Assistant Professor School of Operations Research and Information Engineering Cornell University

http://www.people.orie.cornell.edu/sbanerjee/

229 Rhodes Hall 136 Hoy Road Ithaca, NY 14853

sbanerjee@cornell.edu

RESEARCH INTERESTS

 $Stochastic\ modeling\ and\ design\ of\ scalable\ algorithms\ and\ mechanisms\ for\ large\ systems.$

In particular, my work spans across the following areas:

 ${\bf Data\text{-}Driven\ Decision\text{-}Making\ and\ Control\ -\ Stochastic\ control,\ online\ algorithms,}$

reinforcement learning.

Pricing, Markets and Social Computing - game theory and mechanism design; pric-

ing and revenue management; transportation systems.

Learning and Optimization on Networks - large-scale network algorithms; recom-

mender systems; epidemic processes; queueing theory.

Current

Cornell University: Ithaca, NY, July 2015 - Present

Position

Assistant Professor: School of Operations Research and Information Engineering.

Field Member: Computer Science, Center for Applied Mathematics, Electrical and Com-

puter Engineering.

Prior

Stanford University: Stanford, CA, August 2013 - June 2015

Positions Postdoctoral Researcher, Social Algorithms Lab (SOAL).

EDUCATION

The University of Texas at Austin, Austin, TX, September 2007 - July 2013.

PhD. in Electrical and Computer Engineering, July 2013 Department of Electrical and Computer Engineering

Thesis: Controlling Complex Information Flows in Networks

Indian Institute of Technology Madras, Chennai, India, 2003 - July 2007.

Bachelor's in Electrical Engineering, July 2007.

Industry Experience Technical consultant at **Lyft**, San Francisco, CA, Aug - Nov 2014, Jun - Dec 2018. Involved in developing and testing early iterations of Lyft's primetime pricing algorithms.

Research intern at **Technicolor Paris Research Lab:** Paris, France, Summer 2011. Research intern at **Bell Labs, Alcatel-Lucent:** Murray Hill, NJ, Summer 2009.

Honors

NSF CAREER Award, 2019

INFORMS APS Undergraduate Student Paper Prize winner: Siddharth Reddy (UG advisee) for Unbounded Human Learning: Optimal Scheduling for Spaced Repetition, 2017

INFORMS APS Student Paper Prize finalist: Daniel Freund and Thodoris Lykouris (Graduate collaborators) for Pricing and Optimization in Shared Vehicle Systems, 2017

WNCG Student Leadership Award, UT Austin, 2013.

Governor's Gold Medal, Institute Silver Medal, IIT Madras, 2007.

PUBLICATIONS Google Scholar profile: Siddhartha Banerjee. For preprints, see my research page.

♦ Book Chapters and Invited Articles (4)

Ridesharing

Siddhartha Banerjee, Ramesh Johari.

In Sharing Economy: Making Supply Meet Demand, M. Hu (Ed.), Springer Series in Supply Chain Management, 2019.

Segmenting Two-Sided Markets

Siddhartha Banerjee, Srinivas Gollapudi, Kostas Kollias, Kamesh Munagala. *ACM SIGecom Exchanges*, 2017.

Dynamic pricing in ridesharing platforms

Siddhartha Banerjee, Ramesh Johari, Carlos Riquelme. *ACM SIGecom Exchanges*, 2016.

The Importance of Exploration in Online Marketplaces

Siddhartha Banerjee, Ramesh Johari, Zhengyuan Zhou.

IEEE Internet Computing, 2016.

♦ Journal Publications (14)

Online Allocation and Pricing: Constant Regret via Bellman Inequalities

Alberto Vera, Siddhartha Banerjee, Itai Gurvich.

Operations Research, 2020.

Adaptive Discretization for Episodic Reinforcement Learning in Metric Spaces

Sean Sinclair, Siddhartha Banerjee, Christina Lee Yu.

ACM Measurement and Analysis of Computing Systems (ACM POMACS), 2020. (Invited based on acceptance to ACM SIGMETRICS '20, June 2020.)

Predict and Match: Prophet Inequalities with Uncertain Supply

Reza Alijani, Siddhartha Banerjee, Sreenivas Gollapudi, Kamesh Munagala, Kangning Wang.

In ACM Measurement and Analysis of Computing Systems (ACM POMACS), 2020. (Invited based on acceptance to ACM SIGMETRICS '20, June 2020.)

The Bayesian Prophet: A Low-Regret Framework for Online Decision Making Alberto Vera, Siddhartha Banerjee.

Management Science, 2020.

(Earlier version presented at ACM SIGMETRICS '19.)

Non-Monetary Mechanism Design via Artificial Currencies

Artur Gorokh, Siddhartha Banerjee, Krishnamurthy Iyer.

Mathematics of Operations Research, 2020.

(Combines results from From Monetary to Non-Monetary Mechanism Design via Artificial Currencies in ACM EC '17, and Near-Efficient Allocation in Repeated Settings in Web and Internet Economics (WINE '16).)

The Segmentation-Thickness Tradeoff in Online Marketplaces

Reza Alijani, Siddhartha Banerjee, S. Gollapudi, Kostas Kollias, Kamesh Munagala. *ACM Measurement and Analysis of Computing Systems (ACM POMACS)*, 2019. (Invited based on acceptance to *ACM SIGMETRICS '19*.)

The Price of Fragmentation in Mobility-on-Demand Services

Thibault Séjourné, Samitha Samaranayake, Siddhartha Banerjee.

ACM Measurement and Analysis of Computing Systems (ACM POMACS), 2018.

(Invited based on acceptance to ACM SIGMETRICS '18.)

Online Collaborative Filtering on Graphs

Siddhartha Banerjee, Sujay Sanghavi, Sanjay Shakkottai. Operations Research, 2016.

The Price of Privacy in Untrusted Recommendation Engines

Siddhartha Banerjee, Nidhi Hegde, Laurent Massoulié.

IEEE Journal of Selected Topics in Signal Processing (Special Issue on Privacy), 2015. (Earlier version in Allerton '12.)

Epidemic Spreading with External Agents

Siddhartha Banerjee, Aditya Gopalan, Abhik Das, and Sanjay Shakkottai. *IEEE Transactions on Information Theory*, 2014. (Earlier version in *IEEE INFOCOM '11*.)

Towards a Queueing-Based Framework for In-Network Function Computation

Siddhartha Banerjee, Piyush Gupta, Sanjay Shakkottai.

Oueueina Systems - Theory and Applications (OUESTA), 2011

Queueing Systems - Theory and Applications (QUESTA), 2012. (Earlier version in ISIT '11.)

Wireless Scheduling with Heterogeneous Delayed Network-State Information

Aneesh Reddy, Siddhartha Banerjee, Aditya Gopalan, Sanjay Shakkottai, Lei Ying. *Queueing Systems - Theory and Applications (QUESTA)*, 2012. (Earlier version in *Allerton '10*.)

Optimal Feedback Allocation For Cellular Uplink: Theory and Algorithms

Harish Ganapathy, Siddhartha Banerjee, Ned Dimitrov, Constantine Caramanis. *IEEE Transactions on Signal Processing*, 2012.

(Earlier version in Allerton '09.)

Greedy Sensor Selection: Leveraging Submodularity

Manohar Shamaiah, Siddhartha Banerjee, Haris Vikalo.

IEEE Wireless Communications Letters, 2012.

(Earlier version in IEEE CDC '10.)

♦ Refereed Conference Publications (31)

Uniform Loss Algorithms for Online Stochastic Decision-Making With Applications to Bin Packing

Siddhartha Banerjee, Daniel Freund. In *ACM SIGMETRICS'20*, July 2020.

${\bf Adaptive\ Discretization\ for\ Episodic\ Reinforcement\ Learning\ in\ Metric\ Spaces}$

Sean Sinclair, Siddhartha Banerjee, Christina Lee Yu.

In ACM SIGMETRICS '20, July 2020.

Predict and Match: Prophet Inequalities with Uncertain Supply

Reza Alijani, Siddhartha Banerjee, Sreenivas Gollapudi, Kamesh Munagala, Kangning Wang.

In ACM SIGMETRICS '20, July 2020.

The Bayesian Prophet: A Low-Regret Framework for Online Decision Making

Alberto Vera, Siddhartha Banerjee.

In ACM SIGMETRICS '19, July 2019.

The Segmentation-Thickness Tradeoff in Online Marketplaces

Reza Alijani, Siddhartha Banerjee, S. Gollapudi, Kostas Kollias, Kamesh Munagala. In *ACM SIGMETRICS '19*, July 2019.

Information Signal Design for Incentivizing Team Formation

Chamsi Hssaine, Siddhartha Banerjee.

In Web and Internet Economics (WINE '18), December 2018.

The Price of Fragmentation in Mobility-on-Demand Services

Thibault Séjourné, Samitha Samaranayake, Siddhartha Banerjee.

In ACM SIGMETRICS '18, July 2018.

The Value of State Dependent Control in Ride-sharing Systems

Siddhartha Banerjee, Yash Kanora, Pengyu Qian.

In ACM SIGMETRICS '18, July 2018.

Pricing and Optimization in Shared Vehicle Systems

Siddhartha Banerjee, Daniel Freund, Thodoris Lykouris.

In $ACM\ EC$ '17, June 2017.

INFORMS APS Student Paper competition finalist, 2017.

From Monetary to Non-Monetary Mechanism Design via Artificial Currencies

Artur Gorokh, Siddhartha Banerjee, Krishnamurthy Iyer.

In ACM EC '17, June 2017.

Segmenting Two-Sided Markets

Siddhartha Banerjee, Srinivas Gollapudi, Kostas Kollias, Kamesh Munagala.

In World Wide Web Conference (WWW '17), April 2017.

Near-Efficient Allocation in Repeated Settings

Artur Gorokh, Siddhartha Banerjee, Krishnamurthy Iyer.

In Web and Internet Economics (WINE '16), December 2016.

Sublinear Estimation of a Single Element in Sparse Linear Systems

Nitin Shyamkumar, Siddhartha Banerjee, Peter Lofgren.

In Allerton '16, October 2016.

Unbounded Human Learning: Optimal Scheduling for Spaced Repetition

Siddharth Reddy, Igor Labutov, Siddhartha Banerjee, Thorsten Joachims.

In ACM SIGKDD '16, August 2016.

INFORMS Undergraduate Student Paper Award, 2017.

Network Formation of Coalition Loyalty Programs

Arpit Goel, Vijay Kamble, Siddhartha Banerjee, Ashish Goel.

In NetEcon '16, June 2016.

Personalized PageRank Estimation and Search: A Bidirectional Approach

Peter Lofgren, Siddhartha Banerjee, Ashish Goel.

In ACM WSDM '16, February 2016.

Bidirectional PageRank Estimation: From Average-Case to Worst-Case

Peter Lofgren, Siddhartha Banerjee, Ashish Goel.

In *WAW '15*, December 2015.

Fast Bidirectional Probability Estimation in Markov Models

Siddhartha Banerjee, Peter Lofgren.

In NIPS '15, December 2015.

Pricing in Ride-Share Platforms: A Queueing-Theoretic Approach

Siddhartha Banerjee, Ramesh Johari, Carlos Riquelme.

In *ACM EC* '15, June 2015.

The Importance of Exploration in Online Marketplaces

Siddhartha Banerjee, Ramesh Johari, Zhengyuan Zhou.

In IEEE CDC '14, December 2014.

Re-incentivizing Discovery: Mechanisms for Progress Sharing in Research

S. Banerjee, A. Goel, A. Krishnaswamy.

In ACM EC '14, June 2014.

FAST-PPR: Scaling Personalized PageRank Estimation for Large Graphs

Peter Lofgren, Siddhartha Banerjee, Ashish Goel, C. Seshadri.

In ACM SIGKDD '14, August 2014.

The Behavior of Epidemics under Bounded Susceptibility

Subhashini Krishnasamy, Siddhartha Banerjee, Sanjay Shakkottai.

In ACM SIGMETRICS '14, June 2014.

Epidemic Thresholds with External Agents

Siddhartha Banerjee, Avhishek Chatterjee, Sanjay Shakkottai.

In IEEE INFOCOM '14, April 2014.

The Price of Privacy in Untrusted Recommendation Engines

Siddhartha Banerjee, Nidhi Hegde, Laurent Massoulié.

In Allerton '12, October 2012.

Epidemic Spreading with External Agents

Siddhartha Banerjee, Aditya Gopalan, Abhik Das, and Sanjay Shakkottai.

In IEEE INFOCOM '11, April 2011.

Towards a Queueing-Based Framework for In-Network Function Computation

Siddhartha Banerjee, Piyush Gupta, Sanjay Shakkottai.

In ISIT '11, July 2011.

Greedy Learning of Markov Network Structure

Praneeth Netrapalli, Siddhartha Banerjee, Sujay Sanghavi, Sanjay Shakkottai. In *Allerton '10*, October 2010.

Wireless Scheduling with Heterogeneous Delayed Network-State Information

Aneesh Reddy, Siddhartha Banerjee, Aditya Gopalan, Sanjay Shakkottai, Lei Ying. In *Allerton '10*, October 2010.

Greedy Sensor Selection: Leveraging Submodularity

Manohar Shamaiah, Siddhartha Banerjee, Haris Vikalo.

In IEEE CDC '10, December 2010.

Optimal Feedback Allocation For Cellular Uplink: Theory and Algorithms

Harish Ganapathy, Siddhartha Banerjee, Ned Dimitrov, Constantine Caramanis.

In Allerton '09, October 2009.

♦ Preprints (9)

Online Nash Social Welfare Maximization via Promised Utilities

Siddhartha Banerjee, Vasilis Gkatzelis, Artur Gorokh, Billy Jin. Under submission, 2020.

The Limits of an Information Intermediary in Auction Design

Reza Alijani, Siddhartha Banerjee, Kamesh Munagala, Kangning Wang. Under submission, 2020.

Adaptive Discretization for Model-Based Reinforcement Learning

Sean Sinclair, Tianyu Wang, Gauri Jain, Siddhartha Banerjee, Christina Lee Yu. Under submission, 2020.

Threshold Tests as Quality Signals: Optimal Strategies, Equilibria, and Price of Anarchy

Siddhartha Banerjee, David Kempe, Robert Kleinberg. Working paper, 2020.

Satisficing Search and Algorithmic Price Competition

Chamsi Hssaine, Siddhartha Banerjee, Vijay Kamble.

Working paper, 2020. Available at https://ssrn.com/abstract_id=3544350.

Scrip Economies are (Approximately) Fair and Efficient

Artur Gorokh, Siddhartha Banerjee, Krishnamurthy Iyer.

Under submission, 2019. Available at https://ssrn.com/abstract_id=3411444

A Pricing Framework for the Mobility Marketplace

Chamsi Hssaine, Raga Gopalakrishnan, Siddhartha Banerjee, Samitha Samaranayake. Working paper, 2019.

The Power and Limits of Collusion-Resilient Mechanism Design

Artur Gorokh, Siddhartha Banerjee, Krishnamurthy Iyer.

Under submission, 2018. Available at https://ssrn.com/abstract_id=3125003

Computing Constrained Shortest-Paths at Scale

Alberto Vera, Siddhartha Banerjee, Samitha Samaranayake. Under submission, 2018.

Grants

- CNS-1955997: Resource Constrained Reinforcement Learning for Computing Systems,
 ro-PI, National Science Foundation (NSF), July 2020 July 2024 (\$1,200,000)
- ♦ ECCS-1847393: CAREER: Harnessing Prediction Engines and Non-Monetary Mechanisms for Real-Time Decision Making, PI, National Science Foundation (NSF), March 2019 February 2024 (\$500,549)
- \diamond Engaged Cornell Grant: Engaging Industry in Applied Mathematics , co-PI, Engaged Cornell, June 2019 June 2020 (\$80,000)
- \diamond DMS-1839346: The Future of the Road A Data-Driven Redesign of the Urban Transit Ecosystem, PI, National Science Foundation (NSF), Oct 2018 Oct 2020 (\$425,000)
- ♦ Engaged Cornell Grant: Applied Mathematics in Action, co-PI, Engaged Cornell, June 2018 June 2019 (\$20,000)
- ♦ W911NF-17-1-0094: Operations and the Sharing Economy: Mechanisms for On-Demand Resource Sharing, PI, Army Research Laboratory (ARL), July 2017 July 2020 (\$399,659)

SERVICE

Professional Publications Chair: SIGMETRICS 2017 Workshop Chair: IFIP Performance 2017

TPC Member: SIGMETRICS 2020, 2019, 2018, 2016; EC 2020, 2019, 2018, 2017, 2016,

NetEcon 2020, 2019, 2018, 2017, IFIP Performance 2020, 2019, 2018, 2017.

Prize Committee: Nicholson Prize 2020, 2019.

Journal Reviewer: Math of OR, Operations Research, Management Science, QUESTA,

IEEE Trans. Networking, Trans. Mobile Computing, Trans. Signal Processing.

Organizer: Cornell ORIE Colloquium (2015-2018) RAIN seminar series at Stanford (2013 - 2015)

WNCG Seminar (2012 - 2013), WNCG student seminar (2009 - 2012) at UT Austin.

Teaching EXPERIENCE ORIE 4742, Information Theory & Bayesian Machine Learning: Spring 2020.

ORIE 6500, Introduction to Stochastic Processes: Fall 2019.

ORIE 4580, Simulation Modeling & Analysis: Fall 2017, Fall 2018.

ORIE 4154, Pricing and Market Design: Spring 2017.

ORIE 6154, Revenue Management: Fall 2016.

ORIE 6180, Online Decision-Making & Market Design: Spring 2016, Spring 2019.

ORIE 4520, Stochastics at Scale: Fall 2015.

MS&E 221, Stochastic Modeling: Teaching Assistant, Stanford, Spring 2016.

Advising EXPERIENCE

⋄ Postdoctoral Researchers

Ragavendran Gopalakrishnan, 2017-2019

Jointly supervised with Samitha Samaranayake

Started at Smith School of Business, Queens College as Assistant Professor (2019)

Qi Luo, 2020

Jointly supervised with Samitha Samaranayake

Starting at Clemson University IE as Assistant Professor (2021)

PhD Advisees (graduated)

Artur Gorokh, Cornell CAM, 2015-2020

Thesis: Fairness and Efficiency in Online Allocation of Goods

Jointly supervised with Kris Iver

Joined Facebook as Research Scientist (2020)

Alberto Vera, Cornell ORIE, 2015-2020

Thesis: Real-Time Network Optimization: Practical Algorithms with Provable Guarantees Joined Amazon as Research Scientist (2020)

♦ PhD Advisees (current)

Chamsi Hssaine, Cornell ORIE, 2016-

Sean Sinclair, Cornell ORIE, 2018-

Jointly supervised with Christina Lee Yu

Matthew Eichhorn, Cornell CAM, 2019-

Spencer Peters, Cornell CS, 2019-

Jointly supervised with Joe Halpern

Jack Wang, Cornell CS, 2019-

Received the NDSEG Graduate Fellowship, 2020

⋄ PhD Student Thesis Committees

Reza Alijani, 2020, Duke CS, Advisor: Kamesh Munagala

Faisal Alkaabneh, 2020, Cornell Systems Engineering, Advisor: Oliver Gao

Yingjie Fei, 2020, Cornell ORIE, Advisor: Yudong Chen

Daniel Vial, 2020, Michigan EECS, Advisor: Vijay Subramananian

Thodoris Lykouris, 2019, Cornell CS, Advisor: Eva Tardos

David Lingenbrink, 2019, Cornell ORIE, Advisor: Kris Iyer

Pu Yang, 2019, Cornell ORIE, Advisor: Kris Iyer & Peter Frazier

Venus Lo, 2019, Cornell ORIE, Advisor: Husseyin Topaloglu

Yang Liu, 2019, Cornell CEE, Advisor: Samitha Samaranayake

Zhen Tan, 2018, Cornell CEE, Advisor: Oliver Gao

Undergraduate Collaborators

Gauri Jain, 2020, Cornell CS. Software Engineer at Facebook

Clare Snyder, 2019, Cornell IS. Graduate student at Ross School of Business, University of Michigan

Xiang (Felix) Fu, 2019, Cornell CS. Graduate student at MIT EECS

Noemie Perivier, 2019, Ecole Polytechnique. Graduate student at Columbia DRO

Thibault Séjourné, 2018, Ecole Polytechnique. Graduate student at ENS Paris

Nitin Shyamkumar, 2017, Cornell CS. Graduate student at NYU Courant

Siddharth Reddy, 2017, Cornell CS. Graduate student at EECS, UC Berkeley

Invited Talks

Constant Regret Algorithms for Online Decision-Making

 Foundations of Data Science ML Seminar, University of Texas at Austin, Austin TX, May 2020

Constant Regret Algorithms for Online Decision-Making

– Industrial & Operations Engineering Department Seminar, University of Michigan, Philadelphia PA, March 2020

Constant Regret Algorithms for Online Decision-Making

- UPenn Theory Seminar, University of Pennsylvania, Philadelphia PA, February 2020

Uniform-loss Algorithms for Constrained Online Decision-Making

- MSR ML Seminar, Microsoft Research New York, New York NY, December 2019

The Unreasonable Effectiveness of Artificial Currencies

– Workshop on Platform Markets, Simons Institute Program on Online and Matching-Based Market Design, Berkeley CA, September 2019

Designing the Multi-Modal Transit Marketplace

- NSF Workshop on Control for Networked Transportation Systems, Philadelphia PA, July 2019

Ridesharing: The Road Ahead

 Real-Time Decision Making Reunion Workshop, Simons Institute for the Theory of Computing, Berkeley CA, June 2019

 $The\ Unreasonable\ Effectiveness\ of\ Artificial\ Currencies$

– Institute for Mathematical Behavioral Sciences (IMBS) Seminar, University of California Irvine, Irvine CA, May 2019

Online Decision-Making Using Prediction Oracles

- Communications and Signal Processing Seminar, Michigan EECS, Michigan University, Ann Arbor MI, April 2019

Trace-Driven Online Decision-Making

– Conference on Information Sciences and Systems (CISS 2019), Johns Hopkins University, Baltimore MD, March 2019

Online Decision-Making Using Prediction Oracles

 Quantitative Methods Seminar, Krannert School of Business, Purdue University, West Lafayette IN, October 2018

Designing Decentralized Markets: Artificial Currencies and Collusion Resilience

- Workshop on Marketplace Innovation, June 2018

A Bayesian Approach to Online Resource Allocation

– Workshop on Mathematical and Computational Challenges in Real-Time Decision Making, Simons Institute Program on Real-Time Decision Making, Berkeley CA, May 2018

Allocating Resources, in the Future

- RAIN Seminar series, Stanford University, Palo Alto CA, April 2018
- BLISS Seminar, UC Berkeley, Berkeley CA, April 2018
- IEOR-DRO Joint Seminar, Columbia University, New York City NY, April 2018

The Rideshare Dispatch Problem

– Societal Networks Workshop, Simons Institute Program on Real-Time Decision Making, Berkeley CA, March 2018

The Rideshare Dispatch Problem

– Societal Networks Workshop, Simons Institute Program on Real-Time Decision Making, Berkeley CA, January 2018

Ridesharing

– Bootcamp Workshop, Simons Institute Program on Real-Time Decision Making, Berkeley CA, January 2018

Pricing in Dynamic Two-Sided Markets

– 55th Annual Allerton Conference, Urbana-Champaign IL, October 2017

Personalization, for everyone

- Texas Wireless Summit, UT Austin, Austin TX, October 2017

The Power of Bidirectional Estimators

- Los Alamos National Laboratories, Los Alamos NM, June 2017
- Stanford University ISL Colloquium, Stanford University, Palo Alto CA, February 2016

Pricing and Optimization in Shared Vehicle Systems

- Mostly OM Workshop, Beijing, China, May 2017
- NII Workshop on Optimization under Uncertainty, Shonan, Japan, May 2017
- Department Seminar at Georgia Tech ISYE, Atlanta GA, December 2016

Dynamic Pricing in Rideshare Platforms

- Simons Institute Workshop on Real-Time Decision Making, Berkeley CA, June 2016
- Duke University CS-Econ Colloquium, Durham NC, April 2016

What Money Can't Buy - Beyond Pricing in Online Marketplaces

- Cornell CS Theory Seminar, Ithaca NY, November 2016

Sublinear Estimation of a Single Element in Sparse Linear Systems

- 54th Annual Allerton Conference, Urbana-Champaign IL, October 2016

Fast Bidirectional Estimation in Markov Chains

- Cornell CAM Colloquium, Ithaca Ny, September 2015
- Indian Institute of Science, Bangalore, India, July 2015
- WNCG Seminar Series at UT Austin, Austin TX, May 2015

New Models and Mechanisms for Online Platforms

- Baskin School of Engineering at UC Santa Cruz, Santa Cruz CA, February 2015
- NYU Stern IOMS Seminar, New York City NY, January 2015
- Cornell ORIE Department Seminar, Ithaca NY, January 2015
- MEDS Department Seminar at Kellogg, Evanston IL, December 2014