (4): 439–44. DOI: <https://doi.org/10.1016/j.cclet.2015.03.003>

## PRESENTATIONS

### Posters

- 2020 Lenard, M. "Zooniverse Data Workflows." Poster presented at: UMSI QuasiCon; February 2020; Ann Arbor, MI.

## **SKILLS**

Knowledge of scientific literature, the scientific research process, and the research data lifecycle

Experience with DC, Darwin Core, MARC, BIBFRAME, XML, JSON, RDF, RDFS, SKOS, OWL, PROV, and various other data and metadata standards

Competency with Python, R, SQL, SPARQL, OpenRefine, Protégé, Mathematica

Familiarity with statistical analyses and data cleaning and wrangling techniques (including tidyverse)

Experience working with large, heterogeneous scientific databases and datasets

Ability to learn new systems and software quickly, including *inter alia* integrated library systems, stats packages, various APIs, and database software

## **AWARDS, HONORS, AND FELLOWSHIPS**

2019      Rackham Diversity, Equity, and Inclusion Certificate

2014–17   Rackham Science Award (Fellowship)

2011–12   Kaplan, Strangis and Kaplan Law School Scholarship

2011–12   Dean's Distinguished Scholarship

2010      Herbert T. Graham Scholarship

2006–10   Michigan Competitive Scholarship

## **PROFESSIONAL AND ACADEMIC SOCIETIES**

### **Previous**

2014–19   Graduate Employees Organization #3550

2012–13   qUALMS (the q Undergraduate Association for Linguistics at Michigan State)

2006–13   Society of Physics Students

2012      Asylum Law Project

2011–12   American Constitution Society

2011–12   Minnesota Justice Foundation

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