

Amanda Chu

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EDUCATION

Georgia Institute of Technology; Atlanta, GA,
Ph.D. in Operations Research, anticipated December 2020. GPA: 3.58/4.0

Georgia Institute of Technology; Atlanta, GA,
Masters in Operations Research, May 2019. GPA: 3.58/4.0

Auburn University, Auburn, AL
Bachelor of Industrial and Systems Engineering, *Summa Cum Laude*, August 2015
B.S. in Applied Mathematics, *Summa Cum Laude*, August 2015

WORK EXPERIENCE

UPS; Atlanta, GA

Advanced Technology Group Intern – Full-time; May 2018 – current

- Work was subject to non-disclosure agreements and as such project details cannot be provided
- Worked with colleagues on modeling, simulation, and analytics-based projects
- Created algorithms for addressing special cases of vehicle routing problems with time windows applicable to the delivery operations at UPS
- Developed a complex simulation model with another intern that is being used to help plan future operations
- Helped build and solve large-scale optimization models for specific case studies

Georgia Institute of Technology; Atlanta, GA
Graduate Teaching Assistant – Part-time; August 2015 – Summer 2018

Introduction to Analytics Modeling, ISYE6501; Summer 2017 – Spring 2018

- Performed as Head TA from the first offering of online course in Summer 2017 to present where additional responsibility involved helping professor to choose TAs for course, making TA documentation, organizing and training TAs, designing work schedule for TAs to ensure students online questions are answered as quickly as possible, making the online live video schedule and structure to meet student needs, working with professor and course webmaster to create, modify, and update course content online
- Completed regular TA work such as answering student questions over a range of topics from course content to administrative issues online, handling re-grades based on student requests, helping to design exams, hosting online live video sessions for students in attendance to ask questions on course content and view live programming demos on R, Python, and Arena/SimPy
- Worked with the professor and course webmaster each semester to evaluate and suggest improvements to the course. The changes and improvements include changes to homework assignments wording and corrections, creating homework solutions,

adding additional clarifying information for students into the course content, and designing the TA workload, responsibilities, and scheduling

Simulation, ISYE3044; Summer 2016

- Assisted in teaching course content, demonstrated simulation concepts and process in the course software Simio in and out of class, graded assignments, and held office hours for undergraduate Simulation course

Senior Design, ISYE4106; Fall 2015 – Spring 2016

- Provided support and guidance for undergraduate Senior Design course for presentation and software mentoring in statistics, simulation (Arena and Simio), and optimization
- Presentation mentoring involved having numerous meetings with all Senior Design teams over the semester from morning to evening to evaluate presentation slides and skills based on a rubric provided by our supervisor
- Gained experience with video editing software and video editing since we recorded all Senior Design presentations at two different points in the semester and made them available for the teams to view and prepare for the final presentation at the end of the semester

Boeing; Huntsville, AL

Systems Engineering Intern – Full-time; May 2015 – August 2015

- Worked with experienced systems engineers on learning more about modeling, simulation, and analytics based projects within the Boeing Research & Technology (BR&T) group
- Assigned to work on a project in collaboration with Georgia Institute for Technology Aerospace group dealing with advanced analytics, simulation, and work-scheduling optimization problems
- Created an application in Visual C# to help with integrating the optimization and simulation processes with Boeing proprietary systems and processes

Mississippi Power Company; Hattiesburg, MS

Co-op Technical – Full-time; May 2012 – December 2013 (3 Semesters)

- Attained knowledge of power engineering, performed engineering duties, worked in line work construction
- Managed senior analyst level projects such as underground padmount inspections for Pinebelt division in 2012 and 2013
- Worked storm restoration in February 2013 when a tornado hit Hattiesburg, MS

RESEARCH

Georgia Institute of Technology: H. Milton Stewart School of Industrial & Systems Engineering

Dr. Pinar Keskinocak; William W. George Chair and ADVANCE Professor, Interim Associate Dean for Faculty Development & Scholarship, College of Engineering and Co-Director Center for Health and Humanitarian Systems

Graduate Research Assistant; August 2015 - present

- Pursuing research in healthcare and humanitarian systems specifically in the field of education with focus in school bus routing and teacher scheduling problems under advisor guidance

- Working with real route data provided by the Denver Public School Systems to improve the process of developing school bus routes and evaluating potential route changes due to changing bell times. In the process of submitting a paper on the decision support tool created and being used by Denver Public Schools system to help with planning, evaluating, and optimizing their bus route assignments.
- Working with Atlanta Public Schools to analyze and evaluate the bus route assignments of dual campus schools.
- Investigating and evaluating the school closures in Puerto Rico due to declining student enrollment and after effects of Hurricane Maria.

Auburn University: Samuel Ginn College of Engineering

Dr. Chase Murray; Associate Professor in Industrial and Systems Engineering

Undergraduate Research Assistant (unpaid); Summer 2014 – Summer 2015

- Assisted with research based on drone delivery using truck routing systems and developing mathematical programming models to obtain optimal and heuristic solutions
- Developed test problems to gather information on model behavior, create illustrations, and verify/validate models
- Partnered with another undergraduate student on research characterizing multiple drone utilization by truck for making customer deliveries and developing mathematical models for optimal and heuristic solutions
- Published paper: Murray, Chase C., and Amanda G. Chu. "The flying sidekick traveling salesman problem: Optimization of drone-assisted parcel delivery." *Transportation Research Part C: Emerging Technologies* 54 (2015): 86-109.

SKILLS

- Software experience and competence in: Microsoft Office software, Matlab, Excel VBA, AnyLogic, Simio, Gurobi, GLPK, Python, R, Visual C#, Arena, Jupyter Notebook

INVOLVEMENTS

- Volunteering with local Snap2it animal shelter in Atlanta, GA, to take care of adoptable cats – Summer 2017 to present
- President of The Institute for Operations Research and the Management Sciences (INFORMS) Georgia Institute of Technology student chapter – August 2015 to present
- Founder and President of The Institute for Operations Research and the Management Sciences (INFORMS) Auburn University student chapter – founded Spring 2014 & official Fall 2014
- Vice President of Alpha Pi Mu student chapter– Fall 2014
- Membership: Tau Beta Pi, Alpha Pi Mu, IISE, INFORMS, and WORMS

ACHIEVEMENTS

- Georgia Institute of Technology Industrial & Systems Engineering Outstanding Graduate Teaching Assistantship Award – 2018
- National Science Foundation Graduate Research Fellowship Program Honorable Mention – 2017
- Industrial & Systems Engineering Undergraduate Student of the Year Award – Spring 2015
- Presidential Scholar – Fall 2010 – Spring 2015