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**EDUCATION**

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**University of Southern California***Ph.D. in Computer Science; GPA: 4.0*

Los Angeles, CA

*Aug 2020 – May 2024*

Dissertation: Dispersed Computing in Dynamic Environments

Advisor: Bhaskar Krishnamachari

**California State University, Long Beach***Master of Science in Computer Science; GPA: 4.0*

Long Beach, CA

*Aug 2018 – May 2020**Bachelor of Science in Computer Science; GPA: 3.6**Aug 2013 – May 2018*

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

Advisor: Oscar Morales-Ponce

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**RESEARCH INTERESTS**

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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.

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**EXPERIENCE**

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**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

*Mar 2020 – Jun 2024**Associate Member of the Technical Staff**Sep 2018 – Mar 2020**Intern**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***IT Intern*

Big Pine, CA

*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

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**HONORS & AWARDS**

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**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

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- [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, Tainã 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 Sotiropoulos, 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 Anevlavis, 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

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### Kubishi Sentences ([sentences.kubishi.com](https://sentences.kubishi.com))

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

2024 - present

### Kubishi Dictionary ([dictionary.kubishi.com](https://dictionary.kubishi.com))

An online dictionary for the Owens Valley Paiute language

2020 - present

### ChatLang ([github.com/ANRGUSC/chatlang](https://github.com/ANRGUSC/chatlang))

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

2023

### GCN-Turtlebot ([github.com/ANRGUSC/gcnschedule-turtlenet](https://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

*Distributed robotics systems for space — a proof of concept*

Industry Partner: The Aerospace Corporation

2017

## MEDIA COVERAGE

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### **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*