

# ALICIA ESQUIVEL-MOREL

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<https://alicesquivel.github.io/>



## EDUCATION

**University of Missouri**  
Columbia - Missouri, USA

**Doctorate in Computer Science (PhD CS)**  
Expected graduation date: Fall 2025 - GPA: 3.7

**University of Missouri**  
Columbia - Missouri, USA

**Master of Science in Computer Science (MS CS)**  
2018-2020 - GPA: 3.7/4.0

**Universidad Tecnológica Intercontinental**  
Caacupé, Paraguay

**Licentiate in Computer Systems Analysis**  
2008-2013 - GPA: 4.81/5.0



## RESEARCH INTERESTS

Management and security of distributed/cloud computing applications | Internet of Things (IoT)-based Visual Cloud Computing | Testbeds deployment and design of experiments | Network performance measurement and monitoring | Cyber Security for Critical Application Infrastructures.



## TECHNICAL SKILLS AND EXPERIENCE

Matlab · C · Python · Networking · DevOps · Cloud Computing · Amazon Web Services  
Design of Experiments (DOE) · Technical Writing · Presentation Skills · Applied Research · Data Analysis  
Testing · Cross-functional Team Leadership · Linux (Ubuntu), Mac OS, Windows OS



## EMPLOYMENT HISTORY

**University of Chicago - Chicago, IL**

Internship Research Assistant - Chameleon Cloud

May – August 2023

Research involving infrastructure deployment, use case scenarios, establishing testbeds, tools and methodologies for CHI@Edge, container-based platform for deploying IoT fleets.

**University of Missouri - Columbia, MO**

Graduate Research Assistant - VIMAN Lab

January 2020 – Present

Research involving drone video analytics applications, security in the communication, network-edge and computation in drones. Simulation frameworks, testbeds and hybrid deployments.

**University of Missouri - Columbia, MO**

Graduate Teaching Assistant

CS4530 / 7530 - Cloud Computing [Undergraduate and Graduate class ~70 students]

January – May 2023

CS2830 - Web Development I [Undergraduate class ~300 students]

August – December 2019

CS1050 - Algorithm Design and Programming I [Undergraduate class ~300 students]

August 2021 – May 2022

Assisting with teaching, grading and administering exams, working with students, and other duties as assigned, including assistance on other projects for the class.

**University of Missouri - Columbia**

REU - Research Experience for Undergrads

May 2020 – August 2020

Consumer Networking Technologies

May 2021 – August 2021

Software-defined networking/virtualization, visual computing at the network edge, social virtual reality, mobile sensing & environment recognition.

May 2022 – August 2022

Work as a mentor for undergraduate students, engaging in summer research involving a variety of problems involving consumer networking technologies.



## PUBLICATIONS AND RESEARCH WORK

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### **FlyNet: Drones on the Horizon**

2023

**Alicia Esquivel Morel**, Chengyi Qu, Prasad Calyam, Cong Wang, Komal Thareja, Anirban Mandal, Eric Lyons, Michael Zink, George Papadimitriou, and Ewa Deelman  
IEEE Internet Computing

### **Experiments on Network Services for Video Transmission using FABRIC Instrument Resources**

2023

**Alicia Esquivel Morel**, Durbek Gafurov, Prasad Calyam, Cong Wang, Komal Thareja, Anirban Mandal, Eric Lyons, Michael Zink, George Papadimitriou, and Ewa Deelman  
IEEE CNERT-WORKSHOP, Conference on Computer Communications Workshops (INFOCOM WKSHPS)

### **Trust Quantification in a Collaborative Drone System with Intelligence-driven Edge Routing**

2023

**Alicia Esquivel Morel**, Ekinan Ufuktepe, Cameron Grant, Samuel Elfrink, Chengyi Qu, Prasad Calyam, and Kannappan Palaniappan  
IEEE/IFIP Network Operations and Management Symposium (NOMS)

### **Transmitting Information with Global-designation of Emergency Routes for Edge Video Processing**

2023

Michael Miller, Anvitha Ramachandran, **Alicia Esquivel Morel**, Durbek Gafurov, and Prasad Calyam  
IEEE/IFIP Network Operations and Management Symposium (NOMS)

### **Network Services Management using Programmable Data Planes for Visual Cloud Computing**

2023

**Alicia Esquivel Morel**, Prasad Calyam, Chengyi Qu, Durbek Gafurov, Cong Wang, Komal Thareja, Anirban Mandal, Eric Lyons, Michael Zink, George Papadimitriou, and Ewa Deelman  
International Conference on Computing, Networking and Communications (ICNC)

### **Automating Edge-to-Cloud Workflows for Science: Traversing the Edge-to-Cloud Continuum with Pegasus**

2022

Ryan Tanaka, George Papadimitriou, Sai Charan Viswanath, Cong Wang, Eric Lyons, Komal Thareja, Chengyi Qu, **Alicia Esquivel Morel**, Ewa Deelman, Anirban Mandal, Prasad Calyam, Michael Zink  
22nd IEEE International Symposium on Cluster, Cloud and Internet Computing (CCGrid).

### **Location Prediction and Trajectory Optimization in Multi-UAV Application Missions**

2022

Singh, Rounak, Chengyi Qu, **Alicia Esquivel Morel**, and Prasad Calyam  
Intelligent Unmanned Air Vehicles Communications for Public Safety Networks

### **Learning-based Multi-Drone Network Edge Orchestration for Video Analytics**

2022

Qu, Chengyi, Rounak Singh, **Alicia Esquivel Morel**, and Prasad Calyam  
INFOCOM 2022-IEEE Conference on Computer Communications. IEEE, 2022

### **Obstacle-Aware and Energy-Efficient Multi-Drone Coordination and Networking for Disaster Response**

2021

Chengyi Qu, Rounak Singh, **Alicia Esquivel Morel**, Francesco Betti Sorbelli, Prasad Calyam, Sajal K Das  
2021 17th International Conference on Network and Service Management (CNSM)

### **Using ns-3 with the POWDER wireless testbed**

2021

Tom Henderson, **Alicia Esquivel Morel**  
WNS3 2021 Tutorials

### **Enhancing Network-edge Connectivity and Computation Security in Drone Video Analytics**

2020

**Alicia Esquivel Morel**, Deniz Kavzak Ufuktepe, Robert Ignatowicz, Alexander Riddle, Chengyi Qu, Prasad Calyam, Kannappan Palaniappan  
2020 IEEE Applied Imagery Pattern Recognition Workshop (AIPR)

<b>Dronenet-sim: A learning-based trace simulation framework for control networking in drone video analytics</b>	2020
Chengyi Qu, <b>Alicia Esquivel Morel</b> , Drew Dahlquist, Prasad Calyam	
Proceedings of the 6th ACM Workshop on Micro Aerial Vehicle Networks, Systems, and Applications	

<b>Design of trace-based NS-3 simulations for UAS video analytics with geospatial mobility</b>	2020
Chengyi Qu, <b>Alicia Esquivel Morel</b> , Drew Dahlquist, Prasad Calyam	
Geospatial Informatics X - International Society for Optics and Photonics	

## ✓ PROFESSIONAL SERVICE

**Serve as peer-reviewer of several international IEEE/ACM conferences and journals**

Globecom · TNSM · Wi-DroIT · IEEE ETT · IEEE TDSC · FGCS · COMNET · IJNM · JPDC  
IEEE SECON · CNSM · IPCCC - IEEE · IEEE ICC - NGNI Symposium

## ✓ SCHOLARSHIPS AND AWARDS

<b>National Science Foundation (NSF)-sponsored grant</b>	2023
POWDER-RENEW Mobile and Wireless Week	

<b>National Science Foundation (NSF)-sponsored grant</b>	2022
FABRIC KNIT5 (Keeping Networks Innovative Together) community workshop	

<b>National Science Foundation (NSF)-sponsored grant</b>	2022
IEEE ICC 2022 [IEEE International Conference on Communications] conference	

<b>Department of Defense University Consortium for Cybersecurity (DoD-UC2)</b>	2022
Top three white paper request winner for information (RFI) to the academic community on new cyber technologies pertaining to the topic of implementing zero trust at the tactical warfighting edge	

<b>Electrical Engineering and Computer fellowship award, University of Missouri</b>	2022
Student travel EECS fellowship award	

<b>Upsilon Pi Epsilon (UPE)</b>	2021
The International Honor Society for the Computing and Information Disciplines.	

<b>Fulbright-CAL Scholarship, LASPAU - Administered</b>	2018-2020
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<b>Fulbright Intensive English Program, IIE - Administered</b>	2018
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<b>United States Embassy in Paraguay</b>	2012-2014
Hayes Scholarship - English Micro scholarship Program for Advanced level courses	

## ✓ PROFESSIONAL AFFILIATIONS AND VOLUNTEER WORK

<b>IEEE</b>	2020-Present
Communications Society (ComSoc), Young Professionals, Communications Society, Women in Engineering	

<b>Epsilon Pi Epsilon</b>	2021-Present
Honor Society for the Computing and Information Disciplines	

<b>Volunteer in social and educational projects</b>	2014-Present
Fulbright Association in Paraguay	

<b>Founder and member of the State Alumni Paraguay SAP</b>	2015-2019
Alumni Association from the Government of the United States in Paraguay	