Daniel Gonzalez Cedre

MATHEMATICIAN · COMPUTER SCIENTIST

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Education

University of Notre Dame

Jun 2019 — Present

Ph.D. IN COMPUTER SCIENCE

Notre Dame, IN, USA

- Working on temporal graph mining and rule-based graph transformations with interests in applied category theory
- Recipient of the Dean's Graduate Fellowship
- Graduate Student Recruitment Representative
- · Advised by Tim Weninger

Florida State University

Aug 2017 — May 2019

M.Sc. in Mathematics Tallahassee, FL, USA

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

Florida International University

Aug 2012 — May 2016

B.Sc. in Mathematics · cum laude Miami, FL, USA

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

Miami-Dade College Jun 2010 — Apr 2012

A.A. IN MATHEMATICS · magna cum laude

Miami, FL, USA

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

Internships & Projects

Intern Research Scientist

Jun 2021 — Aug 2021

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

Intern Research Scientist Nov 2020 — Feb 2021

LAWRENCE LIVERMORE NATIONAL LAB

Livermore, CA, USA

- 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

Contactless Fingerprint Collection

Jun 2019 — Jan 2020

COMPUTER VISION RESEARCH LAB @ NOTRE DAME

Notre Dame, IN, USA

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

PURE Math Research Program

Jun 2015 — Jul 2015

University of Hawaii at HiloAdvised by Roberto Pelayo and Brian Wissman

Hilo, HI, USA

Investigating the properties of monotone catenary degree in numerical monoids

Programming Team Member Aug 2013 — Jan 2015

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Competed at ICPC 2013

FLORIDA INTERNATIONAL UNIVERSITY
. Miami, FL, USA

· Competed at Southeastern Regionals in 2014

Publications & Preprints

Motif Minig: Finding and Summarizing Remixed Image Content · arXiv
 William Theisen · Daniel Gonzalez Cedre · Zachariah Carmichael · Daniel Moreira · Tim Weninger · Walter Scheirer
 The Infinity Mirror Test for Graph Models · TKDE
 Satyaki Sikdar · Daniel Gonzalez Cedre · Trenton W. Ford · Tim Weninger
 Joint Subgraph-to-Subgraph Transitions · WSDM
 Justus Hibshman · Daniel Gonzalez Cedre · Satyaki Sikdar · Tim Weninger
 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 \cdot Full talk \cdot SIAM Network Science
2020	The Infinity Mirror Test for Graph Generators · Poster presentation · ND CSE 14 th Annual Poster Conference
2015	Monotone Catenary Degree in Numerical Monoids · Poster presentation · FIU McNair Scholars Research Conference

Teaching Experience _____

Instructor of RecordUniversity of Notre Dame

DISCRETE MATH Spring 2022

- 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

Graduate Student LecturerUniversity of Notre Dame

CSE DISCERNMENT LECTURES Fall 2020

- 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

Recitation Instructor Florida State University

DISCRETE MATH Spring 2019

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

Instructor of Record Florida State University

Precalculus Algebra Fall 2018

• Planned and delivered lectures three times per week

• Held office hours and proctored guizzes and exams

DISCRETE MATH · DATA STRUCTURES

• Graded assignments and held office hours

Graduate Teaching AssistantFlorida State University

Business Calculus · Precalculus Algebra · Trigonometry · Finite Math · Liberal Arts Math

· Proctored quizzes and exams

Graduate Teaching Assistant

Undergraduate Learning Assistant

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

Spring 2013 — Summer 2017

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

Florida International University

University of Notre Dame

Fall 2019 — Spring 2020

Fall 2017 — Fall 2018