

Curriculum Vitae for Donald B. Percival

Education

- 1983: Ph.D. in Statistics, University of Washington (doctoral dissertation entitled ‘The Statistics of Long Memory Processes’ – advisor was Professor R. Douglas Martin)
1976: M.A. in Mathematical Statistics, George Washington University
1968: B.A. in Astronomy, University of Pennsylvania

Employment

- 1983– : Applied Physics Laboratory, University of Washington (current title: Principal Mathematician)
1984– : Department of Statistics, University of Washington (current title: Professor)
1995–2002: MathSoft, Inc. (called Insightful, Inc., starting in 2001), Seattle, WA (title: Research Scientist)
1978–82: Departments of Mathematics, Statistics and Astronomy, University of Washington (titles: Teaching Assistant and Research Assistant)
1968–78: U.S. Naval Observatory, Washington, D.C. (title: Astronomer)

Books

- 2000: D. B. Percival and A. T. Walden, *Wavelet Methods for Time Series Analysis*. Cambridge, England: Cambridge University Press.
1993: D. B. Percival and A. T. Walden, *Spectral Analysis for Physical Applications: Multitaper and Conventional Univariate Techniques*. Cambridge, England: Cambridge University Press.

Articles in Books

- 2008: D. B. Percival, ‘Analysis of Geophysical Time Series Using Discrete Wavelet Transforms: An Overview,’ in *Nonlinear Time Series Analysis in the Geosciences – Applications in Climatology, Geodynamics, and Solar-Terrestrial Physics*, edited by R. V. Donner and S. M. Barbosa. Berlin/Heidelberg: Springer, pp. 61–79 (peer reviewed).
2007: S. Ghosh, J. Beran, S. Heiler, D. B. Percival and W. Tinner, ‘Memory, Non-Stationarity and Trend: Analysis of Environmental Time Series,’ in *A Changing World: Challenges for Landscape Research*, edited by F. Kienast, O. Wildi and S. Ghosh. Dordrecht, The Netherlands: Springer, pp. 233–57 (not peer reviewed).
2004: D. B. Percival, J. E. Overland and H. O. Mofjeld, ‘Modeling North Pacific Climate Time Series,’ in *Time Series Analysis and Applications to Geophysical Systems*, edited by D. R. Brillinger, E. A. Robinson and F. P. Schoenberg, volume 139 in the series *The IMA Volumes in Mathematics and its Applications*. New York: Springer, pp. 151–67 (peer reviewed).
2002: D. B. Percival, ‘Wavelets,’ in *Encyclopedia of Environmetrics* (Volume 4), edited by A. H. El-Shaarawi and W. W. Piegorsch. Chichester, England: John Wiley & Sons, Ltd, pp. 2338–51 (peer reviewed).
2002: P. F. Craigmile and D. B. Percival, ‘Wavelet-Based Trend Detection and Estimation,’ in *Encyclopedia of Environmetrics* (Volume 4), edited by A. H. El-Shaarawi and W. W. Piegorsch. Chichester, England: John Wiley & Sons, Ltd, pp. 2334–8 (peer reviewed).
2001: P. F. Craigmile, D. B. Percival and P. Guttorp, ‘The Impact of Wavelet Coefficient Correlations on Fractionally Differenced Process Estimation,’ in *European Congress of Mathematics (Barcelona, July 10-14, 2000), Volume II*, edited by C. Casacuberta, R. M. Miró-Roig, J. Verdera and S. Xambó-Descamps. Basel, Switzerland: Birkhäuser Verlag, pp. 591–9 (not peer reviewed).
2000: D. B. Percival, S. Sardy and A. C. Davison, ‘Wavestrapping Time Series: Adaptive Wavelet-Based Bootstrapping,’ in *Nonlinear & Nonstationary Signal Processing*, edited by W. J. Fitzgerald, R. L. Smith, A. T. Walden and P. C. Young. Cambridge, England: Cambridge University Press, pp. 442–70 (peer reviewed).
1994: D. B. Percival, ‘Spectral Analysis of Univariate and Bivariate Time Series,’ in *Statistical Methods for Physical Science*, edited by J. L. Stanford and S. B. Vardeman, a volume in the series *Methods of Experimental Physics*. New York: Academic Press, pp. 313–48 (peer reviewed).
1994: D. B. Percival and P. Guttorp, ‘Long-Memory Processes, the Allan Variance and Wavelets,’ in *Wavelets in Geophysics*, edited by E. Foufoula-Georgiou and P. Kumar, a volume in the series *Wavelet Analysis and Its Applications* (series edited by C. Chui). New York: Academic Press, pp. 325–44 (peer reviewed).

1994: D. B. Percival, 'An Introduction to Spectral Analysis and Wavelets,' in *Advanced Mathematical Tools in Metrology*, edited by P. Ciarlini, M. G. Cox, R. Monaco and F. Pavese, volume 16 in the series *Advances in Mathematics for Applied Sciences*. Singapore: World Scientific, pp. 175–86 (not peer reviewed).

Peer Reviewed Journal Articles

- 2009: A. Y. Kim, C. Marzban, D. B. Percival and W. Stuetzle, 'Using Labeled Data to Evaluate Change Detectors in a Multivariate Streaming Environment,' *Signal Processing*, **89**, no. 12, pp. 2529–36.
- 2009: D. Mondal and D. B. Percival, 'Wavelet Variance Analysis for Gappy Time Series,' to appear in *Annals of the Institute of Statistical Mathematics*.
- 2008: D. A. Rothrock, D. B. Percival and M. Wensnahan, 'The Decline in Arctic Sea-ice Thickness: Separating the Spatial, Annual, and Interannual Variability in a Quarter Century of Submarine Data,' *Journal of Geophysical Research – Oceans*, **113**, C05003, doi:10.1029/2007JC004252.
- 2008: A. N. Morabito, D. B. Percival, J. D. Sahr, Z. M. P. Berkowitz and L. E. Vertatschitsch, 'Ricean Parameter Estimation Using Phase Information in Low SNR Environments,' *IEEE Communications Letters*, **12**, no. 4, pp. 244–6.
- 2008: G. A. Nichols-Pagel, D. B. Percival, P. G. Reinhall and J. J. Riley, 'Should Structure Functions Be Used to Estimate Power Laws in Turbulence? A Comparative Study,' *Physica D: Nonlinear Phenomena*, **237**, no. 5, pp. 665–77.
- 2008: D. B. Percival, D. A. Rothrock, A. S. Thorndike and T. Gneiting, 'The Variance of Mean Sea-Ice Thickness: Effect of Long-Range Dependence,' *Journal of Geophysical Research – Oceans*, **113**, C01004, doi:10.1029/2007JC004391.
- 2007: C. Eriksson, A. Omstedt, J. E. Overland, D. B. Percival and H. O. Mofjeld, 'Characterizing the European Sub-Arctic Winter Climate since 1500 Using Ice, Temperature, and Atmospheric Circulation Time Series,' *Journal of Climate*, **20**, no. 21, pp. 5319–34.
- 2007: K. Smith-DiJulio, D. B. Percival, N. F. Woods, E. Y. Tao and E. S. Mitchell, 'Hot Flash Severity in Hormone Therapy Users/Nonusers Across the Menopausal Transition,' *Maturitas*, **58**, no. 2, pp. 191–200.
- 2007: N. F. Woods, K. Smith-DiJulio, D. B. Percival, E. Y. Tao, H. J. Taylor and E. S. Mitchell, 'Symptoms during the Menopausal Transition and Early Postmenopause and Their Relation to Endocrine Levels over Time: Observations from the Seattle Midlife Women's Health Study,' *Journal of Women's Health*, **16**, no. 5, pp. 667–77.
- 2006: L. Karlöf, D. P. Winebrenner and D. B. Percival, 'How Representative is a Time Series Derived from a Firn Core? A Study at a Low Accumulation Site on the Antarctic Plateau,' *Journal of Geophysical Research – Earth Surface*, **111**(F4), F04001, 11 pages.
- 2006: D. B. Percival, 'Spectral Analysis of Clock Noise: A Primer,' *Metrologia*, **43**, no. 4, pp. S299–S310.
- 2006: T. Gneiting, H. Ševčíková, D. B. Percival, M. Schlather and Y. Jiang, 'Fast and Exact Simulation of Large Gaussian Lattice Systems in R^2 : Exploring the Limits,' *Journal of Computational and Graphical Statistics*, **15**, no. 3, pp. 1–19.
- 2006: C. R. Cornish, C. S. Bretherton and D. B. Percival, 'Maximal Overlap Wavelet Statistical Analysis with Application to Atmospheric Turbulence,' *Boundary-Layer Meteorology*, **119**, no. 2, pp. 339–74.
- 2006: J. E. Overland, D. B. Percival and H. O. Mofjeld, 'Regime Shifts and Red Noise in the North Pacific,' *Deep-Sea Research I*, **53**, no. 4, pp. 582–8.
- 2006: D. B. Percival, 'Exact Simulation of Complex-Valued Gaussian Stationary Processes Via Circulant Embedding,' *Signal Processing*, **86**, no. 7, pp. 1470–6.
- 2006: M. Wang, J. E. Overland, D. B. Percival and H. O. Mofjeld, 'Change in the Arctic Influence on Bering Sea Climate during the Twentieth Century,' *International Journal of Climatology*, **26**, no. 4, pp. 531–9.
- 2006: D. B. Percival and W. L. B. Constantine, 'Exact Simulation of Gaussian Time Series from Nonparametric Spectral Estimates with Application to Bootstrapping,' *Statistics and Computing*, **16**, no. 1, pp. 25–35.
- 2005: P. F. Craigmile, P. Guttorp and D. B. Percival, 'Wavelet-Based Parameter Estimation for Polynomial Contaminated Fractionally Differenced Processes,' *IEEE Transactions on Signal Processing*, **53**, no. 8, pp. 3151–61.
- 2005: P. F. Craigmile and D. B. Percival, 'Asymptotic Decorrelation of Between-Scale Wavelet Coefficients,' *IEEE Transactions on Information Theory*, **51**, no. 3, pp. 1039–48.

- 2005: D. B. Percival and D. A. Rothrock, “‘Eyeballing’ Trends in Climate Time Series: A Cautionary Note’, *Journal of Climate*, **18**, no. 6, pp. 886–91.
- 2005: R. K. Powers, Y. Dai, B. M. Bell, D. B. Percival and M. D. Binder, ‘Contributions of the Input Signal and Prior Activation History to the Discharge Behavior of Rat Motoneurons,’ *The Journal of Physiology*, **562**, no. 3, pp. 707–24.
- 2004: J. E. Overland, M. C. Spillane, D. B. Percival, M. Wang and H. O. Mofjeld, ‘Seasonal and Regional Variation of Pan-Arctic Surface Air Temperature Over the Instrumental Record,’ *Journal of Climate*, **17**, no. 17, pp. 3263–82.
- 2004: D. B. Percival, M. Wang and J. E. Overland, ‘An Introduction to Wavelet Analysis with Applications to Vegetation Monitoring,’ *Community Ecology*, **5**, no. 1, pp. 19–30.
- 2004: P. F. Craigmile, P. Guttorp and D. B. Percival, ‘Trend Assessment in a Long Memory Dependence Model using the Discrete Wavelet Transform,’ *Environmetrics*, **15**, no. 4, pp. 313–35.
- 2003: G. M. Raymond, D. B. Percival and J. B. Bassingthwaite, ‘The Spectra and Periodograms of Anti-correlated Discrete Fractional Gaussian Noise,’ *Physica A*, **322**, pp. 169–79.
- 2003: D. B. Percival, ‘Stochastic Models and Statistical Analysis for Clock Noise,’ *Metrologia*, **40**, no. 3, pp. S289–S304.
- 2002: D. Tang, K. B. Briggs, K. L. Williams, D. R. Jackson, E. I. Thorsos and D. B. Percival, ‘Fine-Scale Volume Heterogeneity Measurements in Sand,’ *IEEE Journal of Oceanic Engineering*, **27**, no. 3, pp. 546–60.
- 2002: B. J. Whitcher, S. D. Byers, P. Guttorp, and D. B. Percival, ‘Testing for Homogeneity of Variance in Time Series: Long Memory, Wavelets and the Nile River,’ *Water Resources Research*, **38**, no. 5, 10.1029/2001WR000509.
- 2001: D. B. Percival, J. E. Overland and H. O. Mofjeld, ‘Interpretation of North Pacific Variability as a Short- and Long-Memory Process,’ *Journal of Climate*, **14**, no. 24, pp. 4545–59.
- 2001: W. L. B. Constantine, D. B. Percival and P. G. Reinhall, ‘Inertial Range Determination for Aerothermal Turbulence Using Fractionally Differenced Processes and Wavelets,’ *Physical Review E*, **64**, 036301, 12 pages.
- 2000: B. J. Whitcher, P. Guttorp and D. B. Percival, ‘Multiscale Detection and Location of Multiple Variance Changes in the Presence of Long Memory,’ *Journal of Statistical Computation and Simulation*, **68**, no. 1, pp. 65–88.
- 2000: B. J. Whitcher, P. Guttorp and D. B. Percival, ‘Wavelet Analysis of Covariance with Application to Atmospheric Time Series,’ *Journal of Geophysical Research*, **105**, no. D11, pp. 14,941–62.
- 2000: A. Serroukh, A. T. Walden and D. B. Percival, ‘Statistical Properties and Uses of the Wavelet Variance Estimator for the Scale Analysis of Time Series,’ *Journal of the American Statistical Association*, **95**, no. 449, pp. 184–96.
- 1999: C. A. Greenhall, D. A. Howe and D. B. Percival, ‘Total Variance, an Estimator of Long-Term Frequency Stability,’ *IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control*, **46**, pp. 1183–91.
- 1999: S. Sardy, D. B. Percival, A. G. Bruce, H.-Y. Gao and W. Stuetzle, ‘Wavelet Shrinkage for Unequally Spaced Data,’ *Statistics and Computing*, **9**, pp. 65–75.
- 1998: A. T. Walden, D. B. Percival and E. J. McCoy, ‘Spectrum Estimation by Wavelet Thresholding of Multitaper Estimators,’ *IEEE Transactions on Signal Processing*, **46**, no. 12, pp. 3153–65.
- 1998: E. J. McCoy, A. T. Walden and D. B. Percival, ‘Multitaper Spectral Estimation of Power Law Processes,’ *IEEE Transactions on Signal Processing*, **46**, no. 3, pp. 655–68.
- 1997: D. B. Percival and H. O. Mofjeld, ‘Analysis of Subtidal Coastal Sea Level Fluctuations Using Wavelets,’ *Journal of the American Statistical Association*, **92**, no. 439, pp. 868–80.
- 1997: D. C. Caccia, D. B. Percival, M. J. Cannon, G. M. Raymond and J. B. Bassingthwaite, ‘Analyzing Exact Fractal Time Series: Evaluating Dispersional Analysis and Rescaled Range Methods,’ *Physica A*, **246**, no. 3–4, pp. 609–32.
- 1997: M. J. Cannon, D. B. Percival, D. C. Caccia, G. M. Raymond and J. B. Bassingthwaite, ‘Evaluating Scaled Windowed Variance Methods for Estimating the Hurst Coefficient of Time Series,’ *Physica A*, **241**, no. 3–4, pp. 606–26.
- 1996: R. W. Lindsay, D. B. Percival and D. A. Rothrock, ‘The Discrete Wavelet Transform and the Scale Analysis of the Surface Properties of Sea Ice,’ *IEEE Transactions on Geoscience and Remote Sensing*,

- 34, no. 3, pp. 771–87.
- 1995: D. B. Percival, ‘On Estimation of the Wavelet Variance,’ *Biometrika*, **82**, no. 3, pp. 619–31.
- 1995: D. A. Howe and D. B. Percival, ‘Wavelet Variance, Allan Variance, and Leakage,’ *IEEE Transactions on Instrumentation and Measurement*, **IM-44**, no. 2, pp. 94–7.
- 1995: A. T. Walden, E. J. McCoy and D. B. Percival, ‘The Effective Bandwidth of a Multitaper Spectral Estimator,’ *Biometrika*, **82**, no. 1, pp. 201–14.
- 1994: I. R. Joughin, D. P. Winebrenner and D. B. Percival, ‘Probability Density Functions for Multilook Polarimetric Signatures,’ *IEEE Transactions on Geoscience and Remote Sensing*, **32**, no. 3, pp. 562–74.
- 1994: A. T. Walden, E. J. McCoy and D. B. Percival, ‘The Variance of Multitaper Spectrum Estimates for Real Gaussian Processes,’ *IEEE Transactions on Signal Processing*, **42**, no. 2, pp. 479–82.
- 1993: D. B. Percival, ‘Three Curious Properties of the Sample Variance and Autocovariance for Stationary Processes with Unknown Mean,’ *The American Statistician*, **47**, no. 4, pp. 274–6.
- 1993: M. C. Gregg, H. E. Seim and D. B. Percival, ‘Statistics of Shear and Turbulent Dissipation Profiles in Random Internal Wave Fields,’ *Journal of Physical Oceanography*, **23**, no. 8, pp. 1777–99.
- 1993: B. M. Bell, D. B. Percival and A. T. Walden, ‘Calculating Thomson’s Spectral Multitapers by Inverse Iteration,’ *Journal of Computational and Graphical Statistics*, **2**, no. 1, pp. 119–30.
- 1993: I. R. Joughin, D. B. Percival and D. P. Winebrenner, ‘Maximum Likelihood Estimation of K Distribution Parameters for SAR Data,’ *IEEE Transactions on Geoscience and Remote Sensing*, **31**, no. 5, pp. 989–99.
- 1993: J. E. Tillman, N. C. Johnson, P. Guttorp and D. B. Percival, ‘The Martian Annual Atmospheric Pressure Cycle: Years Without Great Dust Storms,’ *Journal of Geophysical Research*, **98**, no. E6, pp. 10,963–71.
- 1991: B. M. Bell and D. B. Percival, ‘A Two Step Burg Algorithm,’ *IEEE Transactions on Signal Processing*, **39**, no. 1, pp. 185–9.
- 1991: D. B. Percival, ‘Characterization of Frequency Stability: Frequency Domain Estimation of Stability Measures,’ *Proceedings of the IEEE*, **79**, no. 7, pp. 961–72.
- 1986: T. E. Ewart and D. B. Percival, ‘Forward Scattered Waves in Random Media – The Probability Distribution of Intensity,’ *Journal of the Acoustical Society of America*, **80**(6), pp. 1745–53.
- 1978: D. B. Percival, ‘The U. S. Naval Observatory Clock Time Scales,’ *IEEE Transactions on Instrumentation and Measurement*, **IM-27**, no. 4, pp. 376–85.
- 1970: G. M. R. Winkler, R. G. Hall and D. B. Percival, ‘The U. S. Naval Observatory Clock Time Reference and the Performance of a Sample of Atomic Clocks,’ *Metrologia*, **6**, no. 4, pp. 126–34.

Nonreviewed Articles and Reports

- 1997: D. B. Percival and D. A. Howe, ‘Total Variance as an Exact Analysis of the Sample Variance,’ *Proc. of 29th Annual Precise Time and Time Interval (PTTI) Planning Conference*, pp. 97–105.
- 1997: J. R. Goldschneider, A. G. Bruce and D. B. Percival, ‘Lossy Compression of Acoustic Backscatter Data,’ *Proc. of the SPIE – The International Society for Optical Engineering*, **3079**, pp. 213–24.
- 1996: J. B. Bassingthwaite, D. A. Beard, D. B. Percival and G. M. Raymond, ‘Fractal Structures and Processes,’ in *Chaos and the Changing Nature of Science and Medicine: An Introduction* (AIP Conference Proceedings, No. 376), edited by D. E. Herbert, Woodbury, New York: AIP Press, pp. 54–79. pp. 54–79.
- 1994: D. A. Howe and D. B. Percival, ‘Wavelet Analysis for Synchronization and Timekeeping,’ *Proceedings of the 1994 IEEE International Frequency Control Symposium* (The 48th Annual Symposium), pp. 791–7.
- 1992: M. C. Gregg, H. E. Seim and D. B. Percival, ‘The Statistics of the Turbulent Dissipation Rate in a Random Field of Internal Waves,’ *Proc. of Tenth Symposium on Turbulence and Diffusion*.
- 1992: D. B. Percival, ‘Simulating Gaussian Random Processes with Specified Spectra,’ *Computing Science and Statistics*, **24**, 534–8.
- 1989: F. L. Walls, D. B. Percival and W. R. Irelan, ‘Biases and Variances of Several FFT Spectral Estimators as a Function of Noise Type and Number of Samples,’ *Proc. of 43rd Annual Symp. on Frequency Control*, pp. 336–41.
- 1988: D. B. Percival and R. K. Kerr, ‘P_{TSSA} – A Time Series Analysis System Embedded in LISP,’ *Proc. of 20th Symp. on the Interface of Computer Science and Statistics*, pp. 321–30.
- 1987: R. K. Kerr and D. B. Percival, ‘Use of Object-Oriented Programming in a Time Series Analysis System,’ *SIGPLAN Notices*, **22**(12), pp. 1–10 (OOPSLA ’87 Conference Proceedings).

- 1987: D. B. Percival, 'A Reappraisal of Frequency Domain Techniques for Assessing Frequency Stability Measurements,' *Proc. of 19th Annual Precise Time and Time Interval (PTTI) Planning Conference*, pp. 69–80.
- 1985: D. B. Percival, A. Buja, R. D. Martin, E. O. Belcher, R. K. Kerr, S. D. Yee, and C. B. Hurley, 'Designing an Intelligent System for Spectral Analysis,' *Proc. of 17th Symp. on the Interface of Computer Science and Statistics*, pp. 29–37.
- 1985: D. B. Percival, 'On the Sample Mean and Variance of Long Memory Processes,' Technical Report #69, Department of Statistics, University of Washington.
- 1978: D. B. Percival, 'Estimation of the Spectral Density of Fractional Frequency Deviates,' *Proc. of 32nd Annual Symp. on Frequency Control*, pp. 542–8.
- 1977: D. B. Percival, 'Prediction Error Analysis of Atomic Frequency Standards,' *Proc. of 31st Annual Symp. on Frequency Control*, pp. 319–26.
- 1976: D. B. Percival, 'A Heuristic Model of Long-Term Atomic Clock Behaviour,' *Proc. of 30th Annual Symp. on Frequency Control*, pp. 414–9.
- 1975: D. B. Percival and G. M. R. Winkler, 'Timekeeping and the Reliability Problem,' *Proc. of 29th Annual Symp. on Frequency Control*, pp. 412–6.
- 1973: H. E. Peters and D. B. Percival, 'NASA Hydrogen Maser Accuracy and Stability in Relation to World Standards,' *NASA Report X-524-73-109*, Goddard Space Flight Center.
- 1973: D. B. Percival, 'Statistical Properties of High Performance Cesium Standards,' *Proc. of 5th Annual Precise Time and Time Interval (PTTI) Planning Conference*, pp. 239–54.
- 1972: H. E. Peters, R. G. Hall and D. B. Percival, 'Absolute Frequency of an Atomic Hydrogen Maser Clock,' *Proc. of 26th Annual Symp. on Frequency Control*, pp. 319–22 (also *NASA Report X-524-72-225*, Goddard Space Flight Center).

Invited Presentations

- 2008: D. B. Percival, 'Wavelet-Based Bootstrapping for Non-Gaussian Time Series,' presented 4 October 2008 at International Conference on Price, Liquidity, and Credit Risks, Center of Finance and Econometrics, University of Konstanz, Konstanz, Germany
- 2007: D. B. Percival, 'Inversion Methods for Determining Tsunami Source Amplitudes from DART Buoy Data,' presented 26 July 2007 at Pacific Marine Environmental Laboratory, National Oceanic and Atmospheric Administration (PMEL/NOAA), Seattle
- 2006: D. B. Percival, 'Wavelet Methods for Time Series Analysis,' a series of sixteen lectures and four software demonstrations presented 9–13 October 2006 at the Centre for Mathematical Sciences, Lund University, Lund, Sweden
- 2006: D. B. Percival and A. T. Walden, 'Wavelet Methods for Time Series Analysis,' a series of eight lectures presented 18–22 September 2006 as part of the Engineering and Physical Sciences Research Council/Royal Statistical Society (EPSRC/RSS) Graduate Training Programme, Lancaster University, Lancaster, UK
- 2006: D. B. Percival, 'An Introduction to Wavelet Analysis,' presented 14 March 2006 at Northwest Fisheries Science Center (NWFSC) seminar, Seattle
- 2005: D. B. Percival, 'Assessing Arctic Sea Ice Thickness using Wavelets,' presented 1 June 2005 at Quantitative Ecology and Resource Management (QERM) seminar, University of Washington
- 2004: D. B. Percival, 'An Introduction to the Wavelet Variance and Its Statistical Properties,' presented 4 November 2004 at the Department of Statistics seminar, The Ohio State University, Columbus, Ohio
- 2004: D. B. Percival, 'Modelling of Clock Behaviour,' presented 27 September 2004 at the International Workshop on Galileo Time (IWGT), Modelling and Characterization of Atomic Clocks, Torino, Italy
- 2003: D. B. Percival, 'Wavelet Analysis of Clock Noise,' presented 3 December 2003 at 35th Annual Precise Time and Time Interval (PTTI) Meeting, San Diego, California
- 2003: D. B. Percival, 'Clock Statistics: A Tutorial,' presented 1 December 2003 at 35th Annual Precise Time and Time Interval (PTTI) Meeting, San Diego, California
- 2003: D. B. Percival, 'An Introduction to Wavelet Analysis with Applications to Vegetation Monitoring,' presented 26 March 2003 at International Symposium on Vegetation Monitoring, Swiss Federal Research Institute WSL, Birmensdorf, Switzerland

- 2002: D. B. Percival and A. T. Walden, 'Wavelet Methods for Time Series Analysis,' a series of six lectures presented 8–10 September 2002 at 3^e Cycle Romand de Statistique et de Probabilités Appliquées, Ecole d'été, Les Rasses, Switzerland
- 2002: D. B. Percival, 'Estimation of the Wavelet Variance Using Reflection Boundary Conditions,' presented 31 July 2002 at 15th Brazilian National Symposium of Probability and Statistics (SINAPE), Águas de Lindóia, Brazil
- 2002: D. B. Percival, 'An Introduction to the Wavelet Variance and Its Statistical Properties,' a keynote address presented 30 July 2002 at 15th Brazilian National Symposium of Probability and Statistics (SINAPE), Águas de Lindóia, Brazil
- 2002: D. B. Percival, 'Modeling Atmospheric Circulation Changes over the North Pacific,' presented 26 July 2002 at University of São Paulo, São Paulo, Brazil
- 2002: P. F. Craigmile and D. B. Percival, 'Trend Assessment in a Long Memory Dependence Model using the Discrete Wavelet Transform,' presented (by Craigmile) at the conference 'Current Advances And Trends In Nonparametric Statistics,' Crete, Greece, 15–19 July 2002
- 2002: D. B. Percival, 'A Tutorial on Stochastic Models and Statistical Analysis for Frequency Stability Measurements,' presented 19 March 2002 at 4th International Symposium on Time Scale Algorithms, Bureau International des Poids et Mesures, Sèvres, France.
- 2001: D. B. Percival, 'Modeling North Pacific Climate Time Series,' presented 14 November 2001 at workshop on Time Series Analysis and Applications to Geophysical Systems at the Institute for Mathematics and Its Applications, Minneapolis, Minnesota
- 2001: D. B. Percival, 'Interpretation of North Pacific Variability as a Short and Long Memory Process,' presented 28 September 2001 at Pacific Fisheries Environmental Laboratory, Pacific Grove, California
- 2001: D. B. Percival, 'An Introduction to Wavelets with Applications in Climatology,' presented 27 September 2001 at Pacific Fisheries Environmental Laboratory, Pacific Grove, California
- 2001: P. F. Craigmile and D. B. Percival, 'Wavelet-Based Maximum Likelihood Estimation for Trend Contaminated Long Memory Processes,' presented (by Craigmile) 16 August 2001 at the 23rd European Meeting of Statisticians, Funchal, Madeira, Portugal
- 2000: D. B. Percival, 'An Introduction to the Wavelet Analysis of Time Series,' presented 6 June 2000 at the 2000 IEEE/EIA Frequency Control Symposium, Kansas City, Missouri
- 1999: D. B. Percival and P. F. Craigmile, 'Wavelet-Based Approximate Maximum Likelihood Estimation for Long Memory Processes,' presented (by Craigmile) 28 June 1999 at the Nineteenth International Symposium on Forecasting, Washington, DC.
- 1998: D. B. Percival, 'Some Uses for Wavelets in the Analysis of Environmental Time Series;' 'Wavelet Variance Analysis of Processes with Stationary Increments;' and 'Practical Issues in Wavelet-Based Data Analysis,' a series of three talks presented during the Program on Nonlinear and Nonstationary Signal Processing, Isaac Newton Institute for the Mathematical Sciences, Cambridge University, UK (supported in part by a Senior Visiting Fellowship from the Engineering and Physical Science Research Council (EPSRC), UK).
- 1998: D. B. Percival, 'Wavelet Variance and Covariance Analysis of Processes with Stationary Increments,' presented at Western Regional Meeting of Biometrics Society and Institute of Mathematical Statistics, San Diego, CA.
- 1997: A. B. Bruce and D. B. Percival, 'S+Wavelets: The Next Generation,' presented at Workshop on Wavelets and Statistics, Duke University, Durham, NC.
- 1993: D. B. Percival, 'An Introduction to Spectral Analysis and Wavelets,' presented at International Workshop on Advanced Mathematical Tools in Metrology, Consiglio Nazionale delle Ricerche, Torino, Italy.
- 1993: D. B. Percival and A. T. Walden, 'Quadratic Spectral Estimators and Multitapering,' presented at Third SIAM Conference on Linear Algebra, Seattle, WA.
- 1993: D. B. Percival, 'An Introduction to Wavelets,' presented at April meeting of the Puget Sound Chapter of the American Statistical Association, Seattle, WA.
- 1992: D. B. Percival, 'Coupling Statistics and Small-Scale Oceanography: A Case Study,' presented at 152nd Annual Meeting of the American Statistical Association, Boston, MA.
- 1992: D. B. Percival and A. T. Walden, 'Multitaper Spectral Estimation for Power Law Processes,' presented at National Radio Science Meeting (USNC/URSI), Boulder, CO.

- 1991: D. B. Percival, ‘Use of Interactive Graphics for PTTI Data Analysis,’ presented at the 23rd Annual Precise Time and Time Interval (PTTI) Planning Conference, Pasadena, CA.
- 1989: D. B. Percival, ‘Statistical Analysis of PTTI Data Using P_{ITSSA},’ presented at the 21st Annual Precise Time and Time Interval (PTTI) Planning Conference, Redondo Beach, CA.
- 1988: D. B. Percival and A. E. Meyers, ‘Comparison of Two U.S.N.O. Time Scale Algorithms,’ presented at 3rd International Symposium on Time Scale Algorithms, Istituto Elettrotecnico Nazionale Galileo Ferraris, Torino, Italy.
- 1988: D. B. Percival, ‘Spectral Analysis of Frequency Stability Measurements,’ presented at 42nd Annual Frequency Control Symposium, Baltimore, MD.
- 1987: R. D. Martin and D. B. Percival, ‘Modern Computing Environments for Time Series Analysis,’ presented at 147th Annual Meeting of the American Statistical Association, San Francisco, CA.
- 1987: R. D. Martin, D. B. Percival, and A. T. Walden, ‘Topics in Spectrum Estimation,’ presented at National Radio Science Meeting (USNC/URSI), Boulder, CO.
- 1987: D. B. Percival, ‘The Allan Variance and Spectral Density Function Estimation,’ presented at National Radio Science Meeting (USNC/URSI), Boulder, CO.
- 1986: D. B. Percival and A. T. Walden, ‘On Burg’s Algorithm and Akaike’s FPE Order Selection Criteria,’ presented at Sixth Annual Workshop on Maximum Entropy and Bayesian Methods, Seattle University, Seattle, WA.
- 1986: D. B. Percival and R. K. Kerr, ‘TSA: A Computing Environment for Time Series/Spectral Analysis,’ presented at Annual Meeting of the American Geophysical Union, San Francisco, CA.
- 1985: D. B. Percival, ‘ARIMA Time Scale Algorithms and Clock Characterization,’ presented at seminar on measurement of millisecond pulsar sponsored by National Bureau of Standards, Boulder, CO.
- 1985: D. B. Percival, ‘Comments on Adaptive Kalman Filtering,’ discussion on paper by S. Brown presented at the Chemometrics Research Conference sponsored by the National Bureau of Standards, the Office of Naval Research, and the National Science Foundation, Gaithersburg, MD.
- 1985: D. B. Percival, ‘An Inspect System for Spectral Analysis,’ presented at Western Regional Meeting of Biometrics Society and Institute of Mathematical Statistics, San Luis Obispo, CA.
- 1982: D. B. Percival, ‘Application of Robust Statistical Methodology to Time Scale Formation,’ presented at 2nd International Symposium on Time Scale Algorithms, National Bureau of Standards, Boulder, CO.
- 1972: R. G. Hall and D. B. Percival, ‘The U. S. Naval Observatory Clock Time Scale,’ presented at 1st International Symposium on Time Scale Algorithms, National Bureau of Standards, Boulder, CO.

Courses Taught

- 2006: one-week course on wavelets, Lund University, Sweden
- 2006: one-week course on wavelets, Lancaster University, UK (joint with Andrew Walden)
- 2004–06: three-day courses on wavelets, Applied Physics Laboratory, University of Washington
- 2002: three-day course on wavelets, 3^e Cycle Romand de Statistique et de Probabilités Appliquées, Ecole d’été, Les Rasses, Switzerland (joint with Andrew Walden)
- 1997–2009: Statistics 530 (wavelet analysis), University of Washington – co-listed as EE 524 starting in 2005
- 1995–2009: Statistics/EE 520 (spectral analysis of time series), University of Washington
- 1996: one-day course for MathSoft on wavelet analysis in S-Plus, TRW, Redondo Beach, CA
- 1995: Statistics 593A (wavelet analysis), University of Washington
- 1995: Statistics 591A (wavelet analysis), University of Washington
- 1991–2: Statistics 519 (time series analysis), University of Washington
- 1989: one-week course on spectral analysis, National Institute of Standards and Technology, Boulder, CO
- 1987–91: Statistics/EE 520 (spectral analysis of time series), University of Washington
- 1985: Statistics/Biostatistics 578B (time series analysis), University of Washington
- 1984–5: Statistics/EE 520 (spectral analysis), University of Washington
- 1984: Statistics/Biostatistics 578B (advanced topics in spectral analysis), University of Washington (joint with R. Douglas Martin)

Service on Graduate Student Committees

- 2009– : Anna Margolis, Ph.D candidate, Electrical Engineering (Mari Ostendorf, chair)
- 2008– : Jianguo Wang, Ph.D candidate, Economics (Stephen Turnovsky, chair)

2008– : Roopesh Ranjan, Ph.D candidate, Statistics (Tilman Gneiting, chair)
 2007– : Brian Donhauser, Ph.D candidate, Economics (Eric Zivot, chair)
 2007–08: Andrew Morabito, Ph.D candidate, Electrical Engineering (John Sahr, chair)
 2006–07: Andrew Morabito, masters candidate, Statistics (Percival, chair)
 2006–07: Daisuke Nagakura, Ph.D candidate, Economics (Eric Zivot, chair)
 2004–08: Michael Keim, Ph.D candidate, QERM (Percival, chair)
 2004–05: Eric Aldrich, masters candidate, Statistics (Percival, chair)
 2003–04: Nathaniel Derby, masters candidate, Statistics (Tilman Gneiting, chair)
 2002–07: Debashis Mondal, Ph.D candidate, Statistics (Percival, co-chair with Peter Guttorp)
 2002–06: Lingyun Huang, Ph.D candidate, Bioengineering (Kirk Beach, chair)
 2002–05: Gerry Pagel, Ph.D candidate, Mechanical Engineering (Per Reinhall, chair)
 2002–05: Hasan Mir, Ph.D candidate, Electrical Engineering (John Sahr, chair)
 2002–04: Andrew Morabito, masters candidate, Electrical Engineering (John Sahr, chair)
 2001–04: Özgür Çetin, Ph.D candidate, Electrical Engineering (Mari Ostendorf, chair)
 2001–03: Melissa Meyer, masters candidate, Electrical Engineering (John Sahr, chair)
 1997–2000 Peter Craigmile, Ph.D candidate, Department of Statistics (Percival, co-chair with Peter Guttorp)
 1997–2000: Melanie Plett, Ph.D candidate, Bioengineering (Kirk Beach, chair)
 1995–2000: William Constantine, Ph.D candidate, Mechanical Engineering (Per Reinhall, chair)
 1995–98: Brandon Whitcher, Ph.D candidate, Statistics (Percival, co-chair with Peter Guttorp)
 1995–96: Michael Cannon, masters candidate, Bioengineering (Jim Bassingthwaite, chair)
 1995–96: David Caccia, masters candidate, Bioengineering (Jim Bassingthwaite, chair)
 1985–95: Azmi Al-Kurd, Ph.D candidate, Electrical Engineering (Robert Porter, chair); Hanidrez Amindavar, Ph.D candidate, Electrical Engineering (James Ritcey, chair); Serhad Atakturk, masters candidate, Atmospheric Sciences (Kristina Katsaros, chair); George Bloor, masters candidate, Electrical Engineering (James Ritcey, chair); Andrew Bruce, Ph.D candidate, Statistics (R. Douglas Martin, chair); Frode Engelsen, masters candidate, Civil Engineering (Dorothy Reed, chair); James Pitton, Ph.D candidate, Electrical Engineering (Les Atlas, chair); Warren Fox, Ph.D candidate, Electrical Engineering (Jim Luby, chair); Gary Grunwald, Ph.D candidate, Statistics (Peter Guttorp, chair); Steven Hare, Ph.D candidate, Fisheries (Robert Francis, chair); Kathleen Jones, masters candidate, Electrical Engineering (Robert Haralick, chair); Sih-Ping Koh, Ph.D candidate, Mechanical Engineering (Joseph Garbini, chair); Valter Lazzari, Ph.D candidate, Economics (Simon Wheatley, chair); Nhu Le, Ph.D candidate, Statistics (R. Douglas Martin, chair); Pat Loughlin, Ph.D candidate, Electrical Engineering (Les Atlas), chair; Marc Moulton, Ph.D candidate, Business Administration (Allan Hess, chair); Michael Newton, Ph.D candidate, Statistics (Adrian Raftery, chair); Charles Pope, masters candidate, Electrical Engineering (Les Atlas, chair); Carlos Rivera, Ph.D candidate, Electrical Engineering (James Ritcey, chair); Larry Rystrom, Ph.D candidate, Electrical Engineering (Robert Haralick, chair); John Sarraillé, masters candidate, Computer Science (Percival, research project advisor); Clinton Siedenburt, masters candidate, Electrical Engineering (James Ritcey, chair); Paul Sjöholm, masters candidate, Applied Mathematics (Percival, chair); Peter Tran, masters candidate, Electrical Engineering (James Ritcey, chair); Bruce Weertman, Ph.D candidate, Geophysics (Charles Raymond, chair); Stephen Yee, masters candidate, Electrical Engineering (Arun Somani, chair); Tianshan Zhang, Ph.D candidate, Geophysics (Adam Schultz, chair)

Mentored Undergraduates, Sponsored Scholars and Postdocs

2009: sponsored visiting graduate students Agnar Sivertsen and Kristian Hindberg, Department of Mathematics and Statistics, University of Tromsø, Norway
 2007–08: sponsored visiting scholar Rogério Porto, Ph.D candidate, Institute of Mathematics and Statistics, University of São Paulo, Brazil Monash University, Caulfield, Australia
 2006: mentored undergraduate Clement Yang, Statistics
 2004–05: mentored undergraduate Kelvin Ma, Statistics
 2004–05: mentored undergraduate Gauri Sudame, Statistics
 2004: mentored undergraduate Leslie Kwor, Statistics
 2003–06: sponsored postdoctoral researcher Charles Cornish, Atmospheric Sciences

- 2003: sponsored visiting scholar Ann Maharaj, Senior Lecturer, Econometrics and Business Statistics, Monash University, Caulfield, Australia
- 2002–03: sponsored visiting scholar Sungwoon Choi, Professor, Department of Industrial Engineering, Kyungwon University, Seoul, Korea

Miscellaneous Professional Activities

- 2005– : served as a reviewer for book proposals submitted to Springer (three times) and to Wiley
- 2005–06: organized symposium entitled ‘Statistical and Computational Issues in Climate Research’ at the Joint Statistical Meetings, August 2006, Seattle
- 2004– : faculty member, Interdisciplinary Graduate Program in Quantitative Ecology and Resource Management (QERM), University of Washington,
- 2004: organized symposium entitled ‘Wavelet-Based Statistical Analysis of Multiscale Geophysical Data’ at the American Association for the Advancement of Science Annual Meeting, Seattle
- 2004: reviewed *Probability, Statistical Optics, and Data Testing: A Problem Solving Approach* (Third Edition) by B. R. Frieden for *Technometrics*
- 2002– : consultant for Insightful, Inc., Seattle, WA
- 1999– : Associate Editor for *Journal of Computational and Graphical Statistics*
- 1999: chaired session on Nonlinear Dynamical Analysis at First Joint BMES (Biomedical Engineering Society)/EMBS (Engineering in Medicine and Biology Society) Conference, Atlanta, GA.
- 1998: participated (August to December) in ‘Nonlinear and Nonstationary Signal Processing’ program at the Isaac Newton Institute, Cambridge University, UK
- 1998: reviewed *The Spectral Analysis of Time Series* by L. H. Koopmans for *Technometrics*
- 1997: participated in JISAO Workshop on Cross-Validation of Proxy Data and the Instrumentation Record, NOAA/PMEL, Seattle, WA
- 1996: reviewed *Statistics for Long-Memory Processes* by J. Beran for *Journal of American Statistical Association*
- 1991: reviewed *Statistical Spectral Analysis: A Nonprobabilistic Theory* by W. A. Gardner for *Technometrics*
- 1989–90: worked with D. Cawthon of Harborview Medical Center on the statistical analysis of measurements of the firing times of neurons in the human brain (joint work presented by Cawthon in poster sessions at three conferences on the neurological sciences)
- 1989: chaired special session on spectral analysis at the Twenty-Third Asilomar Conference on Signals, Systems and Computers at Pacific Grove, CA
- 1989: reviewed *Digital Image Processing* (2nd Edition) by R. Gonzales and P. Wintz for *Technometrics*
- 1983–84: served as a consultant on a National Oceanic and Atmospheric Administration program to detect longitudinal rolls in a near neutral atmosphere using spectral analysis
- 1983– : served as a reviewer on proposals submitted to National Science Foundation, Engineering and Physical Science Research Council (UK), Swiss National Science Foundation and University of Washington Royalty Research Fund
- 1983– : served as a referee for following 67 journals: *Acta Scientiarum Mathematicarum (Szeged)*; *Annals of Biomedical Engineering*; *Annals of Statistics*; *Annals of the Institute of Statistical Mathematics*; *Applied and Computational Harmonic Analysis*; *Astronomical Journal*; *Bioinformatics*; *Biometrika*; *Climate Dynamics*; *Communications in Statistics: Theory and Methods*; *Computational Statistics and Data Analysis*; *Deep-Sea Research I*; *Ecology*; *Empirical Economics*; *Environmental and Ecological Statistics*; *EURASIP Journal on Advances in Signal Processing*; *European Journal of Soil Science*; *Europhysics Letters*; *Finance Research Letters*; *Geophysical Research Letters*; *IEEE J-SAC: Wireless Communications Series*; *IEEE Journal of Oceanic Engineering*; *IEEE Signal Processing Letters*; *IEEE Spectrum*; *IEEE Transactions on Biomedical Engineering*; *IEEE Transactions on Circuits and Systems–I: Fundamental Theory and Applications*; *IEEE Transactions on Geoscience and Remote Sensing*; *IEEE Transactions on Image Processing*; *IEEE Transactions on Information Theory*; *IEEE Transactions on Signal Processing*; *IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control*; *IEE Proceedings: Radar, Sonar and Navigation*; *International Journal of Climate*; *International Journal of Forecasting*; *International Statistical Review*; *Journal of American Statistical Association*; *Journal of Atmospheric and Oceanic Technology*; *Journal of Computational and Graphical Statistics*; *Journal of Economics*; *Journal of Forecasting*; *Journal of Geophysical Research – Space Physics*; *Journal of Hydrology*, *Journal*

of Statistical Computation and Simulation; Journal of the Acoustical Society of America; Journal of the Atmospheric Sciences; Journal of the Royal Statistical Society Series B; Journal of Time Series Analysis; Journal of Volcanology and Geothermal Research; Mathematical Geology; Metrologia; Oxford Bulletin of Economics and Statistics; Photogrammetric Engineering and Remote Sensing; Physical Review Letters; Physics and Chemistry of the Earth; Proceedings of the National Academy of Sciences of the United States of America; Psychological Methods; Quantitative Finance; Quaternary Research; SIAM Journal of Scientific and Statistical Computing; Signal Processing; Simulation; Statistical Modeling: An International Journal; Statistica Sinica; Studies in Nonlinear Dynamics & Econometrics; Technometrics; U.S. Navy Journal of Underwater Acoustics; and Water Resources Research