

# HARPER OKLAHOMA WEEKS WALLACE

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## EDUCATION

**École Normale Supérieure, PSL Research University**, Paris, France Sep 2020–Present  
M.Sc., Cognitive Science (Neuroscience, Modelling) Anticipated: Jun 2022

**Denison University**, Granville, OH Aug 2017–May 2020  
B.S., Biochemistry, *Summa Cum Laude*, ΦBK, with Distinction Rank: 1/569; GPA: 4.00/4

## RESEARCH

**Équipe biophysique et neurosciences théoriques**, École Normale Sup. Aug 2020–Present  
*Ingénieur d'études* (2021–); *Stagiaire* (2020–21); Fulbright Scholar, France

Advisor: Rava A. da Silveira, Ph.D., Directeur de Recherche, Laboratoire de Physique

*Sujet*: Efficient-coding models of choice-behavioral context effects and preference intransitivity

**Reczek Laboratory**, Denison University Jan 2018–May 2020

Undergraduate Research Assistant

Advisor: Joseph J. Reczek, Ph.D., Professor, Department of Chemistry & Biochemistry

Thesis: Controlled alignment of donor-acceptor columnar liquid crystals and interrogation of optical properties for applications in data storage and encryption

## PUBLICATIONS

**Wallace HOW**, Fikri K, Weinstein JN, Weeks WB. Improving economic conditions associated with care pattern and cost changes. *Soc Determ Health*, 7(1), **2021**. <https://doi.org/10.22037/sdh.v7i1.35144>.

**Wallace HOW**, Fikri K, Weinstein JN, Weeks WB. Improving economic conditions matter for mortality: Changes in local economic distress associated with mortality among Medicare fee-for-service beneficiaries between 2003 and 2015. *J Gen Intern Med*, 37(1), **2021**, 249–51. <https://doi.org/10.1007/s11606-020-06410-z>.

Van Winkle M, **Wallace HOW**, Smith N, Pomerene AT, Wood, MG, Kaehr BJ, Reczek JJ. Direct-write orientation of charge-transfer liquid crystals enables polarization-based coding and encryption. *Sci Rep-UK*, 10, **2020**. <https://doi.org/10.1038/s41598-020-72037-z>.

## PATENT

U.S. Patent No. 11,151,345 (B2). Polarization-based coding/encryption using organic charge-transfer materials. Issued **2021** Oct 19. Inventors: Kaehr BJ, Reczek JJ, Van Winkle M, **Wallace HOW**. <https://patents.google.com/patent/US20210165984A1>.

## PRESENTATIONS

**Wallace HOW**, da Silveira RA. Efficient-coding models of choice-behavioral context effects. Oral presentation at the Institute of Molecular and Clinical Ophthalmology Basel; **2021** Oct 13; Basel, Switzerland.

**Wallace HOW**, da Silva RA. An efficient-coding model of choice-behavioral context effects. (Virtual) Poster session presented at the Institute of Molecular and Clinical Ophthalmology Basel; **2021** Jul 15.

**Wallace HOW**, Fikri K, Weinstein JN, Weeks WB. Improving economic conditions matter for mortality among Medicare fee-for-service beneficiaries in the U.S.. (Virtual) Oral presentation at the iHEA World Congress on Health Economics; **2021** Jul 12–15.

**Wallace HOW**, Reczek JJ. Higher-order molecular control of self-assembling DACLCs. (Virtual) Poster session presented at Fundamental Research in Colloids, Surfaces & Nanomaterials Session; Division of Colloid and Surface Chemistry; American Chemical Society National Meeting; **2020** Mar 22–26.

**Wallace HOW**, Reczek JJ. Technology applications of self-assembling DACLCs: Information storage and encryption techniques. Poster session presented at:  
 (a) 23<sup>rd</sup> Annual Posters on the Hill (CUR); **2019** Apr 30; Washington, DC.  
 (b) Undergraduate Research Session; American Chemical Society National Meeting; **2019** Mar 31–Apr 4; Orlando, FL.

## AWARDS & HONORS

Rosalind Swenson Fulbright Enrichment Award, <i>U.S.–France Fulbright Commission</i>	2021
Fulbright Research/Study Grant, France, <i>Fulbright U.S. Student Program</i>	2020
Valedictorian, Class of 2020, <i>Denison University</i>	
Provost’s Academic Excellence Award, <i>Denison University</i>	
ΦBK Academic Honor Society, <i>Denison University</i>	
ΣΞ Scientific Research Honor Society, <i>Denison University</i>	
William C. Ebaugh Award in Chemistry & Biochemistry, <i>Denison University</i>	
Columbus Chapter Award for Outstanding Senior, <i>American Chemical Society</i>	
Barry Goldwater Scholarship, <i>Barry Goldwater Scholarship Foundation</i>	2019
J. Reid & Polly Anderson Scholarship for Excellence in Science, <i>Denison University</i>	
Department Fellow, Chemistry & Biochemistry, <i>Denison University</i>	
Thomas A. Evans Award in Organic Chemistry, <i>Denison University</i>	
AEΔ Pre-Health Honor Society, <i>Denison University</i>	
23 <sup>rd</sup> Annual Posters on the Hill, <i>Council on Undergraduate Research</i>	

## EMPLOYMENT & EXTRACURRICULAR

<b>Kaplan K–12 Learning Services</b> , Live-Online Team	Jan 2018–Present
SHSAT and SAT Prep. Instructor	
<b>Department of Chemistry &amp; Biochemistry</b> , Denison University	Jan 2018–May 2020
Teaching Assistant, Tutor (2018–20); Department Fellow (2019–20)	
<b>Jazz Combo</b> , Denison University	Jan 2018–May 2020
Alto Saxophone I	
ΦΓΔ <b>Fraternity</b> , Denison University	Jan 2018–May 2020
Treasurer, Social Chair (2019–20)	
<b>Residential Communities</b> , Denison University	Jan 2019–Dec 2019
Community Advisor (formerly “Resident Advisor”)	

## SERVICE

<b>Nightline Paris</b> , Paris, France Volunteer Responder, Referee, & Training Screener, English Line	Oct 2020–Feb 2022
<b>FabLab</b> , Collège-Lycée Paul Valéry, Paris, France Robotics and Programming Mentor	Oct 2020–Jun 2021
<b>Pathways of Central Ohio</b> , Newark, OH Crisis Response Specialist, 2-1-1 Crisis Hotline & National Suicide Prevention Lifeline	Jun 2018–Mar 2020
<b>FIRST Robotics</b> , Granville, OH Middle and High Schools Programming Mentor	Jan 2018–Mar 2020

## TECHNICAL PROFICIENCIES

<b>Programming</b> Python, Swift, Java, C#, C++, Obj-C	<b>Markup</b> L <sup>A</sup> T <sub>E</sub> X
<b>Data Analysis &amp; DBMS</b> MATLAB, R, Python, Excel, SQL	<b>Languages</b> English (native), French (C1)

## PERSONAL ACHIEVEMENTS

Semi-Marathon du Carnaval, Dunkerque, France, 1:49:13	31 Oct 2021
Harmonie Mutuelle Semi-Marathon de Paris, France, 1:59:20	5 Sep 2021
Prouty Century, NH, 5:39:43	14 Jul 2019
Prouty Century, NH, 6:09:32	13 Jul 2018
El Camino Portugués, Lisbon, Portugal–Santiago de Compostela, Spain	1–15 Jun 2016