

Curriculum Vitæ - Andrea Montanari

Depts of Statistics, Mathematics
Stanford University

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Appointments

2015-2023 Professor of Statistics and Mathematics– Stanford University
2022 Visiting Professor, Institute for Advanced Studies, School of Mathematics
2021-2023 Robert and Barbara Kleist Professor in the School of Engineering, Stanford University
2018-present Professor of Mathematics (by Courtesy) – Stanford University
2015-2023 Professor of Electrical Engineering and Statistics – Stanford University
2010-2015 Associate Professor – Stanford University
2006-2010 Assistant Professor – Stanford University
2002-2010 *Chargé de Recherche* (permanent position with CNRS)
Laboratoire de Physique Théorique de l’Ecole Normale Supérieure

Education

MSRI, Berkeley	Mathematics	Postdoctoral fellow, 2005
Ecole Normale Supérieure, Paris	Physics	Marie Curie fellow, 2001
Scuola Normale Superiore, Pisa	Physics	Ph.D., 2001
Università di Pisa	Physics	Laurea, 1997

Distinctions

2023 Ordway Distinguished Lectures (University of Minnesota)
2020 Fellow of the Institute of Mathematical Statistics
2020 Medallion Lecturer (Institute of Mathematical Statistics)
2020 Prix Lucien Le Cam (Société Française de Statistique)
2018 ICM Sectional Speaker (Probability and Statistics)
2017 IEEE Fellow
2016 James L. Massey Research & Teaching Award of the Information Theory Society
2015 INFORMS/Applied Probability Society, Best Publication Award
2014 IEEE, Information Theory Society distinguished lecturer
2013 Okawa Foundation research grant
2010 Google research award
2008 Sigmetrics best paper award

- 2008 Cisco Research Center grant
- 2008 NSF CAREER award
- 2006 CNRS bronze medal for theoretical physics

Research interests

Machine learning and high-dimensional statistics. Graphical models. Coding theory. Random combinatorial structures and optimization.

Professional service

- 2019–2021 Board of Directors, *Association for Computational Learning*
- 2017–2021 Scientific Advisory Committee, *Mathematical Sciences Research Institute, Berkeley*
- 2017– Associate editor, *Journal of the American Statistical Association*
- 2017– Associate editor, *Mathematical Statistics and Learning*
- 2014–2018 Associate editor, *IEEE Transactions on Information Theory*
- 2014–2016 Associate editor, *IEEE Transactions on Network Science and Engineering*
- 2013–2020 Associate editor, *Annales de l'Institut Henri Poincaré D*
- 2012–2015 Associate editor, *Electronic Journal of Statistics*
- 2012–2014 Associate editor, *Operations Research*
- 2012– Associate editor, *Information and Inference. A Journal of the IMA*
- 2010–2012 Scientific Planning Committee, *Istitut Henri Poincaré, Paris.*
- 2009 Guest editor for *SIAM Journal on Discrete Mathematics*

Workshops and conferences organization

- 2020 Organization of the workshop “Computational Phase Transitions” at the Simons Institute for the Theory of Computing, Berkeley
- 2018 Organization of the program “The Rough High-Dimensional Landscape Problem” at the Kavli Institute for Theoretical Physics, UCSB
- 2018 Organization of the semester program “Foundations of Data Science” at the Simons Institute for the Theory of Computing, Berkeley
- 2018 TPC co-chair for the IEEE International Symposium on Information Theory
- 05/2016 Organization of the Workshop “Random Instances and Phase Transitions” at Simons Institute for the Theory of Computing, Berkeley

- 05/2015 Organization of the Workshop “Graphical Models, Statistical Inference, and Algorithms (GRAMSIA)” at IMA, University of Minnesota.
- 05/2015 Organization of the Workshop “Inference in high dimensional regression” at AIM, San Jose
- 04/2012 Organization of the Workshop “Random Walks and Random Media” at MSRI, Berkeley.
- 01/2012 Organization of the Workshop “Mathematical Challenges in Graphical Models and Message-Passing Algorithms” at IPAM, UCLA.
- 01/2010 Organization of the Workshop “New topics at the interface between probability and communications” at Newton Institute, Cambridge, UK.
- 2009 TPC member for the IEEE International Symposium on Information Theory
- 2009 TPC member for the IEEE Information Theory Workshop, Cairo (Egypt).
- 03/2009 Organization of the Workshop “29th Seminar on Stochastic Processes” at Stanford.
- 2009 TPC member for the IEEE Information Theory Workshop, Taormina (Italy).
- 12/2008 Organization of the Workshop “Statistical Mechanics” at Institut Henri Poincare (Paris).
- 2008 TPC member for International Symposium on Information Theory
- 2007 TPC member for International Symposium on Information Theory
- 06/2007 Organization of the Workshop “Common Concepts in Statistical Physics and Computer Science” held at International Center for Theoretical Physics (Trieste, Italy), supported by IUPAP and UNESCO
- 06/2004 Organization of the Workshop “Statistical Physics and Computational Problems: Beyond the Analogy” held at Institut Henri Poincare (Paris) and supported by the European Science Foundation.
- 01/2007 Organization of the Workshop “Theory and applications of message passing: probability, physics, computer science and communications” held at Institute for Information Theory and Applications (UCSD, San Diego)

Doctoral Students Supervised

Theodor Misiakiewicz (Ph.D. 2023, Stanford Statistics)

Thesis title: *New Statistical and Computational Phenomena from Deep Learning*

Assistant Professor, Yale University

Yuchen Wu (Ph.D. 2023, Stanford Statistics)

Thesis title: *Statistical and Computational Problems in Low-Rank Matrix Estimation*

Postdoctoral Fellow, UPenn

Kabir Chandrasekher (Ph.D. 2023, Electrical Engineering)

Thesis title: *Convergence guarantees for iterative algorithms in a class of nonconvex empirical risk minimization problems*

Postdoctoral Fellow, Oxford University

Yuchen Wu (Ph.D. 2023, Stanford Statistics)
Thesis title: *High-Dimensional Problems in Probability, Optimization, and Learning*
Postdoctoral Fellow, UPenn

Mark Sellke (Ph.D. 2022, Stanford Mathematics)
Thesis title: *High-Dimensional Problems in Probability, Optimization, and Learning*
Assistant Professor, Harvard University

Song Mei (Ph.D. 2020, Stanford ICME)
Thesis title: *Computational and Statistical Theories For Large Scale Neural Networks*
Assistant Professor, UC Berkeley

Phan-Minh Nguyen (Ph.D. 2020, Stanford Electrical Engineering)
Thesis title: *Mean Field Limit in Neural Network Learning: Autoencoders and Multilayer Networks*
Voleon Group

Zhou Fan (Ph.D. 2018, Stanford Statistics)
Thesis title: *Eigenvalues in multivariate random effects models*
Assistant Professor, Yale University

Hamid Javadi (Ph.D. 2018, Stanford Electrical Engineering)
Thesis title: *Non-negative matrix factorization and topic models*
Software Engineer, Google

Subhabrata Sen (Ph.D. 2017, Stanford Statistics)
Thesis title: *Optimization, Random Graphs, and Spin glasses*
Assistant Professor, Harvard University

Murat Erdogdu (Ph.D. 2017, Stanford Statistics)
Thesis title: *Stein's Lemma and Subsampling in Large-Scale Optimization*
Assistant Professor, University of Toronto

Yash Deshpande (Ph.D. 2016, Stanford Electrical Engineering)
Thesis title: *Computational Limits in Statistical Estimation: Hidden Clique and Related Problems*
Schramm Postdoctoral Fellow, MIT and Microsoft Research; Voleon Group

Sonia Bhaskar (Ph.D. 2015, Stanford Electrical Engineering)
Thesis title: *Structured Estimation in Healthcare and Low-Rank Matrix Recovery*
Data Scientist, Netflix

Adel Javanmard (Ph.D. 2014, Stanford Electrical Engineering)
Thesis title: *Inference and Estimation in High-dimensional Data Analysis*
Associate Professor, University of Southern California

Morteza Ibrahimi (Ph.D. 2013, Stanford Electrical Engineering)
Thesis title: *Three Problems in High-Dimensional Statistical Parameter Estimation*
Research Engineer, Google

Jose Bento (Ph.D. 2012, Stanford Electrical Engineering)
Thesis title: *Learning graphical models, fundamental limits and efficient algorithms*
Associate Professor, Boston College

Yashodhan Kanoria (Ph.D. 2012, Stanford Electrical Engineering)

Thesis title: *Learning in Social and Economic Networks*

Associate Professor, Columbia University

Raghunandan Keshavan (Ph.D. 2012, Stanford Electrical Engineering)

Thesis title: *Efficient Algorithms For Collaborative Filtering*

Software Engineer, Google

Sewoong Oh (Ph.D. 2011, Stanford Electrical Engineering)

Thesis title: *Matrix Completion: Fundamental Limits and Efficient Algorithms*

Associate Professor, University of Washington at Seattle

Postdoctoral Students Supervised

Yiqiao Zhong (2019 - 2022)

Assistant Professor, University of Wisconsin-Madison

Ahmed El Alaoui (2018 - 2020)

Assistant Professor, Cornell University

Marco Mondelli (2017-2019)

Assistant Professor, IST Austria

Emile Richard (2013-2015)

Senior data scientist, Amazon

Mohsen Bayati (2009-2011)

Associate Professor, Stanford University

Satish Babu Korada (2009-2010)

Quantitative Analyst at D.E Shaw & Co.

Patents

PRIVACY PROTECTION AGAINST CURIOUS RECOMMENDERS

Inventors: S. Ioannidis, E. Weinsberg, S. Bhagat, N. Fawaz, A. Montanari, N. Taft. Filed: August 2013

USER IDENTIFICATION THROUGH SUBSPACE CLUSTERING

Inventors: S. Ioannidis, N. Fawaz, A. Montanari, A. Zhang. Filed: June 2013

METHOD AND APPARATUS FOR IDENTIFYING USERS FROM RATING PATTERNS

Inventors: J. Bento, N. Fawaz, A. Montanari, S. Ioannidis. Filed: August 2012

Plenary lectures

- 10/2023 Rapporteur, *29th Solway Conference on Physics*, Bruxelles, Belgium
09/2023 Plenary talk, *Congresso dell'Unione Matematica Italiana*, Pisa, Italy
02/2023 Plenary talk, *Information Theory and Applications*, UCSD
12/2022 Plenary talk, *International Conference on Frontiers of Statistics and Data Science*, Southern University of Science and Technology, Shenzhen, China
10/2022 Norbert Wiener Distinguished Lecture, *Fall Fourier Talks*, University of Maryland
07/2022 Plenary talk, *Monte Carlo and Quasi Monte Carlo (MCQMC)*, Linz
06/2022 Plenary talk, *Annual ACM Symposium on Theory of Computing (STOC)*, Rome
06/2022 *Italian Meeting on Probability and Mathematical Statistics*, Bologna
06/2022 'Morning Lecture' *British Mathematical Colloquium*, London
10/2021 Richard M. Karp Distinguished Lecture, UC Berkeley
05/2021 Plenary talk at *London Symposium on Information Theory*
04/2021 Plenary talk at *IEEE Information Theory Workshop*
03/2021 Keynote talk at *Advanced Communication Center (ACC) Workshop*, Tel Aviv University
02/2019 Workshop on *LIDS Students' Conference*, Plenary talk, MIT
07/2017 Plenary talk at Conference On Learning Theory (COLT)
02/2017 San Diego, *Information Theory and Applications*, Plenary lecture
04/2015 Plenary talk at *IEEE Information Theory Workshop*
12/2015 Plenary talk at *International Matheon Conference on Compressed Sensing and its Applications*, Berlin Technical University
05/2015 Seymour Sherman Lecture, University of Indiana
06/2015 Plenary Talk, *47th Meeting of the French Statistical Society*, Lille, France
02/2013 UIUC, *CSL Student Conference*, Keynote presentation
08/2012 Plenary talk at *IEEE Information Theory Workshop*
09/2010 Plenary talk at *6th International symposium on turbo codes and iterative information processing*, Brest, France
08/2010 Plenary talk at *ICM Satellite conference on Probability and Stochastic processes*
06/2010 Keynote talk at workshop on *Stochastic Processes in Communication Networks*, Edinburgh, UK
09/2008 Plenary talk at *5th International Symposium on Turbo Codes and Related Topics*, EPFL, Lausanne
07/2007 Plenary talk at *StatPhys 23*

Invited tutorials and lecture series

- 03/2023 *Ordway Distinguished Lecturer*, University of Minnesota
09/2022 *Workshop on spin glasses*, Les Diablerets, Switzerland

- 07/2023 *Summer School on Statistical Physics of Machine Learning* (5 lectures) Les Houches, France
- 08/2021 *Computational Complexity of Statistical Inference* Boot Camp, Simons Institute, UC Berkeley
- 07/2021 Lecture series, *Deep Learning Summer School*, Princeton University
- 07/2020 Lecture series, *Online Open Probability School*, (Organized by University of British Columbia)
- 12/2019 Lecture series, *Meeting on Mathematical Statistics*, CIRM, Marseille
- 01/2019 Tutorial, Workshop on *Foundations of Deep Learning*, MIT
- 08/2018 Summer School on *Statistical Physics and Machine Learning Back Together* (Tutorial), Cargèse, France
- 06/2017 Lecture series at Summer School on *Structured Regularization*, IHP, Paris
- 08/2016 *Lecture series at Beg-Rohu Summer School of Statistical Physics*, Beg-Rohu, France
- 01/2016 Tutorial at *Counting Complexity and Phase Transitions Boot Camp*, Simons Institute, Berkeley
- 09/2015 Tutorial *53rd Annual Allerton Conference on Communication, Control, and Computing*
- 10/2013 Les Houches, France, lecture series at autumn school on *Statistical physics, Optimization, Inference and Message-Passing algorithms*
- 09/2013 Columbia University, lecture series at *Conference on Graphical Models*
- 07/2013 Lecture series at *Saint Flour Lectures on Probability*
- 03/2013 Introductory lectures at *Seminar on Stochastic Processes (SSP 2013)*
- 01/2012 Indian Institute of Science, Bangalore, Lecture series at the *School on Network Science in Electrical Engineering and Computer Science*
- 10/2010 Winedale, Texas. *Winedale workshop on high-dimensional statistical problems*
- 06/2010 Tutorial at the *ACM Symposium on Theory of Computing (STOC)*
- 09/2008 Institut Henri Poincare, Paris, Course for the *Summer School on Random Media, Phase Transitions and Information Theory*
- 08/2008 Lecture series at *XIIth Brazilian School of Probability* (with Amir Dembo)
- 06/2007 Tutorial at *International Symposium on Information Theory*
- 07/2006 Lecture series at Les Houches Summer School on *Complex Systems*
- 02/2006 Centro di Ricerca Matematica Ennio de Giorgi, Pisa, Course at the school *Mathematical aspects of high performance codes: state of the art and open problems*,
- 07/2005 Lecture series at Les Houches Summer School on *Mathematical Statistical Physics*

Other invited lectures and seminars

- 04/2023 Workshop on *Physics for ML* Princeton Center for Theoretical Sciences
- 04/2023 Workshop *Random discrete structures*, University of Muenster, Germany
- 02/2023 Workshop *Towards a theory of artificial and biological neural networks*, Les Houches, France
- 02/2023 Keynote presentation, *Institute for Machine Learning and Kantorovich Initiative*, University of Washington, Seattle

- 02/2023 *Mathematics Colloquium*, University of Washington, Seattle
02/2023 Istituto per le Applicazioni del Calcolo Mauro Picone, Online Seminar
- 11/2022 *Mathematics Colloquium*, Princeton University
10/2022 *Probability Seminar*, Princeton University
10/2022 Workshop on *Random media and large deviations*, in honor of Over Zeitouni's 60th birthday, Courant Institute, New York
06/2022 Workshop *Exploring and Exploiting High-dimensional Phenomena in Statistical Learning and Inference*, Radcliffe Institute, Harvard
05/2022 Workshop on *Re-thinking High-dimensional Mathematical Statistics*, Oberwolfach, Germany
04/2022 Workshop *Theory of Over-Parametrized Machine Learning*, Rice University
01/2022 Workshop *Inhomogeneous Random Systems*, Institut Henri Poincaré. Paris
- 11/2021 Simons Collaboration Mathematics of Deep Learning Seminar
10/2021 Workshop *Dynamics and Discretization: PDEs, Sampling, and Optimization*, Simons Institute
10/2021 *Statistics Colloquium*, University of Chicago
10/2021 Workshop on *Algorithmic Advances for Statistical Inference*
09/2021 Meeting of the *NSF-Simons Collaboration on the Mathematics of Deep Learning*, Simons Foundation, New York
08/2021 Workshop on *Theory of deep learning*, Purdue University
08/2021 Workshop on *Advances in Theory and Algorithms for Deep Reinforcement Learning*, ICERM, Brown University
08/2021 ICML workshop on *Overparameterization: Pitfalls and Opportunities*
05/2021 Workshop on *Efficient Tensor Representations for Learning and Computational Complexity*, IPAM, UCLA, Los Angeles
05/2021 Conference on New Developments in Probability (Tulane University)
03/2021 Workshop *Mathematical Foundations of Machine Learning*, MFO, Oberwolfach, Germany
03/2021 Workshop *Machine Learning and Statistical Physics*, Centre Lagrange, Paris
- 12/2020 Mini-Workshop *Theory of Deep Learning*, Northwestern University
10/2020 University of Southern California, Statistics Seminar
09/2020 Harvard University, Center for Mathematical Sciences and Applications
09/2020 University of Wisconsin Statistics Seminar
09/2020 Probability, Geometry, and Computation in High Dimensions, Simons Institute, Berkeley
08/2020 Stochastic Networks, Applied Probability, and Performance (Seminar Series)
07/2020 International Centre for Theoretical Physics (ICTP), Colloquium
06/2020 Workshop *Computational vs Statistical Tradeoffs in Network Inference*, Northwestern University
06/2020 Math and Data Plus Seminar (ETH-NYU Joint Online Seminar)

- 05/2020 Workshop *Optimal transport and applications to machine learning and statistics*, MSRI, Berkeley, USA
- 04/2020 Stanford Applied Mathematics Colloquium
- 04/2020 Mathematics Department Colloquium, University of Pisa, Italy
- 02/2020 Statistical Machine Learning Seminar, Stanford
- 01/2020 Workshop *Statistics meets Machine Learning*, MFO, Oberwolfach, Germany
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- 11/2019 Workshop on *Using Physical Insights for Machine Learning*, IPAM, UCLA
- 11/2019 Stanford Statistics Seminar
- 10/2019 NSF-Simons Foundation *Panel on Deep Learning*
- 10/2019 Workshop on *Inference in Graphical Models*, Columbia University, New York
- 09/2019 Statistics and ECE Colloquium, UPenn, Philadelphia
- 09/2019 Workshop on *40 Years of Replica Symmetry Breaking*, Università La Sapienza, Roma
- 09/2019 Microsoft Research, Workshop on *The geometry of deep learning*, Redmond
- 06/2019 ICML workshop on *Theoretical Physics for Deep Learning*, Los Angeles
- 05/2019 Workshop on *Statistical and Computational Aspects of Learning with Complex Structure*, MFO, Oberwolfach, Germany
- 04/2019 IPAM workshop on *Geometry of Big Data*, UCLA
- 04/2019 *Probability Seminar*, Stanford
- 03/2019 Booth School of Business, University of Chicago
- 02/2019 Workshop on *At the Crossroad of Physics and Machine Learning*, KITP, Santa Barbara
- 01/2019 Workshop on *Theoretical Physics for Machine Learning*, Aspen
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- 11/2018 *Computational and information-theoretic phase transitions in large-scale inference problems*, 9th Itzykson Seminar, Institute Des Hautes Études Scientifiques, Paris
- 11/2018 *Princeton Day of Statistics*, Princeton
- 10/2018 Workshop on *Foundation of Deep Learning*, GeorgiaTech
- 10/2018 *MADDD: Mathematics of Data and Decisions, Opening Event*, UC Davis
- 09/2018 Workshop *Disordered serendipity: a glassy path to discovery*, Università La Sapienza, Rome (celebrating Giorgio Parisi's 70th birthday)
- 07/2018 Workshop on *IMS Annual Meeting on Probability and Statistics*, Special Session of Annals of Statistics, Vilnius, Lithuania
- 06/2018 Workshop on *Sublinear Algorithms*, MIT
- 05/2018 Workshop on *Bridging Mathematical Optimization, Information Theory, and Data Science*, Princeton
- 04/2018 Workshop on *Combinatorial Statistics*, Centre de recherches mathématiques, Montreal, Canada
- 04/2018 *Probability Seminar*, Stanford
- 03/2018 *Center for Mathematical Sciences and Applications, Colloquium*, Harvard University, Cambridge
- 03/2018 Workshop on *Statistical Inference for Structured High-dimensional Models*, MFO, Oberwolfach, Germany
- 01/2018 Workshop on *Theoretical and algorithmic underpinnings of Big Data*, Newton Institute, Cambridge, UK

- 12/2017 Workshop on *Network Models: Structure and Function*, MFO, Oberwolfach, Germany
- 11/2017 Workshop on *Optimization, Statistics and Uncertainty*, Simons Institute, Berkeley
- 10/2017 *Charles River Lectures*, Cambridge, MA
- 09/2017 Lecture series, *Statistical Seminar* Frejus, France
- 09/2017 *The Statistical Physics Cornucopia* (Marc Mézard 60th birthday), Paris
- 06/2017 *Math+Stats+X* Conference (Dave Donoho's 60th birthday), Stanford
- 05/2017 Workshop on *Phase Transitions in Constraint Satisfaction Problems*, AIM, San Jose
- 05/2017 Workshop on *Nonconvex Statistical Learning*, USC
- 05/2017 Workshop on *Connecting communities via the block model*, AIM, San Jose
- 04/2017 NYU, Mathematics of Data Science (MADS) Colloquium
- 04/2017 MIT LIDS-Theory of Computing Joint Colloquium
- 04/2017 Workshop on *Optimization and Statistical Learning*, Les Houches, France
- 03/2017 Simons Foundation, New York, *Collaboration on Cracking the Glass Problem*
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- 11/2016 Yale University, *Statistics Colloquium*
- 11/2016 Princeton University, *Applied Mathematics Colloquium*
- 08/2016 Northwestern University, Chicago, *Midwest Probability Colloquium*
- 07/2016 Paris, *Statistical physics methods in biology and computer science*
- 06/2016 Oxford University, *Statistics Department Distinguished Seminar*
- 05/2016 Institut Henri Poincare, Paris, Workshop on *Networks: learning, information and complexity*
- 04/2016 UC Berkeley, *Berkeley-Stanford Joint Statistics Colloquium*
- 03/2016 Carnegie Mellon University, Pittsburgh, *Google Distinguished Lecture*
- 03/2016 Hausdorff Research Institute for Mathematics, Bonn, *Harmonic Analysis, Graphs and Learning*
- 03/2016 Workshop, *Computationally and Statistically Efficient Inference for Complex Large-scale Data*, Oberwolfach, Germany
- 02/2016 Workshop *Approximate Counting, Markov Chains and Phase Transitions Workshop*, Simons Institute, Berkeley
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- 12/2015 NIPS 2015 Workshop on *Advances in Approximate Bayesian Inference*
- 12/2015 NIPS 2015 Workshop on *Adaptive Data Analysis (WADAPT)*
- 12/2015 NIPS 2015 Workshop on *Modelling and inference for dynamics on complex interaction networks*
- 12/2015 Stanford University, Applied Math Seminar
- 11/2015 University of Southern California, Statistics Seminar
- 11/2015 Simons Collaboration on Algorithms and Geometry, Simons Foundation, New York
- 10/2015 University of Michigan at Ann Arbor, Statistics Colloquium
- 10/2015 Mathematical Sciences Research Institute, Berkeley, USA, Workshop on *New challenges in PDE: Deterministic dynamics and randomness in high and infinite dimensional systems*

- 08/2015 Conference on Big Data, Center for Mathematical Sciences and Applications, Harvard University
- 08/2015 Joint Statisticals Meeting, Seattle
- 07/2015 SAHD: Workshop on Sensing and Analysis of High-Dimensional Data, Duke University
- 05/2015 21st-Century Statistics at MIT: *Inaugural Symposium*
- 04/2015 IMA, University of Minnesota, *Workshop on Information Theory and Concentration Phenomena*
- 04/2015 Berkeley, Probability Seminar
- 03/2015 Stanford, Probability Seminar
- 03/2015 Simons Institute for the Theory of Computing, Berkeley, *Information Theory Program seminar*
- 1/2015 Simons Institute for the Theory of Computing, Berkeley, *Coding: From Practice to Theory*
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- 12/2014 CIRM, Marseille, France, *Meeting in Mathematical Statistics*
- 12/2014 Caltech, *Computing+Mathematical Sciences Seminar*
- 10/2014 Simons Institute for the Theory of Computing, Berkeley, *Spectral Algorithms: From Theory to Practice*
- 08/2014 Bremen, Germany, *8th International Symposium on Turbo Codes*
- 08/2014 Mambucaba, Brazil, *XVII Brazilian School of Probability*
- 05/2014 UCSD, *Seminar in communication theory and systems*
- 04/2014 Bertinoro, *Workshop on Sublinear Algorithms*
- 04/2014 Wharton, UPenn, *Statistics Colloquium*
- 04/2014 Courant Institute, *Probability and Mathematical Physics Seminar*
- 02/2014 UCSD, Workshop on *Information Theory and Applications*
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- 12/2013 NIPS 2013 Workshop on *Perturbations, Optimization, and Statistics*
- 11/2013 Simons Institute for the Theory of Computing, Berkeley, *Unifying Theory and Experiment for Large-Scale Networks*
- 11/2013 Stanford, Statistics Seminar
- 02/2013 BIRS, Banff, Canada, *Asymptotics of Large-Scale Interacting Networks*
- 02/2013 University of British Columbia, *IAM-PIMS Distinguished Colloquium*
- 02/2013 UCSD, Workshop on *Information Theory and Applications*
- 01/2013 IPAM workshop on *Structure and Randomness in System Identification and Learning*, UCLA
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- 12/2012 NIPS Workshop on *Social Choice: Theory and Practice*
- 12/2012 NIPS 2012 Workshop on *Perturbations, Optimization, and Statistics*, Keynote presentation
- 10/2012 50th Allerton Conference on Communications Control and Computing
- 09/2012 3rd IFAC Workshop on *Distributed Estimation and Control in Networked Systems*, Plenary talk
- 05/2012 NSF Workshop for High-Dimensional Data, Yale

- 05/2012 SIAM Conference on Imaging Science, Philadelphia
03/2012 MIT, ORC Colloquium
02/2012 UCSD, Workshop on *Information Theory and Applications*
01/2012 UC Davis, *Statistics Colloquium*
- 12/2011 Institut Henri Poincare, Paris, *Unifying Concepts in Glass Physics, V*
11/2011 Princeton University, *Applied and Computational Mathematics Colloquium*
11/2011 Princeton University, workshop *Counting, Inference and Optimization on Graphs*
11/2011 University of Chicago, *Applied Mathematics Colloquium*
11/2011 Caltech, *Statistics Colloquium*
06/2011 Stockholm, Sweden. *INFORMS Applied Probability Society Conference*
07/2011 Workshop on *Sensing and Analysis of High-Dimensional Data*, Duke University
05/2011 *Theory of Computation as a Lens on the Sciences*, UC Berkeley
03/2011 *Microsoft Research*, Redmond
03/2011 BIRS, Banff, Canada, Workshop on *Sparse and Low Rank Approximation*
02/2011 UCSD, Workshop on *Information Theory and Applications*
02/2011 Google Workshop on Market Algorithms.
02/2011 UCSC, *Condensed Matter Physics Colloquium*.
02/2011 Information Theory and Applications, San Diego.
- 11/2010 UC Davis. *Mathematical Physics Colloquium*
11/2010 UCLA. *Electrical Engineering Colloquium*
10/2010 UCLA. *Annual AMS meeting*
09/2010 Workshop on *Seminal Interactions between Mathematics and Physics*, Accademia Nazionale dei Lincei, Roma, Italy
06/2010 Gothenburg, Sweden. *Annual Meeting of the Institute of Mathematical Statistics*
03/2010 Les Houches, France. Two lectures at the workshop *Statistical physics of complexity, optimization and systems biology*
03/2010 Kyoto, Japan. Workshop *Statistical physics and informatics*
03/2010 Bay Area ACM Chapter
03/2010 Brown University, Providence, Applied Mathematics Seminar
02/2010 UCSD, Workshop on *Information Theory and Applications*
01/2010 Newton Institute, Cambridge, UK, Workshop on *New topics at the interface between probability and communications*
01/2010 Cairo, Egypt, *IEEE Information Theory Workshop*
- 12/2009 EURANDOM, Eindhoven, The Netherlands, Workshop on *Dynamic Random Environments*
11/2009 Stanford University, Bay Area Theory Symposium (BATS 2009)
11/2009 BIRS, Banff, Canada, Workshop on *Statistical Mechanics on Random Structures*
11/2009 Duke University, Workshop on *Large Data Sets: Computation and Structure*
10/2009 San Diego, USA, INFORMS Annual Meeting, session on *Matrix Rank Minimization*
08/2009 EURANDOM, Eindhoven, The Netherlands, minicourse for the workshop *Order, Disorder and Double Disorder*

- 07/2009 Cornell University, *15th INFORMS Applied Probability Society Conference*
- 06/2009 Center for Mathematical Research, Montreal, Canada, Workshop on *Disordered Systems: Spin Glasses*
- 05/2009 Center for Mathematical Research, Montreal Canada, Workshop on *Combinatorics, Randomization, Algorithms and Probability*
- 03/2009 DIMACS, Working group on *Streaming, Coding, and Compressive Sensing: Unifying Theory and Common Applications to Sparse Signal/Data Analysis and Processing*
- 03/2009 GeorgiaTech *Algorithms, Combinatorics, Optimization seminar*
- 01/2009 Tata Institute, Mumbai, Workshop on *Graphical Models, Statistical Inference and Algorithms*
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- 10/2008 46th Allerton Conference on Communications Control and Computing
- 10/2008 DIMACS, Working group on *Message Passing algorithms and hard combinatorial problems*
- 10/2008 Princeton Center for Theoretical Science, Quantum Computing Seminar
- 10/2008 Microsoft Research, Cambridge, MA, Joint MSR-LIDS Colloquium
- 10/2008 HP Labs, Palo Alto, Information Theory Seminar
- 08/2008 Boulder, Colorado, Workshop on *Random Matrix Theory and Wireless Communications*
- 07/2008 BIRS, Banff, Canada, Workshop on *Message passing algorithms and hard combinatorial problems*
- 07/2008 Paris, Workshop on *Stochastic Networks*
- 04/2008 Maresias, Brazil, Workshop on *Analysis of Algorithms*
- 03/2008 Santa Fe, US, Workshop on *Classical and Quantum Information*
- 01/2008 UCSD, US, Workshop on *Information Theory and Applications*
- 01/2008 San Diego, US, *AMS meeting*
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- 11/2007 Stanford, CS Theory.
- 11/2007 UCSC, Condensed Matter Seminar
- 11/2007 Statistical Physics at Stanford.
- 10/2007 Joint Berkeley-Stanford Colloquium.
- 10/2007 BIRS, Banff, Canada, Workshop on *Entropy of Hidden Markov Processes and Dynamical Systems.*
- 09/2007 Kyoto International Workshop on Statistical Physics Informatics.
- 06/2007 Institut d'Haute Études Scientifiques, Paris.
- 05/2007 IPAM Workshop on *Random and Dynamic Graphs and Networks.*
- 05/2007 Los Alamos Workshop *Algorithms, Inference and Statistical Physics.*
- 03/2007 GaTech-DIMACS Workshop on *Phase Transitions in Random Structures and Algorithms.*
- 03/2007 Caltech Workshop on *The Computational Worldview and the Sciences.*
- 01/2007 Information Theory and Applications, San Diego.
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- 10/2006 43rd Annual Allerton Conference on Communication, Control, and Computing. Monticello, Illinois, USA.

- 10/2006 DIMACS Workshop on *Properties of Large Graphs: From Combinatorics to Statistical Physics and Back*.
- 10/2006 ICME Stanford Seminar.
- 10/2006 Stanford OR Seminar.
- 09/2006 Berkeley Probability Seminar.
- 04/2006 MIT Applied Probability Seminar
- 03/2006 Stanford, ISL colloquium.
- 02/2006 Information Theory Workshop, Punta del Este, Uruguay
- 02/2006 Les Houches Meeting (STIPCO), 3 hours course.
- 01/2006 Newton Institute, Cambridge, UK. Workshop on *Relaxation Dynamics of Macroscopic Systems*.
- 01/2006 Oxford Combinatorics Seminar
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- 09/2005 42nd Annual Allerton Conference on Communication, Control, and Computing. Monticello, USA.
- 09/2005 Rome, Italy, Workshop on *Statistical Physics of Disordered Systems and Applications*.
- 02/2005 Mathematical Sciences Research Institute, Berkeley, USA, Workshop on *Markov Chains in Algorithms and Statistical Physics*. MSRI, Berkeley, USA
- 05/2005 *CS Theory Lunch Seminar*. Berkeley, USA
- 04/2005 *Information Systems Laboratory Seminar*. Standord, USA.
- 04/2005 *Networking seminar*. UC Berkeley, USA.
- 03/2005 Mathematical Sciences Research Institute, Berkeley, USA, *Workshop: Phase Transitions in Computation and Reconstruction*.
- 02/2005 *Theory group seminar*. Microsoft Research, Redmond, USA.
- 01/2005 *Workshop: Applications of Statistical Mechanics to Coding Theory*. Los Alamos National Laboratories, USA
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- 10/2004 *IEEE Information Theory Workshop*. San Antonio, USA.
- 09/2004 International Centre for Theoretical Physics, Trieste, Italy, STIPCO/DYGLAGEMEM meeting: *Fundamental Aspects of Complexity*.
- 09/2004 Rome, Italy, Conference on *Statistical Mechanics, Chaos and Condensed Matter Theory* (4th Giovanni Paladin Memorial).
- 04/2004 Monte Verità, Switzerland, *Equilibrium and Dynamics of Spin Glasses*.
- 09/2004 42nd Annual Allerton Conference on Communication, Control, and Computing. Monticello, Illinois, USA.
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- 09/2003 Center for Nonlinear Sciences, Los Alamos, USA. *CNLS Colloquium*.
- 07/2003 EPFL, Lausanne, Switzerland. Summer Research Institute (School of Computer and Communication Sciences).
- 06/2003 Centro di Ricerca Matematica Ennio De Giorgi. Pisa, Italy. Two lectures during the workshop on *Probability and Statistical Mechanics in Information Science*.
- 05/2003 Kavli Institute for Theoretical Physics. Santa Barbara, USA, *Conference: Glassy States of the Matter and Nonequilibrium Quantum Dynamics*.

- 03/2003 Centro di Ricerca Matematica Ennio De Giorgi. Pisa, Italy, Workshop *Interacting Particles and computational Biology*
- 03/2003 *STIPCO/DYGLAGEMEM meeting: Statistical Physics of Glasses, Spin Glasses, Information Processing and Combinatorial Optimization.* Les Houches, France.
- 09/2002 International Centre for Theoretical Physics, Trieste, Italy, Summer School: *Statistical Physics, Probability Theory and Computational Complexity.*
- 12/2001 *DIMACS workshop: Codes and Complexity.* Rutgers, New Jersey, USA
- 11/2001 *Three lectures* at Laboratory for Information and Decision Systems (MIT) as a part of S. K. Mitter course on coding theory. Boston, USA
- 10/2001 *39th Annual Allerton Conference on Communication, Control, and Computing.* Monticello, Illinois, USA.