John P Dickerson
Curriculum Vitae

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Work Experience

2016–*Present*	U. of Maryland	Assistant Professor, Department of Computer Science & UMIACS
	Affiliation	Applied Math/Stats and Scientific Computation (AMSC) program
	Affiliation	Human-Computer Interaction Lab (HCIL)
2012–*Present*	Optimized Markets	Algorithms & optimization consultant
2010–*Present*	OPTN/UNOS	Algorithms consultant for national kidney exchange
2010–2016	CMU	Research Assistant, Electronic Marketplaces Lab
2008–2012	UMD	Researcher, Lab for Computational Cultural Dynamics (LCCD)
2005	IBM	Global Contract Preparation System (GCPS)
2003–2004	NSA	Bioinformatics and security R&D, *cleared TS/SCI*

Education

2016	Ph.D.	Carnegie Mellon University	Computer Science
2014	M.Sc.	Carnegie Mellon University	Computer Science
2008	B.Sc.	University of Maryland	Computer Science
2008	B.Sc.	University of Maryland	Mathematics

Areas of Expertise

Artificial intelligence, stochastic optimization, applied computational economics, market design, mechanism design, machine learning, kidney exchange, healthcare policy & information technology
I am especially interested in optimal decision making and optimization in healthcare and the social sciences.

Awards & Grants

2018	Outstanding Student Paper Honorable Mention at AAAI-18		
2018	Smith AI in Business and Society Seed Grant, with Ilya Ryzhov and Aravind Srinivasan		$20,000
2016–2018	Ministry of Defense (Israel) grant awarded for "Functional Targeting of Terror Networks: A Big Data Approach," PI transfer from V.S. Subrahmanian		$150,000
2015–2017	Facebook Fellowship	Full tuition, fees, & stipend for 2 years	$159,606
2015–2016	Siebel Scholarship	93 top students from leading graduate schools worldwide	$35,000
2012–2015	NDSEG Fellowship	Full tuition, fees, & stipend for 3 years	$218,410
2014	NSF SBIR Phase I	Principal Investigator, Award #1345567	$150,000
2014	FutureMatch, our framework for dynamic matching, won HPCWire's "Best Data-Intensive Application" award (joint with Pittsburgh Supercomputing Center)		
Ongoing	Travel Funds	AAAI, AAMAS, SoCS, CMU	$3,860

Advising & Mentorship

Ph.D. Students

- Duncan McElfresh (Mathematics, 2017–)

- Candice Schumann (Computer Science, 2017–)

- Neal Gupta (Computer Science, 2017–)

- Pan Xu (*co-advised with Aravind Srinivasan*, Computer Science, 2017–)

Undergraduate Students

- Willy Lang (UMD, 2017–): diversity in matching markets

- Samsara Counts (GWU, 2017–, UMD Summer REU): deep reinforcement learning for matching markets
- Cameron Moy (UMD, 2017–, UMD Summer REU): deep reinforcement learning for matching markets
- Linyi Xi (Haverford, 2017–, UMD Summer REU): deep reinforcement learning for matching markets
- Ayman Karim (UMD, 2016–2017): using sentiment and social network analysis to predict winners in WWE matches
- Aditya Mithas (UMD, 2016–2017, next position: Google): deep reinforcement learning for matching markets
- Kevin Schechter (UMD, 2016–2017, next position: Microsoft): prediction markets
- Benjamin Plaut (CMU, 2015–2016, next position: Stanford Computer Science Ph.D. program): combinatorial optimization and kidney exchange

High School Students

- Naveen Durvasula (Montgomery Blair, 2016–, co-advised with Aravind Srinivasan): mechanism design and Bayesian optimization for kidney exchange. Naveen was an Intel International Science and Engineering Fair (ISEF) Finalist in 2017, and won the Ashtavadhani Vidwan Ambati Subbaraya Chetty Foundation Second Award at Intel ISEF in 2017.

Thesis Proposal & Defense Committees

- Soheil Behnezhad (UMD, will propose in May 2018)
- Ramakrishna Padmanabhan (UMD, will propose in May 2018)
- Mahsa Derakhshan (UMD, will propose in May 2018)
- Elissa M. Redmiles (UMD, will propose in May 2018)
- Hadi Yami (UMD, will propose in April 2018)
- Karthik Abinav Sankararaman (UMD, proposed in 2018)
- Yulu Wang (UMD, defended in 2017), next position: Google
- Andrew Ruef (UMD, proposed in 2017)
- Pan Xu (UMD, proposed in 2017, will defend in 2018)
- Eric Krokos (UMD, proposed in 2017)
- Zhuoshu Li (WashU, proposed in 2017)
- Srijan Kumar (UMD, defended in 2017), next position: post-doc at Stanford Computer Science

Publications

Working papers

1. Rosemarin, H, JP Dickerson, and S Kraus (2017). Learning to Schedule Deadline- and Operator-Sensitive Tasks. *CoRR* **abs/1706.06051**. Working paper.
2. Schumann, C, SN Counts, J Foster, and JP Dickerson (2017). The Diverse Cohort Selection Problem: Multi-Armed Bandits with Varied Pulls. *CoRR* **abs/1709.03441**. Working paper.
3. Plaut, B, JP Dickerson, and T Sandholm (2016). Hardness of the Pricing Problem for Chains in Barter Exchange. *CoRR* **abs/1606.00117**. Working paper.

Books

1. Subrahmanian, V, A Mannes, A Sliva, J Shakarian, and JP Dickerson (2012). *Computational Analysis of Terrorist Groups: Lashkar-e-Taiba*. New York: Springer. ISBN: 978-1-4614-4768-9.

Highly-refereed conference papers

Conferences are the primary publication venue in Computer Science, with competitive acceptance rates of 15–30%.

1. Dickerson, JP, KA Sankararaman, A Srinivasan, and P Xu (2018). Allocation Problems in Ride-Sharing Platforms: Online Matching with Offline Reusable Resources. In: *Conference on Artificial Intelligence (AAAI)*.

2. Dickerson, JP, KA Sankararaman, A Srinivasan, and P Xu (2018). Assigning Tasks to Workers based on Historical Data: Online Matching with Two-sided Arrivals. In: *International Conference on Autonomous Agents and Multi-Agent Systems (AAMAS)*.

3. Freedman, R, J Schaich Borg, W Sinnott-Armstrong, JP Dickerson, and V Conitzer (2018). Adapting a Kidney Exchange Algorithm to Align with Human Values. In: *Conference on Artificial Intelligence (AAAI)*. **Outstanding Student Paper Honorable Mention**.

4. Li, Z, N Gupta, S Das, and JP Dickerson (2018). Equilibrium Behavior in Competing Dynamic Matching Markets. In: *International Joint Conference on Artificial Intelligence (IJCAI)*.

5. McElfresh, D and JP Dickerson (2018). Balancing Lexicographic Fairness and a Utilitarian Objective with Application to Kidney Exchange. In: *Conference on Artificial Intelligence (AAAI)*.

6. Redmiles, EM, M Mazurek, and JP Dickerson (2018). Dancing Pigs or Externalities? Measuring the Rationality of Security Decisions. In: *Conference on Economics and Computation (EC)*.

7. Ahmed, F, JP Dickerson, and M Fuge (2017). Diverse Weighted Bipartite b-Matching. In: *International Joint Conference on Artificial Intelligence (IJCAI)*.

8. Dickerson, JP, AM Kazachkov, AD Procaccia, and T Sandholm (2017). Small Representations of Big Kidney Exchange Graphs. In: *Conference on Artificial Intelligence (AAAI)*.

9. Farina, G, JP Dickerson, and T Sandholm (2017). Operation Frames and Clubs in Kidney Exchange. In: *International Joint Conference on Artificial Intelligence (IJCAI)*.

10. Dickerson, JP, D Manlove, B Plaut, T Sandholm, and J Trimble (2016). Position-Indexed Formulations for Kidney Exchange. In: *Conference on Economics and Computation (EC)*.

11. Plaut, B, JP Dickerson, and T Sandholm (2016). Fast Optimal Clearing of Capped-Chain Barter Exchanges. In: *Conference on Artificial Intelligence (AAAI)*.

12. Blum, A, JP Dickerson, N Haghtalab, AD Procaccia, T Sandholm, and A Sharma (2015). Ignorance is Almost Bliss: Near-Optimal Stochastic Matching With Few Queries. In: *Conference on Economics and Computation (EC)*.

13. Das, S, JP Dickerson, Z Li, and T Sandholm (2015). Competing Dynamic Matching Markets. In: *Conference on Auctions, Market Mechanisms, and Their Applications (AMMA)*.

14. Dickerson, JP and T Sandholm (2015). FutureMatch: Combining Human Value Judgments and Machine Learning to Match in Dynamic Environments. In: *Conference on Artificial Intelligence (AAAI)*.

15. Hajaj, C, JP Dickerson, A Hassidim, T Sandholm, and D Sarne (2015). Strategy-Proof and Efficient Kidney Exchange Using a Credit Mechanism. In: *Conference on Artificial Intelligence (AAAI)*.

16. Dickerson, JP, J Goldman, J Karp, AD Procaccia, and T Sandholm (2014). The Computational Rise and Fall of Fairness. In: *Conference on Artificial Intelligence (AAAI)*.

17. Dickerson, JP, V Kagan, and V Subrahmanian (2014). Using Sentiment to Detect Bots on Twitter: Are Humans more Opinionated than Bots? In: *International Conference on Advances in Social Networks Analysis and Mining (ASONAM)*.

18. Dickerson, JP, AD Procaccia, and T Sandholm (2014). Price of Fairness in Kidney Exchange. In: *International Conference on Autonomous Agents and Multi-Agent Systems (AAMAS)*.

19. Dickerson, JP and T Sandholm (2014). Multi-Organ Exchange: The Whole is Greater than the Sum of its Parts. In: *Conference on Artificial Intelligence (AAAI)*.

20. Erickson, LC, ED Thiessen, KE Godwin, JP Dickerson, and AV Fisher (2014). Endogenously- but not Exogenously-driven Selective Sustained Attention is Related to Learning in a Classroom-like Setting in Kindergarten Children. In: *Conference of the Cognitive Science Society (CogSci)*.

21. Dickerson, JP, AD Procaccia, and T Sandholm (2013). Failure-Aware Kidney Exchange. In: *Conference on Economics and Computation (EC)*.

22. Dickerson, JP and T Sandholm (2013). Throwing darts: Random sampling helps tree search when the number of short certificates is moderate. In: *Conference on Artificial Intelligence (AAAI)*. Late-breaking paper.

23. Dickerson, JP, A Sawant, M Hajiaghayi, and V Subrahmanian (2013). PREVE: A Policy Recommendation Engine based on Vector Equilibria Applied to Reducing LeT's Attacks. In: *International Conference on Advances in Social Networks Analysis and Mining (ASONAM)*.

24. Dickerson, JP, AD Procaccia, and T Sandholm (2012). Dynamic Matching via Weighted Myopia with Application to Kidney Exchange. In: *Conference on Artificial Intelligence (AAAI)*.

25. Dickerson, JP, AD Procaccia, and T Sandholm (2012). Optimizing Kidney Exchange with Transplant Chains: Theory and Reality. In: *International Conference on Autonomous Agents and Multi-Agent Systems (AAMAS)*.

26. Dickerson, JP, GI Simari, V Subrahmanian, and S Kraus (2010). A Graph-Theoretic Approach to Protect Static and Moving Targets from Adversaries. In: *International Conference on Autonomous Agents and Multi-Agent Systems (AAMAS)*.

27. Simari, GI, JP Dickerson, and V Subrahmanian (2010). Cost-based Query Answering in Action Probabilistic Logic Programs. In: *International Conference on Scalable Uncertainty Management (SUM)*.

Journal papers

1. Dickerson, JP, AD Procaccia, and T Sandholm (2018). Failure-Aware Kidney Exchange. *Management Science*. To appear.

2. Doebel, S, JP Dickerson, JD Hoover, and Y Munakata (2018). Using language to get ready: Familiar labels help children to engage proactive control. *Journal of Experimental Child Psychology*.

3. Dickerson, JP and T Sandholm (2017). Multi-Organ Exchange. *Journal of Artificial Intelligence Research (JAIR)* **60**, 639–679.

4. Erickson, LC, ED Thiessen, KE Godwin, JP Dickerson, and AV Fisher (2015). Endogenously- and Exogenously-driven Selective Sustained Attention: Contributions to Learning in Kindergarten Children. *Journal of Experimental Child Psychology*.

5. Sawant, A, JP Dickerson, MT Hajiaghayi, and V Subrahmanian (2015). Automated Generation of Counter-Terrorism Policies using Multi-Expert Input. *ACM Transactions on Intelligent Systems and Technology (TIST)*.

6. Fisher, A, E Thiessen, K Godwin, H Kloos, and JP Dickerson (2013). Assessing selective sustained attention in 3- to 5-year-old children: Evidence from a new paradigm. *Journal of Experimental Child Psychology* **113**.

7. Simari, GI, JP Dickerson, A Sliva, and V Subrahmanian (2013). Parallel Abductive Query Answering in Probabilistic Logic Programs. *ACM Transactions on Computational Logic (TOCL)*.

8. Patro, R, JP Dickerson, S Bista, SK Gupta, and A Varshney (2012). Speeding Up Particle Trajectory Simulations under Moving Force Fields using GPUs. *ASME Journal of Computing and Information Science in Engineering (JCISE)* **12**(2), 021006:1–021006:8.

9. Shakarian, P, JP Dickerson, and V Subrahmanian (2012). Adversarial Geospatial Abduction Problems. *ACM Transactions on Intelligent Systems and Technology (TIST)* **3**(2), 34:1–34:35.

10. Subrahmanian, V and JP Dickerson (2009). What Can Virtual Worlds and Games Do for National Security? *Science* **326**(5957), 1201–1202.

Workshop and smaller conference papers

1. Cui, G, JP Dickerson, N Durvasula, W Gasarch, E Metz, J Prinz, N Raman, D Smolyak, and SH Yoo (2018). A Muffin-Theorem Generator. In: *International Conference on Fun with Algorithms (FUN)*. Working paper. Full version available as "The Muffin Problem" at arXiv:abs/1709.02452.

2. McElfresh, D and JP Dickerson (2018). Balancing Lexicographic Fairness and a Utilitarian Objective with Application to Kidney Exchange. In: *2018 Workshop on Health Intelligence (W3PHIAI) at AAAI-18*.

3. Dickerson, JP, AM Kazachkov, AD Procaccia, and T Sandholm (2017). Small Representations of Big Kidney Exchange Graphs. In: *Workshop on AI and OR for Social Good (AIORSocGood) at AAAI-17*.

4. Farina, G, JP Dickerson, and T Sandholm (2017). Inter-Club Kidney Exchange. In: *Workshop on AI and OR for Social Good (AIORSocGood) at AAAI-17*.

5. Farina, G, JP Dickerson, and T Sandholm (2017). Multiple Willing Donors and Organ Clubs in Kidney Exchange. In: *Algorithmic Game Theory (AGT) workshop at IJCAI-17*.

6. Schumann, C, SN Counts, J Foster, and JP Dickerson (2017). The Diverse Cohort Selection Problem: Multi-Armed Bandits with Varied Pulls. In: *Aligned AI Workshop at NIPS-17*.

7. Schumann, C, SN Counts, J Foster, and JP Dickerson (2017). The Diverse Cohort Selection Problem: Multi-Armed Bandits with Varied Pulls. In: *Women in Machine Learning (WiML) Workshop at NIPS-17*.

8. Dickerson, JP, AM Kazachkov, AD Procaccia, and T Sandholm (2016). Small Representations of Big Kidney Exchange Graphs. In: *Exploring Beyond the Worst Case in Computational Social Choice (EXPLORE) workshop at AAMAS-2016*. **Most Visionary Paper**.

9. Dickerson, JP and T Sandholm (2015). Uncertainty in Dynamic Matching with Application to Organ Exchange. In: *Machine Learning for Healthcare (MLHC) workshop at NIPS-2015*.

10. Banaszak, S, E Bowman, JP Dickerson, and V Subrahmanian (2014). Forecasting Country Stability in North Africa. In: *Joint Intelligence & Security Informatics Conference (JISIC)*.

11. Dickerson, JP (2014). Robust Dynamic Optimization with Application to Kidney Exchange. In: *Doctoral Consortium at AAMAS-2014*.

12. Dickerson, JP, J Goldman, J Karp, AD Procaccia, and T Sandholm (2014). The Computational Rise and Fall of Fairness. In: *Exploring Beyond the Worst Case in Computational Social Choice (EXPLORE) workshop at AAMAS-2014*.

13. Dickerson, JP, AD Procaccia, and T Sandholm (2014). Empirical Price of Fairness in Failure-Aware Kidney Exchange. In: *Towards Better and more Affordable Healthcare: Incentives, Game Theory, and Artificial Intelligence (HCAGT) workshop at AAMAS-2014*.

14. Dickerson, JP and T Sandholm (2014). Balancing Efficiency and Fairness in Dynamic Kidney Exchange. In: *Modern Artificial Intelligence for Health Analytics (MAIHA) workshop at AAAI-2014*.

15. Dickerson, JP and T Sandholm (2013). Liver and Multi-Organ Exchange. In: *IJCAI-2013 Workshop on Constraint Reasoning, Planning and Scheduling Problems for a Sustainable Future (COPLAS)*.

16. Dickerson, JP and T Sandholm (2013). Throwing darts: Random sampling helps tree search when the number of short certificates is moderate. In: *International Symposium on Combinatorial Search (SoCS)*.

17. Dickerson, JP, A Mannes, and V Subrahmanian (2011). Dealing with Lashkar-e-Taiba: A Multi-Player Game-Theoretic Perspective. In: *International Symposium on Open Source Intelligence and Web Mining*.

18. Dickerson, JP, MV Martinez, D Reforgiato, and V Subrahmanian (2008). CIG: Cultural Islands and Games. In: *International Conference on Computational Cultural Dynamics*.

Book chapters

1. Dickerson, JP, GI Simari, and V Subrahmanian (2013). "Using Temporal Probabilistic Rules to Learn Group Behavior". In: *Handbook of Computational Approaches to Counterterrorism*. Ed. by V Subrahmanian. Springer New York.

2. Simari, GI, JP Dickerson, A Sliva, and V Subrahmanian (2013). "Policy Analytics Generation using Action Probabilistic Logic Programs". In: *Handbook of Computational Approaches to Counterterrorism*. Ed. by V Subrahmanian. Springer New York.

3. Shakarian, P, JP Dickerson, and V Subrahmanian (2012). "Geospatial Abduction with Adaptive Adversaries". In: *Geospatial Abduction: Principles and Practice*. Ed. by P Shakarian and V Subrahmanian. Springer. Chap. 4.

Refereed and invited tutorials

1. Dickerson, JP and T Sandholm (2016). *Organ Exchange: A Success Story of AI in Healthcare*. Half-day tutorial at the Conference on Artificial Intelligence (AAAI).

2. Dickerson, JP and T Sandholm (2016). *Organ Exchange: A Success Story of AI in Healthcare*. Half-day tutorial at the International Conference on Autonomous Agents and Multi-Agent Systems (AAMAS).

3. Dickerson, JP and T Sandholm (2016). *Organ Exchange: A Success Story of AI in Healthcare*. Half-day tutorial at the International Joint Conference on Artificial Intelligence (IJCAI).

Invited talks

1. Dickerson, JP (2018). *Diversity in Matching Markets*. Invited talk, Carnegie Mellon University (CMU).

2. Dickerson, JP (2017). *Better Matching Markets Through Optimization*. Invited talk, United States Naval Academy (USNA).

3. Dickerson, JP (2017). *Better Matching Markets Through Optimization*. Invited talk, Laboratory for Telecommunication Sciences (LTS).

4. Dickerson, JP (2017). *Better Matching Markets Through Optimization*. Invited talk, Stanford University.

5. Dickerson, JP (2017). *Better Matching Markets Through Optimization*. Invited talk, University of British Columbia.

6. Dickerson, JP (2017). Recent Advances in Optimization and Machine Learning for Kidney Exchange. In: *INFORMS Healthcare Conference*. Invited talk.

7. Dickerson, JP (2016). *Better Matching Markets Through Optimization*. Invited talk, Duke University.

8. Dickerson, JP (2016). Small Representations of Big Kidney Exchange Graphs. In: *INFORMS Annual Conference*. Invited talk, Healthcare Applications Society cluster.

9. Dickerson, JP (2016). Small Representations of Big Kidney Exchange Graphs. In: *28th European Conference on Operational Research (EURO)*. Invited talk, Healthcare Logistics stream.

10. Dickerson, JP (2016). *Swapping Kidneys: Better Matching Market Design via Optimization*. Invited talk, Data Science DC.

11. Dickerson, JP (2016). Toward a Credit-Based Mechanism for Dynamic Kidney Exchange. In: *INFORMS Annual Conference*. Invited talk, Auctions cluster.

12. Dickerson, JP (2016). Uncertainty in Dynamic Matching with Application to Organ Exchange. In: *INFORMS Annual Conference*. Invited talk.

13. Dickerson, JP, D Manlove, B Plaut, T Sandholm, and J Trimble (2016). Position-Indexed Formulations for Kidney Exchange. In: *INFORMS Annual Conference*. Invited talk, Healthcare Applications Society cluster.

14. Das, S, JP Dickerson, Z Li, and T Sandholm (2015). Competing Dynamic Matching Markets. In: *INFORMS Annual Conference*. Invited talk, Auctions cluster.

15. Dickerson, JP (2015). Combining Human Value Judgments and Machine Learning to Match in Dynamic Environments. In: *International Symposium on Mathematical Programming (ISMP)*. Invited talk, Life Sciences and Healthcare cluster.

16. Dickerson, JP (2015). Combining Human Value Judgments and Machine Learning to Match in Dynamic Environments. In: *INFORMS Healthcare Conference*. Invited talk, Health Operations & Logistics cluster.

17. Dickerson, JP (2015). Near-optimal Stochastic Matching With Few Queries. In: *INFORMS Annual Conference*. Invited talk, Auctions cluster.

18. Dickerson, JP (2015). The Dynamics of Kidney Exchange. In: *Production and Operations Management Society (POMS) Annual Conference*. Invited talk, Healthcare Operations Management track.

19. Dickerson, JP (2014). *FutureMatch: Combining Human Value Judgments and Machine Learning to Match in Dynamic Environments*. DB Seminar, Carnegie Mellon University, Pittsburgh, PA.

20. Dickerson, JP and T Sandholm (2014). FutureMatch: Combining Human Value Judgments and Machine Learning to Match in Dynamic Environments. In: *INFORMS Annual Conference*. Invited talk, Auctions cluster.

21. Dickerson, JP (2013). *Failure-Aware Kidney Exchange*. Tsinghua University, Beijing, China.

22. Dickerson, JP, AD Procaccia, and T Sandholm (2013). Failure-Aware Kidney Exchange. In: *INFORMS Annual Conference*. Invited talk, Auctions cluster.

23. Dickerson, JP, AD Procaccia, and T Sandholm (2012). Dynamic Matching via Weighted Myopia with Application to Kidney Exchange. In: *INFORMS Annual Conference*. Invited talk, Computational Stochastic Optimization cluster.

24. Dickerson, JP, AD Procaccia, and T Sandholm (2012). Optimizing Kidney Exchange with Transplant Chains: Theory and Reality. In: *INFORMS Annual Conference*. Invited talk, Market Mechanisms and their Applications session.

Patents

1. Sandholm, T, F Peng, and JP Dickerson (2017). "Automated Allocation Of Media Campaign Assets To Time And Program In Digital Media Delivery Systems". US Patent #9,699,502.

Other publications and presentations

1. Redmiles, EM, M Mazurek, and JP Dickerson (2018). Do Users Make Rational Security Decisions? In: *Network and Distributed System Security Symposium (NDSS)*. Abstract of poster, **Best Poster Honorable Mention**.

2. Sandholm, T, G Farina, JP Dickerson, R Leishman, D Stewart, R Formica, C Thiessen, and S Kulkarni (2017). A Novel KPD Mechanism to Increase Transplants When Some Candidates Have Multiple Willing Donors. In: *American Transplant Congress (ATC)*. Abstract of poster.

3. Dickerson, JP (2016). Fast Optimal Clearing of Capped-Chain Barter Exchanges. In: *INFORMS Optimization Society (IOS) Conference*.

4. Dickerson, JP (2016). FutureMatch: Combining Human Value Judgments and Machine Learning to Match in Dynamic Environments. In: *World Congress on Game Theory (GAMES)*.

5. Das, S, JP Dickerson, Z Li, and T Sandholm (2015). Competing Dynamic Matching Markets. In: *Conference on Economics and Computation (EC)*. Abstract of poster.

6. Erickson, LC, K Godwin, JP Dickerson, ED Thiessen, and AV Fisher (2015). Different mechanisms for regulating sustained attention and learning in children. In: *Biennial Meeting of the Society for Research in Child Development (SRCD)*.

7. Dickerson, JP, AD Procaccia, and T Sandholm (2014). Price of Fairness in Kidney Exchange. In: *World Transplant Congress (WTC)*. Abstract of poster.

8. Dickerson, JP and T Sandholm (2014). FutureMatch: Learning to Match in Dynamic Environments. In: *World Transplant Congress (WTC)*. Abstract of poster.

9. Dickerson, JP and T Sandholm (2014). FutureMatch: Learning to Match in Dynamic Environments. In: *Conference on Economics and Computation (EC)*. Abstract of poster.

10. Dickerson, JP and T Sandholm (2014). Toward Multi-Organ Exchange. In: *World Transplant Congress (WTC)*. Abstract of poster.

11. Dickerson, JP, AD Procaccia, and T Sandholm (2013). Optimizing Kidney Exchange with Transplant Chains: Theory and Reality. In: *American Transplant Congress (ATC)*. Abstract of poster.

12. Dickerson, JP, AD Procaccia, and T Sandholm (2013). Results About, and Algorithms For, Robust Probabilistic Kidney Exchange Matching. In: *American Transplant Congress (ATC)*. Abstract of poster.

13. Dickerson, JP and T Sandholm (2013). Liver and Multi-Organ Exchange. In: *INFORMS Annual Conference*. Contributed presentations.

14. Dickerson, JP and T Sandholm (2013). Liver and Multi-Organ Exchange. In: *American Transplant Congress (ATC)*. Abstract of poster.

15. Fisher, AV, ED Thiessen, JP Dickerson, and LC Erickson (2013). Development of Selective Sustained Attention: Conceptual and Measurement Issues. In: *Biennial Meeting of the Cognitive Development Society (CDS)*.

16. Thiessen, ED, JP Dickerson, LC Erickson, and AV Fisher (2012). Eyes as the windows of cognition: The Track-It paradigm and selective attention. In: *SRCD Themed Meeting on Developmental Methodology*.

17. Vargas-Baron, E, JP Dickerson, and V Subrahmanian (2009). *Country Profiles on Early Childhood Development: Sub-Saharan Africa*. Booklet for the 4th International Conference on Early Childhood Development.

18. Blusewicz, K, K de Souza, JP Dickerson, B Feldman, A Gaddam, G Ganesan, C Hatch, C Hilseberg, L Kawa, K LaCurts, K Nealon, C Yu, and J Zytnick (2008). *Classification of Perceived Emotion in Music using a Computational Model of the Auditory Cortex*. University of Maryland Gemstone Interdisciplinary Research Program Thesis.

Teaching

S2018	Lecturer	UMD	CMSC828M	Applied Mechanism Design for Social Good	
S2018	Faculty Mentor	UMD	CMSC389K	Full-Stack Web Development with Node.js	
F2017	Lecturer	UMD	CMSC320	Introduction to Data Science	*with Deshpande*
F2017	Faculty Mentor	UMD	CMSC389K	Full-Stack Web Development with Node.js	
S2017	Lecturer	UMD	CMSC320	Introduction to Data Science	
F2016	Lecturer	UMD	CMSC828M	Applied Mechanism Design for Social Good	
2015	Lecturer	CMU	15-892	Foundations of Electronic Marketplaces	*with Sandholm*
2013	Vertical Mentor	CMU	—	Negotiation, eBusiness Technology	Sandholm
2013	Teaching Asst.	CMU	15-780	Graduate Artificial Intelligence	Sandholm & Veloso
2012	Vertical Mentor	CMU	—	Negotiation, eBusiness Technology	Sandholm
2012	Teaching Asst.	CMU	15-780	Graduate Artificial Intelligence	Hebert & Procaccia
2008	Teaching Asst.	UMD	CMSC311	Computer Organization	Hugue
2007	Teaching Asst.	UMD	CMSC311	Computer Organization	Hugue
2007	Teaching Asst.	UMD	CMSC330	Organization of Prog. Languages	Herman
2006	Teaching Asst.	UMD	CMSC212	Intro to Low-Level Programming	Herman

In 2007, I was Undergraduate TA of the Year at UMD's Computer Science Department.

Service

Conferences

Organizer	AAAI/SIGAI Job Fair Co-Chair (at AAAI'18)
	EXPLORE (at AAMAS'17)
Steering Committee	Agents & Incentives in AI (AI^3) at AAMAS/ICML/IJCAI ('18)
PC Member	AAAI ('13, '17, '18)
	AAMAS ('17, '18)
	AISTATS ('17)
	AI, Ethics, & Society ('18)
	COMSOC ('18)
	EC ('17, '18)
	ICML ('16, '17, '18)
	IJCAI ('13, '16, '17, '18)
	TinyToCS ('12)
PC (Workshops)	EXPLORE at AAMAS ('14, '15, '16, '17)
	Adversarial Reasoning in Multi-agent Systems at AAMAS ('17)
	Opinion Aggregation, Dynamics, and Elicitation (WADE) at EC ('18)
	Mechanism Design for Social Good (MD4SG) at EC ('18)
Reviewer	AAAI ('14, '16)
	AAMAS ('12, '16)
	ADT ('15)
	CPAIOR ('13)
	EC ('12)
	IJCAI ('15)
	NIPS ('16, '17, '18)
	SODA ('17)
	TARK ('17)
Session Chair	INFORMS ('14, '15, '16), IOS ('16), AAAI ('13)
Travel Grant	AAMAS ('12, '14), AAAI ('13, '15), SoCS ('13)

Journals

Reviewer	Management Science
	Operations Research
	European Journal of Operations Research (EJOR)
	International Journal of Production Research (IJPR)
	Annals of Mathematics and Artificial Intelligence (AMAI)
	Computers & Operations Research (COR)
	Mathematical Social Sciences (MSS)
	Artificial Intelligence Review (AIRE)

University Service

AY2018–*Present*	UMD	Director, High School Programming Competition
AY2017–*Present*	UMD	Diversity Committee
AY2017–*Present*	UMD	Faculty board member, ML@UMD
AY2016–*Present*	UMD	Artificial Intelligence Field Committee
AY2016–*Present*	UMD	High School Student Matching & Placement Committee
AY2017–18	UMD	Faculty Hiring Committee
AY2017–18	UMD	Teaching Awards Committee
AY2016–17, 17–18	UMD	PhD Admissions Committee
2017	UMD	Judge, Daemon Dash Hackathon
AY2012–13, 13–14	CMU	Admissions Committee
2012	CMU	Visit Weekend planning committee
2012	CMU	President of Dec/5 (SCS graduate student organization)
2011, 2012	CMU	Artificial Intelligence Reading Group (AIRG) planning

Programming & Technology

Languages – Fluent

Java, Python, C++

Languages – Experienced

Ruby, C, JavaScript, Matlab, LATEX2e, ActionScript, Flex, HTML4+, CSS2+, XML, HAML, YAML, JSON

Frameworks

Sinatra, Flask, Rails, Play, Java EE (Servlets on Tomcat or GlassFish), Git, SVN, CVS, TORQUE, MPI
I've also extensively used Blacklight, a 4096-core NUMA supercomputer at the Pittsburgh Supercomputing Center, as well as a 1404-core, 116-node cluster at UMD, a 21-node Nvidia Tesla cluster at UMD, and a variety of Amazon AWS services through my work at Optimized Markets and Kidney Match.

Environments & Software Suites

Emacs, Eclipse, NetBeans, Visual Studio, 3d Studio Max, Adobe Creative Suite, Gimp, RubyMine

References

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Extra academic and personal references available upon request!