

AYOKUNLE OLANREWAJU, Ph.D.

University of Washington

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EDUCATION

- 2017 **McGill University**, Montreal, Quebec, Canada
Ph.D. Biological and Biomedical Engineering
Thesis: 3D-printed Capillary Circuits for Autonomous Liquid Delivery
Advisor: David Juncker
- 2011 **University of Alberta**, Edmonton, Alberta, Canada
MSc, Biomedical Engineering
- 2008 **University of Alberta**, Edmonton, Alberta, Canada
BSc (with Distinction), Electrical Engineering (Biomedical Option)

RESEARCH APPOINTMENTS

- 2022 - **University of Washington**
Assistant Professor, Mechanical Engineering Department
Joint Appointment, Bioengineering Department
Member, Center for AIDS Research
Member, Institute for Translational Health Sciences
Member, Institute for Nano-Engineered Systems
Member, Molecular Engineering & Sciences Institute
- 2020 - 21 **University of Washington**
Acting Assistant Professor, Mechanical Engineering Department
- 2018 – 20 **University of Washington**
Postdoctoral Fellow, Mechanical Engineering Department
Advisors: Jonathan Posner (Mechanical Engineering, Chemical Engineering, Family Medicine)
and Paul Drain (Epidemiology, Global Health, and Medicine)
- 2017 – 18 **McGill University & Soreal Inc**
Industrial Postdoctoral Fellow, Biomedical Engineering Department
- 2010 – 11 **University of Alberta**
Laboratory Technologist, Microfluidics Development Group

RESEARCH INTERESTS

Point-of-care Diagnostics, Microfluidics & Capillary-driven Flow, 3D-printing & Rapid Prototyping, Medication Adherence & Therapeutic Drug Monitoring, Precision Medicine, Personalized Medicine, Functional Assays

SELECTED AWARDS & RECOGNITION

- 2021 International AIDS Society (IAS)/ France Recherche Nord & Sud Sida-HIV Hépatites (ANRS) Lange/van Tongeren Prize for Young Investigators.
- 2021 University of Washington [Undergraduate Research Mentor Award](#)
- 2021 Selected in the inaugural class of [Black Trailblazers in Engineering Fellows](#)
- 2021 Featured on [Cell Mentor's List of 1,000 inspiring Black scientists](#)

CV, Olanrewaju

- 2020 – 22 University of Washington/Fred Hutch Center for AIDS Research New Investigator Award
- 2019 – 20 Mistletoe Research Fellowship
- 2019 1st Place, Elevator Speech Contest, American Society for Cell Biology Annual Meeting:
<https://youtu.be/r2USzdRwVSY>
- 2017 – 18 MITACS Elevate Industrial Postdoctoral Fellowship
- 2017 Québec Étudiant-Chercheur étoiles (Star Student Researcher)
- 2017 1st Place, Shark Tank Competition, MicroTAS 2017 Conference:
<https://youtu.be/zqPDxmFFDW8>
- 2017 Top 15, Canada-wide NSERC Science Action! Video Competition:
<https://youtu.be/PzED8k9HQNU>
- 2014 Quebec International Merit Scholarship for Foreign Students
- 2012 – 15 CIHR Systems Biology Training Program PhD Fellowship
- 2012 – 14 NSERC CREATE Integrated Sensor Systems PhD Fellowship
- 2012 McGill University Biomedical Engineering Department Recruitment Award
- 2009 – 10 Alberta Innovates Graduate Scholarship in Nanotechnology
- 2007 DAAD Research Internship in Science and Engineering (RISE) student, Institute for Robotics and Cognitive Systems, University of Lübeck, Germany

FUNDING

Awarded funding

- 2022 – 23 **Title:** pHastCam: an affordable, rapid blood pH detector for assessment of neonatal hypoxic ischemic encephalopathy after birth in low-resource settings
Role: Principal Investigator (Co-investigators: Perez, Valentine, Wood, Nelson, Robinson)
Sponsor: University of Washington Royalty Research Fund
Project Period: 01-July-2022 to 30-June-2023, **Amount:** \$40,000
- 2022 – 23 **Title:** Autonomous microfluidic devices for therapeutic monitoring of antiretroviral drugs at the point of need.
Role: Principal Investigator
Sponsor: Northwest Nanotechnology Infrastructure Seed Grant
Project period: 01-May-2022 to 30-April-2023, **Amount:** \$8,000
- 2021 – 22 **Title:** Target Product Profile for a Point-of-Care Assay for HIV Medication Adherence Monitoring
Role: Principal Investigator
Sponsor: UW/Fred Hutch Center for AIDS Research iCFAR Award
Project period: 01-September-2021 to 31-August-2022, **Amount:** \$15,000
- 2021 – 22 **Title:** Fast HIV drug level monitoring
Role: Principal Investigator
Sponsor: Atlanta Center for Microsystems Engineered Point of Care Technologies
Project period: 01-April-2021 to 31-March-2023, **Amount:** \$132,500

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- 2020 – 25 **Title:** A novel REVerSe TRanscriptase Chain Termination (RESTRIC) assay for near-patient, objective monitoring of long-term pre-exposure prophylaxis (PrEP) adherence
Role: Co-Investigator (Principal Investigators: Posner, Drain)
Sponsor: National Institutes of Health – NIH/NIAID R01-AI157756
Project period: 09-November-2020 to 31-October-2025, **Amount:** \$3,839,095
- 2020 – 22 **Title:** A rapid enzymatic assay for measurement of adherence to pre-exposure prophylaxis
Role: Principal Investigator
Sponsor: UW/Fred Hutch Center for AIDS Research New Investigator Award
Project period: 01-July-2020 to 30-June-2023, **Amount:** \$90,000
- 2020 – 21 **Title:** Rapid test for measuring adherence to pre-exposure prophylaxis and antiretroviral therapy for HIV
Role: Co-Investigator (Principal investigator: Drain)
Sponsor: CoMotion Innovation Gap Fund
Project period: 01-January-2020 to 31-December-2022, **Amount:** \$50,000,
- 2021 **Title:** Sensit-IV: Diagnostic for Early Shock Detection and Fluid Administration
Role: Principal Investigator
Sponsor: VentureWell
Project Period: 30-June-2021 to 31-Dec-2022, **Amount:** \$20,000
- 2021 **Title:** Open Flow Microperfusion for shock evaluation and treatment
Role: Co-investigator (Principal Investigators: Beni, Stewart)
Sponsor: M.J. Murdock Diagnostics Foundry for Translational Research
Project period: 01-March-2021 to 30-June-2021, **Amount:** \$10,000
- 2021 **Title:** Development of low-cost, rapid blood pH detector for assessment of neonatal hypoxic ischemia encephalopathy after birth in low resource settings
Role: Co-investigator (Principal Investigator: Perez)
Sponsor: M.J. Murdock Diagnostics Foundry for Translational Research
Project period: 01-March-2021 to 30-June-2021, **Amount:** \$9,000
- 2019 – 20 **Title:** Unfettered Research Grant
Role: Principal Investigator
Sponsor: Mistletoe Research Fellowship (now Momental Foundation)
Project period: 01-September-2019 to 30-June-2020, **Amount:** \$10,000

PUBLICATIONS

(* Denotes students that I mentored)

Peer-Reviewed Journal Articles

- [10] **Olanrewaju A.O**, Sullivan BP, Gim A*, Craig CA*, Sevenler D, Bender AT, Drain PK, Posner JD. (2022) REVerSe Transcriptase Chain Termination (RESTRIC) for Selective Measurement of Nucleotide Analogs Used in HIV Care and Prevention. *Bioengineering & Translational Medicine*. doi.org/10.1002/btm2.10369
- [9] Zhang J, Zhang Y, Sullivan B, **Olanrewaju A**, Bender A, Lillis L, Boyle D, Drain P, Posner J, (2020) HIV Pre-Exposure Prophylaxis Adherence Test Using Reverse Transcription Isothermal Amplification Inhibition Assay. *Analytical Methods*. doi.org/10.1039/D2AY00008C

- [8] Yafia M, Ymbern O, **Olanrewaju A**, Parandakh A, Sohrabi Kashani A, Renault J, Jin Z, Kim G, Ng A, Juncker D. (2022) Microfluidic Chain Reaction. *Nature*. doi.org/10.1038/s41586-022-04683-4
- [7] **Olanrewaju A.O**, Sullivan B.P, Bardon A.R, Lo T.J*, Cressey T.R, Posner J.D, Drain P.K, (2021) Pilot Evaluation of a Rapid Enzymatic Assay for Measuring Antiretroviral Drug Concentrations. *Virology Journal*. doi.org/10.1186/s12985-021-01543-x
- [6] Seah Y.M, Chang A.M, Dabee S, Davidge B, Erickson J.R, **Olanrewaju A.O**, Price R.M, (2021) Pandemic-related instructor talk: how new instructors supported students at the onset of the COVID-19 pandemic, *Journal of Microbiology Education*. doi.org/10.1128/jmbe.v22i1.2401.
- [5] Drain P.K, Bardon A.R, Simoni J.M, Cressey T.R, Anderson P, Sevenler D, **Olanrewaju A.O**, Gandhi M, Celum C. (2020) Point-of-Care and Near-Patient Antiretroviral Testing for Monitoring Adherence to HIV Treatment and Prevention, *Current HIV/AIDS Reports*. doi.org/10.1007/s11904-020-00512-3
- [4] **Olanrewaju A.O**, Sullivan B.P, Zhang J.Y, Bender A.T, Sevenler D, Lo T.J*, Fernandez-Suarez M, Drain P.K, and Posner J.D. (2020) Enzymatic Assay for Rapid Measurement of Antiretroviral Drug Levels. *ACS Sensors*. doi.org/10.1021/acssensors.9b02198.
- [3] **Olanrewaju A.O**, Beaugrand M, Yafia M, and Juncker D. (2018) Capillary microfluidics in microchannels: from microfluidic networks to capillare circuits, *Lab on a Chip*. doi.org/10.1039/C8LC00458G.
- [2] **Olanrewaju A.O**, Ng A, DeCorwin-Martin P, Robillard A*, and Juncker D. (2017) Microfluidic Capillare Circuit for Rapid and Facile Bacteria Detection, *Analytical Chemistry*. doi.org/10.1021/acs.analchem.7b01315
- [1] **Olanrewaju A.O**, Robillard A*, Dagher M, and Juncker D. (2016) Autonomous Microfluidic Capillare Circuits Replicated from 3D-Printed Molds", *Lab on a Chip*. doi.org/10.1039/C6LC00764C.

Oral Presentations

- [6] **Olanrewaju A.O**, Gim A.H, Sullivan B.P, Posner J.D, and Drain P.K (2021) A rapid enzymatic assay for selective detection of HIV drugs that indicate long-term and short-term PrEP adherence, *11th IAS Conference on HIV Science*, Virtual, Summer 2021.
- **Received International AIDS Society (IAS)/ France Recherche Nord & Sud Sida-HIV Hépatites (ANRS) Lange/van Tongeren Prize for Young Investigators.**
- [5] **Olanrewaju A.O**, Yafia M, Beaugrand M, Pospel F, and Juncker D (2017) Domino Capillare Circuits: 3D-Printed Capillary Microfluidics for Scalable, Sequential, and Simultaneous Liquid Delivery, *21st International Conference on Miniaturized Systems for Chemistry and Life Sciences*, Savannah, USA.
- **<10% acceptance rate among ~1,000 attendees.**
- [4] **Olanrewaju A.O** and Juncker D, (2016) Design Rules for 3D-Printed Autonomous Capillare Circuits, *20th International Conference on Miniaturized Systems for Chemistry and Life Sciences*, Dublin, Ireland.
- **<10% acceptance rate among ~1,000 attendees.**
- [3] **Olanrewaju A.O**, Ng A, Robillard A*, and Juncker D, (2015) 3D-Printed Capillare Circuits for Ultrarapid Bacteria Detection Using Packed Bead Columns Assembled On-the-spot, *19th International Conference on Miniaturized Systems for Chemistry and Life Sciences*, Gyeongju, Korea.
- **<10% acceptance rate among ~1,000 attendees**

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- [2] **Olanrewaju A.O**, Safavieh R, and Juncker D. Bacteria Capture in Capillary-Driven Microfluidic Device, (2014) *2nd Annual Symposium of the Systems Biology Training Program*, McGill University, Montreal, Canada.
- [1] **Olanrewaju A.O**, Behnam M, Martinez-Quijada J, Hejazi F, Banting G, Bidulock A, Groendahl S, Johnstone R.W, Glerum D.M, and Backhouse C.J. (2010) Towards a portable and inexpensive genetic analysis toolkit for point-of-care applications, *Engineering Graduate Research Symposium*, University of Alberta, Canada

Poster Presentations

- [21] Craig C.A., Blake E, Sullivan B.P., Drain P.K., Posner J.D., **Olanrewaju A.O** (2022) Clinical Validation of RESTRICT, a Rapid Enzymatic Assay for Measuring Tenofovir Diphosphate Concentrations, *17th International Conference on HIV Treatment and Prevention Adherence*, Washington, DC, USA
- [20] Oplinger O, Goodwin K, Bardou A, **Olanrewaju A**, Drain P, Iribarren S (2022) Design and implementation of an mHealth technology to support home-based, objective HIV medication adherence monitoring using a human-centered design approach, *17th International Conference on HIV Treatment and Prevention Adherence*, Washington, DC, USA
- [19] Olanrewaju A.O, Sullivan B.P, Gim A.H, Bender A.T, Drain P.K, Posner J.D. (2021) REVerSe TRanscriptase Chain Termination (RESTRICT) Assays for Selective Measurement of Nucleotide Analogs used in Human Immunodeficiency Virus (HIV) Prevention, *Diagnostics for Global Health Workshop*, Virtual Event
- [18] Gim. A.H*, **Olanrewaju A.O**, Sullivan B.P, Drain K.P, Posner J.D. (2020) "Calibrating a Theoretical Model for Rapid, Near-Patient Measurement of Antiretroviral Drug Concentrations", *Gulf Coast Undergraduate Research Symposium*, Virtual Event
- [17] Gim. A.H*, **Olanrewaju A.O**, Sullivan B.P, Drain K.P, Posner J.D. (2020) "Calibrating a Theoretical Model for Rapid, Near-Patient Measurement of Antiretroviral Drug Concentrations", *University of Washington Summer Undergraduate Research Symposium*, Virtual Event
- [16] **Olanrewaju A.O**, Sullivan B.P., Lo, T.J.*, Cressey T.R, Posner J.D., Drain P.K. (2020) Pilot evaluation of an enzymatic assay for rapid measurement of antiretroviral drug concentrations, *Cell Bio Virtual 2020*
- [15] **Olanrewaju A.O**, Sullivan B, Zhang J.Y, Sevenler D, Bender A.T, Lo T.J*, Fernandez-Suarez M, Drain P.K, Posner J.D. (2019) A Rapid Enzymatic Assay for Near-Patient Measurement of Adherence to HIV Pre-Exposure Prophylaxis, *Annual Meeting of the American Society for Cell Biology*
- [14] **Olanrewaju A.O**, Sullivan B, Zhang J.Y, Sevenler D, Bender A.T, Lo T.J*, Fernandez-Suarez M, Drain P.K, Posner J.D. (2019) A Rapid Enzymatic Assay for Near-Patient Measurement of Adherence to HIV Pre-Exposure Prophylaxis, *23rd International Conference on Miniaturized Systems for Chemistry and Life Sciences*, Basel, Switzerland.
- [13] Zhang J.Y, **Olanrewaju A.O**, Bender A.T, Zhang Y, Drain P.K, Posner J.D. (2019) An ultrasensitive, semi-quantitative measurement of HIV nucleoside reverse transcriptase inhibitors (NRTI) with RT-recombinase polymerase amplification (RT-RPA) for rapid PrEP adherence testing. *23rd International Conference on Miniaturized Systems for Chemistry and Life Sciences*, Basel, Switzerland.

- [12] Zhang J.Y, **Olanrewaju A.O**, Bender A.T, Zhang Y, Drain P.K, Posner J.D. (2019) An ultrasensitive, semi-quantitative measurement of HIV nucleoside reverse transcriptase inhibitors (NRTI) with RT-recombinase polymerase amplification (RT-RPA) for rapid ART and PrEP adherence testing, *Annual meeting of the Biomedical Engineering Society (BMES)*, Philadelphia, PA, USA.
- [11] **Olanrewaju A.O**, Sullivan B, Zhang J.Y, Sevenler D, Bender A.T, Lo T.J*, Fernandez-Suarez M, Bardon A.R, Stekler JD, Drain P.K, Posner J.D. (2019) Enzymatic Assay for Near-Patient Measurement of Long-Term ART and PrEP Adherence, *14th International Conference on HIV Treatment and Prevention Adherence*, Miami, FL, USA.
- [10] **Olanrewaju A.O**, Lenzen P*, Ymbern O, Yafia M, and Juncker D. (2018) 3D-Printed Domino Capillary Circuits for Colorimetric Bacteria Detection in Urine, *22nd International Conference on Miniaturized Systems for Chemistry and Life Sciences*, Kaohsiung, Taiwan.
- [9] Ymbern O, Lenzen P*, **Olanrewaju A.O**, Tavakoli A, Yafia M, and Juncker D. (2018) Microchannel-based capillary microfluidics: From simple networks to capillary circuits, *16th IEEE International New Circuits and Systems Conference (NEWCAS)*, Montreal, Canada.
- [8] **Olanrewaju A.O**, Safavieh R, and Juncker D. (2017) The Urine Chip: Rapid Urinary Tract Infection Diagnosis in 7 minutes, *MEDTEQ Forum*, Montreal, Canada
- [7] **Olanrewaju A.O**, Ng A, and Juncker D. (2015) Rapid and inexpensive manufacture of 3D printed capillary circuits for point-of-care diagnostics, *Gordon Research Conference on the Physics & Chemistry Microfluidics*, Vermont, USA.
- [6] **Olanrewaju A.O**, Ng A, and Juncker D. (2014) Capillary Circuits for Fast and Sensitive Bacteria Detection, *Annual Meeting of the Biomedical Engineering Society (BMES)*, San Antonio, USA.
- [5] Laforte V, **Olanrewaju A.O**, and Juncker D. (2013) Low-cost, high liquid volume silicon quill pins for robust and reproducible printing of antibody microarrays, *17th International Conference on Miniaturized Systems for Chemistry and Life Sciences*, Freiburg, Germany.
- [4] Safavieh R, **Olanrewaju A.O**, and Juncker D. (2013) Autonomous capillary microfluidic systems for time-sensitive delivery of multiple liquids, *NSERC CREATE Integrated Sensor Systems Summer School*, Montreal, Canada.
- **Received Best Poster Award.**
- [3] Safavieh R, **Olanrewaju A.O**, and Juncker D. (2013) Autonomous capillary microfluidic systems for time-sensitive delivery of multiple liquids, *Systems Biology Training Program Symposium*, McGill University, Montreal, Canada
- [2] Safavieh R, **Olanrewaju AO**, and Juncker D. (2012) Capillary-based microfluidic system for sequential delivery of multiple liquids, *Microfluidics 2.0: Workshop on Capillary-based Microfluidics for Bioanalysis*, Boston, USA.
- [1] Behnam M, **Olanrewaju A.O**, Martinez-Quijada J, Hejazi F, Banting G, Bidulock A, Groendahl S, Johnstone R.W, Glerum D.M, Backhouse C.J. (2010) Inexpensive and portable sample-in-answer-out genetic analysis systems for point of care applications, *14th International Conference on Miniaturized Systems for Chemistry and Life Sciences*, Groningen, Netherlands.

PATENT APPLICATIONS

- [4] Perez K, Nelson L, Robinson T, Freaney A, Van H, **Olanrewaju A**, Valentine G, Seibel E, Fan E, Posner J, Sharma M (2021) Systems and Methods for Rapid Blood pH Detection, Application 63/279,560
- [3] **Olanrewaju A.O**, Sullivan B.P, Sevenler D, Bender A.T, Zhang J.Y, Sandlin R.D, Drain P.K, Posner J.D. (2019) An enzymatic assay to measure long-term adherence to pre-exposure prophylaxis and antiretroviral therapy, PCT/US2020/037609.
- [2] Juncker D, **Olanrewaju A.O**, and Yafia M. (2017) Domino Capillary Circuits: 3D-Printed Capillary Microfluidics for Scalable, Sequential, and Simultaneous Liquid Delivery, US Provisional Patent Application 62/575418.
- [1] Juncker D, and **Olanrewaju A.O**. (2015) Fluidic Circuits and Methods for Bacterial Screening, PCT/CA2016/051232.

INVITED LECTURES AND SEMINARS

- | | |
|---------|---|
| 11/2021 | University of Washington, Department of Bioengineering “ <i>Activity Based Diagnostics for Therapeutic Drug Monitoring</i> ”. |
| 10/2021 | Institute for Nano-Engineered Systems (NanoES), University of Washington, “ <i>Capillary microfluidics for user-friendly, minimally instrumented, and scalable liquid delivery operations</i> ”. |
| 10/2021 | Center for Engineering in Medicine & Surgery (affiliated with the Massachusetts General Hospital, Harvard Medical School, Shriners Burns Hospital, and Massachusetts Institute of Technology), “ <i>Functional Assays for therapeutic monitoring of antiretroviral therapy</i> ”. |
| 07/2021 | Emerging Investigators in Microfluidics Conference (EIMC), “ <i>Towards Point-of-Care Measurement of Medication Levels to Improve Human Immunodeficiency Virus (HIV) Health Outcomes</i> .” |
| 06/2021 | University of British Columbia, School of Biomedical Engineering, “ <i>Measurement of antiviral drugs for improving human immunodeficiency virus (HIV) treatment and prevention</i> .” |
| 04/2021 | University of Washington, Mechanical Engineering Department, “ <i>Measurement of antiviral drugs for improving human immunodeficiency virus (HIV) treatment and prevention</i> .” |
| 03/2021 | University of British Columbia, Mechanical Engineering Department, “ <i>Towards point-of-care measurement of antiviral drugs for improving human immunodeficiency virus (HIV) treatment and prevention</i> .” |
| 02/2021 | University of Washington, Chemistry Department, “ <i>Functional assays for measuring nucleotide analogs used in antiviral therapy</i> .” |
| 10/2020 | Boston University, Biomedical Engineering Department, Emerging Scholars Symposium, “ <i>Towards point-of-care detection of antiretroviral drug concentrations for improving human immunodeficiency virus (HIV) treatment and prevention</i> .” |
| 10/2020 | University of Washington, Mechanical Engineering Department, “ <i>Towards a rapid and accessible test for measuring antiviral drug levels to improve HIV treatment and prevention</i> .” |
| 07/2020 | University of Washington, Undergraduate Research Program, “ <i>My Research, Motivation, and Journey in Academia</i> .” |

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- 06/2020 University of Washington, Diversity in UW STEM Research Seminar, “*Developing diagnostic tools to monitor the effectiveness of antiretroviral treatment and prevention.*”
- 06/2020 University of Washington, Molecular Engineering & Sciences Institute, “*An enzymatic assay for fast and accessible measurement of antiretroviral drug levels.*”
- 02/2020 University of Washington, Bioengineering Department, “*Towards a fast and accessible test for measuring medication adherence to HIV treatment and prevention.*”

TEACHING EXPERIENCE

During Independent Faculty Position

Spring 2022 ME 536 Microfluidics for Global Health (4.8/5)

Before Independent Faculty Position

- 2020 – 21 **Mentor**, ME 498, Engineering Innovations in Health program
- *EquinOx*: developing pulse oximeters that account for skin tone differences to reduce measurement error
 - Won 3rd Prize in 2022 Hollomon Health Challenge
 - Won Best Idea for Addressing Health Access and Disparities Prize
- 2022 **Guest Lecturer**, ENGR 115, Engineering Transformation of Health, University of Washington
- 2021 **Guest Lecturer**, GEN ST 391, Research Exposed! Undergraduate Research Program and Undergraduate Academic Affairs, University of Washington
- 2021 **Guest Lecturer**, PHARMACY 580A, Current Trends in Pharmacy Practice and Science, School of Pharmacy, University of Washington
- 2020 – 21 **Mentor**, ME 498, Engineering Innovations in Health program
- *Sensit-IV*: bedside microfluidic device for measuring biomarkers of hypoxic shock
 - *pHast Cam*: rapid detection of neonatal blood pH to detect hypoxic ischemic encephalopathy in low-resource settings
 - *Bilocult*: point-of-care bile detection to diagnose pediatric intestinal obstruction
- 2020 **Guest Lecturer**, BIOEN 457/557, Advanced Molecular Engineering, Bioengineering Department, University of Washington
- 2020 **Guest Lecturer**, GEN ST 297, Diversity in UW STEM Research Seminar, University of Washington
- 2020 **Guest lecturer**, BIOEN 485/585, Computational Bioengineering, Molecular Engineering & Sciences Institute, University of Washington
- 2020 **Co-Instructor**, Biology 285A: Diseases, Diagnostics, and Treatments, University of Washington
- Science Teaching Experience Program: Working in Science Education
- 2012 – 17 **Instructor**, Hands-on workshop in Micro- and Nano-bioengineering, McGill University
- 2012 **After-school Tutor**, Let’s Talk Science Outreach Program, McGill University
- 2009 – 10 **In-class Presenter**, Let’s Talk Science Outreach Program, University of Alberta
- Received Most Outstanding Health Workshop Volunteer Award

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- 2009 **Teaching Assistant**, EE 457, Microfabrication and Devices, Electrical and Computer Engineering Department, University of Alberta
- 2005 **Instructor**, DiscoverE Science & Engineering Camps, University of Alberta

RESEARCH ADVISING

Thesis Committees at the University of Washington

- 2022 Ashley Dostie, Chemistry
- 2022 Xin Niu, Epidemiology
- 2022 Kevin Jiang, Bioengineering
- 2022 Shane Gilligan-Steinberg, Bioengineering
- 2022 Alexander Yan, Bioengineering

Graduate Students Mentored

- 2021 – now Cosette Craig, PhD Student, Mechanical Engineering, University of Washington (UW)
- Co-supervised with Jonathan Posner
 - Received TL-1 Predoctoral Training Fellowship from the Institute for Translational Health Sciences
- 2021 – 22 Kelsey Leong, Master's student, Materials Science, UW
- 2020 – 21 Ross Nelson, Master's student, Chemical Engineering, UW
- 2019 – 20 Tiffany Lo, Master's student, Materials Science & Engineering, UW
- 2018 Philippe Lenzen, Master's student, Biomedical Engineering, McGill University
- On exchange from École Polytechnique Fédérale de Lausanne, Switzerland
- 2016 Florian Possel, Master's student, Biomedical Engineering, McGill University
- On exchange from University of Tübingen, Germany

Undergraduate Students Mentored

- 2022 – now Auden Gostin, Chemical Engineering, UW
- 2022 – now Caitlyn Kwong, Engineering (Undeclared), UW
- 2022 – now Carrie Lin, Mechanical Engineering, UW
- 2022 – now Catherine Rodgers, Bioengineering, UW
- 2022 – now Diya Rekhi, Engineering (Undeclared), UW
- 2022 Felix Guo, Mechanical Engineering, UW
- 2022 – now Madison Walenta, Bioengineering, UW
- 2022 – now Mindy Quach, Mechanical Engineering, UW
- 2022 – now Nadir Ziane, Chemical Engineering, UW
- 2022 – now Zoe Blumenkranz, Engineering (Undeclared), UW
- 2021 – now Hannah Nguyen, Chemical Engineering, UW

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- 2021 – 22 Emily Blake, Molecular, Cellular, and Developmental Biology, UW
- 2021 – 22 Michelle Chou, Biochemistry, UW
- 2021 – 22 Rachel Shi, Bioengineering, UW
- Received Mary Gates Research Scholarship
- 2020 – 21 Jason Chan, Biology, UW
- 2020 – 21 Alicia Gim, Chemical Engineering, UW
- Received CoMotion Mary Gates Innovation Summer Internship
 - Received Washington Research Foundation Fellowship
- 2020 – 21 Yonas Meshesha, Bioengineering, UW
- Received Washington Research Foundation Fellowship
- 2020 – 21 Katherine Zhang, Bioengineering, UW
- Received CoMotion Mary Gates Innovation Summer Internship
- 2014 – 15 Alessandra Robillard, Mechanical Engineering, McGill University
- Received Integrated Sensor Systems Summer Training Fellowship
- 2014 – 15 Rivka Cohen, Mechanical Engineering, McGill University
- 2014 – 15 Luigi Corrado, Mechanical Engineering, McGill University
- 2014 – 15 Andrew Luongo, Mechanical Engineering, McGill University
- 2012 Anupam Yadav, McGill University
- On exchange from India on MITACS Summer Internship

Staff

- 2021 – Noah Pham, Research Scientist, Mechanical Engineering, University of Washington (UW)

DIVERSITY, EQUITY, AND INCLUSION EFFORTS

- 2021 Moderator, Trailblazers in Engineering Event, Purdue University (Virtual)
- 2021, 2022 Panelist, The Nature of Research & Normalizing Failure Workshop, Gabriel E. Gallardo Research, Student Leadership & Advocacy Symposium, University of Washington
- 2020 – now Volunteer, Graduate Student Mentorship Initiative, Cientifico Latino
- 2020 – now Member, National Society of Black Engineers
- 2020 – now Member, UNITE, University of Washington
- Group devoted to advancing justice, equity, diversity, and inclusion on campus.
- 2020 Panelist, University of Washington School of Medicine Anti-Racism Town Hall
- 2020 Guest Lecturer, University of Washington, Diversity in UW STEM Research Seminar
- 2019 – 20 Organizing Committee, Crafting Effective Diversity Statements Workshops
- University of Washington Postdoc Diversity Alliance
- 2019 Panelist, Managing the Student to Postdoc Transition as an Underrepresented Minority
- 2018 – 20 Founding Member, Postdoc Diversity Alliance, University of Washington

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- Organization that provides community and support for postdocs from historically underrepresented backgrounds and their allies/accomplices.

2015 – 16 Member, Equity and Diversity Committee, McGill Post Graduate Students' Society

PROFESSIONAL DEVELOPMENT & SERVICE

2022 Panelist, New Faculty Panel, Future Faculty Fellows Program, University of Washington

2020 – 21 Facilitator, K99 Peer Mentoring Group, University of Washington (& Beyond)

2020 Panelist, Accomplishing Career Transitions (ACT) Program Networking Session, Cell Bio Virtual 2020

2020 Panelist, Science Teaching Experience Program, Future Faculty Fellows Workshop, University of Washington

2019 – 20 Science Teaching Experience for Postdocs, University of Washington

2019 – now American Society for Cell Biology Accomplishing Career Transitions Program

- Cohort training program for postdocs and junior faculty from historically underrepresented backgrounds.

2019 Startup Collaboration Program, Mistletoe Research Fellowship

2019 Future Faculty Fellows Workshop, University of Washington

2019 BIO 2019 I-Corps Bio-Entrepreneurship Workshop & Travel Award

2019 American Society for Biochemistry and Molecular Biology, Art of Science Communication Course

2018 Judge, Washington Regional Junior Science and Humanities Symposia

2016 – 17 Steering Committee for Undergraduate Skills Development, McGill University

2016 Advisory Committee for the Selection of Dean of Students, McGill University

2015 – 16 Member Support Commissioner, Postgraduate Students' Society, McGill University

2012 – 15 Councilor, Postgraduate Students' Society, McGill University

2012 Learning to Teach Day, McGill University

PEER REVIEW

ACS Applied Materials & Interfaces, Analytical Chemistry, Angewandte Chemie Int. Ed., Biosensors, Lab on a Chip, Langmuir, Micromachines, Microsystems and Nanoengineering, MicroTAS Conference, New England Journal of Medicine, RSC Advances, Sensors, Technology

PROFESSIONAL SOCIETY MEMBERSHIPS

American Association for the Advancement of Science (AAAS), American Society for Biochemistry and Molecular Biology (ASBMB), American Society of Cell Biology (ASCB), American Society for Microbiology (ASM), Biomedical Engineering Society (BMES), National Society of Black Engineers (NSBE)