

# GABRIEL PASSAMANI ANDRADE

## EDUCATION

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<b>University of Colorado Boulder</b> Ph.D. in Computer Science (Expected Spring 2023)	<i>Fall 2018 - Present</i>
<b>University of Massachusetts Amherst</b> M.S. in Applied Mathematics	<i>Fall 2016 - Spring 2018</i>
<b>University of Massachusetts Amherst</b> B.S. in Pure Mathematics Minor in Philosophy	<i>Fall 2012 - Spring 2016</i>

## CURRENT RESEARCH PROJECTS

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<b>University of Colorado Boulder</b> <i>Graphical Economics with Resale</i> Adviser: Professor Rafael Frongillo	Spring 2019 - Present
<b>University of Colorado Boulder</b> <i>A Liquid Democratic Model of Collective Transport</i> Adviser: Professor Orit Peleg	Spring 2019 - Present
<b>University of Colorado Boulder</b> <i>Effects of Price Sensitivity in Algorithmic Agents on Electricity Market Dynamics</i> Advisers: Professors Rafael Frongillo and Kyri Baker	Fall 2018 - Present

## PAST RESEARCH PROJECTS

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<b>Lawrence Livermore National Labs</b> <i>Unsupervised Event Detection in Long Horizon Time Series Data</i> Adviser: Dr. Goran Konjevod	Summer 2019
<b>Biologically Inspired Neural and Dynamical Systems Lab</b> <i>Hierarchical Network Structure and Dynamics Motivated by Brains</i> Adviser: Professor Robert Kozma	Spring 2017 - Summer 2018
<b>University of Massachusetts Amherst</b> <i>Recurrent Systems for EMG-Based Hand Gesture Recognition</i> Adviser: Professor Qian-Yong Chen	Fall 2017 - Spring 2018
<b>University of Massachusetts Amherst</b> <i>Deep Neural Networks for Classifying Breast Masses From Mammograms</i> Adviser: Professor Nathaniel Whitaker	Fall 2016 - Spring 2017
<b>Mathematical Sciences Research Institute</b> <i>A Matroid Generalization of Sperner's Lemma</i> Advisers: Professors Francis Su and Mutiara Sondjaja	Summer 2015

## PUBLICATIONS

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G.P. Andrade, M. Ruzsinkó, and R. Kozma *Graph Models of Neurodynamics to Support Oscillatory Associative Memories*. In Proceedings of the International Joint Conference on Neural Networks (2018)

## PROGRAMMING LANGUAGES & OPERATING SYSTEMS

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Python, C, C++, Bash, Java, Matlab, x86 assembly, and PDDL

Multiple Linux Distributions, OS X, and Windows

## RELEVANT WORK EXPERIENCE

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### **Lawrence Livermore National Labs**

- Complex Networks Researcher Summer 2019

### **University of Colorado Boulder Department of Computer Science**

*Teaching Assistant*

- Intro to Computational Thinking Fall 2019
- Algorithms Spring 2019
- Starting Computing (Computer Science 1) Fall 2018

### **University of Massachusetts College of Information and Computer Sciences**

- Research Assistant Summer 2017 - Summer 2018

### **University of Massachusetts Department of Mathematics and Statistics**

- Graduate System Administrator and IT assistant Fall 2016 - Spring 2018

## SERVICE & LEADERSHIP

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### **Graduate Researchers in Data (GRiD)**

Summer 2017 - Spring 2018

*Chair of Operations*

- Organized and Hosted workshops, talks, and Hackathons
- Helped manage funds and secure assets for the organization

### **ASA DataFest**

Spring 2017 & 2018

*Consultant*

- Advised participants needing help with their projects

### **UMass Provost Undergraduate Research Fellowship**

Fall 2015 - Spring 2016

*Mentor*

- Helped guide the fellowship recipient in their research, class choices, etc.
- Chosen among senior undergraduates to represent the Mathematics Department

## AWARDS & HONORS

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2<sup>nd</sup> Place In Progress Research Poster, Graduate Student Research Expo Spring 2019

Outstanding Academic Achievement Award in Mathematics & Statistics Spring 2016

Louis Stokes Alliances for Minority Participation (LSAMP) Scholar

## SELECT PRESENTATIONS

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ACM Conference on Economics and Computation, Phoenix, AR	June 25th 2019
DARPA Site Visit, Amherst, MA	May 10th 2017
AMS/MAA Joint Mathematics Meeting (JMM), Seattle, WA	January 8th 2016
NSF SFS Site Visit, Amherst, MA	November 12th 2015
SACNAS National Conference, National Park, MD	October 29th 2015
MSRI-UP Final Talk, Berkeley, CA	July 24th 2015

## RELEVANT GRADUATE LEVEL COURSEWORK

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### University of Colorado Boulder:

- Dynamics on Networks (APPM 5720)
- Biologically Inspired Multi-Agent Systems (CSCI 5423)
- Convex Optimization (CSCI 5254)
- Network Analysis and Modeling (CSCI 5352)
- Coordination and Control of Multi-Agent Systems (ECEN 5008)

### University of Massachusetts Amherst:

- Information Theory (CS 650)
- Artificial Neural Network Dynamics Independent Study (CS 696)
- Artificial Intelligence (CS 683)
- Advanced Algorithms (CS 611)
- Numerical Analysis (Math 651)
- Cybersecurity Lecture Series (Math 591CF)
- Mathematical Statistics I & II (Stats 607 & 608)
- Dynamics, ODEs & PDEs (Math 532H & 534H)
- Real Analysis (Math 523H)

## MISC. SKILLS

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Fluent in English and Portuguese