

Mark H. Hansen

Columbia Journalism School
2950 Broadway
New York, NY 10025
markh@columbia.edu

Education

Department of Statistics, University of California at Berkeley, 1989 – 1994
Ph.D. in Statistics, 1994
Dissertation Title: Extended Linear Models, Multivariate Splines and ANOVA
M.A. in Statistics, 1991

Department of Mathematics, University of California at Berkeley, 1987 – 1989
M.S. program (transferred to the Statistics Department)

Department of Mathematics, University of California at Davis, 1982 – 1987
B.S. in Applied Mathematics
Graduated with High Honors

Research Positions

David and Helen Gurley Brown Professor of Journalism, Columbia Journalism School, Fall 2012 - Present
East Coast Director, David and Helen Gurley Brown Institute for Media Innovation, Fall 2012 - Present
Courtesy appointment, Department of Statistics, Fall 2012 - Present

Professor, Department of Statistics, University of California, Los Angeles, Spring 2009 - Fall 2013
Associate Professor of Statistics, Spring 2003 - Spring 2009
Courtesy appointment, Department of Electrical Engineering, Fall 2007 - Fall 2013
Courtesy appointment, Department of Design|Media Arts, Spring 2003 - Fall 2013

Member of the Technical Staff, Bell Laboratories, Summer 1994 - Winter 2002

Adjunct Instructor, Interactive Telecommunications Program, New York University, Fall 2012

Advising

PhD Students

Nathan Langholz (Stat, 2013), Amelia McNamara (Stat, 2014), Jeroen Ooms (Stat, 2015),
Nathan Yau (Stat, 2013), Sheela Nair (Stat, 2009), Adam Sugano (Stat, 2008), Andrew Baek (Stat, 2006)

MFA and MS Students

Matthew Albasi (CJS), Adrian Blanco (CJS), Kourosh Houshmand (CJS, 2018), Jihyun Kim (DMA, 2008),
Matt Kugizaki (Stat, 2009), Yulong LI (CJS, 2018), Veronica Penney (CJS), Aaron Siegel (DMA, 2008),
Ali Tehrani (CJS, 2018),

PhD Committees

Chen Avin (CS, 2005), Roja Bandari (EE, 2013), Charles Barrett (CU, 2018), David Browne (EE, 2007),
Kevin Eustice (CS, 2008), Hossein Falaki (CS, 2012), Neda Farzinnia (Stat, 2006), Kate Fink (CU, 2014),
Brian Fulkerson (CS, 2010), Sushrut Gautam (Math, 2009), Alexandre Gonçalves (CU), Sabrina He (Stat, 2005),
Seth Hill (Poli Sci, 2010), Mark Hopkins (CS, 2005), Weihua Huang (Stat, 2005), Josh Hyman (CS, 2009),
Michael Karsh (Stat, 2011), Donnie Kim (CS, 2012), Kathy Kong (EE, 2007), Brian Kriegler (Stat, 2006),
Irina A. Kukuyeva (Stat, 2012), Mohit Lad (CS, 2006), Jason Lenderman (Stat), Brent Longstaff (CS),

Hongyan Ma (IS, 2008), Eitan Mendelowitz (CS, 2009), Barzan Mozafari (CS, 2009), Minyoung Mun (CS, 2009), Kevin Ni (EE, 2008), Rakhee Patel (Stat, 2011), Andrew Parker (CS, 2009), Alberto Pepe (IS, 2010), Mohammad Rahimi (CS, USC, 2005), Nithya Ramanathan (CS, 2007), Sasank Reddy (EE, 2010), Randall Rojas (Stat, 2010), Vids Samanta (CS, 2012), Tom Schoelhammer (CS, 2008), Yijing Shen (Stat, 2007), Jason Shen (Stat, 2011), Dan Shiber (Math, 2008), Salih Tileylioglu (Civil Engin, 2008), Che-Chuan Wu (Civil Engin, 2011), Shenglin Yang (EE, 2006), Bin Zhang (CS, USC, 2008), Qian Zhong (Stat, 2007)

MS Committees

Shaun Ahmadian (CS), Laura Balzano (EE, 2006), Anna Bargagliotti (Stat, 2007), Libby Bond (Stat), Elizabeth Bruch (Stat, 2009), John Bucci (Stat, 2006), Nabil Hajj Chehade (EE, 2006), Victor Chen (EE, 2007), Jackie Dacosta (Stat, 2006), Natasha Ericta (Stat, 2007), Chia-ho Lin (Stat, 2005), Keith Mayoral (CS, 2010), Amarjeet Singh (EE, 2006), Michael Stealey (EE, 2006)

MFA Committees

Christo Allegra (DMA, 2009), Sean Dockray (DMA, 2005), Scott Hessels (DMA, 2005), Andrew Hieronymi (DMA, 2006), Aaron Koblin (DMA, 2007), Chris O'Leary (DMA, 2008), Morrow Pettigrew (DMA, 2007)

Publications

M. Hansen, with additional reporting by Timothy Donald Jones, "To Reduce Privacy Risks, the Census Plans to Report Less Accurate Data," *The New York Times*, December 6, 2018.

N. Confessore, G. J. X. Dance, R. Harris, M. Hansen, "The Follower Factory." *The New York Times*, January 27, 2018

G. Dance, T. Meagher, with additional reporting by E. Hopkins and M. Hansen, "Crime in Context," *The Marshall Project*, August 18, 2016

M. Chammah, with additional reporting by M. Hansen, "Policing the Future," *The Marshall Project*, February 3, 2016

M. Hansen, "Is Google More Accurate Than the FBI?," *The Marshall Project*, July 2, 2015

M. Hansen, "Data-Driven Aesthetics," *The New York Times*, June 19, 2013

J. Kang, K. Shilton, J. Burke, D. Estrin, M. Hansen (2012), "Self-surveillance privacy," *Iowa Law Review*, Vol. 97

T. Ko, J. Hyman, E. Graham, M. Hansen, D. Estrin, and S. Soatto (2010), "Embedded Imagers: Detecting, Localizing and Recognizing Objects and Events in Natural Habitats," In *Proceedings of Sensor Networks and Applications*

S. Reddy, M. Mun, J. Burke, D. Estrin, M. Hansen, M. Srivastava (2010), "Using Mobile Phones to Determine Transportation Modes," *ACM Transactions on Sensor Networks (TOSN)*, Vol. 6, No. 2

M. Mun, S. Hao, N. Mishra, K. Shilton, J. Burke, D. Estrin, M. Hansen, R. Govindan (2010), "Personal Data Vaults: A Locus of Control for Personal Data Streams," In *Proceedings of The 6rd International Conference on emerging Networking Experiments and Technologies (CoNEXT) 2010*, Philadelphia, PA

J. Hicks, N. Ramanathan, D. Kim, M. Monibi, J. Selsky, M. Hansen, D. Estrin (2010), "AndWellness: An Open Mobile System for Activity and Experience Sampling," In *proceedings of Wireless Health 2010: Academic and Research Conference*, La Jolla, CA, October 5-7, 2010

S. Reddy, D. Estrin, M. Hansen, M. Srivastava (2010), "Examining Micro-Payments for Participatory Sensing Data Collections," in the *International Conference on Ubiquitous Computing (UbiComp)*, September 2010

K. Ni, N. Ramanathan, C. Nabil, L. Balzano, S. Nair, S. Zahedi, G. Pottie, M. Hansen, and M. Srivastava (2009), "Sensor Network Data Fault Types," *ACM Transactions on Sensor Networks (TOSN)*, Vol.5, No.3, 2009

M. Mun, S. Reddy, K. Shilton, N. Yau, P. Boda, J. Burke, D. Estrin, M. Hansen, E. Howard, and R. West, (2009) "PEIR, the Personal Environmental Impact Report, as a Platform for Participatory Sensing Systems Research," The 7th Annual International Conference on Mobile Systems, Applications and Services, Mobisys 2009

J. Hyman, M. Hansen, and D. Estrin (2008), "Estimating the Spectral Reflectance of Natural Imagery Using Color Image Features," ImageSense 2008, an ACM Sensys Workshop

S. Reddy, K. Shilton, J. Burke, D. Estrin, M. Hansen, M. Srivastava (2008), "Evaluating Participation and Performance in Participatory Sensing," in Proceedings of International Workshop on Urban, Community, and Social Applications of Networked Sensing Systems - UrbanSense08

K. Shilton, N. Ramanathan, V. Samanta, J. Burke, D. Estrin, M. Hansen, and M. Srivastava (2008), "Participatory Design of Urban Sensing Networks: Strengths and Challenges," in Proceedings of the Participatory Design Conference

S. Reddy, J. Burke, D. Estrin, M. Hansen, M. Srivastava (2008), "Determining Transportation Mode On Mobile Phones," in Proceedings of the 12th IEEE International Symposium on Wearable Computers (ISWC)

M. Mun, D. Estrin, J. Burke and M. Hansen (2008), "Parsimonious Mobility Classification using GSM and WiFi Traces," In Proceedings of the Fifth Workshop on Embedded Networked Sensors (HotEmNets 2008)

K. Shilton, J. Burke, D. Estrin, M. Hansen, and M. Srivastava (2008), "Participatory Privacy in Urban Sensing," in Proceedings of the International Workshop on Mobile Device and Urban Sensing (MODUS 2008)

D. Cuff, M. Hansen, and J. Kang (2008), "Out of the woods: Urban sensing," Communications of the ACM, Vol. 51 (3), pages 24-33

M. Hansen, B. Rubin, H. C. Steiner, and T. Walker (2008), "Words to look at, words to listen to: Designing a 'proliphonic' display for the lobby of the New York Times Building," in Proceedings of the 2008 Linux Audio Conference

E. Agapie, G. Chen, D. Houston, E. Howard, J. Kim, M. Y. Mun, A. Mondschein, S. Reddy, R. Rosario, J. Ryder, A. Steiner, J. Burke, D. Estrin, M. Hansen, M. Rahimi (2008), "Seeing Our Signals: Combining location traces and web-based models for personal discovery," in Proceedings of the 9th IEEE Workshop on Mobile Computing Systems and Applications (HotMobile 2008)

G. Chen, J. Cho, and M. Hansen (2008), "On the brink: Searching for drops in sensor data," in Proceedings of the 11th International Conference on Extending Database Technology (EDBT08)

J. Hyman, E. Graham, M. Hansen, and D. Estrin (2007), "Imagers as Sensors: Correlating Plant CO₂ Uptake with Digital Visible-Light Imagery," in Proceedings of the Fourth International Workshop on Data Management for Sensor Networks

S. Reddy, A. Parker, J. Hyman, J. Burke, D. Estrin, and M. Hansen (2007), "Image Browsing, Processing, and Clustering for Participatory Sensing: Lessons From a DietSense Prototype," in Proceedings of EmNets 07

A. Singh, M. Batalin, M. Stealey, V. Chen, B. Jordan, J. Fisher, T. Harmon, M. Hansen, and W. Kaiser (2007), "Autonomous Robotic Sensing Experiments at San Joaquin River," in Proceedings of the 2007 IEEE International Conference on Robotics and Automation

A. Singh, M. Batalin, M. Stealey, V. Chen, M. Hansen, T. Harmon, G. Sukhatme, and W. Kaiser (2007), "Mobile robot sensing for environmental applications," in Proceedings of FSR 2007, the 6th International Conference on Field and Service Robotics

A. Singh, M. Batalin, M. J. Stealey, B. Zhang, Amit Dhariwal, B. Stauffer, S. Moorthi, C. Oberg, A. Pereira, V. Chen, Y. Lam, D. Caron, M. Hansen, W. J. Kaiser, G. Sukhatme (2007), "Human Assisted Robotic Team Campaigns for Aquatic Monitoring," Journal of Field Robotics, Vol. 24 , Issue 11-12, pages 969-989

M. Balazinska, A. Deshpande, M. Franklin, P. B. Gibbons, J. Gray, M. Hansen, M. Liebhold, S. Nath, A. Szalay, V. Tao (2007), "Data management in the worldwide sensor web," IEEE Pervasive Computing, Vol. 6, No. 2, pages 30-40

- S. Reddy, G. Chen, B. Fulkerson, S.-J. Kim, U. Park, N. Yau, J. Cho, M. Hansen and J. Heidemann (2007), "Sensor-Internet Share and Search: Enabling Collaboration of Citizen Scientists," Workshop for Data Sharing and Interoperability, IPSN 07
- S. Tileylioglu, M. Hansen, R. Nigbor (2007), "Elevators as a repeatable excitation source for structural health monitoring in buildings," in Proceedings of the 6th International Workshop on Structural Health Monitoring
- M. Hamilton, E. Graham, P. Rundel, M. Allen, W. Kaiser, M. Hansen, and D. Estrin (2007), "New Approaches in Embedded Networked Sensing for Terrestrial Ecological Observatories," Environmental Engineering Science, 24(2).
- Wallis, J., Borgman, C.L., Mayernik, M.S., Pepe, A., Ramanathan N., and Hansen, M. (2007) "Know Thy Sensor: trust, data quality, and data integrity in scientific digital libraries," in Proceedings of the 11th European Conference on Research and Advanced Technology for Digital Libraries
- J. Burke, D. Estrin, M. Hansen, A. Parker, N. Ramanathan, S. Reddy, M. B. Srivastava (2006), "Participatory sensing," in Proceedings of the World Sensor Web Workshop, ACM Sensys 2006, Boulder, Colorado
- A. Parker, S. Reddy, T. Schmid, S. Ganeriwal, K. Chang, J. Burke, M. Hansen, M. Srivastava, D. Estrin, V. Paxon, and M. Allman (2006), "Network System Challenges in Selective Sharing and Verification for Personal, Social, and Urban-Scale Sensing Applications," in Proceedings of the Fifth Workshop on Hot Topics in Networks (HotNets-V)
- K. Chang, N. Yau, M. Hansen, and D. Estrin (2006), "SensorBase.org - A Centralized Repository to Slog Sensor Network Data," in Proceedings of the International Conference on Distributed Networks(DCOSS)/EAWMS
- N. Ramanathan, L. Balzano, D. Estrin, M. Hansen, T. Harmon, J. Jay, W. Kaiser, G. Sukhatme (2006) Designing Wireless Sensor Networks as a Shared Resource for Sustainable Development, in Proceedings of the First International Conference on Information and Communication Technologies and Development
- J. Baek, M. Hansen, R. Nigbor, S. Tileylioglu, (2006) "Elevators as an excitation source for structural health monitoring," in Proceedings of the 4th World Conference on Structural Control Monitoring
- S. Ganeriwal, D. Ganesan, M. Hansen, M. B. Srivastava, D. Estrin (2005), "Rate Adaptive Time Synchronization in Sensor Networks," ACM Sigmetrics (poster)
- M. Rahimi, M. Hansen, B. Kaiser, G. Sukhatme, D. Estrin (2005), "Adaptive sampling for environmental field estimation using robotic sensors," in Proceedings of IROS 2005
- M. Batalin, M. Rahimi, Y. Yu, S. Liu, G. Sukhatme, W. Kaiser, M. Hansen, G. Pottie and D. Estrin (2004), "Call and Response: Experiments in sampling the environment," in Proceedings of ACM SenSys '04
- M. H. Hansen and B. Yu (2003), "Minimum description length model selection criteria for generalized linear models," Science and statistics, IMS Lecture Notes – Monograph Series, Vol. 40
- Nonlinear Estimation and Classification (2003), D. D. Denison, M. H. Hansen, C. C. Holmes, B. Mallick and B. Yu (Editors), Lecture Notes in Statistics, Vol. 171, Springer-Verlag
- R. Sen and M. H. Hansen (2003) "Predicting a Web user's next request based on log data," Journal of Computational and Graphical Statistics, Vol. 12, No. 1 (Based on this paper, R. Sen won the Student Paper Competition sponsored by the ASA Section on Statistical Computing)
- M. H. Hansen and C. Kooperberg (2002) "Spline Adaptation in Extended Linear Models,"(with discussion) Statistical Science, Vol. 17, No. 1, pages 2-51
- O. D. Patterson and M. H. Hansen (2002), "The impact of tolerance on kill ratio estimation for memory," IEEE Transactions Semiconductor Manufacturing, Vol. 15, No. 4, pages 404-410
- M. H. Hansen and B. Rubin (2002), "Listening Post," accepted for ICAD 2002

- M. H. Hansen and E. Shriver (2001) "Using navigation data to improve IR functions in the context of Web search," in Proceedings of CIKM 2001
- M. H. Hansen and B. Yu (2001), "Model Selection and the Principle of Minimum Description Length," JASA, Vol. 96, No. 454, pages 746-774
- T. Hermann, M. H. Hansen and H. Ritter (2001) "Sonification of Markov chain Monte Carlo simulations," in Proceedings of ICAD 2001, Hiipakka, J., Zacharov, N. and Takala, T., Eds., pages 208-216
- M. H. Hansen and B. Rubin (2001) "Experiencing information systems through sound," in Proceedings of ICAD 2001, Hiipakka, J., Zacharov, N. and Takala, T., Eds., pages 10-15
- B. Rubin and M. H. Hansen (2001), "Yahoo/Bounce," on State of the Union, 2001, produced by Elliot Sharp, Electronic Music Foundation, Inc. (Invited contribution to a 3-disc set)
- K. August, M. H. Hansen and E. Shriver (2001) "Mobile Web Searching," Bell Labs Technical Journal, Vol. 6, 84-98
- M. H. Hansen and B. Yu (2000), "Wavelet Thresholding via MDL: Simultaneous Denoising and Compression," IEEE Transactions on Information Theory, Vol. 45, No. 5, pages 1778-1788
- V. N. Nair, M. H. Hansen and J. Shi (2000), "Statistics in Advanced Manufacturing," (Year 2000 Commemorative Vignette on Engineering and the Physical Sciences), JASA, Vol. 95, No. 451, pages 1002-1005
- M. H. Hansen and B. Rubin (2000), "The audiences would be the artists and their life would be the arts," IEEE MultiMedia, Vol. 7, No. 2, pages 6-9
- O. Patterson and M. H. Hansen (2000) "The impact of tolerance on kill ratio estimation for memory," in Proceedings of the 2000 IEEE/SEMI Advanced Semiconductor Manufacturing Conference & Workshop (ASMC)
- O. Patterson, M. H. Hansen, and T. Henry (1999), "Spatial Analysis of Defect and Electrical Test Wafer Maps for Yield Limiting Defect Reduction," in the Proceedings of SEMATECH
- M. H. Hansen and B. Yu (1999), "Bridging AIC and BIC: An MDL Model Selection Criterion," in Proceedings of the IT Workshop on Detection, Estimation, Classification and Imaging
- M. H. Hansen and B. Yu (1999), "Assessing MDL in Wavelet Denoising and Compression," in Proceedings of the Information Theory Workshop 1999
- M. H. Hansen, C. Kooperberg and S. Sardy (1998), "Triogram Models " Journal of the American Statistical Association, Vol. 93, pages 101-119
- J. M. Chambers, M. H. Hansen, D. A. James and D. Temple Lang (1998), "Distributed Computing with Data: A CORBA-Based Approach," Computing Science and Statistics, Vol. 30, pages 518-525
- C. Stone, M. H. Hansen, C. Kooperberg, Y. Truong (1997), "Polynomial Splines and Their Tensor Products in Extended Linear Modeling," (with discussion), The Annals of Statistics, Vol. 25, No. 4, pages 1371-1470
- M. H. Hansen, V. Nair and D. Friedman (1997), "Monitoring Wafer Map Data from Integrated Circuit Fabrication Processes for Spatially Clustered Defects," Technometrics Vol. 39, No. 3. (Chosen for the Technometrics Invited Session at the Fall Technical Conference in Baltimore, Maryland, 1997)
- D. Friedman, M. H. Hansen, V. Nair and D. James (1997), "Model-free estimation of some yield metrics in integrated circuit manufacturing," IEEE Transactions on Semiconductor Manufacturing, Vol. 10, No. 3
- M. H. Hansen and D. James (1997), "A Computing Environment for Spatial Data Analysis in the Microelectronics Industry," Bell Labs Technical Journal, Vol. 2, No. 1, pages 114-129

M. H. Hansen and V. Nair (1996), "Process and Productivity Improvement in Semiconductor Manufacturing," Computing Science and Statistics, Vol. 27, pages 3–7

Patents

U.S. Patent No. 9,135,576

System for and method of generating and visualizing sharing event cascade structures associated with content sharing events that occur across a network

with J. Thorp

Awarded September 2015

Original assignee — The New York Times Company

U.S. Patent No. 7,194,454

Method for organizing records of database search activity by topical relevance

with E. Shriver

Awarded March 2007

Original assignee — Lucent Technologies (Murray Hill, NJ)

U.S. Patent No. 6,647,383

System and method for providing interactive dialogue and iterative search functions to find information

with K. August, C. Chuang, D. Lee, M. McNerney, C. Nohl, P. Ong, E. Shriver, and T. Sizer

Awarded November 2003

Original assignee — Lucent Technologies (Murray Hill, NJ)

U.S. Patent No. 6,449,604

Method for characterizing and visualizing patterns of usage of a Web site by network users (II)

with W. Sweldens

Awarded September 2002

Original assignee — Lucent Technologies (Murray Hill, NJ)

U.S. Patent No. 6,424,745

Method and Apparatus for Object Recognition

with H. Hess, P. Mitra, and G. Thomas

Awarded July, 2002

Original assignee — Lucent Technologies (Murray Hill, NJ)

U.S. Patent No. 6,182,097

Method for characterizing and visualizing patterns of usage of a Web site by network users (I)

with W. Sweldens

Awarded January 2001

Original assignee — Lucent Technologies (Murray Hill, NJ)

U.S. Patent No. 6,075,594

System and Method for Spectroscopic Product Recognition and Identification

with D. X. Sun and G. Thomas

Awarded June 2000

Original assignee — Lucent Technologies (Murray Hill, NJ)

U.S. Patent No. 5,240,866

A Method for Characterizing Defects in Integrated Circuits

with D. Friedman, J. R. Hoyer and V. N. Nair

Awarded August, 1993

Original assignee — AT&T

University Service

Columbia University Graduate School of Journalism

Member, Committee on Instruction, Fall 2012 - Spring 2015, Fall 2018 - present
Member, Committee on Appointments, Fall 2013 - Spring 2015
Member, Committee on Long-Range Planning and Budget, Fall 2018 - present

Created the Lede Program, a Post-Bacc certification merging data, computation and journalism; helped create a data concentration for the MS in Journalism

Columbia University-wide Service

Member, Tenure Review Advisory Committee, Fall 2014 - Spring 2015

Chair, Committee on New Media, Institute for Data Sciences and Engineering, Fall 2012 - Spring 2014
Committee Member, Data, Media and Society, Data Sciences Institute, Fall 2014 - present

Committee on Global Thought, Spring 2015 - present
Advisory Committee, Presidential Scholars in Society & Neuroscience, Spring 2015 - present
Hiring Committee, Film and Media Studies, Spring 2017
Working group in Arts & Humanities, Spring 2014

UCLA Statistics Department

Vice Chair for Graduate Studies, Summer 2003 - Summer 2010
Faculty Adviser to the Statistics Graduate Student Association, Winter 2003 - Summer 2010
Chair, Admissions Committee, Winter 2003 - Summer 2010
Chair, Ph.D. Curriculum Committee, Winter 2003 - Spring 2004

UCLA University-wide Service

Faculty Executive Committee, Fall 2008 - Spring 2009
Graduate Council and Committee on Degree Programs, Fall 2003 - Spring 2006
Co-Chair Committee on Degree Programs, Fall 2005 - Spring, 2006
Review Committee for the Department of Epidemiology, Winter 2004
Chair, Review Committee for the Department of Management, Winter 2005
Chair, Review Committee for the Department of Classics, Winter 2006

Professional Service

Boards and General Advising

Advisory Board, DataKind, Summer 2011 - Present
Advisory Board, OpenIntro, Winter 2012 - Spring 2016
Advisory Panel, StoryCorps (Exploring how best to "mobilize the collection"), July 2011

Editorial service

Associate Editor, Journal of the American Statistical Association, Winter 1999 - April 2003
Associate Editor, Technometrics, Fall 1998 - April 2003
Co-Editor, Statistical Computing and Graphics Newsletter, 1996 - 2000

Served as a referee for the Annals of Statistics, Journal of the American Statistical Association, Journal of the Royal Statistical Society, Journal of Computational and Graphical Statistics, Technometrics, IEEE Transactions on Semi-conductor Manufacturing, IEEE Transactions on Information Theory, and the Scandinavian Journal of Statistics.

Elected positions

2001 Chair, Statistical Computing Section of the American Statistical Association
1999 JSM Program Chair, Statistical Computing Section of the American Statistical Association

Conference Organization

Program committee, Computation+Journalism, University of Miami, Winter 2019
Co-Organizer, "A Taste of Things to Come," Fort Mason, San Francisco, Fall 2018
A dinner for 70 created by Corby Kummer, Lisa Goddard, Andrew Revkin and Alice Waters
Part of the experiments in reporting on climate change sponsored by the Brown Institute
Co-Sponsors — The Aspen Institute and the Asia Society
Co-Organizer, "Blockchain in Journalism: Promise and Practice," Columbia Journalism School, Fall 2018
Organizer, "Introduction to Public Data," Fall 2018, Columbia Journalism School
A day-long workshop on public data — exploring federal, state and local data providers, and mixing official statisticians with data journalists
Keynote panel including the Chief Statistician of the United States
Organizer, "Sneakercon," Columbia Journalism School, Fall 2017
A two-day workshop to discuss offline networking
Program committee, Computation+Journalism, Northwestern University, Fall 2017
Program committee, IJCAI workshop "Natural Language Processing Meets Journalism," NYC, Winter 2016
Program committee, Computation+Journalism, Stanford University, Fall 2016
Co-Organizer, Computation+Journalism, Columbia Journalism School, Fall 2014 and Fall 2015
Organizer, "Bit by Bit," Columbia Journalism School, Winter 2014
A week-long series of events mixing technologists with "storytellers"
Included well-known journalists, illustrators, songwriters, architects, data scientists, computer scientists and creative technologists
Sponsored by the Brown Institute in partnership with AOL and Rhizome
Co-Organizer, User-Centered Modeling, Summer 2012
Institute for Mathematics and its Applications, University of Minnesota
Co-Organizer, Explorations in statistics Undergraduate program in statistics, Summers 2009 - 2012
Co-Organizer, Workshop: Integrating Computing into the Statistics Curricula, Summer 2008
University of California, Berkeley, CA
Co-Organizer, Computing in Statistics, Spring 2007 Mathematical Sciences Research Institute, Berkeley, CA
Co-Organizer, Data Sharing and Interoperability on the World-wide Sensor Web Workshop, Spring 2007
Held as part of IPSN07, Cambridge, MA
Co-Organizer, Mathematical Challenges and Opportunities in Sensor Networks, Winter 2007
Institute for Pure and Applied Mathematics, UCLA
Co-Organizer, Visualization and its role in the practice of statistics, Summer 2006
Undergraduate program in statistics
Co-Organizer, Visualization and its role in the practice of statistics, Summer 2005
Undergraduate program in statistics
Program committee, Statistics and Information Technology, Summer 2005 2005 Graybill Conference
Program committee, Workshop on High Dimensional Data Analysis, Fall 2004
Institute for Pure and Applied Mathematics, UCLA
Co-Organizing committee, Simulation and Reenactment, Spring 2004
Banff New Media Institute
Co-Organizer, Workshop on Complexity and Inference, Spring 2003
DIMACS Special Year on Computational Information Theory and Coding
Co-Organizer, Modern Statistical Computing and Graphics in Academia, Spring 2001
One day workshop to explore how best to promote and sustain the field of Statistical Computing
Co-Organizer, Nonlinear Estimation and Classification, Spring 2001
A two-week workshop held at the Mathematical Sciences Research Institute emphasizing interdisciplinary approaches to modeling large, complex data — proceedings published by Springer-Verlag
Program committee, 12th International Conference on Scientific and Statistical DBM, Summer 2000
Program committee, Joint Statistical Meetings, Section on Statistical Computing, Summer 2000

Co-Organizer, Statistical Science and the Internet, Summer 1998

A mini-conference designed to explore the impact that emerging Internet-related tools will have on the way we communicate statistical ideas

Member, IMS committee on New Researchers, 1994 - 1995

Grants and Awards

Note: Personal grant applications have slowed since I joined Columbia Journalism School as, through the Brown Institute, I oversee a budget of about \$1M in funds (a mix of endowment and current use) for projects, events and staff.

Principal Investigator, Sloan Foundation Grant, Fall 2017

Grant in support of "Sneakercon"

Principal Investigator, Microsoft Research Grant, Fall 2017

Grant in support of "Sneakercon"

Co-Principal Investigator, Knight Prototype Grant, Summer 2015

Lenses: A tool to support visual journalism (\$35K)

Co-Principal Investigator, Tow Center for Digital Journalism Grant, 2015

Developing a programming language for data journalism (\$50K)

Co-Recipient, Museum of Modern Art Education Department "Artists Experiment" Grant, 2015

with Jer Thorp and Ben Rubin

Co-Principal Investigator, National Science Foundation DUE Grant, 2010 - 2013

MOBILIZE: Mobilizing for Innovative Computer Science Teaching and Learning (\$12.5M)

Co-Principal Investigator, National Science Foundation NSF/STC, 2007 - 2012

CENS, The Center for Embedded Networked Sensing (\$18M)

Co-Principal Investigator, National Science Foundation NSF/IIS, 2008 - 2011

Ethics Education for Participatory Urban Sensing (\$300K)

Co-Principal Investigator, National Science Foundation CNS Grant, 2006 - 2010

NeTS-FIND: Network Fabric for Personal, Social, and Urban Sensing Applications (\$1.6M)

Co-Principal Investigator, National Science Foundation CNS Grant, 2006 - 2008

NeTS-FIND: Sensor-Internet Sharing and Search (\$1.4M)

Co-Principal Investigator, National Science Foundation CNS Grant, 2005 - 2008

NeTS-NOSS: Algorithms and System Support for Data Integrity in Wireless Sensor Networks (\$1.4M)

Co-Principal Investigator, National Science Foundation CNS Grant, 2006 - 2009

Computing in Statistics: Model Courses and Curricula

Media Arts Fellowship, funded by the Rockefeller and Ford Foundations, Spring 2005

Awarded for Today, a collaborative performance piece with B. Rubin

Rockefeller Foundation Grant, Fall 2002

In support of Listening Post, a ten-week installation at the Whitney Museum of American Art

Rockefeller Foundation Grant, Spring 2001

In support of Listening Post, a two-week installation at the Brooklyn Academy of Music

Co-Principal Investigator, National Science Foundation DMS Grant, 1998 - 2000

Statistical Methods for Process Control and Improvement in Advanced Manufacturing

Selected Exhibitions and Collections

The Brain Index (Mark Hansen and Laura Kurgan, Columbia University), opened 2017

One of three large-scale multimedia installations designed for the lobby of the Jerome L. Greene Science Center, the first building completed on Columbia University's new Manhattanville Campus

A Sort of Joy — Thousands of Exhausted Things (Mark Hansen, Ben Rubin, Jer Thorp and The Elevator Repair Service)

Two performances in the Second Floor Galleries, Museum of Modern Art, New York, Spring 2015

Timescapes (Local Projects, with Mark Hansen, Ben Rubin and Jer Thorp), 2014

Permanent installation, 9/11 Memorial Museum, New York

And that's the way it is (Ben Rubin with Mark Hansen and Jer Thorp), 2012

Permanent installation, Cronkite Plaza, University of Texas at Austin

Shakespeare Machine (Ben Rubin with Mark Hansen and Jer Thorp), 2012
Permanent installation, the Public Theater, New York City

Shuffle (The Elevator Repair Service, Mark Hansen and Ben Rubin)
PEN World Voices Festival, New York, 2012
The Prague Quadrennial, Prague, 2011
The New York Public Library, New York, 2011

Terre Natale (Diller Scofidio + Renfro, Mark Hansen, Laura Kurgan and Ben Rubin)
Museum of Modern Art, New York, 2011
Alhóndiga Bilbao, 2010
Kunsthal Charlottenborg, Copenhagen, 2009
Fondation Cartier, Paris, 2009

Moveable Type (Mark Hansen and Ben Rubin), 2008
Permanent installation, The New York Times Building

Listening Post (Mark Hansen and Ben Rubin)
La Panacee, Montpellier, France, 2013
London Science Museum (acquisition), London, 2008
ARoS Aarhus Kunstmuseum, Aarhus, 2009
Museo Centro de Arte Reina Sofía, Madrid, 2008 The Yerba Buena Center, San Francisco, 2007 San Jose
Museum of Art, San Jose (acquisition), 2005
Whitney Museum of American Art, New York, 2002

Reviews and News Coverage

"To teach people about climate change, feed them journalism," *Columbia Journalism Review*, October 11, 2018

"Faked: The Headquarters. The Followers. The Influence?," by Ed Winstead, *The New York Times*, January 27, 2018

"News Counts is a collaborative project to protect the 2020 Census (and help journalists get the best stories out of it)," Laura Hazard Owen, *Nieman Lab*, 2018

"The Twitter bot economy," *Columbia Journalism Review Podcast*, February 1, 2018

"Twitter's Moral Flaws," *Carnegie Council Podcast*, 2018

"Interactive Brain Art," *Scientific American blog*, May 2, 2017

"Columbia University's Arts & Science Centers by Renzo Piano Building Workshop," *Architectural Record*, May 1, 2017

"Investigating the algorithms that govern our lives," by Chava Gourarie, *Columbia Journalism Review*, 2016

"Putting the Data Science into Journalism," by Keith Kirkpatrick for *Communications of the ACM*, 2015

"The Potential and the Risks of Data Science," by Steve Lohr for the *Bits Blog*, *The New York Times*, 2013

"Columbia's Mark Hansen to journalists: 'You have to get your hands dirty. You have to write some code.'", by Joe Pompeo for *Politico*, 2013

"Shaping technology to the story: The Brown Institute for Media Innovation is finding its niche," by Caroline O'Donovan for the *Nieman Lab blog*, 2013

"Disruptions: Data Without Context Tells a Misleading Story," by Nick Bilton for the *Bits Blog*, *The New York Times*, 2013

Artworks by Hansen, Rubin and Thorp featured throughout the *Harvard Business Review*, March 2013

"A portrait of humanity in the purchases we make," by Jim Giles for the New Scientist Blog , October 2012

"Data as Design", profile appearing in The New York Academy of Sciences Magazine, Winter 2012

"See the World Rebalancing with PopTech's Data Viz App," Good Magazine Business Blog, October 2011

"3 Classic Novels. 22 Minutes. Why Not?" The New York Times, May 2011

"Hemingway, Faulkner and Fitzgerald: The Remix," The New Yorker Magazine Blog, May 2011

"The New York Times R&D Lab has built a tool that explores the life stories take in the social space," Nieman Journalism Lab Blog, April 2011

"3-D Model Unlocks Secrets Of Twitterverse," Fast Company Design Blog, Spring 2011

"Art is no longer just a feast for the eyes...", The Sunday Times, March 2008

"Tune in to the glorious gobbledegook of global gabble", The Times of London, February 2008

"Listening to internet chatter", BBC News, February 2008

"A portrait of 100,000 people logged on to a global chatroom", The Independent, February 2008

"Get Me Rebuild", New York Magazine, December 2007

"Moveable Type", NPR's On the Media, October 2007

"News Flows, Consciousness Streams: The Headwaters of a River of words", The New York Times, October 2007

"'Listening Post' brings the Internet into view," San Francisco Chronicle, August 2007

"2007: The year in arts and entertainment," San Francisco Chronicle (Listening Post among top 10 Arts events in 2007)

"2006: The year in arts and entertainment" San Francisco Chronicle (Listening Post among top 10 Arts events in 2006)

"Screen Capture" Architect Magazine, October 2006

"Chat room art" NPR's Here and Now, February 2004

Review of Listening Post Peter Eleey, Frieze Magazine, April 2003

"Orange and White" Adam Gopnik, The New Yorker Magazine, March 2003

Cover story on Listening Post, The Linux Journal, March 2003

"A fly on chat-room walls," Jad Abumrad, NPR's Weekend Edition Saturday, February 2003

Review of Listening Post Roberta Smith, The New York Times, February 2003

"Poised between old and New" Eric Gibson, The Wall Street Journal, February 2003

"Listening Post gives bits, bytes the sound of music" M. McFarland, The Seattle Times, November 2002

"Making an Opera From Cyberspace's Tower of Babel" Matthew Mirapaul, The New York Times, December 2001

"Listening Post," by Jad Abumrad, NPR's Studio 360, December 2001

Awards

Listening Post received the Golden Nica for Interactive Art at Ars Electronica, 2004 (winners in other categories included Wikipedia and Creative Commons)

Listening Post received a Webby Award in the category of NetArt, 2003

Listening Post was nominated for a Wired Magazine Rave Award, 2002

Invited Talks

2019

Invited Speaker, 2019 Dana-Farber Cancer Institute, Marvin Zelen Memorial Symposium

2018

Keynote Speaker, Jupytercon, New York City

Keynote Speaker, ICPSR Annual Board Meeting, Ann Arbor

Invited Panelist, UN World Data Forum, Dubai

“Data journalism” panel

2018 Joint Meetings of the ASA, Vancouver

Invited Panel on “Statistics and the Media”

Invited Presentation to the annual meeting of the UN Statistics Division, New York City

Keynote Speaker at the 39th Annual Spring Symposium of the NJ Chapter of the American Statistical Association

Invited Workshop on the 2020 Census for the Bloomberg Data for Good Exchange, New York City

2017

Invited panelist at Eurostat’s “Power from Statistics” meeting, Brussels

NICAR Workshop, sponsored by the Society for News Design

Title “Visualizing and understanding uncertainty”

Presented with Alberto Cairo and Jen Christiansen

Invited Speaker for SVA’s MA Design Research Seminar

2016

2016 Joint Statistical Meetings of the ASA, Chicago

Invited panelist, “Data Journalism and Statistical Expertise”

Invited workshop, New York City Media Lab Annual Summit

Invited talk, Civic Hall, New York City

Invited panelist, NICAR

Title “Beyond chi-square: Is it a fluke?” (with journalists from ProPublica and the New York Times)

2015

Invited talk at XIII GDA-CAF Seminar 2015, Buenos Aires

Title “Media 2020: The challenge of innovation”

Invited panelist, Museum of Modern Art R&D Salon “Bigger Data”

Keynote address for AISTATS 2015, San Diego

Title “Data and/as Journalism”

Invited panelist at The Society for News Design’s annual meeting

Panel on design in the newsroom

2014

Invited seminar, Department of Statistics, Harvard University

Invited panel at NICAR

Title “What’s the deal with Data Science?” (with Chase Davis of the New York Times)

Invited talk at the New York City Media Lab Annual Summit

2013

Magill lecturer, The Fu Foundation School of Engineering and Applied Science, Columbia University

Invited talk, Five College Statistics Program Lecture
Invited talk, The Royal Statistical Society's meeting on "The Future of Statistics"
Invited talk, 2013 Joint Statistical Meetings of the ASA, Montreal

2012

Invited talk at the Alliance Annual Conference on Journalism New Practices, Sciences Po, Paris
Keynote address, The 43rd Symposium on the Interface
Invited panelist, "What makes a good data visualization?" The New York Public Library
Invited panelist, Data Mining & Visualization for the Humanities Workshop, NYU
Invited talk
Invited participant, Spark Camp (focus on big data)
Invited seminar, Interactive Telecommunications Program, NYU
UCLA Science Faculty Research Colloquium
Invited talk, "Repetition and Surprise, Rehearsal and Reinvention"

2011

Invited discussion, PopTech
Title "Harnessing the Power of Open Data"
Invited seminar, Yale Department of Statistics
CONET (Cooperating Objects Network Of Excellence) Summer School, Bertinoro, Italy
Invited seminar on Participatory Sensing
Invited talk, Eyeo Festival
Invited talk on The Intersection of Data and Design, New York Academy of Sciences

2010

Invited talk, New York Open Statistical Programming Meetup
Invited presentation with Jer Thorp, BetaDay
Invited presentation on Cascade with Jer Thorp, TimesOpen 2.0: Big Data Wrap-Up

2009

Invited workshop, O'Reilly's Where 2.0
Invited seminar, Wall Street on Demand
Keynote address, AISTATS 2009
Statistics in Society Seminar Series, NYU
Title "Data analysis in an expanded field"

2008

Invited talk, 11th Annual Japanese-American Kavli Frontiers of Science Symposium
Invited seminar, Five Colleges Colloquium, Amherst, MA
Invited seminar, Interactive Telecommunications Program, NYU
Computation+Journalism Symposium, Georgia Institute of Technology
Invited talk on non-professional practices of data collection and analysis

2007

Invited talk, Visualizar Workshop, MediaLab Prado, Madrid
Yahoo Design Expo, Sunnyvale, CA
Invited presentation on Moveable Type

2006

Unblinking Conference, UC Berkeley Presentation with D. Cuff and J. Kang
National Academy of Sciences, 20th Anniversary Celebration CSTB Invited talk with D. Cuff and J. Kang
Commencement address, Department of Statistics, UC Berkeley
Invited presentation, Society for Cinema and Media Studies, Vancouver, Canada
Mapping New Knowledge Ecologies Workshop, Design Institute, University of Minnesota
Invited talk on embedded sensing

2005

2005 Joint Statistical Meetings of the ASA, Minneapolis, MI

Invited Talk: Statistical research opportunities in sensor networks Organized Invited Session: Mapping
Organized Invited Session: Statistics and the media arts
Keynote speaker, SIAM Conference on Data Mining

2004

Invited Seminar with Ben Rubin, The Design Institute, University of Minnesota
German-American Frontiers of Engineering Symposium
Invited talk for a meeting organized by the National Academy of Engineering

2003

Invited Talk, Argos Festival, Brussels
Invited Seminar, Art Center College of Design, Pasadena, CA
Invited Seminar, Department of Statistics, UC Berkeley
Art, Technology and Culture Colloquium, UC Berkeley
Invited participant and speaker, "The Beauty of Collaboration" Workshop, Banff New Media Institute

2002

National Academy of Sciences' Committee on Applied and Theoretical Statistics Workshop on Massive Data Streams
Distinguished Invited Speaker Series in Computer Science, UBC
BRIDGES Consortium Two, Banff New Media Institute Invited participant and speaker
IMS Meeting on Mixture Models, Cleveland, OH
Invited talk, "Mixtures in telecommunications applications"
Spring Research Conference on Statistics in Industry and Technology, Ann Arbor, MI
Invited talk, "Data streams"
Free Space Symposium, Duke University
Invited panelist discussing the institutional support required for successful Art & Science Collaborations

2001

Next Wave 2001, Brooklyn Academy of Music December, 2001
Listening Post, a 2-week installation rendering in real time thousands of simultaneous conversations on the Web
ArtSci2001, Symposium organized by Art & Science Collaborations
Invited talk on Listening post installation
Invited Seminar, UC Davis, Department of Statistics
Invited Seminar, Rutgers University, Department of Statistics
Invited Seminar, Columbia University, Department of Statistics
Invited Seminar, Iowa State University, Department of Statistics
Invited Seminar, Carnegie Mellon University, Department of Statistics
2001 Joint Statistical Meetings of the ASA, Baltimore, MD
Organized invited session, "Multisensory Data Representation and Exploration"
33rd Symposium on the Interface: Computing Science and Statistics, Costa Mesa, CA
Invited talk, "Sound as a tool for data analysis"
Digital H@ppy Hour, The Kitchen, NYC
Sounds of the New, invited presentation with Ben Rubin
Statistical Methodologies in Business Research Conference
Invited talk, "M-commerce traffic analysis for usability assessment and services creation"
Search Engines: Diversity and Controversy, The Sixth Search Engine Meeting
Invited talk "The Information Hidden When Web Searching"
Blur: New Creative Practices Within Developing Technologies
Invited seminar series sponsored by Creative Time and Thundergulch, hosted by The New School
Presentation Title: Experiencing Information Systems Through Sound

2000

National Academy of Sciences, Committee on Information Technology and Creativity
Invited talk, "Art-Technology Collaborations"
34th Annual Conference on Information Sciences and Systems, Princeton University
Invited talk, "Uncovering Complexity in Data through Sound"

1999

1999 Joint Statistical Meetings of the ASA, Baltimore, MD Organized invited session, "Practical Smoothing"
1999 Joint Statistical Meetings of the ASA, Baltimore, MD Talk, "ASA and the Web"

1998

Invited Seminar, New Jersey Institute of Technology
4th ICSA Statistical Conference, Kunming, China
 Invited talk, "Statistics in Advanced Manufacturing"
1998 Joint Statistical Meetings of the ASA, Dallas, Texas
 Invited talk, "Extended Linear Modeling and the Principle of Minimum Description Length"
Invited Seminar, University of Michigan, Department of Statistics
Invited Seminars, Cornell University, Department of ORIE and Statistics Department

1997

Fall Technical Conference, Baltimore, Maryland
Invited talk, "Monitoring Wafer Map Data from IC Fabrication Processes for Spatially Clustered Defects"
 Technometrics Invited Session
1997 Joint Statistical Meetings of the ASA, Anaheim, California
 Invited talk, "Adaptive Knot Splines"
 Organized invited session, "Computational Science and the Internet"
Joint Research Conference on Statistics in Industry and Technology, New Brunswick, NJ
 Organized invited session, "Semiconductor Yield Modeling"
Invited Seminar, The Wharton School, University of Pennsylvania
21. Jahrestagugg der Gesellschaft fu'r Klassifikation e.V., Potsdam, Germany
 Invited talk, "Spline Adaptation in Extended Linear Models"
Invited Seminar, Weierstrass Institute for Applied Analysis and Stochastics

1996

Invited Seminar, University of California at Berkeley Department of Statistics
Invited Seminar, Rutgers University Department of Statistics
1996 Joint Statistical Meetings of the ASA, Chicago, Illinois
 Invited talk, "Data Analysis and the Web"
Invited Seminar, University of Illinois at Urbana-Champaign Department of Statistics
Invited Seminar, University of Washington Department of Statistics

1995 and before

IMS WNAR, Stanford, California
 Invited talk, "Bivariate function estimation via spline spaces defined over adaptively constructed triangulations"
27th Symposium on the Interface: Computing Science and Statistics, Philadelphia, PA
 Invited talk, "Process and Productivity Improvement in Semiconductor Manufacturing"
Quality and Productivity Research Conference, Phoenix, Arizona
 Invited talk, "Strategies for Process and Productivity Improvement in IC Manufacturing"
Spring Research Conference on Statistics in Industry and Technology, Chapel Hill, NC June, Invited talk, "Quality and Productivity Improvement in Integrated Circuit Fabrication"
1993 Joint Statistical Meetings of the ASA, San Francisco, California August, 1993
 Invited talk, "Quality Improvement in Integrated Circuit Fabrication Through Spatial Analysis of Wafer Map Data"
ORSA/TIMS Meeting, San Francisco, California November, 1992
 Invited talk, "Process Improvement through Statistical Modeling & Data Analysis — An Application to IC Fabrication"