

# Christopher M. Hans

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**Education**

DUKE UNIVERSITY  
**Ph.D.** in Statistics 2005  
*Advisor:* Mike West  
**M.S.** in Statistics 2003

HARVARD UNIVERSITY  
**A.B.** *cum laude* in Statistics 2001  
*Advisor:* David van Dyk

**Positions**

THE OHIO STATE UNIVERSITY  
Associate Professor, Department of Statistics 2011-present  
Founding Co-Director, Undergraduate Data Analytics Major 2014-present  
Affiliated Faculty, Translational Data Analytics @ Ohio State 2015-present  
Assistant Professor, Department of Statistics 2005-2011

DUKE UNIVERSITY  
Research Assistant for Mike West 2003-2005

STATISTICAL AND APPLIED MATHEMATICAL SCIENCES INSTITUTE  
Research Assistant 2002-2003

HARVARD UNIVERSITY DEPARTMENT OF STATISTICS  
Research Assistant for David van Dyk 2000-2001, summer 2002

**Publications**

PREPRINTS & MANUSCRIPTS UNDER SUBMISSION

Davis, C. B., Hans, C. M. and Santner, T. J. (2019) “Prediction using a Bayesian heteroscedastic composite Gaussian process.” arXiv:1906.10737 (under submission)

Som, A., Hans, C. M. and MacEachern, S. N. (2014) Block Hyper- $g$  Priors in Bayesian Regression. arXiv:1406.6419

PEER- AND EDITOR-REVIEWED

Som, A., Hans, C. M. and MacEachern, S. N. (2016) A conditional Lindley paradox in Bayesian linear models. *Biometrika*, **103**, 993–999. doi: [10.1093/biomet/asw037](https://doi.org/10.1093/biomet/asw037).

Hans, C. M. (2016) Comment on article by Pratola. (Invited discussion of “Efficient Metropolis–Hastings Proposal Mechanisms for Bayesian Regression Tree Models” by Matthew T. Pratola.) *Bayesian Analysis*, **11**, 921–927.

Hans, C. M. and Peruggia, M. (2015) Comment on Article by Musio and Dawid. (Invited discussion of “Bayesian Model Selection Based on Proper Scoring Rules” by A. Philip Dawid and Monica Musio.) *Bayesian Analysis*, **10**, 505–509.

Hans, C., Allenby, G. M., Craigmile, P. F., Lee, J., MacEachern, S. N. and Xu, X. (2012) Covariance decompositions for accurate computation in Bayesian scale-usage models. *Journal of Computational and Graphical Statistics*, **21**, 538–557.

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**Publications** PEER- AND EDITOR-REVIEWED (CONT.)

Hans, C. (2011) Elastic Net Regression Modeling With the Orthant Normal Prior. *Journal of the American Statistical Association*, **106**, 1383–1393.

Hans, C. (2011) Comment on Article by Polson and Scott. (Invited discussion of “Data Augmentation for Support Vector Machines” by Nicholas G. Polson and Steven L. Scott.) *Bayesian Analysis*, **6**, 37–42.

Hans, C. (2010) Model uncertainty and variable selection in Bayesian lasso regression. *Statistics and Computing*, **20**, 221–229.

Hans, C. (2009) Bayesian lasso regression. *Biometrika*, **96**, 835–845.

Hans, C., Dobra, A. and West, M. (2007) Shotgun stochastic search for “large  $p$ ” regression. *Journal of the American Statistical Association*, **102**, 507–516.

Dressman, H. K., Hans, C., Bild, A., Olson, J., Rosen, E., Marcom, P. K., Liotcheva, V., Jones, E., Vujaskovic, Z., Marks, J., Dewhirst, M. W., West, M., Nevins, J. R. and Blackwell, K. (2006) Gene expression profiles of multiple breast cancer phenotypes and response to neoadjuvant chemotherapy. *Clinical Cancer Research*, **12**, 819–826.

Hans, C. and Dunson, D. B. (2005) Bayesian inferences on umbrella orderings. *Biometrics*, **61**, 1018–1026.

Jones, B., Carvalho, C., Dobra, A., Hans, C., Carter, C. and West, M. (2005) Experiments in stochastic computation for high-dimensional graphical models. *Statistical Science*, **20**, 388–400.

Rich, J.N., Hans, C., Jones, B., Iversen, E. S., McClendon, R. E., Rasheed, B. K. A., Dobra, A., Dressman, H. K., Bigner, D. D., Nevins, J. R. and West, M. (2005) Gene expression profiling and genetic markers in glioblastoma survival. *Cancer Research*, **65**, 4051–4058.

Dobra, A., Hans, C., Jones, B., Nevins, J. R., Yao, G. and West, M. (2004) Sparse graphical models for exploring gene expression data. *Journal of Multivariate Analysis*, **90**, 196–212.

van Dyk, D. A. and Hans, C. M. (2002) Accounting for Absorption Lines in Images Obtained with the Chandra X-ray Observatory, in *Spatial Cluster Modelling* (Eds. A. Lawson and D. Denison), Chapman & Hall/CRC, 175–198.

## CONTRIBUTED ARTICLES AND DISCUSSIONS

Hans, C. (2011) Discussion of “Shrink Globally, Act Locally: Sparse Bayesian Regularization and Prediction” by Nicholas G. Polson and James G. Scott. In *Bayesian Statistics 9*, Eds. J. M. Bernardo, M. J. Bayarri, J. O. Berger, A. P. Dawid, D. Heckerman, A. F. M. Smith and M. West. Oxford, U. K.: Oxford University Press, 530–531.

Hans, C. (2008) Parallel computing and Bayesian modeling. *International Society for Bayesian Analysis (ISBA) Bulletin*, **15**(3), 10–12.

Hans, C., Wang, Q., Dobra, A. and West, M. (2007) SSS: Software for high-dimensional Bayesian regression model search. *International Society for Bayesian Analysis (ISBA) Bulletin*, **14**(2), 8–9.

Hans, C. and West, M. (2006) High-dimensional regression in cancer genomics. *International Society for Bayesian Analysis (ISBA) Bulletin*, **13**(2), 2–3.

**Publications** ABSTRACTS AND SHORT ENTRIES

Hans, C. and van Dyk, D. A. (2003) Accounting for absorption lines in high energy spectra, in *Statistical Challenges in Modern Astronomy* (Eds. E. Feigelson and G. Babu), Springer, 429–430.

**Awards and Honors**

ISBA Certificate of Appreciation For service as ISBA Webmaster and moderator of the Bayes News Forums	2013
Thomas E. & Jean D. Powers Award for Excellence in the Teaching of Statistics Department of Statistics, The Ohio State University	2012
Inducted into Clarence High School Wall of Fame, Clarence, NY	2012
James B. Duke Fellowship, Duke University	2001-2005
Detur Prize, Harvard College	1998
Elizabeth Wilder Prize, Department of Germanic Languages and Literatures, Harvard University	1998
Valedictorian, Clarence High School	1997

**Grants**

<i>Complex Experiments and High-Input Simulators: Challenges in Design, Prediction and Sensitivity</i> Co-PI on NSF grant DMS-1310294 (PI Tom Santner & Co-PI Angela Dean)	2013-2017
<i>Knowledge-Driven Bayesian Regression</i> Principal investigator on NSF grant DMS-1007682 (Co-PI Steve MacEachern)	2010-2013
<i>High-Dimensional Regression Modeling via Distributed Computing</i> Sole Principal investigator on NSF grant DMS-0706948	2007-2010

**Talks, Seminars and Presentations of Note**

Southern Regional Council on Statistics (SRCOS) (research)	June 2019
Southern Regional Council on Statistics (SRCOS) (education)	June 2019
11th Int'l. Conf. of the ERCIM WG (CMStatistics 2018), Pisa, IT	December 2018
OSU Board of Trustees' Academic Affairs and Student Life Committee	August 2018
Bayes Comp 2018, Barcelona, Spain	March 2018
2018 Assessment Conference, Ohio State University	February 2018
10th Int'l. Conf. of the ERCIM WG (CMStatistics 2017), London, UK	December 2017
School of Mathematical and Statistical Sciences, Arizona State Univ.	October 2017
Joint Statistical Meetings, Baltimore, MD	August 2017
Workshop on Undergrad. Educ. of Data Science, Shiga Univ., Japan	January 2017
<i>Ibid.</i> , Panel Discussion on "Data Science Education Using Real Data"	January 2017
10th Int'l. Conf. on Comp. & Financial Econometrics, Seville, Spain	December 2016
Latent Variables 2016 Conference, University of South Carolina	October 2016
Department of Statistics, Indiana University	October 2016
Joint Statistical Meetings, Chicago, IL	August 2016
Thirteenth ISBA World Meeting (research talk), Sardinia, Italy	June 2016
Thirteenth ISBA World Meeting (invited discussion), Sardinia, Italy	June 2016
9th Int'l. Conf. on Comp. & Financial Econometrics, London, UK	December 2015

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**Talks, Seminars and Presentations of Note (cont.)**

Statistics Sect., Dept. of Mathematics, Imperial College London, UK	December 2015
Joint Statistical Meetings, Seattle, WA	August 2015
11th Int'l Workshop on Objective Bayes Methodology, Valencia, Spain	June 2015
Joint Statistical Meetings, Boston, MA	August 2014
The Abel Symposium, Kabelvåg, Norway	May 2014
Ninth ICSA International Conference, Hong Kong	December 2013
Joint Statistical Meetings, Montreal, Canada	August 2013
Division of Statistics + Scientific Comp., Univ. of Texas at Austin	February 2013
25th Anniversary Conference, Duke Univ. Dept. of Statistical Science	October 2012
56th Annual Fall Technical Conference, St. Louis, MO	October 2012
Department of Statistics, Univ. of Kentucky	September 2012
Joint Statistical Meetings, San Diego, CA	August 2012
Eleventh ISBA World Meeting, Kyoto, Japan	June 2012
4th Int'l. Conf. on Computing & Statistics (ERCIM'11), London, UK	December 2011
Department of Statistics, The Ohio State University	October 2011
Center for Machine Learning and Intelligent Systems, UC Irvine	May 2011
Joint Statistical Meetings, Vancouver, Canada	August 2010
Tenth ISBA World Meeting, Benidorm, Spain	June 2010
Conference on Nonparametric Statistics and Statistical Learning, OSU	May 2010
Division of Biostatistics, NY Psychiatric Institute, Columbia Univ.	May 2010
Third Midwest Statistics Research Colloquium, Univ. of Chicago	March 2010
Econometrics & Stat. Colloq., U. Chicago Booth School of Business	November 2009
Joint Statistical Meetings, Washington, DC	August 2009
WNAR-IMS Annual Meeting, Portland, OR	June 2009
Seminar on Bayesian Inference in Econometrics & Statistics, U. Chicago	May 2008
Center for Statistics and the Social Sciences, Univ. of Washington	April 2008
Joint Statistical Meetings, Salt Lake City, UT	July 2007
Department of Statistics, The Wharton School, U. of Pennsylvania	September 2006
Conference on High Performance Computing, Trinity College Dublin	August 2006
Joint Statistical Meetings, Seattle, WA	August 2006
Ninth Meeting of New Researchers in Statistics, Seattle, WA	August 2006
Joint Statistical Meetings, Minneapolis, MN	August 2005
Departments of Statistics and Biostatistics, Univ. of Michigan	March 2005
Department of Statistics, Yale University	March 2005
Department of Statistics, UC Irvine	February 2005
Department of Statistics, Ohio State Univ.	February 2005
Division of Biostatistics, Univ. of Minnesota	February 2005
Econometrics & Statistics Colloquium, U. Chicago GSB	January 2005
Department of Statistics & O.R., Universitat de València, Spain	January 2005
Second Workshop on MC Methods, Harvard U. (with Mike West)	August 2004
Joint Statistical Meetings, Toronto, Canada	August 2004
Workshop on Stochastic Computation, SAMSI	February 2003

**Poster Presentations**

Sixth IMS/ISBA Joint Meeting, Lenzerheide, Switzerland	January 2016
Twelfth ISBA World Meeting, Cancun, Mexico	July 2014
Ninth ISBA World Meeting, Hamilton Island, Australia	July 2008
Third IMS/ISBA Joint Meeting, Bormio, Italy	January 2008
Eighth ISBA World Meeting and Valencia Meeting, Benidorm, Spain	June 2006
Second IMS/ISBA Joint Meeting, Bormio, Italy	January 2005
Seventh ISBA World Meeting, Viña del Mar, Chile	May 2004

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**Poster Presentations (cont.)**

International Workshop on Bayesian Data Analysis, UC Santa Cruz	August 2003
First IMS/ISBA Joint Meeting, Isla Verde, Puerto Rico	July 2003
Statistical Challenges in Modern Astronomy III, Penn. State Univ.	July 2001

**Teaching**

THE OHIO STATE UNIVERSITY

**Statistics 427:** Intro. to Prob. and Stat. for Eng. and the Sciences  
AU 2007-AU 2010, WI 2010 (453 total students)

**Statistics 529:** Data Analysis II  
WI 2010-WI 2011 (82 total students)

**Statistics 632:** Stochastic Processes I  
WI 2006-WI 2009, WI 2011-WI 2012 (93 total students)

**Statistics 673:** Introduction to Computational Statistics  
AU 2011 (23 total students)

**Statistics 773:** Statistical Computing  
AU 2005-AU 2006, AU 2008-AU 2011 (144 total students)

**Statistics 3301:** Statistical Modeling for Discovery I  
AU 2015-AU 2018 (148 total students)

**Statistics 3450:** Basic Statistics for Engineers  
AU 2012-AU 2013 (386 total students)

**Statistics 4193:** Data Analytics Capstone  
SP 2017-2018 (14 total students)

**Statistics 5550:** Introductory Time Series Analysis  
SP 2013-SP 2017 (101 total students)

**Statistics 6550:** The Statistical Analysis of Time Series  
AU 2012, AU 2014 (51 total students)

**Statistics 6950:** Applied Statistics II  
SP 2018 (23 total students)

**Advising**

PH.D. ADVISEES

1. Sharada Modur (co-advised with Elizabeth Stasny) May 2010  
*Missing Data Methods for Clustered Longitudinal Data*  
Faculty Biostatistician, Department of Epidemiology, Johns Hopkins Bloomberg School of Public Health
2. Ruoxi Xu December 2011  
*Regression Model Stochastic Search via Local Orthogonalization*  
Currently: Quantitative Analyst, Fifth Third Bank
3. Agniva Som (co-advised with Steve MacEachern) July 2014  
*Paradoxes and Priors in Bayesian Regression*  
Currently: Machine Learning Scientist, A9 (Amazon)
4. Casey Davis (co-advised with Tom Santner) March 2015  
*A Bayesian Approach to Prediction and Variable Selection Using Nonstationary Gaussian Processes*  
Senior Scientist, Merck
5. Linchao Chen (co-advised with Mark Berliner) April 2015  
*Predictive Modeling of Large Spatio-Temporal Datasets*  
Statistician, Apple
6. Junyan Wang (co-advised with Mario Peruggia) July 2016  
*Empirical Bayes Model Averaging in the Presence of Model Misfit*  
Marketing Data Scientist Manager, JPMorgan Chase & Co.

**Advising**

## MEMBER, PH.D. COMMITTEE

1. Shreyan Ganguly	June 2019
2. Jiayin Zheng	January 2018
3. John Stettler	August 2015
4. Jiaqi Zaetz	August 2015
5. Mark Risser	July 2015
6. John Lewis	July 2014
7. Di Cao	July 2014
8. Aaron Quan	May 2014
9. Jonathan Bradley	July 2013
10. Marian Frazier	May 2013
11. Xiaomin Xi (Integrated Systems Engineering Department)	April 2013
12. Pingbo Lu	July 2012
13. Liang Niu	May 2012
14. Hang Joon Kim	May 2012
15. Michael Sonksen	June 2011
16. Juhee Lee	May 2010
17. Xiuyun Zhang	May 2009
18. Zhen Wang	March 2009

## MEMBER, CANDIDACY EXAM COMMITTEE

1. Kori Khan	April 2019
2. Shreyan Ganguly	November 2017
3. Jiayin Zheng	May 2016
4. Junyan Wang (co-chair)	November 2015
5. Jiaqi Zaetz	December 2014
6. Xiaomu Wang	December 2014
7. Andrew Olsen	December 2014
8. John Stettler	May 2014
9. Mark Risser	March 2014
10. Casey Davis (co-chair)	December 2013
11. Staci White	December 2013
12. John Lewis	November 2013
13. Linchao Chen (co-chair)	November 2013
14. Agniva Som (co-chair)	November 2013
15. Zhiguang Xu	November 2013
16. Yulei Zhang	August 2013
17. Di Cao	July 2013
18. Grant Schneider	April 2013
19. Jonathan Bradley	July 2012
20. Marian Frazier	April 2012
21. Xiaomin Xi (Integrated Systems Engineering Department)	March 2012
22. Pingbo Lu	January 2011
23. Liang Niu	March 2011
24. Hang Kim	September 2011
25. Aaron Quan	December 2011
26. Ruoxi Xu (chair)	November 2010
27. Joshua Svenson	June 2010
28. Michael Sonksen	June 2010
29. Zhen Wang	June 2008
30. Xiuyun Zhang	May 2008
31. Hyejung Moon	March 2008
32. Sharada Modur (co-chair)	November 2007
33. Jie Ding	August 2007
34. Youlan Rao	June 2007
35. Qinying He	June 2006

**Service**

## EDITORIAL

Associate Editor, Journal of Computational and Graphical Statistics	2009-present
Associate Editor, Bayesian Analysis	2011-2015
Associate Editor, Computational Statistics and Data Analysis	2010-2013
Panel Reviewer, National Science Foundation	(three panels)
Reviewer, AISTATS Conference	2010, 2012
<i>Ad hoc</i> Reviewer, National Science Foundation	(one review)

Refereed papers for the following journals:

*Annals of Applied Statistics, Annals of Statistics, Bayesian Analysis, Biometrics, Biometrika, Canadian Journal of Statistics, Communications in Statistics, Computational Statistics, Computational Statistics and Data Analysis, Genome Biology, Journal of the American Statistical Association, Journal of Business and Economic Statistics, Journal of Computational and Graphical Statistics, Journal of Machine Learning Research, Journal of the Royal Statistical Society Series B, Journal of Statistical Planning and Inference, Metron, PLOS One, Scandinavian Journal of Statistics, Statistical Analysis and Data Mining, Statistical Methodology, Statistical Science, Statistics and Computing, Statistics and Probability Letters*

## DEPARTMENT OF STATISTICS, THE OHIO STATE UNIVERSITY

Faculty Coordinator, ASA DataFest @ OSU	2016-2018
Chair, Hiring Committee, Associated Faculty/Data Analytics Program Specialist	2015-2018
Executive Advisory Committee	AU 2013-SP 2015
Chair, Hiring Committee, Academic Planning Specialist staff position	2014, 2017
Chair, Undergraduate Major Committee	AU 2012-SP 2014
Colloquium Committee	SP 2009, AU 2013
Chair, Curriculum Committee	AY 2012-2013
Member, Curriculum Committee	AY 2011-2013
Member, Computer Advisory Committee	2006-2013
Member, Undergraduate Committee	SU 2012-SP 2014
Member, Qualifier Exam I Committee	17 total exam offerings
Chair, Qualifier Exam I Committee	4 exam offerings
Coordinator, Quantitative Studies in Consumer Behavior Seminar	AU 2006, SP 2009
Member, Semester Conversion Subcommittee on Engineering	2009-2011
Member, MAS Exam Committee	5 total exam offerings
Lecturer, Statistics 801	4 total lectures
Lecturer, Statistics 8010	3 total lectures

## THE OHIO STATE UNIVERSITY

Institutional Advisory Board, Translational Data Analytics Institute	2019-2020
ASC Idea Fest Hackathon Judge	2015
ASC Career Services Task Force	2014-2015
Liaison to the CoE Core Curriculum and College Services Committee	2012-2014
ASC Strategic Planning Subcommittee	2012
Denman Undergraduate Research Forum Judge	2016, 2015, 2011, 2010, 2008

*Graduate Faculty Representative, Ph.D. Exam*

1. Jiaxin Wu (Physics)	July 2019
2. Samuel Ting (Biomedical Engineering)	December 2015

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**Service***Graduate Faculty Representative, Ph.D. Exam (cont.)*

3. Adam Groseclose (Industrial & Systems Eng.)	August 2014
4. Kartik Ramasubramanian (Dep. of Chemical & Biomolecular Eng.)	July 2013
5. Andrew Gard (Department of Mathematics)	February 2012
6. Lindsay DiCuirci (Department of English)	July 2010
7. David Maimon (Department of Sociology)	May 2009
8. Leszek Rybaczyk (Integ. Biom. Sci. Grad. Prog.)	May 2008

## PROFESSIONAL

JCGS Management Committee Member	2017-2020
JCGS Editorial Search Committee Member	2017-2018
Chair, ISBA Committee on Named Lectures	2017-2018
2018 ISBA World Meeting Scientific Committee Member	2017-2018
Scientific Program Committee Member, CMStatistics Conference	2016-2018
Session Chair, ISBA World Meeting	2016, 2018
Vice Chair, Chair, Past Chair of ISBA Program Council	2015-2017
2016 ISBA World Meeting Scientific Committee Member	2015-2016
ISBA Editorial Search Committee	2015
Session Chair, Joint Statistical Meetings	2006, 2009, 2010, 2014, 2015
Session Chair, ISBA World Meeting	2014
Web Editor, International Society for Bayesian Analysis (ISBA)	2010-2012
ISBA Nominating Committee	2012
Midwest Statistics Research Colloquium Scientific Committee	2011, 2012
Savage Award Committee Member	2011
SBSS Student Paper Competition Committee Member	2007, 2010
Organized Section on Statistical Computing Invited Session, JSM	2009
Session Chair, International Workshop on Objective Bayes Methodology	2009
Organized SBSS Topic Contributed Session, Joint Statistical Meetings	2006
Session Chair, 8th Valencia International Meeting on Bayesian Statistics	2006

**Memberships** *American Statistical Association*

- Columbus Chapter
- Section on Bayesian Statistical Science
- Section on Statistical Computing
- Section on Statistical Graphics
- Section on Statistical Learning and Data Science
- Section on Statistics in Sports

*Institute of Mathematical Statistics**International Society for Bayesian Analysis* (lifetime member)

- Bayesian Nonparametrics Section (lifetime member)
- Objective Bayesian Section (lifetime member)
- Section on Bayesian Computation (lifetime member)

*International Statistical Institute*