

OBJECTIVE	Seeking full-time opportunities in areas of operations research, industrial engineering, forecasting, and data analytics.	
SUMMARY	<ul style="list-style-type: none"> - Solid background in operations research, statistical modeling/analysis, and programming. - Research/industry experience on optimal control of manufacturing/logistics/supply chains and revenue management. - Over 5 hands-on projects in building optimization/simulation/statistics-based decision support tools. - Energetic self-starter, outstanding analytical ability, and strong communication skills. 	
EDUCATION	Virginia Polytechnic Institute and State University (Virginia Tech), Blacksburg, VA <ul style="list-style-type: none"> - Ph.D. in Operations Research (GPA: 3.92/4.00) Sep 2018 (expected) <ul style="list-style-type: none"> ◦ Advisor: Dr. Subhash C. Sarin. - M.S. in Industrial and Systems Engineering (GPA: 3.90/4.00) 2016 Tongji University, Shanghai, China - B.E. in Industrial Engineering (GPA: 4.64/5.00; Rank: 2/55) 2013 	
COMPUTER SKILLS	Programming Languages: C++, Python, VBA, C#.	Database: SQL, Access.
	Optimization: CPLEX/OPL, AMPL.	Simulation: AutoMod, ProModel, Simio.
	Scientific Computing: R, Mathematica.	Others: Git, AutoCAD.
GRADUATE COURSEWORK	Operations Research: Linear/Nonlinear/Integer/Dynamic Programming, Scheduling and Sequencing Theory, Random Processes, Simulation. Statistics & Mathematics: Probability Theory, Statistical Inference, Statistical Learning, Real Analysis. Manufacturing & Logistics: Manufacturing Systems Engineering, Production Planning & Control, Lean Manufacturing, Semiconductor Manufacturing, Inventory and Operations Management.	
RELATED EXPERIENCE	PROS, Houston, TX (a pricing and revenue management solution company) Scientist Intern (Optimization) Jun 2017 – Aug 2017 <i>Pareto Frontier in Revenue Management</i> ^[1] <ul style="list-style-type: none"> - Proposed a constrained stochastic DP approach to generate Pareto frontier of conflicting airline objectives. <i>Airline Customer Value Study</i> <ul style="list-style-type: none"> - Built 15+ automation tools (Python and VBA) on analyzing past flight data to estimate customer potential revenue if switch from the current leg-based control to network-based products. - Optimized the code and reduced run time by 97%, saving weeks of overall analysis time. <i>3-day Hackathon</i> <ul style="list-style-type: none"> - Proposed and developed an opportunity-based dynamic flight destination recommendation engine. - Predicted market opportunities using ridge regression with time series models. Virginia Tech, Blacksburg, VA (Winner) IISE Student Case Competition in Logistics and Supply Chain Feb 2017 – Mar 2017 <ul style="list-style-type: none"> - Proposed a two-stage approach for strategic network design and operational decisions. - Proposed tight mathematical formulations and used decomposition to accelerate. Computational test revealed a reduction of the solution time by 10^3+ times. - Coded a computer decision support tool based on our proposed approach (C++ with CPLEX). <i>Biomass Feedstock Logistics</i> Aug 2016 – present <ul style="list-style-type: none"> - Identified different integrated biomass feedstock supply chain problems with structural insights. - Proposed a Dantzig-Wolfe decomposition framework for the integrated biomass feedstock supply chain problem. - Formulated a fleet management model in the design of a switchgrass-based bio-ethanol supply chain. <i>Joint Supply Chain Operations</i> ^[3,4] Jun 2015 – Jun 2017 <ul style="list-style-type: none"> - Identified the structure of the optimal shipping policy via a Lagrangian multiplier method for joint scheduling of a vendor-buyer system. Proposed a dynamic programming-based algorithm. - Proposed structural properties and solution methods (both exact and heuristic) for a joint production scheduling and shipping problem with a batching feature. 	

	<i>Semiconductor Fab Simulation</i>	Aug 2014 – Dec 2014
	- Built simulation models (using AutoMod) of the Automated Material Handling System (AMHS).	
	- Proposed a coding framework for simulating complex AMHS, allowing flexibly adjusted process sequences.	
	- Analyzed different scenarios (multiple releasing and dispatching rules) based on cycle time and throughput.	
	<i>Graduate Teaching Assistant</i>	Aug 2014 – May 2016
	- Instructed 15+ different manufacturing and electrical labs.	
	- Presented workshops for graduate students in using simulation softwares (AutoMod and AutoSched).	
	- Designed case study project for a graduate level course (ISE 6424 Dynamic Programming).	
	Volkswagen Automotive, Shanghai, China	
	Logistics Intern	Jul 2012 – Aug 2012
	- Inquired suppliers the delivery costs of purchased parts, and updated the information in database.	
	- Communicated with suppliers to implement a new Just-In-Time system.	
PUBLICATIONS	[1] Fangzhou Sun , Wei Wang, and Darius Walczak. <i>On generating efficient frontier for expected profit contribution and resource utilization</i> . Working paper, target: Journal of Revenue and Pricing Management.	
	[2] Fangzhou Sun , Rahul Ramachandran, Maichel M. Aguayo, and Subhash C. Sarin. <i>A taxonomic review of biomass feedstock supply chain problems</i> . Working paper, target: International Journal of Production Research.	
	[3] Fangzhou Sun and Subhash C. Sarin. <i>A joint production and delivery schedule for a single-vendor single-buyer system over finite horizon</i> . Working paper, target: European Journal of Operational Research.	
	[4] Fangzhou Sun , Subhash C. Sarin, and Yuqiang Wang. <i>Integrated production and shipping scheduling for a single manufacturer and multiple customers</i> . In review, Journal of Scheduling.	
PRESENTATIONS	- <i>A joint production and delivery schedule for a single-vendor single-buyer system over finite horizon</i> , INFORMS Annual Meeting, Houston, TX.	2017
	- <i>Dynamic programming application in revenue management</i> . Virginia Tech.	2017
	- <i>Introduction to AutoMod and AutoSched AP</i> . Workshop, Virginia Tech.	2016
	- <i>Integrated production and shipping scheduling for a single manufacturer and multiple customers</i> . INFORMS Annual Meeting, Philadelphia, PA.	2015
OTHER EXPERIENCE	Vice President , INFORMS VT Student Chapter	Aug 2015 – May 2016
	- Managed finance and memberships of the student organization.	
	- Raised average weekly seminar attendance by 30% more than the previous academic year.	
	- Won INFORMS 2016 Student Chapter Annual Award, Magna Cum Laude.	
SELECTED AWARDS & HONORS	First Place Award, IISE 2017 student case competition in Logistics and Supply Chain, <i>IISE</i> .	2017
	Graduate Student Assembly Travel Fund, <i>Virginia Tech</i> .	2015
	Alpha Pi Mu, a national industrial engineering honor society, <i>Virginia Tech</i> .	2014
	Various awards in college: Outstanding Graduate, 1st Prize Scholarship, etc., <i>Tongji University</i> .	2010 – 2013
	Provincial 1st Prize, Chinese Physics Olympiad, <i>Chinese Physics Society</i> .	2009