

Christine Chung

Department of Computer Science | Connecticut College | New London | CT | cchung@conncoll.edu

Education

Cornell University, Ithaca, NY	Computer Science	B.A. 1999
Cornell University, Ithaca, NY	Computer Science	M.Eng. 2000
Teachers College, Columbia University, New York, NY	Mathematics Education	M.A. 2003
University of Pittsburgh, Pittsburgh, PA	Computer Science	Ph.D. 2009

Professional Experience

Associate Professor	2016-present
Jean C Tempel Assistant Professor	2009-2016
Dept of Computer Science, Connecticut College, New London, CT	
Graduate Student Researcher	August 2007-May 2009
Teaching Assistant	August 2005-May 2007
Dept of Computer Science, University of Pittsburgh, Pittsburgh, PA	
Mathematics and Computer Science Teacher	July 2003- June 2005
Clarkstown South High School, West Nyack, NY	
Student Teacher (Computer Science and Mathematics)	Jan 2003-May 2003
Stuyvesant High School, New York, NY	
ESPN Sunday Night Baseball <i>K-Zone</i> Effect System Lead Operator	2001-2002
Sportvision, New York, NY	
Technical Consultant, Programmer	2000-2001
Kraft and Kennedy, New York, NY	
Teaching Assistant	September 1999-May 2000
Cornell University, Ithaca, NY	
Summer Researcher	Summer 1998
Bell Labs, Murray Hill, NJ	

Journal Publications

authors alphabetically listed

1. BARBARA ANTHONY AND CHRISTINE CHUNG. Equilibria in Doodle polls under three tie-breaking rules. *Theoretical Computer Science, Volume 822, 2020, Pages 61-71.*
2. ANANYA DAS CHRISTMAN, CHRISTINE CHUNG, *NICHOLAS JACZKO, *SCOTT WESTVOLD, AND DAVID YUEN. Robustly Assigning Unstable Items. *Journal of Combinatorial Optimization*, January 2020.
3. BARBARA ANTHONY AND CHRISTINE CHUNG. Serve or skip: the power of rejection in online bottleneck matching. *Journal of Combinatorial Optimization, 32(4), 1232-1253.* November 2016.
4. BARBARA ANTHONY AND CHRISTINE CHUNG. Online bottleneck matching. *Journal of Combinatorial Optimization*, December 2012.

-
5. CHRISTINE CHUNG, KATRINA LIGETT, KIRK PRUHS AND AARON ROTH. The Power of Fair Pricing Mechanisms. *Algorithmica*, 63(3):634-644, 2012.
 6. LORY AL MOAKAR, PANOS CHRYSANTHIS, CHRISTINE CHUNG, SHENODA GUIRGUIS, ALEXANDROS LABRINIDIS, PANAYIOTIS NEOPHYTOU, AND KIRK PRUHS. Auction-based admission control for continuous queries in a multi-tenant DSMS. *International Journal of Next-Generation Computing*, Vol 3, No 3, November 2012.

Refereed Conference Publications

*undergraduate student co-author

1. ANANYA CHRISTMAN, CHRISTINE CHUNG, *NICHOLAS JACZKO, *TIANZHI LI, *SCOTT WESTVOLD, AND *XINYUE XU, AND DAVID YUEN. New Bounds for Maximizing Revenue in Online Dial-a-Ride. *31st International Workshop on Combinatorial Algorithms (IWCOA 2020)*. LNCS, vol 12126. Springer, 2020.
2. BARBARA ANTHONY, ANANYA CHRISTMAN, CHRISTINE CHUNG, *SARA BOYD, *RICKY BIRNBAUM, *JIGAR DHIMAR, *PATRICK DAVIS, AND DAVID YUEN. Maximizing the number of rides served for Dial-a-Ride. In *Proceedings of Workshop on Algorithmic Approaches for Transportation Modeling, Optimization, and Systems (ATMOS)*, September 2019.
3. BARBARA ANTHONY AND CHRISTINE CHUNG. Inefficiency of Equilibria in Doodle Polls. *12th Annual International Conference on Combinatorial Optimization and Applications (COCOA 2018)*. LNCS, vol 11346. Springer, 2018.
4. ANANYA DAS CHRISTMAN, CHRISTINE CHUNG, *NICHOLAS JACZKO, *SCOTT WESTVOLD, AND DAVID YUEN. Robustly Assigning Unstable Items. *12th Annual International Conference on Combinatorial Optimization and Applications (COCOA 2018)*. LNCS, vol 11346. Springer, 2018.
5. BARBARA ANTHONY AND CHRISTINE CHUNG. How Bad is Selfish Doodle Voting? Extended Abstract in *Proceedings of the 17th International Conference on Autonomous Agents and Multiagent Systems (AAMAS 2018)*. Stockholm, Sweden, pp. 1856-1858, July 10-15, 2018.
6. ANANYA DAS CHRISTMAN, CHRISTINE CHUNG, *NICHOLAS JACZKO, *MARINA MILAN, *ANNA VASILCHENKO, *SCOTT WESTVOLD. Revenue Maximization in Online Dial-a-ride. In *Proceedings of the Workshop on Algorithmic Approaches for Transportation Modeling, Optimization, and Systems (ATMOS)*, September 2017.
7. *DANYA ALRAWI, BARBARA ANTHONY, AND CHRISTINE CHUNG. How well do Doodle polls do? *8th International Conference on Social Informatics (SocInfo)* Springer, 2016.
8. BARBARA ANTHONY AND CHRISTINE CHUNG. The power of rejection in online bottleneck matching. *The 8th Annual International Conference on Combinatorial Optimization and Applications (COCOA)* LNCS Springer, 2014.
9. CHRISTINE CHUNG, SHENODA GUIRGUIS, AND ANASTASIA KURDIA. Competitive cost-savings in data stream management systems. In *Proceedings of the 20th International Computing and Combinatorics Conference (COCOON)* LNCS Springer, 2014.
10. BARBARA ANTHONY AND CHRISTINE CHUNG. Data plan throttling: a simple consumer choice mechanism. In *Proc. IEEE Global Communications Conference (GLOBECOM 2013)*.

-
11. BARBARA M. ANTHONY, LISA BENDER, CHRISTINE CHUNG, MARK LEWIS. Trends in CS enrollment at small, liberal arts institutions (abstract only). *The 44th ACM Technical Symposium on Computer Science Education* (SIGCSE 2013).
 12. BARBARA ANTHONY AND CHRISTINE CHUNG. Online bottleneck matching. *Proc. 6th Annual Conference on Combinatorial Optimization and Applications* (COCOA) LNCS Springer, 2012.
 13. *BO XIONG AND CHRISTINE CHUNG. Completion time scheduling and the WSRPT algorithm. *Proc. 1st International Symposium on Combinatorial Optimization* (ISCO) LNCS Springer, 2012.
 14. CHRISTINE CHUNG, KATRINA LIGETT, KIRK PRUHS AND AARON ROTH. The Power of Fair Pricing Mechanisms. *Latin American Symposium on Theoretical Informatics* (LATIN) LNCS Springer, 2012.
 15. BRIDGET BAIRD AND CHRISTINE CHUNG. Expanding CS1: applications across the liberal arts. *Journal of Computing Sciences in Colleges*, 25(6), 47-54. (CCSCNE 2010)
 16. CHRISTINE CHUNG, TIM NONNER, AND ALEX SOUZA. SRPT is 1.86-competitive for completion time scheduling. In *Proc. 21st ACM-SIAM Symposium on Discrete Algorithms* (SODA 2010).
 17. LORY AL MOAKAR, PANOS CHRYSANTHIS, CHRISTINE CHUNG, SHENODA GUIRGUIS, ALEXANDROS LABRINIDIS, PANAYIOTIS NEOPHYTOU, AND KIRK PRUHS. Admission control mechanisms for continuous queries in the cloud. In *Proc. 26th IEEE International Conference on Data Engineering* (ICDE 2010).
 18. CHRISTINE CHUNG AND EVANGELIA PYRGA. Stochastic stability in internet router congestion games. In *Proc. 2nd International Symposium on Algorithmic Game Theory* (SAGT) LNCS Springer, 2009.
 19. CHRISTINE CHUNG, GIORGOS CHRISTODOULOU, KATRINA LIGETT, EVANGELIA PYRGA, AND ROB VAN STEE. On the price of stability for undirected network design. In *Proc. 7th Workshop on Approximation and Online Algorithms* (WAOA) LNCS Springer, 2009.
 20. CHRISTINE CHUNG, KATRINA LIGETT, KIRK PRUHS AND AARON ROTH. The price of stochastic anarchy. *Proc. 1st International Symposium on Algorithmic Game Theory* (SAGT) LNCS Springer, 2008.
 21. CHRISTINE CHUNG, KIRK PRUHS AND PATCHRAWAT UTHAISOMBUT. The online transportation problem: on the exponential boost of one extra server. In *Proc. 8th Annual Latin American Theoretical Informatics Symposium* (LATIN) LNCS Springer, 2008.

Other Works

- The impact of algorithmic trading in a simulated asset market. Timothy Walsh '12, Bo Xiong '13, and Purba Mukerji. International Conference of Computing in Economics and Finance (CEF) 2012. Prague, Czech Republic, June 2012.

-
- FormalCheck Query Language Compared with Computation Tree Logic. Ziji Yang, Christine Chung, and In-Ho Moon. Bell Labs (Lucent Technologies), white paper. Murray Hill, NJ, 1999.
 - The Impact of Algorithmic Trading in a Simulated Asset Market. P Mukerji, C Chung, T Walsh, B Xiong. *Journal of Risk and Financial Management* 12 (2), 68, 2019.

Talks, Presentations, Interviews

- NPR interview. "Algorithms: the DNA to our Digital Data" (<https://www.wnpr.org/post/algorithms-dna-our-digital-data>)
- How Bad is Selfish Doodle Voting? Poster presentation at the 17th International Conference on Autonomous Agents and Multiagent Systems (AAMAS). Stockholm, Sweden, July 2018.
- How well do Doodle polls do? Paper presentation at the 8th International Conference on Social Informatics (SocInfo). Bellevue, Washington, November 2016.
- The Power of Rejection in Online Bottleneck Matching. Paper presentation at the 8th Annual International Conference on Combinatorial Optimization and Applications (COCOA). Maui, Hawaii, December 2014.
- Competitive cost-savings in data stream management systems. Paper presentation at the 20th International Computing and Combinatorics Conference (COCOON). Atlanta, Georgia, August 2014.
- Algorithms, in *Context*. The endowed chair lecture series at Connecticut College, New London, Connecticut, April 2013.
- Trends in CS enrollment at small, liberal arts institutions. Birds-of-a-Feather Discussant at the 44th ACM Technical Symposium on Computer Science Education (SIGCSE), Denver, CO, March 2013.
- Expanding CS1: applications across the liberal arts (with Bridget Baird). Consortium of Computing Sciences in Colleges, Northeast Region (CCSCNE), Hartford, Connecticut, April 2010.
- Expanding student enthusiasm for, and understanding of, introductory Computer Science. Panel Discussant at CCSCNE (Consortium for Computing Sciences in Colleges, Northeast Region), Hartford, CT, April 2010.
- Stochastically stable states in load balancing and congestion games.
 - Dagstuhl Workshop on Computational Social Systems and the Internet, Dagstuhl, Germany, July 2007 (Invited by Éva Tardos).
 - Carnegie Mellon University (CMU) Theory Lunch, Pittsburgh, Pennsylvania, May 2007.
- The price of stochastic anarchy.
 - Women In Theory Workshop Poster at Princeton University, Princeton, NJ, May 2008 (Invited by Tal Rabin).

Paper presentation at University of Freiburg in Freiburg, Germany, May 2008 (Invited by Susanne Albers).

Paper presentation at Max Planck Institut für Informatik (MPII) in Saarbrücken, Germany, May 2008 (Invited by Rob Van Stee).

Paper presentation at Symposium on Algorithmic Game Theory (SAGT) in Paderborn, Germany, May 2008.

Teaching, Advising, and Service to Connecticut College

- Courses taught (two or three of these every semester):

COM110 Intro to Computer Science and Problem Solving

COM212 Data Structures

COM304 Design and Analysis of Algorithms

COM313 Algorithmic Game Theory

COM323/MAT323 Theory of Computation

COM495/6 Research Seminar

- Academic adviser to dozens of CS majors each semester
- Past undergraduate CS research students (advised in an average of two semesters of CS research each)

Tim Walsh '12, Bo Xiong '13, Evan Gray '13, Peter Glennon '13, Jennifer Blagg '13, Mert Mihci '14, Talha Mohsin '14, Shiva Lingala '14, Junhee Lee '14, Amit Kinha '14, Amanda Crawford '14, Erica Stockwell-Alpert '14, Dillon Kerr '15, Lillie Schachter '15, Ari Brenner '15, Julia Proft '16, Virginia Gresham '17, Rodrigo Rogel-Perez '17, Tyler Wood '17, Max Bender '16, Danya Al-Rawi '16, Tim Palmer '17, George Sarkar '17, Tom Conlin '16, Khanh Nghiem '18, Asaf Davidov '17, Marina Milan '17, Gabe Ryan '17, Jason Karos '18, Nate Devine '18, Samuel Barnes '18, Jigar Dhimar '18, Ricky Birnbaum '18, Nick Buly '18, Adham Khalifa '22, Steven Nieves '22, Linda He '21, Anna Jeffers '20, Lauren Helm '20, Michael Riley '20, Sindy Du '20, Sean King '20

- Select Service to Connecticut College

Elected faculty ombudsperson

"Connections" (General Education program) Entrepreneurship Pathway. Fall 2016. Served as co-faculty coordinator for the new Entrepreneurship Pathway. Held a Pathway design retreat to kick off the pathway proposal and application process. Attended the weekly Pathway Coordinators seminar.

Elected member of the Committee on Appointments Promotions and Tenure (CAPT). Fall 2020 - present.

Elected member of the Educational Planning Committee (EPC). Fall 2014 - Fall 2016. This term was during our overhaul of our General Education program and the inception of our new GE (*Connections*) program

Interim member of the Committee on Faculty Compensation (CFC). Fall 2016

Member (and interim chair) of the Information Services Committee. Fall 2010 - Spring 2013 and Fall 2017 - Spring 2020.

Member of the Inclusive Excellence working group. Fall 2015.

Member of the Modes of Inquiry working group. Fall 2015.

Served as a Connections "Mode C" (Quantitative and Formal Reasoning) consultant. Fall 2017 - Spring 2020.

Member of the Strategic Plan Implementation Task Force. June 2016 - October 2016.

Awards and Honors

- 2017 John S. King Excellence in Teaching Award given by the Connecticut College Student Government Association (SGA) to a faculty member who has “shown an extraordinary commitment to students both inside and outside the classroom.” According to SGA bylaws, the award is not to be given annually, and “should not be presented so often that it will lose its significance.”
- 2017 Nominated for: John S. King Memorial Teaching Award. (A different award from the above SGA award, given by the Dean of Faculty.)
- 2015 Booth Ferris Foundation grant of \$200,000 for a joint proposal with Gary Parker. The Science Leaders II Program in Computer Science at Connecticut College. This project aims to increase the number of students from underrepresented groups graduating with a CS major.
- 2014 AAC & U PKAL TIDES (Teaching to Increase Diversity and Equity in STEM) grant of \$34,278 for a joint proposal with Gary Parker and Chad Jones. Improving Computing Competency and Increasing the Number of Underrepresented CS Students through Science-Informatics. Among the 19 proposals awarded full or partial grants out of about 200 applicants.
- 2013 Nominated for Helen Mulvey Teaching Award
- Numerous “Research Matters” small grants awarded from the Dean of the Faculty Office at Connecticut College
- 2008 Taulbee Award for Excellence in Computer Science (given annually to one graduate student in the University of Pittsburgh CS Department for evidence of outstanding teaching skills, strong research interests, and a marked interest in pursuing an academic career)
- 2001 National Sports Emmy Award – The George Wensel Innovative Technical Achievement Award for K-Zone on ESPN Sunday Night Baseball.

Professional Activities

- Reviewer for Conferences
 - IEEE Symposium on Foundations of Computer Science (FOCS)
 - The ACM-SIAM Symposium on Discrete Algorithms (SODA)
 - Workshop for Approximation and Online Algorithms (WAOA)

- Reviewer for Journals

- Transactions on Economics and Computation (ACM)

- Algorithmica (Springer)

- Computer Communications (Elsevier)

- European Journal of Operational Research (Elsevier)

- International Journal of Computer Mathematics (Taylor & Francis)

- Journal of Computing (INFORMS)

- Journal of Scheduling (Springer)

- Operations Research (INFORMS)

- Theoretical Computer Science (Elsevier)

- Reviewer for Textbook Publishers

- John Wiley & Sons

- Pearson Addison-Wesley

- Member

- Institute of Electrical and Electronics Engineers (IEEE)

- Association of Computing Machinery (ACM)

- ACM Special Interest Group on Algorithms and Computation Theory (ACM SIGACT)

- ACM Special Interest Group on Electronic Commerce (ACM SIGecom)

- NSF panel member on Optimization and Approximation, in the Division of Computing and Communication Foundations (CCF) within the Directorate for Computer and Information Science and Engineering (CISE), at the NSF offices in Arlington, VA, April 2015.