

Daniel Gonzalez Cedre

MATHEMATICIAN · COMPUTER SCIENTIST

✉ dgonza26@nd.edu | 🌐 daniel-gonzalez-cedre.github.io | 🌐 Daniel Gonzalez Cedre | 📞 0000-0002-2676-1452 | 🌐 daniel-gonzalez-cedre

Education

University of Notre Dame

PH.D. IN COMPUTER SCIENCE

- Advised by Tim Weneringer
- Recipient of the Dean's Graduate Fellowship
- Graduate Student Recruitment Representative

Jun 2019 — Present

Notre Dame, IN, USA

Florida State University

M.SC. IN MATHEMATICS

- Concentration in Financial Mathematics
- Recipient of the Dean's Graduate Scholarship

Aug 2017 — May 2019

Tallahassee, FL, USA

Florida International University

B.SC. IN MATHEMATICS · *cum laude*

B.SC. IN COMPUTER SCIENCE · *cum laude*

- McNair Scholar, 12th cohort
- Recipient of the National Hispanic Scholarship
- Recipient of the Florida Bright Futures Academic Scholarship

Aug 2012 — May 2016

Miami, FL, USA

Miami-Dade College

A.A. IN MATHEMATICS · *magna cum laude*

- Dual Enrollment through the School for Advanced Studies at Wolfson
- AP Scholar with Distinction
- National Hispanic Scholar

Jun 2010 — Apr 2012

Miami, FL, USA

Internships & Projects

Intern Research Scientist

LAWRENCE LIVERMORE NATIONAL LAB

- Advised by Grant Boquet and Timothy La Fond
- Performed Bayesian inference on vertex-replacement graph grammars
- Worked to disentangle CNRG from its hierarchical-clustering-based priors

Jun 2021 — Aug 2021

Livermore, CA, USA

Intern Research Scientist

LAWRENCE LIVERMORE NATIONAL LAB

- Advised by Grant Boquet and Timothy La Fond
- Modeled temporal graphs with hidden Markov models
- Modified a vertex-replacement graph grammar to incorporate hidden Markov states
- Evaluated the quality of generated temporal graphs using standard graph comparison metrics

Nov 2020 — Feb 2021

Livermore, CA, USA

Contactless Fingerprint Collection

COMPUTER VISION RESEARCH LAB @ NOTRE DAME

- Advised by Adam Czajka in collaboration with Aidan Draper
- Sponsored by West Virginia University

Jun 2019 — Jan 2020

Notre Dame, IN, USA

PURE Math Research Program

UNIVERSITY OF HAWAII AT HILO

- Advised by Roberto Pelayo and Brian Wissman
- Investigating the properties of monotone catenary degree in numerical monoids
- Funded by the NSF

Jun 2015 — Jul 2015

Hilo, HI, USA

Programming Team Member

FLORIDA INTERNATIONAL UNIVERSITY

- Competed at ICPC 2013
- Competed at Southeastern Regionals in 2014

Aug 2013 — Jan 2015

Miami, FL, USA

Publications & Preprints

- 2022** **The Infinity Mirror Test for Graph Models** · TKDE
Satyaki Sikdar · Daniel Gonzalez Cedre · Trenton W. Ford · Tim Weninger
- 2021** **Joint Subgraph-to-Subgraph Transitions** · WSDM
Justus Hibshman · Daniel Gonzalez Cedre · Satyaki Sikdar · Tim Weninger
- 2015** **Monotone Catenary Degree in Numerical Monoids** · arXiv
Daniel Gonzalez Cedre · Cameron Wright · Jenna Zomback

Talks & Lectures

- 2021** **Mining Temporal Hypergraphs with Graph Grammars** · Invited guest lecture
Rose-Hulman Institute of Technology
- 2020** **The Infinity Mirror Test for Graph Generators** · Full talk
SIAM Network Science
- 2020** **The Infinity Mirror Test for Graph Generators** · Poster presentation
ND CSE 14th Annual Poster Conference
- 2015** **Monotone Catenary Degree in Numerical Monoids** · Poster presentation
FIU McNair Scholars Research Conference

Teaching Experience

Instructor of Record

DISCRETE MATH

- Designed every aspect of the course
- Planned and delivered lectures three times per week
- Held optional weekly 3.5-hour-long recitation sections for the students
- Created and graded weekly problem sets, two midterm exams, and a final exam
- Performed all duties without the help of a TA for a class of 26 students
- Held 3 office hours per week

University of Notre Dame

Spring 2022

Graduate Student Lecturer

CSE DISCERNMENT LECTURES

- Delivered a series of three virtual lectures to prospective engineering freshmen
- Designed a computer vision-based learning activity for the students
- Guided students through group activities, showing them a variety of interesting topics in computer science

University of Notre Dame

Fall 2020

Recitation Instructor

DISCRETE MATH

- Delivered weekly recitation lectures to two sections of students
- Held office hours, proctored weekly quizzes, and graded assignments

Florida State University

Spring 2019

Instructor of Record

PRECALCULUS ALGEBRA

- Planned and delivered lectures three times per week
- Held office hours and proctored quizzes and exams

Florida State University

Fall 2018

Graduate Teaching Assistant

DISCRETE MATH · DATA STRUCTURES

- Graded assignments and held office hours

University of Notre Dame

Fall 2019 — Spring 2020

Graduate Teaching Assistant

BUSINESS CALCULUS · PRECALCULUS ALGEBRA · TRIGONOMETRY · FINITE MATH · LIBERAL ARTS MATH

- Proctored quizzes and exams

Florida State University

Fall 2017 — Fall 2018

Undergraduate Learning Assistant

GRAPH THEORY · INTRO TO ADVANCED MATH · CALCULUS 2 · CALCULUS 1 · DISCRETE MATH · FINITE MATH · COLLEGE ALGEBRA

- Held recitation sections and office hours
- Assisted professors with in-class duties
- Graded assignments

Florida International University

Spring 2013 — Summer 2017