

Karthekeyan Chandrasekaran

CONTACT INFORMATION	301 Transportation Building 104 S. Mathews Ave Urbana, IL 61801	<i>Phone:</i> +1-217-300-1160 <i>Email:</i> karthe@illinois.edu <i>URL:</i> https://karthik.ise.illinois.edu
RESEARCH INTERESTS	Combinatorial Optimization, Integer Programming, Probabilistic Methods, Randomization	
APPOINTMENTS	Associate Professor University of Illinois at Urbana-Champaign, IL Department of Industrial and Enterprise Systems Engineering	Aug, 2021-present
	Affiliate University of Illinois at Urbana-Champaign, IL Department of Computer Science	Sep, 2014-present
	Assistant Professor University of Illinois at Urbana-Champaign, IL Department of Industrial and Enterprise Systems Engineering	Sep, 2014-Jul, 2021
	Simons Postdoctoral Research Fellow Harvard University, Cambridge, MA School of Engineering and Applied Sciences Host: Salil Vadhan	Sep, 2012-Aug, 2014
	Visiting Researcher International Computer Science Institute (ICSI), Berkeley, CA Algorithms Group Host: Richard Karp	Jul-Oct, 2011
	Research Intern Microsoft Research, Bangalore, India Algorithms Group Host: Navin Goyal Host: Amit Deshpande	May-Jul, 2009 May-Jul, 2008
	Applied Mathematics Group Host: Satya V. Lokam	May-Jul, 2007
	Microsoft Research, Redmond, WA Algorithms Group Host: Ramarathnam Venkatesan	Jun-Aug, 2006
EDUCATION	Ph.D., Algorithms, Combinatorics, and Optimization Georgia Institute of Technology, Atlanta Advisor: Santosh Vempala	Aug, 2012
	B.Tech., Computer Science and Engineering Indian Institute of Technology, Madras	Jun, 2007
TEACHING	Graduate-level (UIUC) <ul style="list-style-type: none">Combinatorial Optimization, IE 519/CS 586 (formerly IE 598) Fall 2015, Spring 2018, 2020Integer Programming, IE 511 Spring 2015, 2017, 2019	

Undergraduate-level (UIUC)

- Deterministic Models in Optimization, IE 310
Spring 2016, 2022, Fall 2016, 2017, 2018, 2019, 2020
- Operations Research Lab, IE 311
Spring 2016, Fall 2016, 2017, 2018

STUDENTS

PhD Advisees

- Shubhang Kulkarni, UIUC (2020–present)
- Weihang Wang, UIUC (2019–present)
- Calvin Beideman, UIUC (2018–present)
- Chao Xu, UIUC (PhD, May 2018, joint with Prof. Chandra Chekuri)
Thesis title: “Cuts and Connectivity in Graphs and Hypergraphs”
Currently at Voleon (formerly at Yahoo! Research, New York and Grab)

MS Advisees

- Sahand Mozaffari, UIUC (Aug 2021, joined Microsoft)
- Ali Bibak, UIUC (Aug 2020, joined FlexTrade)

BS-MCS Advisees

- Victor Sui, UIUC (2019–2020, joined Jump Trading)

Undergrad Advisees

- Aditya Pillai, UIUC (2019–2020, joined as PhD student at Georgia Tech)
- Jingwen Jiang, UIUC (2015–16, joined as PhD student at Univ. of Chicago)

GRANTS

Awarded

- Cuts, Connectivity and Partitioning in Graphs, Hypergraphs and Beyond
NSF (\$500,000): Algorithmic Foundations (Small), jointly with co-PI Prof. Chekuri, 2019
- Matrix Signings and Algorithms for Expanders and Combinatorial Nullstellensatz
NSF (\$500,000): Algorithmic Foundations (Small), jointly with co-PI Prof. Kolla, 2018

AWARDS AND HONORS

Sharp Outstanding Teaching Award in Industrial Engineering

University of Illinois, Urbana-Champaign

2018

Teachers Ranked as Excellent by their Students

Combinatorial Optimization (Grad level)

Spring 2018, Spring 2020

Deterministic Models in Optimization (Undergrad level)

Fall 2017

Best Ph.D. Thesis Award

Sigma Xi Chapter, Georgia Institute of Technology

2013

College of Computing Dissertation Prize

Georgia Institute of Technology

2012

Algorithms and Randomness Center (ARC) Fellowship

Georgia Institute of Technology

Fall 2010, Spring 2012

CONFERENCE PUBLICATIONS

Counting and enumerating optimum cut sets for hypergraph k -partitioning problems for fixed k

(with C. Beideman, W. Wang)

- (to appear) International Colloquium on Automata, Languages and Programming (ICALP), Jul 2022

Faster connectivity in low-rank hypergraphs via expander decomposition

(with C. Beideman, S. Mukhopadhyay, D. Nanongkai)

- Integer Programming and Combinatorial Optimization (IPCO), Jun 2022

Deterministic enumeration of all minimum k -cut-sets in hypergraphs for fixed k

(with C. Beideman, W. Wang)

- ACM-SIAM Symposium on Discrete Algorithms (SODA), Jan 2022

ℓ_p -norm Multiway Cut

(with W. Wang)

- European Symposium on Algorithms (ESA), Sep 2021

Fixed Parameter Approximation Scheme for Min-max k -cut

(with W. Wang)

- Integer Programming and Combinatorial Optimization (IPCO), May 2021

Min-max Partitioning of Hypergraphs and Symmetric Submodular Functions

(with C. Chekuri)

- ACM-SIAM Symposium on Discrete Algorithms (SODA), Jan 2021

Fixed-Parameter Algorithms for Longest Heapable Subsequence and Maximum Binary Tree

(with E. Grigorescu, G. Istrate, S. Kulkarni, Y-S. Lin, M. Zhu)

- International Symposium on Parameterized and Exact Computation (IPEC), Dec 2020

Hypergraph k -cut for fixed k in deterministic polynomial time

(with C. Chekuri)

- IEEE Symposium on Foundations of Computer Science (FOCS), Nov 2020

The Maximum Binary Tree Problem

(with E. Grigorescu, G. Istrate, S. Kulkarni, Y-S. Lin, M. Zhu)

- European Symposium on Algorithms (ESA), Sep 2020

Multicriteria cuts and size-constrained k -cuts in hypergraphs

(with C. Beideman, C. Xu)

- International Conference on Randomization and Computation (RANDOM), Aug 2020

Spectral Aspects of Symmetric Matrix Signings

(with C. Carlson, H-C. Chang, N. Kakimura, A. Kolla)

- Mathematical Foundations of Computer Science (MFCS), Aug 2019

Improving the Integrality Gap for Multiway Cut

(with K. Bérczi, T. Király, V. Madan)

- Integer Programming and Combinatorial Optimization (IPCO), May 2019

Improving the smoothed complexity of FLIP for max cut problems

(with A. Bibak, C. Carlson)

- ACM-SIAM Symposium on Discrete Algorithms (SODA), Jan 2019

Lattice-based Locality Sensitive Hashing is Optimal

(with D. Dadush, V. Gandikota, E. Grigorescu)

- Innovations in Theoretical Computer Science (ITCS), Jan 2018

Hypergraph k -Cut in Randomized Polynomial Time

(with C. Xu, X. Yu)

- ACM-SIAM Symposium on Discrete Algorithms (SODA), Jan 2018

A tight $\sqrt{2}$ -approximation for Linear 3-Cut

(with K. Bérczi, T. Király, V. Madan)

- ACM-SIAM Symposium on Discrete Algorithms (SODA), Jan 2018

Odd Multiway Cut in Directed Acyclic Graphs

(with S. Mozaffari)

- International Symposium on Parameterized and Exact Computation (IPEC), Sep 2017

Global and fixed-terminal cuts in digraphs

(with K. Bérczi, T. Király, E. Lee, C. Xu)

- International Workshop on Approximation Algorithms for Combinatorial Optimization Problems (APPROX), Aug 2017

On the Expansion of Group-Based Lifts

(with N. Agarwal, A. Kolla, V. Madan)

- International Workshop on Randomization and Computation (RANDOM), Aug 2017

Local Testing for Membership in Lattices

(with M. Cheraghchi, V. Gandikota, E. Grigorescu)

- Foundations of Software Technology and Theoretical Computer Science (FSTTCS), Dec 2016

Deciding Orthogonality in Construction-A Lattices

(with V. Gandikota, E. Grigorescu)

- Foundations of Software Technology and Theoretical Computer Science (FSTTCS), Dec 2015

Finding Small Stabilizers for Unstable Graphs

(with A. Bock, J. Könemann, B. Peis, L. Sanità)

- Integer Programming and Combinatorial Optimization (IPCO), Jun 2014

Finding a Most Biased Coin with Fewest Flips

(with R. Karp)

- Conference on Learning Theory (COLT), Jun 2014

Faster Private Release of Marginals on Small Databases

(with J. Thaler, J. Ullman, A. Wan)

- Innovations in Theoretical Computer Science (ITCS), Jan 2014

Integer Feasibility of Random Polytopes

(with S. Vempala)

- Innovations in Theoretical Computer Science (ITCS), Jan 2014

The Cutting Plane Algorithm is Polynomial for Perfect Matchings

(with L. Végh, S. Vempala)

- IEEE Symposium on Foundations of Computer Science (FOCS), Oct 2012

Algorithms for Implicit Hitting Set Problems

(with R. Karp, E. Moreno-Centeno, S. Vempala)

- ACM-SIAM Symposium on Discrete Algorithms (SODA), Jan 2011

Deterministic Algorithms for the Lovász Local Lemma

(with N. Goyal, B. Haeupler)

- ACM-SIAM Symposium on Discrete Algorithms (SODA), Jan 2010

Thin Partitions: Isoperimetric Inequalities and Sampling Algorithms for some Non-convex Families

(with D. Dadush, S. Vempala)

- ACM-SIAM Symposium on Discrete Algorithms (SODA), Jan 2010

Sampling s-Concave Functions

(with A. Deshpande, S. Vempala)

- International Workshop on Randomization and Computation (RANDOM), Aug 2009

ℓ_p -norm Multiway Cut

(with W. Wang)

- Algorithmica, 2022

Hypergraph k -cut for fixed k in deterministic polynomial time

(with C. Chekuri)

- Mathematics of Operations Research, 2022

Multicriteria cuts and size-constrained k -cuts in hypergraphs

(with C. Beideman, C. Xu)

- Mathematical Programming, 2022

The Maximum Binary Tree Problem

(with E. Grigorescu, G. Istrate, S. Kulkarni, Y-S. Lin, M. Zhu)

- Algorithmica, Vol. 83, 2021

Improving the smoothed complexity of FLIP for max cut problems

(with A. Bibak, C. Carlson)

- ACM Transactions on Algorithms, Vol. 17, Issue 3, 2021

Hypergraph k -cut in randomized polynomial time

(with C. Xu, X. Yu)

- Mathematical Programming, Vol. 186, 2021

Improving the Integrality Gap for Multiway Cut

(with K. Bérczi, T. Király, V. Madan)

- Mathematical Programming, Vol. 183, 2020

Spectral Aspects of Symmetric Matrix Signings

(with C. Carlson, H-C. Chang, N. Kakimura, A. Kolla)

- Discrete Optimization, Vol. 37, 2020

Odd Multiway Cut in Directed Acyclic Graphs

(with S. Mozaffari, M. Mnich)

- SIAM Journal on Discrete Mathematics, Vol. 34, Issue 2, 2020

A tight $\sqrt{2}$ -approximation for Linear 3-Cut

(with K. Bérczi, T. Király, V. Madan)

- Mathematical Programming, Vol. 184, Issue 1, 2020

On the Expansion of Group-Based Lifts

(with N. Agarwal, A. Kolla, V. Madan)

- SIAM Journal on Discrete Mathematics, Vol. 33, Issue 3, 2019

Additive Stabilizers for Unstable Graphs

(with C. Gottschalk, J. Könemann, B. Peis, D. Schmand, A. Wierz)

- Discrete Optimization, Vol. 31, 2019

Beating the 2-approximation factor for Global Bicut

(with K. Bérczi, T. Király, E. Lee, C. Xu)

- Mathematical Programming, Vol. 177, Issue 1, 2019

Local Testing of Lattices

(with M. Cheraghchi, V. Gandikota, E. Grigorescu)
- SIAM Journal on Discrete Mathematics, Vol. 32, Issue 2, 2018

Shift Lifts Preserving Ramanujan Property

(with A. Velingker)
- Linear Algebra and its Applications, Vol. 529, 2017

Deciding Orthogonality in Construction-A Lattices

(with V. Gandikota, E. Grigorescu)
- SIAM Journal on Discrete Mathematics, Vol. 31, Issue 1, 2017

The Cutting Plane Algorithm is Polynomial for Perfect Matchings

(with L. Végh, S. Vempala)
- Mathematics of Operations Research, Vol. 41, No. 1, 2016

Finding Small Stabilizers for Unstable Graphs

(with A. Bock, J. Könnemann, B. Peis, L. Sanità)
- Mathematical Programming, Vol. 154, Issue 1, 2015

Deterministic Algorithms for the Lovász Local Lemma

(with N. Goyal, B. Haeupler)
- SIAM Journal on Computing, Vol. 42, Issue 6, 2013

An Observation about Variations of the Diffie-Hellman Assumption

(with R. Bhaskar, S. V. Lokam, P. L. Montgomery, R. Venkatesan, Y. Yacobi)
- Serdica Journal of Computing, Vol. 3, No. 3, 2009

Vulnerabilities in Anonymous Credential Systems

(with R. Bhaskar, S. V. Lokam, P. L. Montgomery, R. Venkatesan, Y. Yacobi)
- Electronic Notes in Theoretical Computer Science, Vol. 197, No. 2, 2008

BOOK CHAPTERS

Graph Stabilization: A Survey

- Combinatorial Optimization and Graph Algorithms: Communications of NII Shonan Meetings, 2017

ARTICLES IN
REVIEW

Deterministic enumeration of all minimum cut-sets and k -cut-sets in hypergraphs for fixed k

(with C. Beideman, W. Wang)

Fixed Parameter Approximation Scheme for Min-max k -cut

(with W. Wang)

Min-max Partitioning of Hypergraphs and Symmetric Submodular Functions

(with C. Chekuri)

Analyzing Residual Random Greedy for monotone submodular maximization

(with K. Bérczi, T. Király, A. Pillai)

TALKS

Partitioning over Submodular Structures

Indian Institute of Science, Bengaluru	Mar, 2022
Indian Institute of Technology, Hyderabad	Feb, 2022
University of California, Davis	Feb, 2022
Hausdorff Institute for Mathematics, Bonn, Germany	Nov, 2021
University of Illinois, Urbana-Champaign	Sep, 2021
Carnegie Mellon University, Pittsburgh	Mar, 2021

ℓ_p-norm multiway cut Hausdorff Institute for Mathematics, Bonn, Germany	Nov, 2021
Multiway cut and integrality gap Mixed Integer Programming workshop, Online	May, 2021
Min-max Partitioning of Hypergraphs and Symmetric Submodular Functions ACM-SIAM Symposium on Discrete Algorithms	Jan, 2021
Hypergraph k-cut for fixed k in deterministic polynomial time IEEE Symposium on Foundations of Computer Science Frontiers of Parameterized Complexity University of Illinois, Urbana-Champaign Michigan-Purdue Theory Seminar	Nov, 2020 Nov, 2020 Nov, 2020 Sep, 2020
Improving the smoothed complexity of FLIP for max cut problems University of Illinois, Chicago Workshop on Combinatorial Optimization, Corsica Purdue University, West Lafayette	Oct, 2019 Sep, 2019 Mar, 2019
Hypergraph k-cut in randomized polynomial time Cornell University, Ithaca University of Colorado, Boulder ISMP '18, Bordeaux Eötvös Loránd University, Budapest Flexible Network Design Workshop, Maryland University of Illinois, Urbana-Champaign Northwestern University, Evanston Purdue University, West Lafayette	Apr, 2020 Nov, 2018 Jul, 2018 Jun, 2018 May, 2018 Apr, 2018 Mar, 2018 Feb, 2018
Beating the 2-factor for Bicut University of Chicago, Chicago	Nov, 2017
Global and fixed-terminal cuts in digraphs Midwest Theory Day, Indiana University, Bloomington ACO25, Georgia Institute of Technology, Atlanta	Apr, 2017 Jan, 2017
Lattice Optimization University of Illinois, Urbana-Champaign	Apr, 2016
Stabilizers for Unstable Graphs INFORMS '16, Nashville Workshop in Current Trends in Combinatorial Optimization, Shonan, Japan ISMP '15, Pittsburgh	Nov, 2016 Apr, 2016 Jul, 2015
Local Testing for Membership in Lattices Hausdorff Institute for Mathematics, Bonn, Germany University of Illinois, Urbana-Champaign	Nov, 2015 Sep, 2015
Finding Small Stabilizers for Unstable Graphs INFORMS '14, San Francisco Purdue University, West Lafayette University of Illinois, Urbana-Champaign Flexible Network Design Workshop, Lugano, Switzerland	Nov, 2014 Oct, 2014 Sep, 2014 Aug, 2014
Finding a Most Biased Coin with Fewest Flips EPFL, Lausanne, Switzerland	Jul, 2014

RWTH Aachen University, Aachen, Germany Jun, 2014
Conference on Learning Theory 2014, Barcelona, Spain Jun, 2014

Integer Feasibility of Random Polytopes

Microsoft Research, Redmond Mar, 2014
Massachusetts Institute of Technology, Cambridge Mar, 2014
Innovations in Theoretical Computer Science 2014, Princeton Jan, 2014

Faster Private Release of Marginals on Small Databases

University of Waterloo, Ontario, Canada Oct, 2013
Purdue University, West Lafayette Sep, 2013

A Polynomial-time Cutting Plane Algorithm for Perfect Matchings

Northeastern University, Boston Dec, 2013
Brown University, Providence Oct, 2013
Flexible Network Design Workshop, Toronto, Canada Aug, 2013
Bellairs Workshop on Combinatorial Optimization, Barbados Apr, 2013
Carnegie Mellon University, Pittsburgh Jan, 2013
IEEE Symposium on Foundations of Computer Science, New Brunswick Oct, 2012
Harvard University, Cambridge Oct, 2012
Toyota Technological Institute, Chicago Jun, 2012

A Discrepancy based Approach to Integer Programming

Toyota Technological Institute, Chicago Jun, 2012
SIAM Conference on Discrete Mathematics, Halifax, Canada Jun, 2012
Workshop on Computation and Phase Transitions, Atlanta Jun, 2012
Discrete Optimization Seminar, Georgia Institute of Technology, Atlanta Jan, 2012
INFORMS '11, Charlotte Nov, 2011
Microsoft Research, Silicon Valley Nov, 2011
IBM Research, Almaden Sep, 2011
University of California, Berkeley Aug, 2011

Algorithms for Implicit Hitting Set Problems

Random Structures and Algorithms, Atlanta May, 2011
ACM-SIAM Symposium on Discrete Algorithms, San Francisco Jan, 2011
Microsoft Research, Bangalore, India Dec, 2010
Indian Institute of Technology, Madras, India Dec, 2010
ACO Student Seminar, Georgia Institute of Technology, Atlanta Apr, 2010

Algorithms for the Lovász Local Lemma

Indian Institute of Technology, Madras Dec, 2010
Combinatorics Seminar, Georgia Institute of Technology, Atlanta Sep, 2009

Sampling Star-shaped Bodies

Microsoft Research, Bangalore, India Jul, 2009

Sampling s-Concave Functions

INFORMS '09, San Diego Oct, 2009
RANDOM-APPROX, Berkeley Aug, 2009
Microsoft Research, Bangalore, India Jun, 2009

DISTINGUISHED
TALKS

Beating the 2-factor for Bicut

Workshop on Combinatorial Optimization, Corsica Oct, 2018

k-Cut in Graphs, Hypergraphs and Beyond

Workshop on Combinatorial Optimization, Corsica Oct, 2018

PROFESSIONAL
SERVICE

Grant Panels

- National Science Foundation (NSF) Panel Member
- Israel Science Foundation (ISF) Evaluator, 2019, 2020

Program Committee Member

- Symposium on Simplicity in Algorithms (SOSA), 2022
- International Conference on Randomization and Computation (RANDOM), 2021
- ACM-SIAM Symposium on Discrete Algorithms (SODA), 2020
- International Conference on Approximation Algorithms for Combinatorial Optimization Problems (APPROX), 2019, 2022
- International Symposium on Combinatorial Optimization (ISCO), 2018, 2020, 2022

Reviewer for conferences

ALT (2012), APPROX (2017), CCC (2014), COLT (2014, 2016), CSR (2019), FOCS (2010, 2013, 2015, 2016, 2017, 2018, 2019, 2020), FSTTCS (2013, 2020), ESA (2018), ICALP (2018, 2021), IPCO (2016, 2019, 2021, 2022), LATIN (2012), NIPS (2010), PODS (2015), RANDOM (2012, 2018), SODA (2015, 2016, 2017, 2018, 2019, 2021, 2022), SOSA (2019), STOC (2011, 2015, 2016, 2017, 2018, 2020, 2021)

Reviewer for journals

Algorithmica, Discrete Applied Mathematics, Discrete Mathematics, Discrete Optimization, IEEE/ACM Transactions on Networking, Journal of Computer and System Sciences (JCSS), Mathematical Programming, Mathematics of Operations Research (MOR), Open Journal of Mathematical Optimization, Operations Research, Random Structures and Algorithms, Science China Mathematics, SIAM Journal on Computing (SICOMP), SIAM Journal on Discrete Mathematics (SIDMA), SIAM Journal on Optimization (SIOPT), Transactions on Knowledge and Data Engineering (TKDE)

Session Organizer

- *Recent progress in graph cut problems*
International Symposium on Mathematical Programming (ISMP), Bordeaux, 2018
- *Algorithmic Learning Theory*
INFORMS Annual Meeting, Phoenix, 2012

UNIVERSITY
SERVICE

Department of Industrial and Enterprise Systems Engineering, UIUC

- CS+X and X+DS Committee (as Chair) Spring 22
- Faculty Hiring Committee 2020-21, 21-22
- Operations Manager Hiring Committee (as Chair) 2019-20
- Graduate Committee 2016-17, 18-19
- Marketing and Outreach Committee 2018-19
- Advisory Committee 2016-18
- Grainger Engineering Breakthrough Initiative (GEBI) Hiring Committee 2015-16, 17-18
- Seminars Committee (as Chair) 2015-16
- ISE-CS Liaison 2014-15
- Courses and Curriculum Committee 2014-15
- Space Committee 2014-15

College of Engineering, UIUC

- College of Engineering Committee 2020-21
 - Evaluated new CS courses
- College of Engineering Committee 2015-16
 - Evaluated the revised CS curriculum and new CS courses

- Library Committee 2014–15
- BROADER SERVICE
- Illinois Council of Teachers of Mathematics (ICTM) Math Contest Oral Judge 2016, 2017, 2018, 2019
 - Undergraduate Research Symposium Poster Judge 2022

INSTRUCTIONAL
ACTIVITIES

PhD Defense Exam Committee

- Matthew Drescher, Mathematics, Universite Libre De Bruxelles, Fall 2021
- Yipu Wang, Computer Science, UIUC, Spring 2020
- Vivek Madan, Computer Science, UIUC, Summer 2018
- Shalmoli Gupta, Computer Science, UIUC, Summer 2018
- Mayank Baranwal, Mechanical Science and Engineering, UIUC, Spring 2018
- Hee Youn Kwon, Industrial Engineering, UIUC, Spring 2018
- Chao Xu, Computer Science, UIUC, Spring 2018 (as Director of Research)
- Siyang Xie, Civil Engineering, UIUC, Spring 2018
- Venkata Gandikota, Computer Science, Purdue, Spring 2017

PhD Preliminary Exam Committee

- Ian Ludden, Computer Science, UIUC, Spring 2022
- Calvin Beideman, Computer Science, UIUC, Spring 2022
- Setareh Taki, Industrial Engineering, UIUC, Fall 2021
- Weihang Wang, Mathematics, UIUC, Spring 2021
- Yipu Wang, Computer Science, UIUC, Fall 2018
- Wenda Zhang, Industrial Engineering, UIUC, Fall 2018
- Hee Youn Kwon, Industrial Engineering, UIUC, Fall 2017
- Chao Xu, Computer Science, UIUC, Spring 2017 (as Director of Research)
- Shalmoli Gupta, Computer Science, UIUC, Spring 2017
- Vivek Madan, Computer Science, UIUC, Spring 2017
- Siyang Xie, Civil Engineering, UIUC, Spring 2017
- Mayank Baranwal, Mechanical Science and Engineering, UIUC, Fall 2016
- Venkata Gandikota, Computer Science, Purdue, Fall 2015

PhD Oral Qualifiers Committee

- Lang Yin, Industrial Engineering, UIUC, Spring 2022
- Yufei Ruan, Industrial Engineering, UIUC, Fall 2019, Spring 2021
- Tiancheng Qin, Industrial Engineering, UIUC, Fall 2019
- Samhita Vadrevu, Industrial Engineering, UIUC, Spring 2019
- Siqi Zhang, Industrial Engineering, UIUC, Spring 2019
- Timothy Murray, Industrial Engineering, UIUC, Spring 2018
- Menglong Li, Industrial Engineering, UIUC, Spring 2018
- Reza Yousefi Maragheh, Industrial Engineering, UIUC, Spring 2017
- Runqi Hu, Industrial Engineering, UIUC, Fall 2015
- Shuanglong Wang, Industrial Engineering, UIUC, Spring 2015

Industry sponsored undergraduate projects advised (SE 494/495)

- Paint Room Layout and Process Analysis for Cost and Efficiency Improvement
Taylor Calcagno, Scott Jin, Keerthi Rajaram, Vaishali Tikoo, Jibing Yao
Simply Amish, Spring 2022
- Medical Packaging Production Troubleshooting and Productivity Improvement with Pick-and-Place
Aaryaman Baid, Harrison Oliff, Satvika Veeravalli, Minxing Sun
PPC Flexible Packaging, Spring 2021
- Design of Reusable Shipping Container System for Efficiency and Cost Reduction
Kisun Ahn, Maya Burgard, Reilly Devine, Aqsa Owais
Zelis, Spring 2020
- Intranet Gamification for Enhancement of Employee Participation
Shijun Cao, Anjana Narasimhan, Shane O'Brien, Yu Wang
Cushman & Wakefield, Fall 2019
- Plant Layout for Production Expansion and Increased Efficiency
Sebastian Basuki, Ji Won Park, Amelia Snyder
Tovola, Spring 2019
- Tango Autonomous Mower Path Planning Algorithm Improvement
Shaan Bhakta, Daniel Hill, Xinhang Li, Rikin Mehta
John Deere Technology Innovation Center, Fall 2018
- Volumetric Analysis for Packaging Accuracy and Cost Reduction
Gregory Chew, Lucas Gutzwiller, Callahan Skiles, Danielle Stasik
Tucker Rocky Distributing, Spring 2018
- Yard Layout Optimization for Trailer Loading Efficiency
Henry Doyle, Xueru Rong, Benjamin Wegloski
Morton Buildings, Inc., Fall 2017
- Logistics Optimization of Regionally Located Construction Equipment
Sean Kelley, Thomas Kukec, Jin Hwan Lee, Scott Shiro
Morton Buildings, Inc., Fall 2016
- Tube Product Scrap Analysis and Reduction
Aly Mohamed Said Elalfy, Christine Hudak, Jared Konrardy
Atkore International, Spring 2016
- Foam Plank Extrusion Batch Process Scrap Reduction
Michelle Erickson, Jared Spivey, Chen Zhang
Pregis Corporation, Fall 2015