

EDUCATION

University of Southern California

Ph.D. in Computer Science; GPA: 4.0

Dissertation: Dispersed Computing in Dynamic Environments

Advisor: Bhaskar Krishnamachari

Los Angeles, CA

Aug 2020 – May 2024

California State University, Long Beach

Master of Science in Computer Science; GPA: 4.0

Bachelor of Science in Computer Science; GPA: 3.6

Long Beach, CA

Aug 2018 – May 2020

Aug 2013 – May 2018

Thesis: Minimizing The Maximum Distance Traveled To Form Patterns With Systems of Mobile Robots

Advisor: Oscar Morales-Ponce

RESEARCH INTERESTS

Cooperative multi-agent systems, distributed computing, decentralized computing, online algorithms, distributed ledger technology, internet of things (IoT), artificial intelligence (AI), and large language models (LLMs) for endangered language revitalization.

EXPERIENCE

University of Southern California

Adjunct Research Assistant Professor of Electrical and Computer Engineering

Los Angeles, CA

July 2024 – Present

Coinbase

Consultant - Machine Learning Engineer

Remote

Jan 2024 – Present

Loyola Marymount University

Assistant Professor of Computer Science

Los Angeles, CA

Aug 2024 – Present

The Aerospace Corporation

Member of the Technical Staff

El Segundo, CA

Associate Member of the Technical Staff

Mar 2020 – Jun 2024

Intern

Sep 2018 – Mar 2020

Jan 2018 – Aug 2018

- Designed software and algorithms for rapidly developing scalable, modular, and efficient analyses for launch vehicle verification in simulation, day-of-launch, and post-flight environments.

CSULB Research Foundation

Student Research Assistant

Long Beach, CA

Mar 2017 – May 2018

- Developed software and simulations for systems of cooperative robots.

Big Pine Paiute Tribe of the Owens Valley

Big Pine, CA

IT Intern

May 2014 – Aug 2014

- Organized computer skills workshops for high school students in a tribal work experience program
- Developed membership management software for the tribal wellness center

HONORS & AWARDS

Cobell Scholar

The Cobell Scholarship

2023-2024

Awarded to “high-achieving, community-involved Native college students with leadership experience”.

CPS Rising Star

2023 CPS Rising Stars Workshop

2023

This workshop aims to identify and mentor outstanding PhD students and postdocs who are interested in pursuing academic careers in Cyber-Physical Systems (CPS) related areas

First-Place Winner

2nd Student Design Competition on Networked Computing on the Edge @ CPS IoT Week 2022

2022

Graph Convolutional Network-based Scheduler for Distributing Computation in the Internet of Robotic Things

PUBLICATIONS

- [26] **Studying the Effect of Schedule Preemption on Dynamic Task Graph Scheduling**
Mohammadali Khodabandehlou, Jared Coleman, and Bhaskar Krishnamachari
To Appear at MILCOM 2025 WS-9 - Workshop On The Internet Of Things For Adversarial Environments
- [25] **Adapting Classic Scheduling Heuristics for Online Execution under Uncertainty**
Jason Chamorro, Gabriel Twigg-Ho, Jared Coleman, Tainā Coleman, Bhaskar Krishnamachari, and Mohammadali Khodabandehlou
To Appear at WORKS @ SC25 - The 20th Workshop on Workflows in Support of Large-Scale Science
- [24] **Community Voices on Digital Tools for Owens Valley Paiute**
Jared Coleman
LMU Digital Commons
- [23] **Crowd-SFT: Crowdsourcing for LLM Alignment**
Alex Sotiroopoulos, Sulyab Thottungal Valapu, Linus Lei, Jared Coleman, and Bhaskar Krishnamachari
DAPPS 2025 - The 7th IEEE International Conference on Decentralized Applications and Infrastructures
- [22] **Optimal Delivery with a Faulty Drone**
Jared Coleman, Evangelos Kranakis, Danny Krizanc, and Oscar Morales-Ponce
CCCG 2025 - The 37th Canadian Conference on Computational Geometry
- [21] **Linear Search with Probabilistic Detection and Variable Speeds**
Jared Coleman, Oscar Morales-Ponce
IWOCA 2025 - The 36th International Workshop on Combinatorial Algorithms
- [20] **Extended Abstract: A Chatbot for Endangered Language Research**
Diego Cuadros, Jared Coleman, Ruben Rosales, Glenn Nelson
AmericasNLP @ NAACL 2025 - 5th Workshop on NLP for Indigenous Languages of the Americas
- [19] **Evaluating Scheduling Algorithms for Adaptive Orchestration in Federated Tactical Edge Cloud Environments**
Alessandro Amato, Harrie Bastiaansen, Jared Coleman, Willem Datema, Mattia Fogli, Johan van der Geest, Bhaskar Krishnamachari, Thomas Kudla, Pablo Sanchez, Niranjan Suri
ICMCIS 2025 — International Conference on Military Communications and Information Systems
- [18] **Multimodal Search on a Line**
Jared Coleman, Dmitry Ivanov, Evangelos Kranakis, Danny Krizanc, Oscar Morales-Ponce
SIROCCO 2025 — International Colloquium on Structural Information and Communication Complexity
- [17] **PISA: An Adversarial Approach To Comparing Task Graph Scheduling Algorithms**
Jared Coleman, Bhaskar Krishnamachari
IPDPS 2025 - The 39th International Parallel and Distributed Processing Symposium
- [16] **LLM-Assisted Rule Based Machine Translation for Low/No-Resource Languages**
Jared Coleman, Bhaskar Krishnamachari, Khalil Iskarous, Ruben Rosales
AmericasNLP @ NAACL 2024 - 4th Workshop on NLP for Indigenous Languages of the Americas
- [15] **Linear Search for an Escaping Target with Unknown Speed**
Jared Coleman, Dmitry Ivanov, Evangelos Kranakis, Danny Krizanc, Oscar Morales-Ponce
IWOCA 2024 — 35th International Workshop on Combinatorial Algorithms
- [14] **Online Allocation of Sensing and Computation in Large Graphs**
Xinlin Li, Merve Karakas, Osama A. Hanna, Mehrdad Kiamari, Jared Coleman, Christina Fragouli, Bhaskar Krishnamachari, Gunjan Verma
IEEE CIC 2023 — International Conference on Collaboration and Internet Computing
- [13] **DARSAN: A Decentralized Review System Suitable for NFT Marketplaces**
Sulyab Thottungal Valapu, Tamoghna Sarkar, Jared Ray Coleman, Anusha Avyukt, Hugo Embrechts, Dimitri Torfs, Michele Minelli, Bhaskar Krishnamachari
ICBC 2023 — International Conference on Blockchain

- [12] **Search and Rescue on the Line**
Jared Coleman, Lorand Cheng, Bhaskar Krishnamachari
SIROCCO 2023 — International Colloquium on Structural Information and Communication Complexity
- [11] **PhD Forum Abstract: Cooperative Problem-Solving with Systems of Constrained Mobile Agents**
Jared Ray Coleman
IPSN 2023 — International Conference on Information Processing in Sensor Networks
- [10] **Graph Convolutional Network-based Scheduler for Distributing Computation in the IoRT**
Jared Coleman, Mehrdad Kiamari, Lillian Clark, Daniel D'Souza, Bhaskar Krishnamachari
MILCOM 2023 WS-7 — Workshop On The Internet Of Things For Adversarial Environments
- [9] **Delivery to Safety with Two Cooperating Robots**
Jared Coleman, Evangelos Kranakis, Danny Krizanc, Oscar Morales-Ponce
SOFSEM 2023 — International Conference on Current Trends in Theory and Practice of Computer Science
- [8] **The Snow Plow Problem: Perpetual Maintenance by Mobile Agents on the Line**
Jared Coleman, Oscar Morales-Ponce
ICDCN 2023 — International Conference on Distributed Computing and Networking
- [7] **Line Search for an Oblivious Moving Target**
Jared Coleman, Evangelos Kranakis, Danny Krizanc, Oscar Morales-Ponce
OPODIS 2022 — International Conference on Principles of Distributed Systems
- [6] **Multi-Objective Network Synthesis for Dispersed Computing in Tactical Environments**
Jared Coleman, Eugenio Grippo, Bhaskar Krishnamachari, Gunjan Verma
SPIE Defense + Commercial Sensing 2022
- [5] **Network Synthesis for Tactical Environments: Scenario, Challenges, and Opportunities**
Tzanis Anevialis, Jonathan Bunton, Jared Coleman, Mine Dogan, Eugenio Grippo, Abel Souza, Christina Fragouli, Bhaskar Krishnamachari, Matthew Maness, Karl Olson, Prashant Shenoy, Paulo Tabuada, Gunjan Verma
SPIE Defense + Commercial Sensing 2022
- [4] **Robotic Sorting on the Grid**
Jared Coleman, Oscar Morales-Ponce
ICDCN 2022 — 23rd International Conference on Distributed Computing and Networking
- [3] **Message Delivery in the Plane by Robots with Different Speeds**
Jared Coleman, Evangelos Kranakis, Oscar Morales-Ponce, Danny Krizanc
SSS 2021 — 23rd International Symposium on Stabilization, Safety, and Security of Distributed Systems
- [2] **The Pony Express Communication Problem**
Jared Coleman, Evangelos Kranakis, Oscar Morales-Ponce, Danny Krizanc
IWOCA 2021 — 32nd International Workshop on Combinatorial Algorithms
- [1] **Minimizing The Maximum Distance Traveled To Form Patterns With Systems of Mobile Robots**
Jared Coleman, Evangelos Kranakis, Oscar Morales-Ponce, Jorge Urrutia, Birgit Vogtenhuber
CCCG 2020, 32nd Canadian Conference on Computational Geometry, August 5-7, 2020

OTHER RESEARCH PRODUCTS

Kubishi Sentences (sentences.kubishi.com)

LLM-powered sentence building and translation tools for the Owens Valley Paiute Language

2024 - present

Kubishi Dictionary (dictionary.kubishi.com)

An online dictionary for the Owens Valley Paiute language

2020 - present

ChatLang (github.com/ANRGUSC/chatlang)

An LLM-powered role-playing bot with parallel tutor assistance

2023

GCN-Turtlebot (github.com/ANRGUSC/gcnschedule-turtlenet)

GCN-based Scheduler for Distributing Computation in the Internet of Robotic Things

First-place winner: 2nd Student Design Competition on Networked Computing on the Edge at CPS IoT Week

2022

Secure IIoT Application*Using blockchain technology to secure industrial IoT systems*

Industry Partner: Chevron

2021-2023

Aerocube @ The Beach*Distrubuted robotics systems for space — a proof of concept*

Industry Partner: The Aerospace Corporation

2017

MEDIA COVERAGE

This new tech could save old languages from dying out*Clare Duffy, CNN**September 2, 2025***Can A.I. Help Revitalize Indigenous Languages?***Serena Jampel, Smithsonian Magazine**July 31, 2025***Why some endangered language speakers have to get creative with AI preservation efforts***Nichole Currie, WHYY (PBS/NPR)**December 9, 2024***Revitalizing Critically Endangered Languages via Large Language Models***Loyola Marymount University Newsroom**November 14, 2024***Imagine Hearing A Distant Relative Telling Stories in a Nearly Forgotten Language. What Would You Do?***Greg Hardesty, USC Viterbi, School of Engineering**June 20, 2024*