

Professional Experience

Chemistry Associate Lecturer

Department of Chemistry
University of Central Florida – Orlando, Florida

August 2025 – Present

Chemistry Lecturer

Department of Chemistry
University of Central Florida – Orlando, Florida

May 2020 – August 2025

Post-doctoral Scholar

Karen L. Smith Faculty Center for Teaching and Learning
University of Central Florida – Orlando, Florida

May 2018 – May 2020

Education

Ph.D. Chemistry

University of Central Florida – Orlando, Florida

Dissertation: *Integration of Fundamental Research and CER: The Role of Authenticity in Developing Views on the Nature of Teaching, Learning, and Doing Science*

May 2018

Advisor: F. Eloy Hernández

M.A. Applied Learning and Instruction

University of Central Florida – Orlando, Florida

May 2018

M.S. Chemistry

University of Central Florida – Orlando, Florida

December 2016

B.S. Chemistry

Florida Institute of Technology – Melbourne, Florida

December 2010

Teaching Experience

Lecturer/Associate Lecturer (current position)

Regularly teach large enrollment (~450 students) and Honors (~20 students) CHM2046: Chemistry Fundamentals II, CHM3410: Physical Chemistry 1 (an upper-level course for Chemistry majors), and CHM4942, the Undergraduate Learning Assistant training course in various modalities, including online, mixed-mode, remote, and face-to-face. Courses are designed in a flipped format with Team-Based Learning (TBL), and active learning during class meetings.

Adjunct Lecturer, UCF (Fall 2018, Spring 2020)

In Fall 2018, developed and taught CHM2046: Chemistry Fundamentals II as a mixed-mode course. Developed inquiry activities for students to complete online, prepared content for delivery online, and facilitated face-to-face active learning sessions for 150 students. In Spring 2020, taught the same course in a face-to-face modality using interactive lecture and a student response system (iClicker).

Graduate Teaching Associate (Instructor of Record), UCF (Fall 2017)

Developed and taught CHM3410: Physical Chemistry 1, including chemical thermodynamics and kinetics as a flipped classroom course. Developed and facilitated discussions online based on assigned readings. Designed and facilitated active learning in-class activities consisting of practice solving problems and plotting and analyzing data in physical chemistry.

Graduate Teaching Assistant, UCF (Fall 2013-Spring 2017)

Chemistry Fundamentals Laboratory (3 semesters)

Facilitated inquiry-style experiments in which students were required to develop and carry out their own procedures to answer a key question. Provided guidance on experimental design, data collection and analysis. Provided scaffolded instruction, including facilitating peer-review, on writing laboratory reports.

Physical Chemistry Laboratory (2 semesters)

Guided pairs of students in performing various physical chemistry experiments including experiments covering thermodynamics topics (e.g. adiabatic expansion of gases to determine heat capacity ratios), kinetics concepts (e.g. polarimetry for monitoring the conversion of sucrose to fructose and glucose), and quantum chemistry concepts (e.g. absorption spectroscopy to determine the size of a “box” in which a particle is contained).

Physical Chemistry Lecture (1 semester)

Assisted with the redesign of a traditionally taught Physical Chemistry lecture as an active learning course using flipped classroom, flexible seating for in-class group work, and alternative assessments (i.e. no tests). Helped facilitate and graded in class activities.

General Chemistry Laboratory (2 semesters)

Facilitated laboratory sessions in which students followed procedures from a lab manual to complete experiments addressing basic chemistry concepts (e.g. chemical and physical processes, acidity and basicity of household solutions).

Chemistry Fundamentals Lecture (2 semesters)

Assisted with development and administration of clicker questions. Proctored exams.

Sixth Grade Science Teacher, Southwestern Middle School – DeLand, Florida (October 2012 – June 2013)

Developed course material, taught, and assessed material in a sixth-grade science course. Taught six sections, totaling more than 125 students.

Chemistry Teacher, Bayside High School – Palm Bay, Florida (March 2011 – May 2012)

Developed course materials, taught, and assessed students on material in chemistry and honors chemistry appropriate for 10th grade students. Taught five sections, totaling approximately 125 students per year. Assisted science research students with data analysis.

Undergraduate Teaching Assistant, Florida Institute of Technology – Melbourne, Florida (August 2010 – December 2010)

Assisted Physical Chemistry Lab students with instrument use and data analysis.

Mentoring Experience

Graduate Students

- Matilynn Lam, Chemistry Doctoral Student, UCF, January 2023 – present

Undergraduate Students

- August Jacobsmeier, Chemistry Major, UCF, August 2025 – present
- Ammar Shahzad, Psychology Major, UCF, August 2025 - present
- Britney Nguyen, Chemistry Major, UCF, January 2025 – present
- Griffen Smith, Chemistry Major, UCF, January 2025 – present
- Alex Richards, Chemistry Major, UCF, October 2024 – present
- Kevin Morales, Chemistry Major, UCF, July 2023 – May 2025
 - Honors Undergraduate Thesis completed Spring 2024
- Patria Marcano Maldonado, Chemistry Major, UCF, May 2023 – May 2024
- Adam Demeter, Chemistry Major, UCF, August 2022 – May 2023
- Paul Hillsman, Chemistry Major, UCF, May 2022 - May 2023
- Jacob Sand, Chemistry Major, UCF, May 2022 - May 2023
- Rebecca Higdon, Chemistry Major, UCF, January 2022 - May 2023
- Harsimrat Kooner, Biomedical Sciences Major, UCF, August 2021 - present
- Matilynn Briglia, Chemistry Major, UCF, August 2021 - May 2022
- Yara Khallaf, Biomedical Sciences Major, UCF, January 2021 – present

- Brianna Ewing, Biomedical Sciences Major, UCF, January 2020 – May 2021
- Bethany Arcaya, Biomedical Sciences Major, UCF, January 2019 – May 2021
- Michaela Kelly, Biochemistry Major, UCF, September 2018 – May 2021
- Alexandra Eugster, Statistics Major, UCF, July 2018 – December 2019
- Meryem Hinaoui, Chemistry Major, UCF, August 2016 – June 2017

High School Students

- Anupa Thirmiya, Seminole High School, Sanford, Florida, August 2015 – June 2016

Dissertation and Thesis Committee Membership

- AnnaMarie Knowles, Honors Undergraduate Thesis, 2025, completed
- Cameron Bechard, Chemistry Education Doctoral Student, UCF, in progress
- Marjan Roshandel, Chemistry Education Doctoral Student, UCF, in progress
- Lannika Johnson, Honors Undergraduate Thesis, 2022, completed

Peer-Reviewed Publications

Undergraduate student, *Corresponding author

- 20 **Ghasseminia, L.**, Donnelly, J., Dennis, D., Rodriguez, T.* Mutual Gains in STEM Classrooms: Assessing Learning Assistant (LA) Integration in Forensic Chemistry Education. *Journal of Forensic Science Education*, accepted.
- 19 Donnelly, J.*, **Maldonado, P. M.**, Legron-Rodriguez, T. Indicators of Team Function in a Large-Enrollment Team-Based Learning General Chemistry Course. *International Journal of the Scholarship of Teaching and Learning*, accepted.
- 18 Lemma, A., **Maldonado, P. M.**, **Goberville, L.**, Donnelly, J., & Legron-Rodriguez, T.* Team-Based Learning in a Senior-Level Forensic Chemistry Course: Team Gains, Contribution to Individual Achievement, and Students' Feelings. *College Teaching*, 2025, 1–10.
- 17 Donnelly, J.*, Winkelmann, K., **Khallaf, Y.** Changes in Physical Chemistry Syllabi Focus Attributed to the Transition to Emergency Remote Teaching. *Journal of Chemical Education*, 2024, 101, 5110-5114.
- 16 Donnelly, J.*, Winkelmann, K. STEM Students' Sensemaking of Instructional Technology after the COVID-19 Pandemic. *Journal of Science Education and Technology*, 2024.
- 15 **Lam, M.**, Schwarz, C., Sharma, R., Donnelly, J.* An Introduction to Scanning Electron Microscopy and Science Communication Skills for Undergraduate Chemistry Students. *Journal of Chemical Education*, 2023, 100, 2802-2808.
- 14 Miller, A., Clark, M. H., Donnelly, J.*, & Hahs-Vaughn, D. The Relationship of Student Evaluations of Teaching to Future Performance in a Chemistry Course Sequence. *Journal of Chemical Education*, 2022, 99, 1336-1346.
- 13 Donnelly, J.*, Miller, A., Krsmanovic, M., Saitta, E. Response of STEM and social science faculty to the COVID-19 crisis: An application of organizational learning. *College Teaching*, 2021, 1-9.
- 12 Donnelly, J.*, Winkelmann, K. Analysis of the learning-centeredness of physical chemistry syllabi. *Journal of Chemical Education*, 2021, 98, 1888-1897.
- 11 Donnelly, J., Miller, A., Strawser, M.* Resilience in the face of crisis: Organizational response to developing faculty eLearning literacy in a global pandemic. *Journal of Literacy and Technology*, 2020, 21, 37-55.
- 10 DeMara, R.*, Bacanli, S., Bidoki, N., Xu, J., Nassiff, E., Donnelly, J., Turgut, D. Data mining of assessments to generate learner remediation teams: Efficacy and perceptions in an undergraduate engineering pilot offering. *Journal of Educational Technology Systems*. 2020, 48, 464-492.

- 9 Donnelly, J.*, Berry, L. Considering the environment: An expanded framework for teacher knowledge. *Journal of Learning Spaces*. 2019, 8, 42-49.
- 8 Dipold, J., Donnelly, J., Romero, E. E., Calheiro, T. P., Bonacorso, H. G., Iglesias, B. A., Siqueira, J. P., Hernandez, F. E., De Boni, L., Mendoca, C. R.* Two-photon absorption properties of BODIPYs-like compounds based on BF₂-naphthyridine complexes. *RSC Physical Chemistry Chemical Physics*. 2019, 21, 6662-6671.
- 7 Crassous, J.*, Bouvier, R., Durand, R., Favereau, L., Srebro-Hooper, M., Dorcet, V., Roisnel, T., Vanthuyne, N., Vesga, Y., Donnelly, J., Hernandez, F. E., Autschbach, J.*, Trolez, Y., Helicenes grafted with 1,1,4,4-tetracyanobutadiene moieties: pi-helical push-pull systems with strong electronic circular dichroism and two-photon absorption. *Chemistry - A European Journal*. 2018, 24, 14484-14494.
- 6 Donnelly, J. Hernandez, F. E.*, Trends in bond dissociation energies for the homolytic cleavage of successive molecular bonds. *Journal of Chemical Education*. 2018, 95, 1672-1678.
- 5 Donnelly, J., Hernandez, F. E.*, Fusing a Reversed and Informal Learning Scheme and Space: Student Perceptions of Active Learning in Physical Chemistry. *Chemistry Education Research and Practice*. 2018, 19, 520-532.
- 4 **Castillo, S.**, Chemnasiri, W., Donnelly, J., and Hernandez, F. E.*, Determination of the Relative Antioxidant Strength of Teas Combining Metal Nanoparticles, Plasmonics, and Fluorescence: A Multidisciplinary Experiment. *Journal of Nano Education*. 2016, 8, 71-83.
- 3 Donnelly, J., Hernandez, F. E.*, Two-photon absorption spectroscopy on curcumin in solution: A state-of-the-art physical chemistry experiment. *Journal of Chemical Education*. 2016, 94, 101-104.
- 2 Donnelly, J., Vesga, Y., Hernandez, F. E.*, Enhanced two-photon absorption and fluorescence upconversion in Thioflavin-T micelle-type aggregates in glycerol/water solution. *Chemical Physics*. 2016, 477, 19-23.
- 1 Donnelly, J., Diaz, C., Hernandez, F. E.*, OCTET and BIOTEC: A Model of a Summer Intensive Designed to Cultivate the Future Generation of Young Leaders in STEM. *Journal of Chemical Education*. 2016, 93, 619-625.

Peer-reviewed Book Chapters

- 2 **Donnelly, J.***, Winkelmann, K. (accepted) First Impressions Matter: How to Write a Learning-Focused Syllabus for Physical Chemistry. In *Engaging Students in Physical Chemistry*, Volume 2. American Chemical Society.
- 1 Saitta, E.*, **Donnelly, J.** (2022) The Role and Influence of the Discipline-Based Education Research (DBER) Community on STEM Faculty Development. In Linder, S. M., Lee, C. M., Stefl, S. K., & High, K. A. (Eds.), *Handbook of STEM Faculty Development* (pp. 61-70) IAP.

Other Creative Works

- 6 Rex, M. & **Donnelly, J.** The Department of Chemistry Undergraduate Learning Assistants Program. *UCF Faculty Focus*. 2024, 23(1) 10-11.
- 5 Saitta, E. & **Donnelly, J.** Enriching STEM Faculty Development through Collaborations with the Discipline Based Education Research (DBER) Community. *UCF Faculty Focus*. 2023, 22(1) 18-19.
- 4 **Donnelly, J.** AIM Knight's Choice Award. *UCF Faculty Focus*. 2022, 21(1) 1.
- 3 **Donnelly, J.** Faculty Struggles and Successes During the Transition to Remote Instruction in Spring 2020. *UCF Faculty Focus*. 2020, 19(2) 7-8.

- 2 **Donnelly, J.** Active-Learning Classrooms (Intro to faculty articles). UCF Faculty Focus. 2019, 18(2) 9-10.
- 1 **Donnelly, J.** Active-Learning Classrooms. UCF Faculty Focus. 2018, 17(2) 22-24.

Conference Presentations (Oral)

*Presenting author; **Undergraduate/graduate student**

- 34 **Ride, A.***, Rodriguez, T., Donnelly, J. Study of group cohesion in a team-based learning style general chemistry 2 course. Presented at the 76th Southeastern Regional Meeting of the American Chemical Society, Orlando, FL, October 26, 2025.
- 33 **Smith, G.***, Donnelly, J. Training learning assistants using AI. Presented at the 76th Southeastern Regional Meeting of the American Chemical Society, Orlando, FL, October 26, 2025.
- 32 Donnelly, J.* Saitta, E., **Dolcine, E.** Developing learning assistant's facilitation practices using a mixed-reality simulator. Presented at the International Learning Assistant Conference, Boulder, CO, October 18-21, 2024.
- 31 Donnelly, J.* **Marcano Maldonado, P., Goberville, L.**, Legron-Rodriguez, T. Indicators of team function in a large-enrollment team-based learning general chemistry course. Presented at the Biennial Conference on Chemistry Education, Louisville, KY, July 28-August 1, 2024.
- 30 Donnelly, J.* **Marcano Maldonado, P., Goberville, L.**, Legron-Rodriguez, T. Indicators of team function in a large-enrollment team-based learning general chemistry course. Presented at the ACS Spring 2024 National Meeting & Expo, New Orleans, LA, March 17-21, 2024.
- 29 **Goberville, L.***, **Marcano Maldonado, P.**, Donnelly, J., Legron-Rodriguez, T. Investigating team function and performance in a senior-level, Team-Based Learning course. Presented at the ACS Spring 2024 National Meeting & Expo, New Orleans, LA, March 17-21, 2024.
- 28 **Hillsman, P.***, **Higdon, R.**, Harshman, J., Lapeyrouse, N., Donnelly, J. The influence of physical space on the learning environment: STEM faculty perspective. Presented at the ACS Spring 2023 National Meeting & Expo, Indianapolis, IN, March 26-30, 2023.
- 27 **Sand, J.***, **Arcaya, B.**, **Ewing, B.**, Lapeyrouse, N., Donnelly, J. Drawing their ideal learning space: Chemistry faculty knowledge about the relationship between physical space and pedagogy. Presented at the ACS Spring 2023 National Meeting & Expo, Indianapolis, IN, March 26-30, 2023.
- 26 (Invited) Donnelly, J.*, Sharma, R., Schwarz, C., **Lam, M.** The Art of Teaching Materials Characterization Techniques to K-12 Students. Presented at the Technical Meeting and Exhibition of Materials Science and Technology, Pittsburgh, Pennsylvania, October 10, 2022.
- 25 Schwarz, C.*, Liggett, M., Swan, K., Vauclair, C., Bennet, J., Altemose, Q., Donnelly, J., Sharma, R. Novel Ceramics and Glass Science Course built to Engage Undergraduate Students using Simulations and Art. Presented at the Technical Meeting and Exhibition of Materials Science and Technology, Pittsburgh, Pennsylvania, October 10, 2022.
- 24 Schwarz, C.*, Sharma, R., Donnelly, J., Kang, M., Richardson, K., Schade, A. The Creation and Implementation of a Ceramics and Glass Science Research Laboratory at a Primarily Undergraduate College. Presented at the Technical Meeting and Exhibition of Materials Science and Technology, Pittsburgh, Pennsylvania, October 12, 2022.
- 23 **Lam, M.***, Donnelly, J. Determining How Undergraduate Students Interpret and Communicate and Understanding of Visual Data Representation. Presented at the 98th Florida Annual Meeting and Exposition of the Florida Section of the American Chemical Society, Palm Harbor, Florida, August 6, 2022.

- 22 Legron-Rodriguez, T.*, Donnelly, J.* Team-based Learning Large and Small: Implementation Across Class Sizes, Presented at the 2022 Biennial Conference on Chemical Education, West Lafayette, Indiana, August 3, 2022.
- 21 Donnelly, J.*, Winkelmann, K. Changes in Physical Chemistry Syllabi Focus Attributed to the Transition to Remote Instruction. Presented at the 2022 Biennial Conference on Chemical Education, West Lafayette, Indiana, July 31, 2022.
- 20 Donnelly, J.*, Lapeyrouse, N.*, Rex, M.*, Legron-Rodriguez, T.*, Paradiso, J.* Adaptation and Adoption of OER in Introductory Chemistry Courses. In 2022 Capital PKAL Regional Network Meeting STEM Instructional Innovations Necessitated by COVID-19: Evolution of Processes Post Pandemic. Virtual, March 25, 2022.
- 19 Donnelly, J., Winkelmann, K. Making the promise: Using the Course Syllabus to Challenge Low Expectations for Success in Physical Chemistry. 2020 Biennial Conference on Chemical Education. Abstract accepted March 31, 2020. Because of the global COVID-19 pandemic, the 2020 Biennial Conference on Chemical Education was terminated on April 2, 2020, by the Executive Committee of the Division of Chemical Education, American Chemical Society; and, therefore, this presentation could not be given as intended.
- 18 Lapeyrouse, N., **Kelly, M.**, Yestrebsky, C., Donnelly, J. Considering the Chemistry Learning Environment: What Elements of Spaces Say About Their Intended Purpose. 2020 Biennial Conference on Chemical Education. Abstract accepted March 31, 2020. Because of the global COVID-19 pandemic, the 2020 Biennial Conference on Chemical Education was terminated on April 2, 2020, by the Executive Committee of the Division of Chemical Education, American Chemical Society; and, therefore, this presentation could not be given as intended.
- 17 **Kelly, M.**, Lapeyrouse, N., Yestrebsky, C., Donnelly, J. Undergraduate Perceptions of Chemistry Learning Spaces. ACS National Meeting & Expo. Philadelphia, PA, March 22-26, 2020. Because of the global COVID-19 pandemic, the 2020 ACS National Meeting & Expo was terminated on March 9, 2020, by the American Chemical Society; and, therefore, this presentation could not be given as intended.
- 16 Donnelly, J., Winkelmann, K. Learning-Centeredness of Physical Chemistry Courses as Evidenced by Syllabi. ACS National Meeting & Expo, Philadelphia, PA, March 22-26, 2020. Because of the global COVID-19 pandemic, the 2020 ACS National Meeting & Expo was terminated on March 9, 2020, by the American Chemical Society; and, therefore, this presentation could not be given as intended.
- 15 Donnelly, J.*, Berry, L.* Describing Teacher Knowledge about the Learning Environment. Presented at the Sunshine State Teaching and Learning Conference, Daytona Beach, FL., January 29-31, 2020.
- 14 Lapeyrouse, N.*, Donnelly, J., **Eugster, A.**, and Yestrebsky, C. Promoting Success in Gateway STEM Courses: A Comparison of Introductory Chemistry Tracks. 2019 Presented at the Focus on First Generation Conference, Miami, FL., April 8th-9th, 2019.
- 13 Donnelly, J.*, Berry, L. Environmental, Technological, Pedagogical, and Content Knowledge (ETPACK): A New Framework for Teacher Knowledge. Presented at the ACS National Meeting & Expo, Orlando, Florida, March 31-April 4, 2019.
- 12 Lapeyrouse, N.*, Donnelly, J.* Promoting Success in Gateway STEM Courses: A Comparison of Introductory Chemistry Tracks. Presented at the Sunshine State Teaching and Learning Conference, Daytona Beach, Florida, January 30-February 1, 2019.
- 11 Berry, L.*, Donnelly, J.*, Dorner, W.* The Role of Emoji in Higher Education. Presented at the Sunshine State Teaching and Learning Conference, Daytona Beach, Florida, January 30-February 1, 2019.

- 10 Donnelly, J.*, **Castillo, S.**, Chemnasiri, W., and Hernandez, F. E., Determination of the Relative Antioxidant Strength of Teas Combining Metal Nanoparticles, Plasmonics and Fluorescence. Presented at the 11th Annual NanoFlorida 2018 Conference, Melbourne, Florida, October 5-7, 2018.
- 9 Donnelly, J.*, Merrit, D. Helping Faculty Transition into Active Learning Classrooms. Presented at the 2018 Consortium of College and University Media Centers Annual Conference, Salt Lake City, Utah, October 3-6, 2018 .
- 8 Donnelly, J.*, Hernandez, F. E., The Effect of a Week-Long Authentic Research Experience on High School Students' Views on the Nature of Science. Presented at the 255th ACS National Meeting & Expo, New Orleans, Louisiana, March 18-22, 2018.
- 7 Donnelly, J.*, Hernandez, F. E., Determination of the Relative Antioxidant Strength of Teas Combining Metal Nanoparticles, Plasmonics and Fluorescence. Presented at the 253rd ACS National Meeting & Expo, San Francisco, California, April 2-6, 2017.
- 6 Donnelly, J.*, Hernandez, F. E., Two-Photon Absorption Spectroscopy on Curcumin in Solution: A State-of-the-Art Physical Chemistry Experiment. Presented at the 253rd ACS National Meeting & Expo, San Francisco, California, April 2-6, 2017.
- 5 Donnelly, J.*, Hernandez, F. E., SoTL in an Upper-Level Undergraduate STEM course fusing a Reverse Learning Scheme with an Informal Learning Space. Presented at the Sunshine State Teaching and Learning Conference, St. Petersburg, Florida, February 15-17, 2017.
- 4 Donnelly, J., Hernandez, F. E., OCTET and BIOTEC: A Model of a Summer Intensive Designed to Cultivate the Future Generation of Young Leaders in STEM. Presented at the 61st Annual Meeting of the Florida Educational Researchers Association, Lakeland, Florida, November 16-18, 2016.
- 3 Donnelly, J.*, Hernandez, F. E., OCTET and BIOTEC: A Model of a Summer Intensive Designed to Cultivate the Future Generation of Young Leaders in STEM. Presented at the 251st ACS National Meeting & Expo, San Diego, California, March 13-17, 2016.
- 2 Donnelly, J.*, Hernandez, F. E., Development and Application of the Protein Shaving Method: A route to ab initio conformational studies of cannabinoids docked to CB1 using Linear and Nonlinear Circular Dichroism. Presented at the Florida Inorganic and Materials Symposium, Gainesville, FL, October 9-10, 2015.
- 1 Donnelly, J.*, Hernandez, F. E., Conformational Study of Δ 9-tetrahydrocannabinol (Δ 9-THC) and cannabidiol (CBD) via Linear and Nonlinear Circular Dichroism. Presented at the 249th ACS National Meeting & Expo, Denver, Colorado, March 22-26, 2015.

Poster Presentations

*Presenting author; **Undergraduate/graduate student**

- 23 **Morales, K.* Nguyen, B.***, Legron-Rodriguez, T., Donnelly, J. Shifting student expectations in a process-oriented guided inquiry learning (POGIL) physical chemistry course. Presented at the UCF Student Scholar Symposium, Orlando, Florida, March 26, 2025.
- 22 **Richards, A.***, Legron-Rodriguez, T., Donnelly, J. A Qualitative Analysis of the Effect of Diversity on Group Cohesion in a General Chemistry Course. Presented at the UCF Student Scholar Symposium, Orlando, Florida, March 26, 2025.

- 21 **Smith, G.*** Donnelly, J. Training Learning Assistants Using AI. Presented at the UCF Student Scholar Symposium, Orlando, Florida, March 26, 2025.
*Judges' Choice Award Winner
- 20 **Marcano Maldonado, P.*, Goberville, L.,** Donnelly, J., Legron-Rodriguez, T. Team composition and performance in a large-enrollment Team-Based Learning (TBL) introductory chemistry course. Presented at the ACS Spring 2024 National Meeting & Expo, New Orleans, LA, March 17-21, 2024.
- 19 **Marcano Maldonado, P.*, Goberville, L.,** Donnelly, J., Legron-Rodriguez, T. Team composition and performance in a large-enrollment Team-Based Learning (TBL) introductory chemistry course. Presented at the Florida Undergraduate Research Conference, Miami, Florida, February 17, 2024.
- 18 **Marcano Maldonado, P.*, Goberville, L.,** Donnelly, J., Legron-Rodriguez, T. Team composition and performance in a large-enrollment Team-Based Learning (TBL) introductory chemistry course. Presented at the UCF Student Scholar Symposium, Orlando, Florida, March 26, 2024.
*Judge's Choice Award Winner
- 17 **Morales, K.***, Donnelly, J., Legron-Rodriguez, T. An Analysis of the Change of Students' Expectations in a Reformed Physical Chemistry Course. Presented at the Florida Undergraduate Research Conference, Miami, Florida, February 17, 2024.
- 16 **Morales, K.***, Donnelly, J., Legron-Rodriguez, T. An Analysis of the Change of Students' Expectations in a Reformed Physical Chemistry Course. Presented at the UCF Student Scholar Symposium, Orlando, Florida, March 26, 2024.
- 15 **Hillsman, P.*, Higdon, R.,** Harshman, J., Lapeyrouse, N., Donnelly, J. The influence of physical space on the learning environment: STEM faculty perspective, Presented at the UCF Student Scholar Symposium, Orlando, Florida, March 28, 2023.
- 14 **Khallaf, Y.***, Donnelly, J., Winkelmann, K. How the transition to remote learning in higher education was reflected in the learning-centeredness of Physical Chemistry syllabi, Presented at the UCF Student Scholar Symposium, Orlando, Florida, March 28, 2023.
- 13 **Kooner, H.***, Legron-Rodriguez, T. Donnelly, J. Analysis of an Application of the Electronic Notebook in Higher Educational Settings. Presented at the UCF Student Scholar Symposium, Orlando, Florida, March 28, 2023.
- 12 **Sand, J.*, Arcaya, B., Ewing, B.,** Lapeyrouse, N., Donnelly, J. Drawing their ideal learning space: Chemistry faculty knowledge about the relationship between physical space and pedagogy. Presented at the UCF Student Scholar Symposium, Orlando, Florida, March 28, 2023.
- 11 **Khallaf, Y.***, Donnelly, J., Winkelmann, K. How the transition to remote learning in higher education was reflected in the learning-centeredness of Physical Chemistry syllabi, Presented at the Florida Undergraduate Research Conference, Miami, Florida, February 18, 2023.
- 10 **Lam, M.***, Donnelly, J. What Considerations Do Undergraduate Students Make When Generating and Interpreting Microscopy Images? Presented at the UCF Student Scholar Symposium, March 31, 2022.
- 9 **Lam, M.***, Donnelly, J. How do undergraduate students interpret and communicate an understanding of visual representations of data? Presented at the Florida Undergraduate Research Conference, February 18-19, 2022.
- 8 **Arcaya, B.*, Ewing, B.,** Lapeyrouse, N., Yestrebsky, C., Donnelly, J. Analysis of spatial hierarchy of real and ideal chemistry learning spaces. Presented at the Virtual Florida Undergraduate Research Conference, February 26-27, 2021.
- 7 **Kelly, M.***, Lapeyrouse, N., Yestrebsky, C., Donnelly, J. Undergraduate Perceptions of Chemistry Learning Spaces. Presented at the Virtual Florida Undergraduate Research Conference, February 26-27, 2021.

- 6 **Eugster, A.***, Donnelly, J., Yestrebsky, C., and Lapeyrouse, N. Comparison of the performance of General Chemistry 2 students based on General Chemistry 1 track taken. Presented at the American Chemical Society National Meeting and Exposition. Orlando, FL. March 31st -April 4th, 2019.
- 5 Donnelly, J.*, Hernandez, F. E., Two Course-Based Undergraduate Research Experiences (CUREs) in Physical Chemistry. Presented at the 10th Annual Florida Statewide Symposium – Best Practices in Undergraduate Research, Orlando, Florida, October 27 & 28, 2017.
- 4 Donnelly, J.*, Hernandez, F. E., Analysis of Student Engagement Using Learning Catalytics: Evaluation of Student Response System Effectiveness in General Chemistry. Presented at the Chemistry Education Research Graduate Student and Post-Doc Professional Development Conference, Oxford, Ohio, June 29-July 2, 2017.
- 3 Donnelly, J.*, Hernandez, F. E., SoTL in an Upper-Level Undergraduate STEM course fusing a Reverse Learning Scheme with an Informal Learning Space. Presented at the UCF Summer Faculty Development Conference, Orlando, Florida, May 8-11, 2017.
- 2 Donnelly, J.*, Hernandez, F. E., OCTET and BIOTEC: A Model of a Summer Intensive Designed to Cultivate the Future Generation of Young Leaders in STEM. Presented at the UCF Graduate Student Research Forum, Orlando, Florida, April 5, 2016.
- 1 Donnelly, J.*, Hernandez, F. E., Multiphoton spectroscopy on Thioflavin T: A nonlinear approach for amyloid detection, Presented at the 251st ACS National Meeting & Expo, San Diego, California, March 13-17, 2016.

Funding

Collaborative Research: HSI Implementation and Evaluation Project: Infusing Intentionality for Success by Transforming STEM Gateway Courses at Two HSIs Utilizing AI and Big Data

PI: Zhongzou Chen, Co-PIs: Christopher Randles, Michell Taub, Katiuscia Teixeira, Senior Personnel: Harrison Oonge, Tong Wan, **Julie Donnelly**, Piotr Mikusinski
 January 2025-December 2028
\$798,619

S-STEM: Creating Holistic Advising and Mentoring in Physical Science (CHAMPS)

PI: Tamra Legron-Rodriguez, Co-PIs: **Julie Donnelly**, Patrick LiKamWa, Tong Wan, Constance Doty
 March 2025-February 2031
\$1,999,862

Chemistry Fundamentals Program-Level Redesign: Adaptation and Adoption of OER in Introductory Chemistry Courses

PI: **Julie Donnelly**, Co-PIs: Nicole Lapeyrouse, Matthew Rex
 Center for Distributed Learning Course Redesign Initiative Award
 August 2021-May 2022
\$15,500

Towards a Center for Discipline-based Education Research at UCF

PI: Jackie Chini, Co-PIs: Zhongzou Chen, Katelyn Cooper, Erin Saitta, Chris Randles, Kati Teixeira, **Julie Donnelly**
 UCF Interdisciplinary Team Enhancement Award
 January 2020-November 2021
\$40,000

Professional Development

Participant

- **POGIL Activity Collaborative (PAC) Reviewer Training**, Virtual, October 2025
- **3-Day POGIL (Process-Oriented Guided Inquiry Learning) Workshop** in St. Louis, MO, July 2025
- UCF Faculty Center for Teaching and Learning (FCTL) **AI Fundamentals Course**, Fall 2024

- **FCTL Neurodiversity in Higher Education Faculty Learning Community**, Spring 2024
- **Learning Assistant Alliance e-series virtual workshops**
 - Nuts and Bolts of Building, Growing, and Sustaining an LA program, April 22, 2024
 - Transforming your course with LAs, August 21, 2023
 - Essential elements of the LA model, August 28, 2023
 - What is the weekly prep session? September 12, 2023
- **FCTL Summer Faculty Development Conference**, May 9-12, 2022
- **FCTL Teaching and Learning Days:**
 - Academic Dishonesty in Online Environments. June 2020
 - Inclusive Teaching with First Gen and Linguistically Diverse Students. November 2020
 - Inclusive Teaching Across Disciplines. January 2021
 - Faculty Self-Care. March 2021
 - ePortfolios, February 2022
- **Personalized Adaptive Learning (PAL6000)** – professional development course for faculty teaching personalized, adaptive courses, specifically using the Realizeit platform, Center for Distributed Learning, UCF - Orlando, FL. Spring 2019
- **Interactive Distributed Learning (IDL6543)** – 80 hour professional development course for faculty teaching online or mixed mode, Center for Distributed Learning, UCF - Orlando, FL. Summer 2018
- Twelve-week **Preparing Future Faculty** program, Faculty Center for Teaching and Learning, UCF - Orlando, FL. Fall 2013
- **Inquiry training** (Graduate Teaching Assistant), Chemistry Department UCF - Orlando, FL. Fall 2013

Facilitator

- **FCTL Summer Institute Undergraduate Learning Assistants track leader**, May 5-7, 2025
 - As track leader I also facilitated the following sessions:
 - “Assessing LA Impact: Translating Research into Practice” with Melissa Dagley
 - “Embrace the Chaos: Survival Tips and Strategies for Teaching Large Lecture Courses” with Matthew Atkinson
- Biennial Conference on Chemical Education Workshop **Making the Most of the Syllabus: Centering Learning From the Start** with Kurt Winkelmann, August 2024.
- **FCTL Summer Institute Undergraduate Learning Assistants track leader**, May 6-8, 2024
 - As track leader I also facilitated the following sessions:
 - “Transforming Your Course with ULAs” with Chloë Edmonson and Paul Lawrence
 - “Making the Most of the Weekly Prep Session” with Cynthia Bayer and Matthew Rex
 - “What is the ULA Pedagogy Course?” with Laurie Uttich and Tong Wan
 - “Team-Based Learning 101: Giving Structure to Group Work” with Tamra Legron-Rodriguez
- Chemistry Department **Undergraduate Learning Assistant Lunch and Learns**, 2023, 2024, 2025
- FCTL Teaching and Learning Day: **Undergraduate Learning Assistants (ULAs) Across the Disciplines** with Chloë Edmonson, March 6, 2024
- **FCTL Summer Institute Workshops**, May 8-10, 2023
 - “Applying Universal Design for Learning to a Team-Based Learning Course” with Tamra Legron-Rodriguez and Amy Sugar
 - “Implementing Inquiry-Based Instruction into the Classroom” with Erin Saitta
 - “New Technology in the Classroom: Wireless Screen Sharing with Ditto and More” with Todd McMahon
- **Team-Based Learning Collaborative Workshop**: “Leveraging the intersectionality of Universal Design for Learning and Team-Based Learning” with Tamra Legron-Rodriguez, March 2023

- Biennial Conference on Chemical Education Workshop **Improving Multiple Choice Test Assessment Items Using the “Item Writing Flaws Evaluation Instrument” (IWFEI)** with Christopher Randles, Jared Breakall, and Erin Saitta, August 2022
- TOPkit Workshop: **Building instructional resilience: Formulating a response to crisis pedagogy**, with Michael Strawser and Ann Miller, 2021
- FCTL **Zoomtastic Workshop Series and Book Club** guest speaker on the use of the annotation tool in Zoom for interaction in remote classes, 2021
- FCTL **Course Innovation Projects**:
 - Teaching in Active Learning Spaces (Spring 2018, Fall 2018, Spring 2019 – 2 sections, Fall 2019)
 - Appealing to the iGeneration: FLIPping content in a F2F course (Spring 2020)
- FCTL and Center for Distributed Learning iLab: **Digital Learning STEM Institute**, 2018
- FCTL **Preparing Tomorrow’s Faculty**, Spring 2019
- FCTL **Workshops on Active Learning**
 - “Teaching with Technology”, New Faculty Orientation – Fall 2018, Winter Faculty Development Conference – Fall 2018
 - “Graduate Teaching Associate Training”, Fall 2018, Spring 2019, Summer 2019
 - “General Education Program Workshop on Active Learning”, Fall 2018, Spring 2019
 - “Scholarship of Teaching and Learning Day”, Fall 2018, Spring 2019
 - UCF Downtown Classroom Orientation, Fall 2019
 - Various department and unit meetings throughout post-doctoral appointment

Service

- Co-organizer and presider of symposium with Lapeyrouse, N. Southeastern Regional Meeting of the American Chemical Society, Orlando, FL, October 2025.
- Peer-reviewer for ACS Books: Engaging Students in Physical Chemistry, Vol. 2
- Peer-reviewer for Discover Education
- Peer-reviewer for Education Sciences
- Peer-reviewer for Frontiers in Education
- UCF COS Assessment Review Committee member 2024, 2025
- ACS Student Organization Faculty Review Panel, 2024, 2025
- UCF COS Dean’s Advisory Council member, 2024-2026
- Peer-reviewer for Journal on Excellence in College Teaching
- UCF Chemistry Undergraduate Teaching and Learning Assistant Coordinator, 2022-present.
 - Program profiled in the **Chronicle of Higher Education**: [The College Students Who Help Teach Their Peers](#)
- UCF Chemistry Undergraduate Curriculum Committee Chair, Fall 2021 – present.
- Uknighted Chemistry Graduate Student Association (UCGSA) faculty advisor, 2022-present.
- Peer-reviewer for Journal of Chemical Education
- General Chemistry committee member, 2023-present.
- UCF Chemistry Department Annual Evaluation Standards and Procedures Committee Member 2022-present.
- Co-organizer and presider of symposium with Lapeyrouse, N. Biennial Conference on Chemical Education, Lexington, KY, August 2024.
- Co-organizer and presider of symposium with Legron-Rodriguez, T. Biennial Conference on Chemical Education, Lexington, KY, August 2024.
- UCF Teaching Incentive Program Committee Chair, Spring 2024.
- Search committee member
 - FCTL Instructional Specialist, 2024

- Chemistry Lab Coordinator, 2024
- Chemistry lecturer, 2023
- UCF College of Sciences Instructor/Lecturer Task Force, 2024 - present
- UCF Student Scholar Symposium Judge, Spring 2022, 2023, 2024, 2025.
- Chemistry Department Awards organization, 2023
- Materials Science and Technology Undergraduate Student Speaking Contest Judge, October 9, 2022
- Co-organizer and presider of symposium with Lapeyrouse, N. Biennial Conference on Chemical Education, West Lafayette, Indiana, August 2022.
- UCF Teaching Incentive Program Committee Member, Spring 2022.
- UCF Chemistry Steering Committee Member, Fall 2021 – present.
- UCF Synchronous Online Teaching Working Group with FCTL/CDL, Spring 2021
- Peer-review for International Journal of Technology in Education and Science
- UCF Chemistry Department Undergraduate Curriculum Committee Member, Fall 2020
- UCF Course Redesign Initiative (CRI) Course Review Committee Member, Spring 2019-Spring 2021
- UCF Course Redesign Initiative (CRI) Proposal Review Committee Member, Spring 2019-Spring 2021
- Teaching Excellence Award Committee Member, Spring 2019, Spring 2020
- Co-organizer of symposium with Nicole Lapeyrouse. Biennial Conference on Chemical Education, Corvallis, Oregon, July 2020. Because of the global COVID-19 pandemic, the 2020 Biennial Conference on Chemical Education was terminated on April 2, 2020, by the Executive Committee of the Division of Chemical Education, American Chemical Society; and, therefore, this symposium did not take place as intended.
- Co-organizer and presider of symposium with Popova, M. National Meeting of the American Chemical Society, San Francisco, California, March 2017.

Outreach

- Chisholm Elementary School (New Smyrna Beach, FL) 2nd grade ACS Science Coach, 2023-24 academic year
- The **Orlando Chemistry Tutoring, Enrichment and Training Camp (OCTET)**, Summer 2015, 2016, 2017
- The **Biology Integrated Orlando Training and Enrichment Camp (BIOTEC)**, Summer 2015, 2016, 2017
- The **Physics Youth Scholars Integrated Camp for Orlando Scientists (PhYSICOS)**, Summer 2017
- Chemistry Department participation in UCF **STEM Day**, January 2015

Professional Affiliations

- Member of American Chemical Society, 2015-present

Honors and Awards

- POGIL Large Lecture Transformation Award, 2025
- UCF Scholarship of Teaching and Learning (SoTL) Award, 2025
- UCF Chemistry Department Professional Development Award, 2023
- UCF College of Science Excellence in Undergraduate Teaching Award, 2023
- Affordable Instructional Materials (AIM) Knight's Choice Award, 2022
- UCF Preeminent Postdoctoral Program (P3) funding recipient, 2018-2020
- Outstanding Speaker in the Nanomaterials Track at NanoFlorida Conference, 2018
- Kathleen McIntyre Award for outstanding graduate work in teaching, research, and class performance, April 2018

- UCF Initiatives in STEM iSTEM Fellowship, 2016-2017
- Graduate Teaching Award in UCF Chemistry Department, April 2017
- Outstanding Seminar Award in UCF Chemistry Department, April 2015
- Dr. J Clayton Baum Award for excellence in academics and research, May 2010