

Deisy Cristina Carvalho Fernandes

50 S. Central Campus Dr. 2280 MEB
Salt Lake City, UT 84112
deisy.fernandes@utah.edu
<https://deisy.che.utah.edu/>



Education

Jul 2020- Jul 2022	Postdoctoral Researcher, Brown University
Jun 2020	Doctor of Philosophy in Chemical Engineering, University of Illinois at Chicago
May 2013	Bachelor of Science in Chemical Engineering, University of Illinois at Chicago, Chemical Engineering, GPA: 3.45/4.0, Graduated with Honors Dean's List (2 semesters)
Jan 2004 – Dec 2007	<i>Coursework of Industrial Chemical Engineering</i> , University of Sao Paulo – Brazil

Academic Appointments & Affiliations

Aug 2022 - Present	Assistant Professor, Department of Chemical Engineering, The University of Utah
Jul 2020- Jul 2022	Postdoctoral Presidential Researcher Fellow, Brown University
Jun 2017- Jun 2020	Graduate Research Fellowship Program- Fellow, National Science Foundation, the University of Illinois at Chicago
Jul 2018- Jun 2019	Graduate Research Worldwide Program- Fellow, National Science Foundation, Bordeaux University, Center Research Paul Pascual/ Bordeaux, France
Jul, 2015- Jun 2017	Graduate Research Fellowship Program- Fellow, National Science Foundation, the University of Illinois at Chicago
Jul, 2015- Jun 2017	Bridge to the Doctorate Fellow, National Science Foundation, The University of Illinois at Chicago
Jun 2010 - Jun 2013	Research Assistant - Chemistry, University of Illinois at Chicago, Chemical Engineering
Jan 2006 - Dec-2007	<i>Research Assistant- Chemical/Electrical Engineering</i> , University of the State of Sao Paulo (UNESP), Guaratingueta, SP, Brazil
Jan 2005 - Nov 2006	<i>Research Assistant- Chemical Engineering</i> , University of Sao Paulo (USP) Lorena, SP, Brazil

Professional Service

National and International Service

Sep 2022	Reviewer – Nature
Jul 2022- Present	Faculty Liaison – LatinXinChE – Minority Affairs Community (MAC) AIChE (Organized 3 events for meetings for monthly meetings)
Nov 2022	Reviewer – Chemical Engineering Research and Design – Elsevier
Dec 2 nd , 2022	Tooele Happy Hour podcast
Nov 15 th 2022	Co-Chair Engineering Cancer II: Therapy AIChE Annual Meeting 2022

Nov 16 th 2022	Panel AICHE Café with LatinXinChE – AICHE Annual Meeting
Oct 2022	Reviewer – Chemical Engineering Research and Design – Elsevier
Oct 6 th 2022	Celebrating our Latinidad in Engineering Virtual – UIC
July 2022	Co-organizer and chair of SACNAS Regional Conference (July 2022) – Brown university
Apr 21 st , 2022	Middle School outreach, Virtual- Sao Lourenco, MG - Brazil
Feb 25-26, 2022	ILSAMP – Educational transitions talk, Chicago -IL
Feb 24-25, 2021	Region 6 Virtual Noche de Ciencias Virtual
Feb 22, 2020	Introduce a girl to Engineering Day (SWE) Virtual
Oct 4 th , 2019	UIC – at the STEM Youth Leadership Development Forum (YLDF) hosted by the Hispanic Association of Colleges and Universities (HACU), “The YLDF provides students exposure to STEM career pathways while engaging in interactive academic activities”
Fall 2019, 2017 and 2016	Volunteer at the Mom, Me & SWE at the University of Illinois at Chicago, with the Society of Women Engineers (SWE) to inspire with young girls. Helped them with hands-on activities and taught some concepts of chemical the future generation of engineers in STEM and engineering
Mar 17 th , 2018	Museum of Science and Industry -High school outreach
Oct 18 th , 2017	Volunteer at the Invent and Build It at the SWE Conference in Austin, Texas. Middle and high school girls were exposed to my research and had hands-on activities using 3D printed graphene samples
Jun-Jul 2017 and 2019	Helped with the curriculum development and taught the chemical engineering section at the WIESP (Women in Engineering Summer Program), where high school girls for a month would learn about solar cells, 3D gels and chocolate printing with hands-on activities.
Mar 31 st –Apr 1 st , 2017	Chair at the high school activities for the AIChE Midwest Regional Conference. Spring-2017 – Mentored a Hispanic student during the school semester, advising about classes, school life, and graduate school opportunities.
Mar 2017	Chair of High School Outreach Program at AIChE Midwest Regional Conference
Spring 2015, Fall 2016	UIC Open-House,

University Service

Nov 2023 - Present	Faculty Advisor SHEP
Jul. 2023 - Present	Faculty Advisor- Women and Allies in Chemical Engineering (WACHE)
Aug 2023 - Present	Graduate Student Committee
Aug 2022 -Jul 2023	DEI committee
Aug 2022 -Jul 2023	Faculty Search Committee

Academic Honors and Awards

Academic Fellowships

2020-2022	\$124,000.00	<i>Presidential Diversity Postdoctoral Fellow (Brown University)</i>
2017-2020	\$138,000.00	National Science Foundation - Graduate Research Fellowship (NSF-GRF) Title: "Functionalized Planar Graphene for Ultra-Sensitive and Highly Specific Electrical Sensors for cancer markers"
2018-2019	\$5,000.00	NSF-Graduate Research Opportunities Worldwide (NSF-GROW). Title: "Synthesis and Characterization of 2D nanomaterials gels for 3D printed devices fabrication".
2015-2017	\$84,000.00	<i>Bridge to the Doctorate Fellowship</i>
May-Jul 2015	\$4,000.00	<i>The PASSAGE Scholars Program</i>
Spring 2019	\$275.00	<i>UIC - Graduate Student Council travel award</i>
Fall - 2019	\$200	<i>UIC - Student Presenter Awards</i>
Fall - 2019	\$275	<i>UIC - Graduate Student Council travel award</i>
May 17th, 2018	\$125.00	<i>Regional AIChE Presentation Awards - First Place - Graduate Student Poster Competition at the Chicago Section of the American Institute of Chemical Engineering (AIChE),</i>
Apr 10th, 2017	\$125.00	<i>Regional AIChE Presentation Awards - First Place - Graduate Student Poster Competition at the Chicago Section of the American Institute of Chemical Engineering (AIChE)</i>

Teaching Experience

University of Utah

Co-Instructor: CH EN 3701 Projects Laboratory I
(001- F2022 – 27 students), (002- F2022 – 24 students)

Brown University

Fundamentals of Engineering – Brown Pre College
(Summer 2022- 32 students)

Co-Instructor of lectures for ENGN 0720 Thermodynamics
(Spring 2022 – 56 students), (Summer 2022- 12 students)

University of Illinois at Chicago,

Teaching Assistant, Engineering 100 and FESP Freshmen Internship Program,
(Fall 2017, Section 1- 297 students, Section 2 – 298 students)

Instructor, WISE (Woman in Science and Engineering Summer Program)
(Summer 2018 – 22 students)

Project SYNCERE, Chicago, IL

Engineering Instructor – Aug 2012- May 2013

Taught fundamentals of engineering to students at different grade levels. Demonstrated engaging and interactive projects that helped students get excited about engineering.

Ph.D. Students

Austin Eiting

Undergraduate Students

Ienne Zielinski

John Peterson

Funded Research

2022-2024 \$100,000

NSF Grant Proposal (CO-PI)- Nanosheet-Biomolecular Layered Hybrids - Synthesis, Structure, and Controlled Release

Publications

Journal Publication

- **Deisy C. Carvalho Fernandes**, Vikas Berry, Philippe Pullin, Wilfred Neri “3D printed Graphene/MoS₂ gel: characterization, mechanical properties, and optoelectronic analysis. *In preparation (submitting by end of april 2023)*
- Mandana Bhebhani, Bijentimala Keisham, Deisy Cristina Carvalho Fernandes, Harsh Khilwani, Vikas Berry, and Ankit Mehta Identifying Glioblastoma Multiforme’s Heterogeneity via Raman Mapping of Tissue Interfaced Graphene (**Submitted March 2023 Neurosurgery**)
- Liu, M.; **Fernandes, D. C. C.**; Saleeba, Z. S. S. L.; Hurt, R. H. Controlled Release of Molecular Intercalants from Two-Dimensional Nanosheet Films. *ACS Nano* **2021**, *0* (0), acsnano.1c07888. <https://doi.org>
- Behbahani, M.; Keisham, B.; **Fernandes, D.**; Berry, V.; Mehta, A. I. Non-Invasive Evaluation of Glioblastoma Multiforme (GBM) Using Graphene Monitored Via Raman Mapping. *Neurosurgery* **2020**, *67* (Supplement_1). https://doi.org/10.1093/neuros/nyaa447_915.
- **Deisy C. Carvalho Fernandes**, Dylan Lynch, Vikas Berry. (2018) “3D-Printed Graphene/Polymer Structures for Electron-Tunneling Based Devices.” *Scientific Reports*, vol. 10, no. 1, 2020, doi:10.1038/s41598-020-68288-5
- Busby, E., Thibert, A., Fuzell, J., **Arrington, D. C.**, Jawaid, A. M., Snee, P. T., & Larsen, D. S. (2013). “Ultrafast exciton dynamics in colloidal aluminum phosphide nanocrystals”, *Chemical Physics Letters*, *557*, 129–133. <https://doi.org/https://doi.org/10.1016/j.cplett.2012.12.032>.

Presentations

- *Carbon Conference*, (July 20, 2023)
- AIChE (American Institute of Chemical Engineering) Annual Meeting- Phoenix (Nov 14, 2022) – **3 oral presentations**
- TIPE global Women in 3D printing 2022 conference (Jan 17th, 2022)
- Seminar at Brown University – “Scalable Assembly of 2D Materials into 3D Functional Devices” (Dec 3rd, 2021)
- AIChE (American Institute of Chemical Engineering) Annual Meeting- Boston (Nov 8-9, 2021)
- SACNAS (Society for Advancement of Chicanos/Hispanics and Native Americans in Science) – Online (Oct 27, 2021)
- New England Regional SACNAS (Society for Advancement of Chicanos/Hispanics and Native Americans in Science) – Online (Mar 20, 2021)
- AIChE (American Institute of Chemical Engineering) Annual Meeting- Online (Nov 16-19, 2020)

- SACNAS (Society for Advancement of Chicanos/Hispanics and Native Americans in Science) Conference, Online (Oct 29, 2020)
- AIChE (American Institute of Chemical Engineering) Annual Meeting- Miami, FL (Nov 12, 2019)
- SACNAS (Society for Advancement of Chicanos/Hispanics and Native Americans in Science) Conference at Honolulu, Hawaii, (Oct 31, 2019)
- UIC Graduate Student Orientation, (Aug 21, 2019)
- Nanotubes and Graphene (NTG) Retraite La Teich France, France (Jun 6, 2019)
- Graduate Student Poster Competition at the Chicago Section of the American Institute of Chemical Engineering (AIChE), Northwestern University, Evanston, IL (Apr 10th, 2018)
- AIChE (American Institute of Chemical Engineering), Annual Meeting - Pittsburgh, PA (Oct 31, 2018)
- AIChE (American Institute of Chemical Engineering) Annual Meeting - Minneapolis, MN (Oct 29, 2017)
- French - American workshop on Translational Chemistry, Boudreaux, France (Jul 06-07, 2017)
- Chicago Regional SACNAS (Society for Advancement of Chicanos/Hispanics and Native Americans in Science) Conference at University of Chicago, (May 20, 2017)
- 2017 Users Meeting APS/CNN, Argon National Laboratory (May 10, 2017)
- Graduate Student Poster Competition at the Chicago Section of the American Institute of Chemical Engineering (AIChE), UIC, Chicago - IL (Apr 13, 2017)
- iREU Site 2017 Pre-departure Meeting, French Embassy - Washington, DC (March 29, 2017)

Panels

- Annual Biomedical Research Conference for Minority Students (ABRCMS) - "International Collaborative Research: An Important Supplement to Academic and Professional Training" (Nov 15, 2019)
- Louis Stokes Midwest Regional Center of Excellence (LSMRCE)- Voices of Success Panel Discussion (Oct 26, 2019)
- UIC College of Engineering Advisory Board- Panel for Woman Programs (Oct 07, 2019)
- UIC Panel for graduate and undergraduate students about NSF GRFP (Oct 02, 2019)
- Dare to dream: Get Educated, Build the Dream STEM Conference, Fermilab National Laboratory (Apr 14, 2018)- Outreach for Latina high-school girls
- UIC Graduate student session for NSF GRFP application (Sep (2018)
- French Embassy, Washington DC; The Louis Stokes Regional NSF International Center of Excellence (LSAMP-NICE) Inaugural Meeting (Sep 8 -10 2018)
- UC Graduate student session for NSF GRFP (Sep 2017)
- UIC Graduate Student Orientation (Aug 2016)
- AIChE Midwest Regional Conference – Engineering Panel Session – High School Outreach Program (Feb 28/Mar 01, 2017)

Professional Training

- Junior Faculty Development Retreat (Oct 10-21, 2023)
- SHPE (Society of Hispanic Professional Engineers) (Nov 10-13, 2021)
- AIChE (American Institute of Chemical Engineering) Annual Meeting, Boston, MA (Nov 7-10, 2021)
- SACNAS (Society for Advancement of Chicanos/Hispanics and Native Americans in Science) Online Conference (Oct 25-29, 2021)
- Society of Women Engineers at WE21, Indianapolis, IN (Oct 21-23, 2017)
- **NextProf Nexus**, Michigan University (Oct 04-07, 2021)
- **Future Faculty Program**, Rochester Institute of Technology (Sep 22-24, 2021)

- Centre Research Paul Pascal, Bordeaux, France (Dec 2018)
- Dissertation Institute, Texas University (Jun 11-15, 2018)
- AIChE (American Institute of Chemical Engineering) Annual Meeting, Minneapolis, MN (Oct 29th-Nov 3rd, 2017)
- Society of Women Engineers at WE17, Austin, TX (Oct 26-28, 2017)
- 2017 IIN Symposium, Evanston, IL (Sep 28, 2017)
- Chicago Regional SACNAS (Society for Advancement of Chicanos/Hispanics and Native Americans in Science) Conference at University of Chicago (May 20-21, 2017)
- Argonne National Laboratory, 2017 Users Meeting, Argonne, IL (May 08-11, 2017)
- Argonne National Laboratory, 2016 Users Meeting, Argonne, IL (May 09-12, 2016)
- SACNAS Symposium, Northwestern University, Evanston, IL (May 14, 2016)

Undergraduate Poster/Oral Presentation Judge

- SACNAS (Society for Advancement of Chicanos/Hispanics and Native Americans in Science) Online Conference, (Oct 18-20, 2019)
- Annual Biomedical Research Conference for Minority Students (ABRCMS) - "International Collaborative Research: An Important Supplement to Academic and Professional Training" (Nov 16, 2019)
- SACNAS (Society for Advancement of Chicanos/Hispanics and Native Americans in Science) Conference at Honolulu, Hawaii, (Nov 1, 2019)
- Louis Stokes Midwest Center of Excellence Annual Conference, Indianapolis (Oct 26, 2019)
- ILSAMP Research Symposium, Lisle, IL (Feb 23, 2018)
- Louis Stokes Midwest Center of Excellence Annual Conference, Indianapolis (Oct 6, 2017)
- ILSAMP Research Symposium, Rosemont, IL (Feb 27, 2017)
- Louis Stokes Midwest Center of Excellence Annual Conference, Lisle (Oct 29, 2016)

Leadership

Society Leadership

- Faculty Liason LatinX in ChE – MAC, AICHE 2022-2023
- President GradSWE Aug 2019- Jul 2020
- President of GRACE Aug 2017- Jul 2018

News

- **Science Magazine, Advertorial - LSAMP-NICE expands international exchanges between underrepresented STEM students and their host laboratories**, Apr 8, 2022 https://www.science.org/doi/10.1126/organization.abq3408/full/lsamp_advertorial_2022-04-08-1686067071807.pdf
- **Science Magazine, Advertorial - LSAMP-NICE boosts international research opportunities for underrepresented STEM students**, Apr 24, 2020 <https://www.sciencemag.org/advertorials/lsamp-nice-boosts-international-research-opportunities-underrepresented-stem-students>
- **UIC Engineering Career Center – The Spark Newsletter. Internship spotlight** – Oct 07, 2019 <https://mailchi.mp/132c895a4cd6/the-spark-5-ways-to-prepare-for-an-interview?e=153f962dd3>
- **UIC CHE News Chemical Engineering PhD candidate receives NSF-Graduate Fellowship to study 2D nanomaterial gels, inks**. March 26th, 2019 - <https://che.uic.edu/news-stories/uic-chemical-engineering-phd-candidate-receives-nsf-graduate-fellowship-to-study-2d-nanomaterial-gels-inks/>
- **CHE UIC newsletter NSF-GRFP/GROW** - Dec 2018 - https://vikasb.people.uic.edu/Happy_New_Year_ChE_UIC.pdf
- **AICHE Newsletter,** May 2018 - <https://www.aiche.org/sites/default/files/community/186226/aiche-newsletter/462756/may-2018-newsletter.pdf> [community-site-](https://www.aiche.org/sites/default/files/community/186226/aiche-newsletter/462756/may-2018-newsletter.pdf)
- **UIC News' paper** –NSF GRFP, April 25, 2018 - <https://today.uic.edu/files/2018/04/04-25-18->

[newscenter.pdf](#)

- **AICHE Newsletter**, May 2017 - <https://www.aiche.org/sites/default/files/community/186226/aiche-community-site-page/439111/2017-may.pdf>
- **LSAMP Program Modeling, Group Impact**, 2017 – Poster Presentation at the French-American workshop on Translational Chemistry, Boudreaux, France, Jul 06-07, 2017- <https://lsmrce.org/documents/community/LSAMP-Group-Impact-Book.pdf>
- **UIC Engineering News**, *Deisy Arrington wins the prestigious NSF Graduate Research Fellowship*, May 25, 2016- <https://engineering.uic.edu/news-stories/deisy-arrington-wins-the-prestigious-nsf-graduate-research-fellowship/>

Professional affiliations

- AIChE, 2010-Present
- SWE, 2010 – Present
- GrACE (Graduate Association of Chemical Engineering) –UIC 2015-2020
- SHPE – UIC 2010-Present
- SACNAS – 2015- Present