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I. EDUCATION BEYOND SECONDARY SCHOOL

- 06/1992 B.S. (Physics, Minor in Applied Math), University of California, Irvine, CA
- 06/1993 B.S. (Statistics), University of California, Riverside, CA
- 06/1995 M.S. (Statistics), University of California, Riverside, CA
- 12/1998 Ph.D. (Applied Statistics, EE Conc.), University of California, Riverside, CA
- 1/99-7/01 Postdoctoral Scholar (fMRI), California Institute of Technology, Pasadena, CA

Continuing Education: ⁺Denotes Only Attended

- 1999 Short Course in fMRI, Medical College of Wisconsin CME
- 2002 MR Physics for Physicists, ISMRM MPCECP⁺
- 2003 Alzheimer's: What's New, What's True, Medical College of Wisconsin CME
- 2004 Brain Function and fMRI, ISMRM MPCEC⁺
- 2005 MR Physics for Physicists, ISMRM MPCEC⁺
- 2005 CITI Course: The Protection of Human Research Subjects
- 2005 CITI Course: Biomedical Investigators, Co-Investigators and Study Coordinators
- 2006 MR Physics for Physicists, ISMRM MPCEC⁺
- 2007 fMRI: Basics to Cutting Edge, ISMRM MPCEC⁺
- 2008 CITI: The Protection of Human Research Subjects-Refresher
- 2008 CITI: Biomedical Investigators, Co-Investigators and Study Coordinators-Refresher
- 2008 AALAS Learning Library CEU: Working with the IACUC
- 2010 CITI: The Protection of Human Research Subjects-Refresher
- 2012 MCW Annual MRI Safety Training (2007-present)

Research Skills: AFNI, C, FORTRAN, LATEX, MATLAB, SAS, SPM, SPSS, UNIX/LINUX

II. RANKS AT MARQUETTE

Associate Professor of Statistics, Department of MSCS August 2009 -

ACADEMIC TENURE: Yes

FULL TIME FACULTY SERVICE AT MARQUETTE August 2009 -

III. OTHER TEACHING EXPERIENCE

| | |
|-------------------|---|
| 09/1996 – 12/1996 | Lecturer, Department of Information and Decision Sciences, California State University, San Bernardino, CA |
| 08/1997 – 06/1998 | Adjunct Instructor, Department of Mathematics, Riverside Community College, Riverside, CA |
| 07/1998 – 08/1998 | Associate Instructor, Department of Statistics, University of California, Riverside, CA |
| 07/2001 – 06/2008 | Assistant Professor, Department of Biophysics (Primary), Medical College of Wisconsin, Milwaukee, WI |
| 07/2001 – | Faculty of the MCW Functional Imaging Research Center (http://www.firc.mcw.edu/) Medical College of Wisconsin, Milwaukee, WI |
| 10/2001 – 06/2008 | Assistant Professor, Department of Biostatistics (Secondary), Medical College of Wisconsin Milwaukee, WI |
| 01/2002 – 06/2008 | Adjunct Assistant Professor, Department of Mathematical Sciences, University of Wisconsin, Milwaukee, WI |
| 07/2008 – 09/2009 | Associate Professor, Department of Biophysics (Primary) Medical College of Wisconsin, Milwaukee, WI |
| 07/2008 – 09/2009 | Associate Professor, Department of Population Health - Division of Biostatistics (Secondary) Medical College of Wisconsin Milwaukee, WI |
| 07/2008 – 08/2009 | Adjunct Associate Professor, Department of Mathematical Sciences, University of Wisconsin, Milwaukee, WI |
| 08/2009 – | Associate Professor, Department of Mathematics, Statistics, and Computer Science, Marquette University, Milwaukee, WI |
| 09/2009 – | Associate Adjunct Professor, Department of Biophysics Medical College of Wisconsin, Milwaukee, WI |
| 05/2010 – | Faculty of the MCW Neuroscience Research Center (http://www.mcw.edu/NRC.htm) |

IV. OTHER WORK EXPERIENCE

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|------------------|--|
| 5/1998 – 12/1998 | Statistical Computing Consultant, Department of Academic Computing University of California, Riverside, CA |
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V. MEMBERSHIP IN PROFESSIONAL AND HONORARY SOCIETIES

| | |
|-------------------|--|
| 02/1997 – present | American Statistical Association (ASA) |
| 01/1999 – present | International Society for Bayesian Analysis (ISBA) |
| 01/2000 – 12/2000 | Mathematical Association of America (MAA) |
| 01/2001 – present | Full Member, International Society for Magnetic Resonance in Medicine (ISMRM) |
| 01/2005 – present | Member, ISMRM Brain Function Study Group (Group started in 2005) |
| 01/2007 – 12/2008 | Full Member, Organization for Human Brain Mapping (OHBM) |
| 01/2007 – present | Elected Member, International Statistical Institute (ISI), http://isi.cbs.nl |
| 01/2011 – present | Member, Canadian Applied and Industrial Mathematics Society |

VI. OFFICES HELD IN PROFESSIONAL AND HONORARY SOCIETIES

| | |
|-------------------|---|
| 07/2002 – 06/2005 | Director, Milwaukee Chapter of The American Statistical Association |
| 07/2005 – 06/2006 | Vice President, Milwaukee Chapter of The American Statistical Association |
| 07/2006 – 06/2007 | President, Milwaukee Chapter of The American Statistical Association |
| 1/2010 – 12/2013 | Council of the Chapters Representative of The American Statistical Association |
| 01/2012 – 12/2012 | Founding Chair of Section on Statistics in Imaging (SI) of The American Statistical Association (ASA) |

VII. HONORS

| | |
|-------------------|--|
| 1988 | Golden Key National Honor Society |
| 1989 | Anfinson Physics Scholarship for Outstanding Lower Division Physics Students |
| 06/1990 – 08/1990 | Lawrence Livermore National Laboratory (LLNL) Student Research Fellowship, U.S. Department of Energy; L Security Clearance |
| 01/1993 – 12/1994 | Patricia Roberts Harris Fellowship, U.S. Department of Education |
| 01/1997 – 12/1997 | Patricia Roberts Harris Fellowship, U.S. Department of Education |
| 09/1996 – 06/1997 | Outstanding Teaching Assistant Award |
| 1996 | OΔK National Leadership Honor Society |
| 1998 | Who's Who in Colleges and Universities |
| 2005 | Who's Who in Medical Sciences Education, Academic Keys in Medicine |

VIII. SCHOLARLY PUBLICATIONS

REFEREED JOURNAL PUBLICATIONS/ORIGINAL PAPERS *Denotes Corresponding Author

1. Heinsen, A.P.*, **ROWE, D.B.**: A comparison of CF₄ + hydrocarbon fast gases for drift chambers and straw tubes. Nucl. Instrum. Methods Phys. Res. Section A 321(1-2):165-171, 1992.
2. **ROWE, D.B.***: Factorization of separable and patterned covariance matrices for Gibbs sampling. Monte Carlo Meth. and Apps. 6(3):205-210, 2000.
3. **ROWE, D.B.***: Bayesian source separation for reference function determination in fMRI. Magn. Reson. Med. 46(2):374-378, 2001.
4. **ROWE, D.B.***: A Bayesian approach to blind source separation. J. Interdisc. Math. 5(1):49-76, 2002.
5. **ROWE, D.B.***: Jointly distributed mean and mixing coefficients for Bayesian source separation using MCMC and ICM. Monte Carlo Meth. and Apps. 8(4):395-403, 2002.
6. **ROWE, D.B.***: Bayesian source separation of functional sources. J. Interdisc. Math. 6(2):129-138, 2003.

7. Bennett, K.M., Schmainda, K.M., Bennett, R.T., **ROWE, D.B.**, Lu, H., Hyde, J.S.*: Characterization of continuously distributed restricted water diffusion rates with a stretched-exponential model. Magn. Reson. Med. 50(4):727-734, 2003.
8. **ROWE, D.B.***: On using the sample mean in Bayesian factor analysis. J. Interdisc. Math. 6(3):319-329, 2003.
9. **ROWE, D.B.***: Significant fMRI neurologic synchrony using Monte Carlo methods. Monte Carlo Meth. and Apps. 9(4):367-385, 2003.
10. Logan, B.R., **ROWE, D.B.***: An evaluation of thresholding techniques in fMRI analysis. NeuroImage 22(1):95-108, 2004.
11. **ROWE, D.B.***, Logan, B.R.: A complex way to compute fMRI activation. NeuroImage 23(3):1078-1092, 2004.
12. **ROWE, D.B.***, Logan, B.R.: Complex fMRI analysis with unrestricted phase is equivalent to a magnitude-only model. NeuroImage 24(2):603-606, 2005.
13. **ROWE, D.B.***: Parameter estimation in the complex fMRI model. NeuroImage 25(4):1124-1132, 2005.
14. **ROWE, D.B.***: Modeling both the magnitude and phase of complex-valued fMRI data. NeuroImage 25(4):1310-1324, 2005.
15. **ROWE, D.B.***, Hoffmann, R.G.: Multivariate statistical analysis in fMRI. IEEE Eng. Med. Biol. 25(2):60-64, 2006.
16. **ROWE, D.B.***, Nencka, A.S., Hoffmann, R.G.: Signal and noise of Fourier reconstructed fMRI data. J. Neurosci. Methods 159(2):361-369, 2007.
17. Grether, D.M.*, Plott, C.R., **ROWE, D.B.**, Sereno, M.I., Allman, J.M.: Mental processes and strategic equilibration: An fMRI study of selling strategies in second price auctions. Exper. Econ. 10(2):105-122, 2007.
18. **ROWE, D.B.***, Meller, C.P., Hoffmann, R.G.: Characterizing phase-only fMRI data with an angular regression model. J. Neurosci. Methods 161(2):331-341, 2007.
19. Zhu, H.*, Ibrahim, J.G., Tang, N., **ROWE, D.B.**, Hao, X, Bansal, R, Peterson, B.S.: Statistical analysis of brain morphometric measures: a wild bootstrap method. IEEE Trans. Med. Imaging 26(7): 954-966, 2007.
20. Nencka, A.S., **ROWE, D.B.***: Reducing the unwanted draining vein BOLD contribution in fMRI with statistical post-processing methods. NeuroImage 37(1):177-188, 2007.
21. Xu, Y., Wu, G., **ROWE, D.B.**, Ma, Y., Zhang, R., Xu, G., Li, S.-J.*: COMBE: COMplex Model Based Estimation of thermal noise for fMRI data in the presence of artifacts. Magn. Reson. Imaging 25(7):1079-1088, 2007.

22. Kufahl, P.R., **ROWE, D.B.***, Li, S.-J.: Processing of drug-induced BOLD responses with Bayesian source separation. Digital Signal Processing 17(5):975-978, 2007.
23. Xu, Y., Xu, G. Wu, G., Antuono, P., **ROWE, D.B.**, Li S.-J.*: The phase shift index for marking abnormal functional asynchrony in Alzheimer's patients by fMRI. Magn. Reson. Imaging 26(3):379-392, 2008.
24. Logan, B.R., Geliaskova, M.P., **ROWE, D.B.***: An Evaluation of spatial thresholding techniques in fMRI analysis. Hum. Brain Mapp. 29(12):1379-1389, 2008.
25. Hahn, A.D., Nencka, A.S., **ROWE, D.B.***: Improving robustness and reliability of phase-sensitive fMRI analysis using Temporal Off-resonance Alignment of Single-echo Timeseries (TOAST). NeuroImage, 44(3):742-752, 2009.
26. Zhu, H.*, Li, Y., Ibrahim, J.G., Shi, X., An, H., Chen, Y., Lin, W., **ROWE, D.B.**, Peterson, B.S.: Rician regression models for magnetic resonance images. J. Am. Stat. Assoc., 104(486):623-637, 2009.
27. Nencka, A.S., Hahn, A.D., **ROWE, D.B.***: A Mathematical Model for Understanding the STatistical effects of k -space (AMMUST- k) preprocessing on observed voxel measurements in fcMRI and fMRI. J. Neurosci. Methods., 181(2):268-282, 2009.
28. **ROWE, D.B.***, Haacke, E.M.: MAGnitude and PHase Thresholding (MAPHT) of noisy complex-valued magnetic resonance images. Magn. Reson. Imaging. 27(9):1271-1280, 2009.
29. **ROWE, D.B.***: Magnitude and phase signal detection in complex-valued fMRI data. Magn. Reson. Med., 62(5):1356-1357, 2009.
30. Hernandez-Garcia, L.*, Vazquez, A.L., **ROWE, D.B.**: Complex-valued analysis of arterial spin labeling based FMRI signals. Magn. Reson. Med. 62(6):1597-1608, 2009.
31. **ROWE, D.B.***, Hahn, A.D., Nencka, A.S.: Functional magnetic resonance imaging brain activation directly from k -space. Magn. Reson. Imaging., 27(10):1370-1381, 2009.
32. Hernandez-Garcia*, L., Jahanian, H., **ROWE, D.B.**: Quantitative Analysis of Arterial Spin labeling FMRI Data using a General Linear Model. Magn. Reson. Imaging, 28(7):919-927, 2010.
33. Hettinger P.C., Li R., Yan J-G, Matloub H.S., Cho Y.R., Pawela C.P., **ROWE, D.B.**, Hyde J.S.*: Long-term vascular access ports as a means of sedative administration in a rodent fMRI survival model. J. Neurosci. Methods., 200(2):106-112, 2011.
34. Bruce, I.P., Karaman, M.M., **ROWE, D.B.***: A Statistical Examination of SENSE Image Reconstruction via an Isomorphism Representation. Magn. Reson. Imaging, 29(9):1267-1287, 2011.
35. Hahn, A.D., Nencka, A.S., **ROWE, D.B.***: Enhancing the utility of complex-valued fMRI detection of neurobiological processes through post-acquisition estimation and correction of dynamic B_0 errors and motion. Hum. Brain Mapp., 33(2):288-306, 2012.

36. Hahn A.D., **ROWE D.B.***: Physiologic noise regression, motion regression, and TOAST dynamic field correction in complex-valued fMRI time series, NeuroImage, 59(3): 2231-2240, 2012.
37. Bruce, I.P., Karaman, M.M., **ROWE, D.B.***: The SENSE-Isomorphism Theoretical Image Voxel Estimation (SENSE-ITIVE) model for reconstruction and observing statistical properties of reconstruction operators. Accepted, Magn. Reson. Imaging, 2012. DOI: 10.1016/j.mri.2012.04.002
38. **ROWE, D.B.**, Adrian, D.W., Maitra, R.*: On the use of Gaussian and Rice distributions for fitting magnitude fMRI time series data. (Status: In Submission), 2012.
39. Mazaheri Y.* , Afaq A., **ROWE D.B.**, Lu Y., Shukla-Dave A., Grover J.: Diffusion-weighted MRI of the prostate: Improved robustness with stretched exponential modeling (Status: In Submission), 2012.
40. **ROWE D.B.***, Nencka A.S., Hyde J.S.: Quantitative Image Reconstruction of Two Simultaneously Excited and Acquired FMRI Slices Using a Single Coil. (Status: In Preparation), 2012.
41. Bruce, I.P., **ROWE, D.B.***: A Real-Valued Isomorphism Representation and Statistical Investigation of the Complex-Valued GRAPPA Parallel Magnetic Resonance Image Reconstruction Model. (Status: In Preparation), 2012.
42. Karaman MM, Bruce IP, **ROWE D.B.**: A More Accurate MR Reconstruction with the Incorporation of MR Relaxivities. (Status: In Preparation.), 2012.
43. Adrian, D.W., Maitra, R.* , **ROWE, D.B.**: Improved activation detection via complex-valued AR(p) model for fMRI voxel time series. (Status: In Preparation), 2012.
44. Maitra, R.* , **ROWE, D.B.**, Adrian, D.W.: Estimating parameters for Rice distributed time series observations with applications to fMRI data. (Status: In Preparation), 2012.
45. Karaman, M.M., Bruce, I.P., **ROWE, D.B.***: A statistical fMRI model for differential T_2^* contrast incorporating T_1 and T_2^* of gray matter. (Status: In Preparation), 2012.
46. Nencka, A.S., **ROWE, D.B.***: A Mathematical Model for Understanding the STatistical effects of Time series (AMMUST-T) preprocessing on observed voxel measurements in fcMRI and fMRI. (Status: In Revision), 2012.
47. Stroyny, A.L.* , **ROWE, D.B.**: A Re-examination of some Popular Latent Factor Estimation Methods. (Status: In Preparation), 2012.

BOOKS, CHAPTERS & REVIEWS

1. **ROWE, D.B.**: Correlated Bayesian factor analysis. Ph.D. Thesis, Department of Statistics, University of California, Riverside, 1998.

2. **ROWE, D.B.:** Multivariate Bayesian Statistics: Models for Source Separation and Signal Unmixing. Chapman & Hall/CRC Press, Boca Raton, FL, 2003. ISBN: 1584883189
3. Barth, M., **ROWE, D.B.:** Functional Susceptibility Weighted Magnetic Resonance Imaging. In MRI Susceptibility Weighted Imaging: Basic Concepts and Clinical Applications (pp 561-575). Editors Haacke, E.M., Reichenbach, J., Xu, Y. John Wiley & Sons, January 2011. ISBN: 0470043431
4. **ROWE, D.B.,** Jiang, J., Haacke, E.M.: Complex threshold methods for eliminating pixels that contain predominantly noise in magnetic resonance images. In MRI Susceptibility Weighted Imaging: Basic Concepts and Clinical Applications (pp 577-603). Editors Haacke, E.M., Reichenbach, J., Xu, Y. John Wiley & Sons, January 2011. ISBN: 0470043431
5. **ROWE, D.B.:** The Fourier Transform: A Technical Understanding with Applications to MRI. (Status: In preparation.).

CONFERENCE PROCEEDINGS/ABSTRACTS

1. **ROWE, D.B.:** Bayesian source separation of fMRI signals. AIP Conference Proceedings: Bayesian inference and maximum entropy methods in science and engineering 2000 (Ali Mohammad-Djafari, ed.). American Institute of Physics, Melville, NY, 2001).
2. Morgan, S.W., **ROWE, D.B.:** The effect of detrending when computing regression coefficients in block design fMRI. Proc. Intl. Soc. Magn. Res. Med. 10:1424, 2002.
3. Stroyny, A.L., **ROWE, D.B.:** A Re-examination of some Popular Latent Factor Estimation Methods. The Fifteenth Annual Investment Seminar, Cambridge, UK September 8-11, 2002.
4. Bennett, K.M., Hyde, J.S., Rebro, K., **ROWE, D.B.,** Rand, S., Schmainda, K.M.: Imaging brain tumor invasion. Proc. Intl. Soc. Magn. Reson. Med. 1:1285, 2003.
5. Bennett, K.M., Schmainda, K.M., **ROWE, D.B.,** Rebro, K., Hyde, J.S.: A stretched-exponential model of sub-voxel diffusion rates in cerebral tissue. Proc. Intl. Soc. Magn. Reson. Med. 11:1479, 2003.
6. Kufahl, P.R., **ROWE, D.B.,** Li, S.-J.: A Bayesian hemodynamic drug response model for fMRI analysis. Proc. Intl. Soc. Magn. Reson. Med. 11:1907, 2003.
7. **ROWE, D.B.:** Measures of fMRI neurologic synchrony. Joint Stat. Meetings, Session 249: Brain Imaging #300749, 2003.
8. **ROWE, D.B.,** Logan, B.R.: An fMRI activation method using complex data. Proc. IEEE International Symposium on Biomedical Imaging, 876-879, 2004.
9. Logan, B.R., **ROWE, D.B.:** A comparison of fMRI activation thresholding methods. Proc. Intl. Soc. Magn. Reson. Med. 12:1095, 2004.
10. **ROWE, D.B.:** A complex data method to compute fMRI activation. Proc. Am. Stat. Assoc. Biometrics Section, 9:440-447, 2004.

11. **ROWE, D.B.:** Complex activation is more focal and concentrated to parenchymal tissue. Proc. Intl. Soc. Magn. Reson. Med. 13:1577, 2005.
12. Kufahl, P.R., **ROWE, D.B.**, Li, S.-J.: Exploring Intervoxel dependencies in human pharmacological fMRI data. Proc. Intl. Soc. Magn. Reson. Med. 13:1579, 2005.
13. Nencka, A.S., **ROWE, D.B.:** Complex constant phase activation model removes venous BOLD contribution in fMRI. Proc. Intl. Soc. Magn. Reson. Med. 13:495, 2005.
14. **ROWE, D.B.**, Nencka A.S.: Magnitude and phase modeling for fMRI brain activation. Proc. Am. Stat. Assoc. Biometrics Section, 10:377-382, 2005.
15. Meller, C.P., **ROWE, D.B.:** An angular regression model for phase-only fMRI data. Proc. Am. Stat. Assoc. Biometrics Section, 10:316-323, 2005.
16. Hoffmann, R.G., Deyoe, E.A. Brefczynski, J.A., **ROWE, D.B.:** Spatial-temporal modeling of visual cortex pathology. Proc. Am. Stat. Assoc. Biometrics Section, 10:223-229, 2005.
17. **ROWE, D.B.**, Nencka A.S.: Complex activation suppresses venous BOLD in GE-EPI fMRI data. Proc. Intl. Soc. Magn. Reson. Med. 14:2834, 2006.
18. Nencka, A.S., **ROWE, D.B.:** Theoretical results demonstrate fundamental differences in venous BOLD reducing activation methods. Proc. Intl. Soc. Magn. Reson. Med. 14:3269, 2006.
19. Kufahl, P.R., **ROWE, D.B.**, Li S.-J.: Bayesian source separation of drug-induced BOLD responses with correlated reference functions. Proc. Intl. Soc. Magn. Reson. Med. 14:1160, 2006.
20. Hoffmann, R.G., Maciejewski, M.J., Savarapian, P., DeYoe, E.A., **ROWE, D.B.:** Methods for assessing changes in the fMRI visual field map after surgery. Proc. Am. Stat. Assoc. Biometrics Section, 11: 2062-2067, 2006.
21. **ROWE, D.B.**, Nencka, A.S., Hoffmann, R.G.: Intrinsic voxel correlation in fMRI. Proc. Am. Stat. Assoc. Biometrics Section, 11:338-345, 2006.
22. Hoffmann, R.G., Maciejewski, M.J., **ROWE, D.B.**, DeYoe, E.A.: Assessing changes in the fMRI visual field map after surgery for epilepsy, Proc. Intl. Biometrics Conference, Montreal, Quebec, Canada, 2006.
23. **ROWE, D.B.**, Hernandez-Garcia, L., Lee, G.R.: Complex analysis of ASL fMRI data yields more focal activation. Proc. Intl. Soc. Magn. Reson. Med. 15:1422, 2007.
24. Nencka, A.S., **ROWE, D.B.:** Constant phase statistical method better localizes activations than phase regressor statistical method. Proc. Intl. Soc. Magn. Reson. Med. 15:3198, 2007.
25. **ROWE, D.B.**, Li, S.-J.: Two fMRI indices as markers for Alzheimer's disease. Proc. Intl. Soc. Magn. Reson. Med. 15:3728, 2007.

26. Hoffmann, R.G., Macjenskii, M.J., DeYoe, E.A., **ROWE, D.B.**: Spatial Statistical Methods for Detecting Changes in Visual Field Maps, Proc. Organization for Hum. Brain Mapp. 13th Annual Meeting, Neuroimage 37(Supplement 1), S45:311, 2007.
27. Logan, B.R., Geliaskova, M.P., Laud, P.W., **ROWE, D.B.**: A Bayesian Spatial Mixture Model for fMRI Analysis. Proc. Organization for Hum. Brain Mapp. 13th Annual Meeting, NeuroImage 37(Supplement 1),S45:317, 2007.
28. Nencka, A.S., **ROWE, D.B.**: Image space correlations induced by k -space processes. Proc. Organization for Hum. Brain Mapp. 13th Annual Meeting, Neuroimage 37 (Supplement 1), S55:284, 2007.
29. **ROWE, D.B.**: FMRI Activation in image space from k -space data. Proc. Organization for Hum. Brain Mapp. 13th Annual Meeting, NeuroImage 37(Supplement 1), S114:377, 2007.
30. Hoffmann, R.G., DeYoe, E.A., Maciejewski, M.J., **ROWE, D.B.**: Estimation of Pre-Post Surgical Changes in the fMRI Visual Field Map. Proc. Am. Stat. Assoc. Biometrics Section, 12:383-388, 2007.
31. **ROWE, D.B.**: FMRI statistical brain activation from k -space data. Proc. Am. Stat. Assoc. Biometrics Section, 12:107-114, 2007.
32. Nencka, A.S., **ROWE, D.B.**: Apodization and Smoothing Alter Voxel Time Series Correlations. Proc. Intl. Soc. Magn. Reson. Med., 16:2457, 2008.
33. Nencka, A.S., **ROWE, D.B.**: The use of Three Navigator Echoes in Cartesian EPI Reconstruction Reduces Nyquist Ghosting. Proc. Intl. Soc. Magn. Reson. Med., 16:3032, 2008.
34. Nencka, A.S., Hahn, A.D., **ROWE, D.B.**: Redundant Spatial Harmonic Information in Zeugmatography with Linear Encoding (R-SHIZLE) Theoretically Encodes Intra-Acquisition Decay. Proc. Intl. Soc. Magn. Reson. Med., 16:3157, 2008.
35. Nencka, A.S., Paulson, E.S., **ROWE, D.B.**: Complex Constant Phase Statistical Model Reduces Venous Contributions to BOLD Cortical Activations in the Visual Cortex. Proc. Intl. Soc. Magn. Reson. Med., 16:2338, 2008.
36. Hahn, A.D., Nencka, A.S., **ROWE, D.B.**: Dynamic Compensation of B0 Field Inhomogeneities Restores Complex fMRI Time Series Activation Power. Proc. Intl. Soc. Magn. Reson. Med., 16:1251, 2008.
37. Hernandez-Garcia, L., **ROWE, D.B.**: A model for phase information in arterial spin labeling fMRI. Proc. Organization for Hum. Brain Mapp. 14th Annual Meeting, Neuroimage 41(Supplement 1), S90:519, 2008.
38. **ROWE, D.B.**, Haacke, E.M.: Thresholding Complex Magnetic Resonance Images Using Magnitude and Phase. Proc. Am. Stat. Assoc., Biometrics Section, 13:1922-1929, 2008.

39. Hoffmann, R.G., Pajewski, N.M., DeYoe, E.A., and **ROWE, D.B.**: A Non-Parametric Mixture Model for the fMRI Visual Field Map. Proc. Am. Stat. Assoc., Statistical Computing Section, 13:3782-3789, 2008.
40. Nencka, A.S., Hahn, A.D., **ROWE, D.B.**: Phase regression and dynamic B-field correction reduce global time series correlations and increase functional correlations. Proc. Intl. Soc. Magn. Reson. Med., 17:1663, 2009.
41. **ROWE, D.B.**, Hernandez-Garcia, L.: An Analytic Magnitude and Phase fMRI Activation Model Applied to ASL. Proc. Intl. Soc. Magn. Reson. Med., 17:1716, 2009.
42. **ROWE, D.B.**, Nencka, A.S.: Induced Correlation In FMRI Magnitude Data From k-Space Preprocessing. Proc. Intl. Soc. Magn. Reson. Med., 17:1721, 2009.
43. Hahn, A.D., Nencka, A.S., **ROWE, D.B.**: Dynamic magnetic field corrections improve phase-only fMRI activations. Proc. Intl. Soc. Magn. Reson. Med., 17:2789, 2009.
44. **ROWE, D.B.**, Haacke, E.M.: Complex-valued voxel thresholding increases image contrast in SWI. Proc. Intl. Soc. Magn. Reson. Med., 17:2923, 2009.
45. Hernandez-Garcia, L., **ROWE, D.B.**: Quantitative General Linear Model Analysis of Arterial Spin labeling Data. Proc. Organization for Hum. Brain Mapp. 15th Annual Meeting, Neuroimage 47 (Supplement 1), S82:530, 2009.
46. Hoffmann, R.G., Simpson, P., **ROWE, D.B.**: A Dirichlet Process Model for Changes in the fMRI Visual Field Map. Proc. Am. Stat. Assoc., Section on Statistical Computing, 2009.
47. Hahn, A.D., **ROWE, D.B.**: Methodology for robust motion correction of complex-valued fMRI time series. Proc. Intl. Soc. Magn. Reson. Med. 18:3051, Stockholm, Sweden, 2010.
48. Hahn, A.D., Nencka, A.S., **ROWE, D.B.**: Iterative space transformation enables the use of optimal magnetic field correction algorithms using EPI-based field maps. Proc. Intl. Soc. Magn. Reson. Med. 18:3092, Stockholm, Sweden, 2010.
49. Hahn, A.D., Nencka, A.S., **ROWE, D.B.**: In fMRI, a dual echo time EPI pulse sequence can induce sources of error in dynamic B-field maps. Proc. Intl. Soc. Magn. Reson. Med. 18:5062, Stockholm, Sweden, 2010.
50. Mazaheri, Y., **ROWE, D.B.**, Zhang, J. Hricak, H., Koutcher, J.A.: Improved Robustness with a Stretched Exponential Model for Intravoxel Incoherent Motion (IVIM) DW Signal. Proc. Intl. Soc. Magn. Reson. Med. 18:2655, Stockholm, Sweden, 2010.
51. Nencka, A.S., Shefchik, D., Jesmanowicz, A., Hyde, J.S., **ROWE, D.B.**: A statistical method for computing BOLD activations in multi-echo time fMRI data sets and identifying likely non-BOLD task related signal change. Proc. Intl. Soc. Magn. Reson. Med. 18:1154, Stockholm, Sweden, 2010.
52. Adrian D.W., Maitra R., **ROWE, D.B.**: Time Series Models for Computing Activation in fMRI. Fifth International Workshop on Statistical Analysis of Neuronal Data (SAND5), University of Pittsburgh, Pittsburgh, PA, 2010. <http://sand.stat.cmu.edu/>

53. Rowe, D.B., Bruce I.P.: Processing Induced Voxel Correlation in SENSE FMRI Via the AMMUST Framework. Proc. Second Biennial International Conference on Resting State Connectivity, Medical College of Wisconsin, Milwaukee, Wisconsin, 2010. <http://www.restingstate.com/>
54. Nencka A.S., Hahn A.D., Rowe, D.B.: Phase Regression and Dynamic B-Field Correction Reduce Global Time Series Correlations and Increase Functional. Proc. Second Biennial International Conference on Resting State Connectivity, Medical College of Wisconsin, Milwaukee, Wisconsin, 2010. <http://www.restingstate.com/>

NON-REFEREED JOURNAL PUBLICATIONS/ORIGINAL PAPERS

1. **ROWE, D.B.**, Press, S.J.: Gibbs sampling and hill climbing in Bayesian factor analysis. Technical Report No. 255, Department of Statistics, University of California, Riverside, CA, 1998.
2. **ROWE, D.B.**: A Bayesian unobservable/observable source separation model and activation determination in fMRI. Social Science Working Paper 1120, Division of Humanities and Social Sciences, California Institute of Technology, Pasadena, CA, 2001.
3. **ROWE, D.B.**: Bayesian source separation with jointly distributed mean and mixing coefficients via MCMC and ICM. Social Science Working Paper 1119, Division of Humanities and Social Sciences, California Institute of Technology, Pasadena, CA, 2001.
4. **ROWE, D.B.**: A model for Bayesian source separation with the overall mean. Social Science Working Paper 1118, Division of Humanities and Social Sciences, California Institute of Technology, Pasadena, CA, 2001.
5. **ROWE, D.B.**: A Bayesian model to incorporate jointly distributed generalized prior information on means and loadings in factor analysis. Social Science Working Paper 1110, Division of Humanities and Social Sciences, California Institute of Technology, Pasadena, CA, 2001.
6. **ROWE, D.B.**: A model for Bayesian factor analysis with jointly distributed means and loadings. Social Science Working Paper 1108, Division of Humanities and Social Sciences, California Institute of Technology, Pasadena, CA, 2001.
7. **ROWE, D.B.**: A Bayesian factor analysis model with generalized prior information. Social Science Working Paper 1099, Division of Humanities and Social Sciences, California Institute of Technology, Pasadena, CA, 2001.
8. **ROWE, D.B.**: Incorporating prior knowledge regarding the mean in Bayesian factor analysis. Social Science Working Paper 1097, Division of Humanities and Social Sciences, California Institute of Technology, Pasadena, CA, 2001.
9. **ROWE, D.B.**: On estimating the mean in Bayesian factor analysis. Social Science Working Paper 1096, Division of Humanities and Social Sciences, California Institute of Technology, Pasadena, CA, 2001.

10. **ROWE, D.B.**, Morgan, S.W.: Computing fMRI activations: coefficients and t-statistics by detrending and multiple regression. Technical Report 39, Division of Biostatistics, Medical College of Wisconsin, Milwaukee, WI, 2002.
11. **ROWE, D.B.**: Multivariate regression generalized likelihood ratio tests for fMRI activation. Technical Report 40, Division of Biostatistics, Medical College of Wisconsin, Milwaukee, WI, 2002.
12. **ROWE, D.B.**: fMRI neurologic synchrony measures for Alzheimer's patients with Monte Carlo critical values. Technical Report 41, Division of Biostatistics, Medical College of Wisconsin, Milwaukee, WI, 2003.
13. Logan, B.R., **ROWE, D.B.**: The effect of correlation and error rate specification on thresholding methods in fMRI analysis. Technical Report 42, Division of Biostatistics, Medical College of Wisconsin, Milwaukee, WI, 2003.
14. **ROWE, D.B.**, Logan, B.R.: An fMRI activation method using complex data. Technical Report 45, Division of Biostatistics, Medical College of Wisconsin, Milwaukee, WI, 2004.
15. Grether, D.M., Plott, C.R., **ROWE, D.B.**, Sereno, M.I., and Allman, J.M.: An fMRI study of selling strategy in second price auctions. Social Science Working Paper 1189, Division of Humanities and Social Sciences, California Institute of Technology, Pasadena, CA, 2004.
16. **ROWE, D.B.**: On estimating the parameters of the complex fMRI time course model. Technical Report 46, Division of Biostatistics, Medical College of Wisconsin, Milwaukee, WI, 2004.
17. **ROWE, D.B.**, Logan, B.R.: A complex fMRI activation model with a temporally varying phase. Technical Report 47, Division of Biostatistics, Medical College of Wisconsin, Milwaukee, WI, 2004.
18. **ROWE, D.B.**: A complex-valued fMRI data model for both the magnitude and phase. Technical Report 48, Division of Biostatistics, Medical College of Wisconsin, Milwaukee, WI, 2004.
19. Meller, C.P., **ROWE, D.B.**: A nonlinear model for phase-only fMRI data. Technical Report 50, Division of Biostatistics, Medical College of Wisconsin, Milwaukee, WI, 2004.
20. **ROWE, D.B.**, Hoffmann, R.G.: Correlated noise of Fourier reconstructed fMRI data. Technical Report 51, Division of Biostatistics, Medical College of Wisconsin, Milwaukee, WI, 2005.
21. **ROWE, D.B.**, Hoffmann, R.G.: Models and applications of multivariate statistical analysis in fMRI. Technical Report 52, Division of Biostatistics, Medical College of Wisconsin, Milwaukee, WI, 2005.
22. **ROWE, D.B.**: Can we compute fMRI brain activation directly from k-space? Technical Report 54, Division of Biostatistics, Medical College of Wisconsin, Milwaukee, WI, 2005.
23. Zhu, H., Li, Y., Ibrahim, J.G., Shi, X., An, H., Chen, Y., Weili Lin, **ROWE, D.B.**, Peterson, B.G.: Regression models for identifying noise sources in magnetic resonance images. Technical Report

Series, year 2007, Paper 3, Department of Biostatistics, The University of North Carolina at Chapel Hill.

IX. OTHER SCHOLARLY ACTIVITIES

1. Grant Reviews
 - 08/2001 Grant Proposal Reviewer, Ad Hoc, National Science Foundation
 - 02/2004 Grant Proposal Reviewer, Dutch National Research Council
 - 10/2004 Grant Proposal Reviewer, Ad Hoc, National Science Foundation
 - 12/2011 Grant Proposal Reviewer, American Cancer Society Pilot Research Grant from the Cancer Center of MCW

2. Editorial Boards
 - 01/2006 – present Journal of Neuroscience Methods, Editorial Board
www.elsevier.com/locate/jneumeth
 - 01/2009 – present Medical Physics, Acting Associate Editor
<http://www.medphys.org/>

3. Journal Reviews
 - 03/1999 – present Communications in Statistics (1)
 - 10/1999 – present Psychometrika (1)
 - 05/2001 – present IEEE Transactions on Image Processing (1)
 - 08/2001 – present NeuroImage (26)
 - 04/2002 – present Journal of the American Statistical Association (4)
 - 06/2004 – present Statistical Methods and Applications (1)
 - 06/2004 – present Journal of Computational and Graphical Statistics (1)
 - 08/2004 – present IEEE Transactions on Medical Imaging (17)
 - 09/2004 – present Journal of Neuroscience Methods (6)
 - 01/2005 – present IEEE Engineering in Medicine and Biology (2)
 - 03/2005 – present IEEE Transactions on Speech and Audio Processing (1)
 - 03/2005 – present Human Brain Mapping (5)
 - 04/2005 – present Journal of Multivariate Analysis (2)
 - 06/2006 – present Digital Signal Processing (1)
 - 07/2006 – present Magnetic Resonance in Medicine (10)
 - 11/2006 – present Signal Processing (1)
 - 11/2006 – present IEEE Transactions on Biomedical Engineering (3)
 - 09/2007 – present Journal of Magnetic Resonance (2)
 - 10/2007 – present Journal of Magnetic Resonance Imaging (1)
 - 01/2008 – present Computational Statistics and Data Analysis (1)
 - 06/2008 – present IEEE Journal of Selected Topics in Signal Processing (1),
Magnetic Resonance Imaging (5), PLoS ONE (1)
 - 03/2009 – present Medical Physics (2)
 - 07/2009 – present Statistics and Its Interface (1)
 - 12/2009 – present Sensors (1), Journal of Immunological Methods (2)
 - 03/2011 – present Journal of Statistical Theory and Applications (1)
(93 Unique Manuscript Reviews)

4. Other Activity
 - 08/2003 Session Chair, Optimization, Joint Statistical Meeting, San Francisco, CA
 - 04/2004 Session Chair, Functional Brain Mapping, 2004 IEEE International Symposium on Biomedical Imaging, Arlington, VA
 - 08/2004 Session Chair, Emerging Technologies in Genetics and Molecular Biology, Joint Statistical Meeting, Toronto, Canada
 - 11/2004 Abstract Reviewer, ISMRM 12th Scientific Meeting and Exhibition, Kyoto, Japan
 - 08/2005 Session Chair, Brain Image Analysis, Joint Statistical Meeting, Minneapolis, MN
 - 08/2006 Session Chair, Recent Advances in Brain Imaging, Joint Statistical Meeting, Seattle, WA
 - 11/2006 Abstract Reviewer, ISMRM 15th Scientific Meeting and Exhibition, Berlin, Germany
 - 01/2007 Abstract Review Committee, Organization for Human Brain Mapping, 13th Annual Meeting, Chicago, IL
 - 08/2007 Session Chair, Advanced Quantitative Brain MRI, Joint Statistical Meeting, Salt Lake City, UT
 - 01/2008 Abstract Review Committee, Organization for Human Brain Mapping, 14th Annual Meeting, Melbourne, Australia
 - 08/2008 Session Chair, Intelligent Brain Statistics, Joint Statistical Meeting, Denver, CO
 - 09/2008 Program and Review Committee, MICCAI 2008 Workshop on Analysis of Functional Medical Images, New York University, NY, NY.
 - 11/2008 Abstract Reviewer, ISMRM 17th Scientific Meeting and Exhibition, Honolulu, HI
 - 01/2009 Abstract Review Committee, Organization for Human Brain Mapping, 15th Annual Meeting, San Francisco, CA
 - 05/2009 Wrote External Faculty promotion letter for Assistant to Associate Professor.
 - 09/2010 Session Chair, Innovation in the data-centric world of fMRI, Joint Statistical Meeting, Vancouver, Canada.
 - 03/2011 Program Committee, 2012 Eastern North American Region (ENAR) of the International Biometrics Society Meeting.
 - 01/2012 Wrote External Faculty promotion letter from Assistant to Associate Professor.
 - 07/2012 Session Chair, Methods in High Dimensional Regression, Joint Statistical Meeting, San Diego, CA, USA.

5. Invited University Lectures:

a. International

b. National

Rowe, D.B. Bayesian Source Separation of fMRI Signals, Department of Mathematics Seminar, Rose-Hulman Institute of Technology, Terre Haute, IN, 03/2000

Rowe, D.B. Bayesian Source Separation of fMRI Signals, Department of Radiology Seminar, VA Medical Center, University of California, San Francisco, CA, 04/2000

Rowe, D.B. A Bayesian Source Separation Model for fMRI Signals, Greg Brown Neuroimaging Lab Meeting, Department of Psychiatry, University of California, San Diego, CA, 06/2000

Rowe, D.B. Bayesian Source Separation of fMRI Signals, Department of Neuroscience Seminar, NYSPI, Columbia University, New York, NY, 01/2001

Rowe, D.B. Bayesian Source Separation of fMRI Signals, Department of Psychology Quantitative Seminar, University of Illinois, Urbana-Champaign, IL, 01/2001

Rowe, D.B. Bayesian Source Separation of fMRI Signals, Department of Psychology Seminar, Stanford University, Palo Alto, CA, 02/2001

Rowe, D.B. Multivariate Statistical Methods in fMRI: Thresholding, Department of Biophysics Seminar, Medical College of Wisconsin, 03/2003

Rowe, D.B. A complex way to compute fMRI activation, Department of Statistics, University of Wisconsin, Madison, WI, 11/2003

Rowe, D.B. A complex way to compute fMRI activation, Center for fMRI, University of California, San Diego, CA, 12/2003

Rowe, D.B. Your Complex-Valued fMRI Data: Part I: What You Assume and Throw Away. Part II: How to optimally use it? Department of Electrical and Computer Engineering, University of Wisconsin, Madison, WI, 12/2004

Rowe, D.B. Your Complex-Valued fMRI Data: Assumptions and optimal use. Department of Biostatistics, Columbia University, New York, NY, 02/2005

Rowe, D.B. Proper Modeling and Analysis of Your Complex-Valued fMRI Data. School of Electrical and Computer Engineering, Purdue University, West Lafayette, IN, 03/2005

Rowe, D.B. Experimental and Simulated Data Comparisons of Two Methods for Post-acquisition Suppression of Venous BOLD in fMRI, Broad Center for Brain Imaging, Caltech, Pasadena, CA, 07/2005

Rowe, D.B. Statistical Models and Analysis of Your Complex-Valued fMRI Data. Joint seminar Departments of Statistics and Psychology Quantitative Division, University of Illinois, Urbana-Champaign, IL, 10/2005

Rowe, D.B. Modeling Complex-Valued Time Series to Improve Detection in fMRI. Department of Biostatistics, University of Michigan, Ann Arbor, MI, 01/2006

Rowe, D.B. Experimental Evidence of Improved Detection in fMRI through Complex-Valued Time Series. fMRI Lab, University of Michigan, Ann Arbor, MI, 02/2006

Rowe, D.B. Increased statistical sensitivity and biological information via complex-valued fMRI time course analysis. Department of Statistics, University of California, Riverside, CA, 04/2006

Rowe, D.B. Functional magnetic resonance imaging brain activation from k -space. Department of Biostatistics, University of Wisconsin, Madison, WI, 09/2006

Rowe, D.B. FMRI activation from observed Fourier encoded data, Department of Mathematics, Statistics, and Computer Science, Marquette University, Milwaukee, WI, 09/2006

Rowe, D.B. Computing functional MRI activation from spatial frequencies. Department of Biostatistics, Vanderbilt University School of Medicine, Nashville, TN, 11/2006

Rowe, D.B. FMRI: From k-Space to activation maps, Center for Computational Biology and Laboratory for NeuroImaging (LONI), University of California, Los Angeles, CA, 04/2007

Rowe, D.B. Complex-valued fMRI activation with preprocessing, Center for MR Research, University of Illinois College of Medicine, Chicago, IL, 11/2008

Rowe, D.B. A coherent framework for fMRI processing and activation. fMRI Lab, University of Michigan, Ann Arbor, MI, 12/2008

Rowe, D.B. The Effects of Preprocessing on Functional Magnetic Resonance Images, Brain Imaging Research Center (BRIC), University of North Carolina, Chapel Hill, NC, 01/2009

Rowe, D.B. FMRI Brain Activation from Preprocessed Complex-Valued Data, Department of Biostatistics, University of North Carolina, Chapel Hill, NC, 01/2009

Rowe, D.B. A Single Coherent Mathematical Model for Functional Magnetic Resonance Imaging, Department of Mathematics, Statistics, and Computer Science, Marquette University, Milwaukee, WI. 02/2009

Rowe, D.B. A Unified FMRI Model for Preprocessing and Connectivity or Activation Determination, Department of Biophysics, Medical College of Wisconsin, 02/2009

Rowe, D.B. The Distribution of Magnitude and Complex Voxel Values in MRI, Waisman Brain Imaging Center, University of Wisconsin, Madison, WI. 03/2009

Rowe, D.B. A Mathematical Model for Functional Magnetic Resonance Imaging, Broad Center for Brain Imaging, Caltech, Pasadena, CA, 04/2009

Rowe, D.B. A Coherent Statistical Framework for Functional Magnetic Resonance Imaging, Department of Statistics, Iowa State University, IA, 12/2009

Rowe, D.B. A Complex-Valued Mathematical Model for fMRI Analysis, Department of Radiology, University of California, San Francisco, CA, 07/2010

Rowe, D.B. A Mathematical Model for Analysis of Your Complex-Valued fMRI Data, Brain Imaging Center, University of California, Berkeley, CA, 07/2010

Rowe, D.B. A Single Statistical Model for Your Complex-Valued FMRI Data, Center for Statistical Science, Brown University, Providence, RI, 09/2010

Rowe, D.B. On Modeling The Complex-Valued FMRI Data, Department of Biostatistics, Washington University, St. Louis, MO 12/2011.

c. Local

Rowe, D.B. Bayesian Source Separation of fMRI Signals, Department of Biophysics, Interdepartmental fMRI Seminar, Medical College of Wisconsin, 12/2000

Rowe, D.B. Bayesian Source Separation of fMRI Signals, Division of Biostatistics, Medical College of Wisconsin, 12/2000

Rowe, D.B. Bayesian Basics, Division of Biostatistics Seminar, MCW, 04/2002

Rowe, D.B. Multivariate Regression: Is my ROI activated? Interdepartmental fMRI Seminar, Medical College of Wisconsin, 09/2002

Rowe, D.B. A Current and a New Measure for Diagnosing Alzheimer's with fMRI, Interdepartmental fMRI Seminar, Medical College of Wisconsin, 02/2003

Rowe, D.B. A Complex Way to Compute fMRI Activation, Interdepartmental fMRI Seminar, Medical College of Wisconsin, 02/2004

Rowe, D.B. Your complex-valued fMRI data: What you assume and throw away. Interdepartmental fMRI Seminar, Medical College of Wisconsin, 10/2004

Rowe, D.B. Complex Statistical Analysis in fMRI. Division of Biostatistics, Medical College of Wisconsin, 03/2005

Rowe, D.B. Postacquisition suppression of venous BOLD via phase information in complex-valued data. Interdepartmental fMRI Seminar, Medical College of Wisconsin, 10/2005

Rowe, D.B. Complex ways to extract information in fMRI, Department of Biophysics Seminar, Medical College of Wisconsin, 01/2006

Rowe, D.B. On fMRI activation directly from k -space, Interdepartmental fMRI Seminar, Medical College of Wisconsin, 07/2006

Rowe D.B. Thresholding Complex Magnetic Resonance Images Using Magnitude and Phase. Brownbag Seminar Series. Department of Biostatistics, MCW, Milwaukee WI 06/09.

Rowe D.B. More Biological Information from Complex-Valued FMRI Data. Department of Biological Sciences, Marquette University, Milwaukee WI 01/12.

5. Conference Presentations

Rowe, D.B. Measures of fMRI neurologic synchrony. American Statistical Association, Joint Statistical Meetings, San Francisco, CA, 8/2003

Rowe, D.B., Logan, B.R. An fMRI activation method using complex data. Institute of Electrical and Electronics Engineers (IEEE) International Symposium on Bioinformatics and Biomedical Imaging, Arlington, VA, 05/2004

Rowe, D.B. A Complex Data Method to Compute fMRI Activation. Statistics for the Brain Session, Joint Statistical Meeting, Toronto, Ontario, Canada, 08/2004

Rowe, D.B. Complex activation is more focal and concentrated to parenchymal tissue. International Society of Magnetic Resonance in Medicine (ISMRM) Thirteenth Scientific Meeting and Exhibition, Miami Beach, FL, 05/2005

Rowe, D.B. Magnitude and Phase Modeling for fMRI Brain Activation. Statistical Advances in Human Brain Mapping Session, Joint Statistical Meeting, Minneapolis, MN, 08/2005

Rowe, D.B. Magnitude and phase modeling for fMRI brain activation. American Statistical Association, Joint Statistical Meetings, Biometrics Section, Minneapolis, MN, 8/2005

Rowe, D.B. An Angular Regression Model for Phase-Only fMRI Data. Brain Image Analysis Session, Joint Statistical Meeting, Minneapolis, MN, 08/2005

Rowe, D.B., Nencka A.S. Magnitude and phase modeling for fMRI brain activation. American Statistical Association, Joint Statistical Meetings, Biometrics Section, Minneapolis, MN, 8/2005

Rowe, D.B. Complex activation suppresses venous BOLD in GE-EPI fMRI data. ISMRM Fourteenth Scientific Meeting and Exhibition, Seattle, WA, 5/2006

Rowe, D.B. Intrinsic voxel correlation in fMRI. Advances in Analyzing fMRI Studies Session, Joint Statistical Meeting, Biometrics Section, Seattle, WA, 08/2006

Rowe, D.B. True Complex-Valued fMRI Time Series and Activation. Invited Session: Statistical Methods in Functional Imaging, Western North American Region (WNAR) of the International Biometrics Society, Flagstaff, AZ, 06/2006

Rowe, D.B. Complex analysis of ASL fMRI data yields more focal activation. ISMRM Fifteenth Scientific Meeting and Exhibition, Berlin, Germany, 5/2007

Rowe, D.B. Two fMRI indices as markers for Alzheimer's disease. ISMRM Fifteenth Scientific Meeting and Exhibition, Berlin, Germany, 5/2007

Rowe, D.B. FMRI Activation in image space from k -space data. Thirteenth Annual Meeting of the Organization for Human Brain Mapping, Chicago, IL, 6/2007

Rowe, D.B. FMRI Statistical Brain Activation from k -Space Data. Modeling Data from Brain Imaging Studies Session, Joint Statistical Meeting, Biometrics Section, Salt Lake City, UT, 08/2007

Rowe, D.B. Thresholding Complex Magnetic Resonance Images Using Magnitude and Phase Data. Modeling Data from Brain Imaging Studies Session, Joint Statistical Meeting, Biometrics Section, Denver, CO 08/2008

Hoffmann, R.G., Simpson, P., Li, S.-H., Yan, K. DeYoe, E.A., Rowe, D.B. Dirichlet Process Models for Changes in fMRI Visual Field. Eastern North American Region (ENAR) of the International Biometrics Society, San Antonio, TX, 3/2009

Rowe, D.B. Noise Assumptions in Complex-Valued SENSE MR Image Reconstruction. Innovation in the data-centric world of fMRI Session, Joint Statistical Meeting, Biometrics Section, Vancouver, Canada, 07/2010

Rowe, D.B. Signal and Noise in Complex-Valued SENSE MR Image Reconstruction. Invited Session: Statistical Methods in Functional Imaging, Eastern North American Region (ENAR) of the International Biometrics Society, Miami, FL, 3/2011

Rowe, D.B. Utilizing Induced Voxel Correlation in fMRI Analysis. Session Title: Meeting Challenges for Modeling Brain Imaging Data: The Spatio-Temporal Perspective, Joint Statistical Meeting, Biometrics Section, Miami, FL, 07/2011

Bruce IP, Rowe DB: Observing Spatial Correlations Induced by the SENSE and GRAPPA Parallel MRI Image Reconstruction Models Using an Isomorphic Framework. Workshop on Brain Image Analysis, University of Wisconsin, Madison. Madison, WI. April 20, 2012.

Rowe, D.B. Statistical Image Reconstruction of Two Simultaneously Excited FMRI Slices. Session Title: Statistical Methods in Imaging, Joint Statistical Meeting, Biometrics Section, San Diego, CA, 07/2012

6. Conferences Attended:

| | | | |
|------|---|---|---|
| 1999 | Joint Statistical Meeting | August 10 – 14, 2002 | Anaheim, California |
| 2002 | Joint Statistical Meeting ISMRM | August 11 – 15, 2002 May 18 – 24, 2002 | New York City, New York Honolulu, Hawai'i, USA |
| 2003 | Joint Statistical Meetings Santa Cruz Bayesian Workshop ISMRM | August 3 – 7, 2003 August 7 – 10, 2003 July 10 – 16, 2003 | San Francisco, California Santa Cruz, California Toronto, Ontario, Canada |
| 2004 | Joint Statistical Meetings ISMRM | August 8 – 12, 2004 May 15 – 21, 2004 | Toronto, Canada Kyoto, Japan |
| 2005 | Joint Statistical Meetings ISMRM | August 7 – 11, 2005 May 7 – 13, 2005 | Minneapolis, Minnesota Miami Beach, Florida, USA |
| 2006 | Joint Statistical Meetings WNAR Intl Biometrics Soc. ISMRM | August 6 – 10, 2006 June 29–July 1, 2006 May 6 – 12, 2006 | Seattle, Washington Flagstaff, AZ Seattle, Washington, USA |

5/7/12 DBR

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|------|--|---|--|
| 2007 | Joint Statistical Meetings ISMRM | July 29 – August 2, 2007 May 19 – 25, 2007 | Salt Lake City, Utah Berlin, Germany |
| 2008 | Joint Statistical Meetings ISMRM | August 3 – 7, 2008 May 3 – 9, 2008 | Denver, Colorado Toronto, Ontario, Canada |
| 2010 | Joint Statistical Meetings Second Biennial International on Resting State Connectivity | July 31 – August 5, 2010 September 16 – 19, 2010 | Vancouver, Canada Milwaukee, Wisconsin |
| 2011 | ENAR Joint Statistical Meetings | March 20 – 23, 2011 July 30 – August 4, 2011 | Miami, Florida Miami, Florida |
| 2012 | Workshop on Brain Image Analysis Joint Statistical Meetings | April 20, 2012 July 28 – August 2, 2012 | Madison, Wisconsin San Diego, California |

7. Research Support (Including grants and fellowships):

a. Current

Title: Quantification of Induced Voxel Correlations by GE and SIEMENS MRI Scanner Algorithms.
Source: Marquette University, 2012 Regular Research Grant (RRG)
Role: Principal Investigator
Dates: July 1, 2012 – December 31, 2012.

Title: fMRI Technology and Analysis
Source: NIH/NIBIB R01 (PI: J.S. Hyde, MCW)
Role: Co-Investigator
Dates: August 3, 2011 – July 31, 2015.

Title: Supraspinal Contributions to Locomotor Control and Recovery after Stroke
Source: NIH K01 (PI: S. Shindler-Ivens, Marquette University)
Role: Mentor
Dates: September 2010-August 2016.

Title: Real-Time Motion Correction and Increased Scan-Session Success in Clinical fMRI
Source: NIH/NIBIB R01 (PI: J.S. Hyde, MCW)
Role: Investigator
Dates: September 15, 2008 – August 31, 2012

b. Pending
5/7/12 DBR

Title: Optimal Statistical Image Reconstruction, Relaxivity Estimation, and Activation Detection in FMRI
Source: NSF (PI: D.B. Rowe, MU)
Role: Principal Investigator
Dates: August 1, 2012 – Feb 31, 2015

c. Prior

8. Other:
MCW IRB Approved Protocol:
Study Full Title: Examining the effects of fcMRI and fMRI analysis procedures
Study #: PRO00009606 (MU #HR-2157)
Dates: 8/31/2009-8/30/2010, renewed 8/31/2010-7/22/2011, renewed 7/05/2011-7/04/2012

X. TEACHING ACTIVITIES DATA

1. Courses Taught at Marquette:

| <u>Year</u> | <u>Semester</u> | <u>Course # and Title</u> | <u>Credit</u> | <u>Enrollment</u> |
|--|-----------------|---|---------------|-------------------|
| 2009 | Fall | MATH 4740: Biostatistical Methods and Models | 3 | 18 |
| | | /MSCS 5740: Biostatistical Methods and Models | /3 | /5 |
| | | MSCS 6010: Probability | 3 | 19 |
| 2010 | Spring | MATH 1700: Modern Elementary Statistics | 3 | 112 |
| | | MATH 1700: Modern Elementary Statistics | 3 | 116 |
| | | MSCS 6960: Biomath Seminar in Math/Stats/Comp Sci Topic: Complex-Valued FMRI | 1-3 | 1 |
| 2010 | Summer | MSCS 6960: Biomath Seminar in Math/Stats/Comp Sci Topic: Complex-Valued FMRI | 1-3 | 1 |
| 2010 | Fall | MATH 1700: Modern Elementary Statistics | 3 | 120 |
| | | MSCS 6010: Probability | 3 | 14 |
| | | MSCS 6960: Biomath Seminar in Math/Stats/Comp Sci Fourier MRI Reconstruction | 1-3 | 8 |
| 2011 | Spring | MSCS 6995: Ind Stdy in Math, Stat, & Comp Sci | 1-3 | 2 |
| | | MATH 1700: Modern Elementary Statistics | 3 | 129 |
| | | MATH 1700: Modern Elementary Statistics | 3 | 118 |
| | | BIIN 6947: Medical College of Wisconsin/BIIN-Joint degree (Statistical Genetics) | 1-8 | 1 |
| | | BIIN 6999: Masters Thesis | 1-6 | 2 |
| 2011 | Summer | MSCS 6995: Ind Stdy in Math, Stat, & Comp Sci | 1-3 | 2 |
| | | BIIN 6980: Practicum in Bioinformatics | 3 | 1 |
| 2011 | Fall | BIIN 6980: Practicum in Bioinformatics | 3 | 3 |
| | | MSCS 6010: Probability | 3 | 17 |
| | | MSCS 6960: Seminar in Math, Stat, & Comp Sci | 1 | 4 |
| | | MSCS 6995: Ind Stdy in Math, Stat, & Comp Sci | 1-3 | 2 |
| | | MSCS 8999: Doctoral Dissertation | 1-12 | 3 |
| | | MSCS 9976: Grad Assistant Research: FT | 0 | 1 |
| | | MSCS 9987: Doctoral Comp Exam Prep: LHT | 0 | 1 |
| MSCS 9988: Doctoral Comp Exam Prep: HT | 0 | 1 | | |

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|-------------|----------------------------------|---|------|------|
| 2012 Spring | | MSCS 9989: Doctoral Comp Exam Prep: FT | 0 | 2 |
| | | MATH 1700: Modern Elementary Statistics | 3 | 122 |
| | | MATH 1700: Modern Elementary Statistics | 3 | 40 |
| | | BIIN 6980: Practicum in Bioinformatics | 3 | 1 |
| | | MSCS 6090: Research Methods/Prof Devel | 1 | 16 |
| | | MSCS 6995: Ind Stdy in Math, Stat, & Comp Sci | 1-3 | 5 |
| | | MSCS 8999: Doctoral Dissertation | 1-12 | 3 |
| 2012 Fall | | MSCS 9970: Graduate Standing Continuation: LHT | 0 | 1 |
| | | MATH 1700: Modern Elementary Statistics | 3 | ~120 |
| | | BIIN 6980: Practicum in Bioinformatics | 3 | ~2 |
| | | MSCS 6010: Probability | 3 | ~15 |
| | | MSCS 6960: Biomath Seminar in Math/Stats/Comp Sci Fourier MRI Reconstruction | 1-3 | ~3 |
| | | MSCS 6974: Practicum for Research in Computational Sci | 3 | ~2 |
| | | MSCS 6995: Ind Stdy in Math, Stat, & Comp Sci | 1-3 | ~5 |
| | MSCS 8999: Doctoral Dissertation | 1-12 | ~3 | |

2. Courses Taught at Medical College of Wisconsin:

| <u>Year</u> | <u>Semester</u> | <u>Course # and Title</u> | <u>Credit</u> | <u>Enrollment</u> |
|-------------|-----------------|--|---------------|-------------------|
| 2001 | Fall | Biophysics 230: Nuclear Magnetic Resonance (Co-taught) | 3 | 4 |
| | | Biophysics 295: Readings & Research | 1-9 | 1 |
| 2002 | Spring | Biophysics 240: Fourier Transforms | 3 | 4 |
| | | Biophysics 295: Readings & Research | 1-9 | 1 |
| 2003 | Fall | Biophysics 298: Biophysics Journal Club | 1 | 8 |
| | Spring | Biophysics 295: Readings & Research | 1-9 | 1 |
| | | Biophysics 298: Journal Club | 1 | 10 |
| | Summer | Biophysics 295: Readings & Research | 1-9 | 1 |
| 2004 | Fall | Biophysics 240: Fourier Transforms | 3 | 9 |
| | | Biophysics 230: Nuclear Magnetic Resonance (Co-taught) | 3 | |
| | Spring | Biophysics 298: Biophysics Journal Club | 1 | 8 |
| | | Biophysics 295: Readings & Research | 1-9 | 1 |
| 2005 | Fall | Biostatistics 295: Readings & Research | 1-9 | 1 |
| | | Biostatistics 299: Master's Thesis | 1-9 | 1 |
| | | Biophysics 230: Nuclear Magnetic Resonance (Co-taught) | 3 | |
| | Spring | Biophysics 295: Readings & Research | 1-9 | 1 |
| | | Biophysics 298: Biophysics Journal Club | 1 | 10 |
| | | Biophysics 295: Readings & Research | 1-9 | 1 |
| 2006 | Summer | Biophysics 240: Fourier Transforms | 3 | 4 |
| | | Biophysics 295: Readings & Research | 1-9 | 1 |
| | Fall | Biophysics 240: Fourier Transforms | 3 | 5 |
| | | Biophysics 295: Readings & Research | 1-9 | 2 |
| 2007 | Spring | Biophysics 230: Nuclear Magnetic Resonance (Co-taught) | 3 | |
| | | Biophysics 295: Readings & Research | 1-9 | 1 |
| | Fall | Biophysics 298: Biophysics Journal Club | 1 | 10 |
| | | Biophysics 295: Readings & Research | 1-9 | 2 |
| 2008 | Spring | Biophysics 295: Readings & Research | 1-9 | 2 |
| | | Biophysics 295: Readings & Research | 1-9 | 2 |
| | Fall | Biophysics 240: Fourier Transforms | 3 | 5 |
| | | Biophysics 295: Readings & Research | 1-9 | 2 |
| 2008 | Spring | Biophysics 230: Nuclear Magnetic Resonance (Co-taught) | 3 | |
| | | Biophysics 295: Readings & Research | 1-9 | 2 |

| | | | | |
|---|----------------------------|--|--|----|
| | | Biophysics 298: Biophysics Journal Club | 1 | 11 |
| | Summer | Biophysics 295: Readings & Research | 1-9 | 2 |
| | Fall | Biophysics 295: Readings & Research | 1-9 | 2 |
| 2009 | Spring | Biophysics 295: Readings & Research | 1-9 | 2 |
| | Summer | Biophysics 295: Readings & Research | 1-9 | 1 |
| | Fall | Biophysics 295: Readings & Research | 1-9 | 1 |
| 2010 | Spring | Biophysics 295: Readings & Research | 1-9 | 1 |
| | Summer | Biophysics 295: Readings & Research | 1-9 | 1 |
| | Fall | Biophysics 295: Readings & Research | 1-9 | 1 |
| 2011 | Spring | Biophysics 295: Readings & Research | 1-9 | 1 |
| | Summer | Biophysics 295: Readings & Research | 1-9 | 1 |
| | Fall | Bioinformatics 294: Practicum for Research & Development in Bioinformatics | 3 | 2 |
| 2012 | Spring | Bioinformatics 294: Practicum for Research & Development in Bioinformatics | 3 | 1 |
| 2012 | Summer | Bioinformatics 294: Practicum for Research & Development in Bioinformatics | 3 | ~2 |
| 3. Courses Taught at University of California, Riverside: | | | | |
| | 1998 | Summer STAT 100A: Introduction to Statistics | 5 | 22 |
| 4. Courses Taught at Riverside Community College: | | | | |
| | 1998 | Spring MATH 12: Statistics | 3 | 22 |
| | 1997 | Fall MATH 12: Statistics | 3 | 20 |
| 5. Courses Taught at California State University, San Bernardino: | | | | |
| | 1996 | Fall Management Science 210: Applied Statistics | 4 | 23 |
| 6. Guest Lecturer at Other Universities: | | | | |
| | 2007 | Spring The Fourier Transform in MRI/fMRI STAT 692: Medical Image Analysis Department of Statistics, University of Wisconsin, Madison, WI | | |
| | | FMRI Time Series Activation STAT 692: Medical Image Analysis Department of Statistics, University of Wisconsin, Madison, WI | | |
| XI. Primary Director of Essays or Theses at Marquette: | | | | |
| | 1. At Marquette University | | | |
| | a. Doctoral | | | |
| | Iain P. Bruce | 08/2009 – present | TBD: Multi-Coil Magnetic Resonance Statistical Image Reconstruction Analysis | |
| | M. Muge Karaman | 08/2009 – present | TBD: Functional Magnetic Resonance Imaging Statistical Modeling and Analysis | |

Mary Kociuba 12/2011 – present
TBD: Functional Magnetic Resonance Imaging

b. Masters

Zhaoyang Teng 01/2010 – 05/2010
A Comparison of the Rowe and the Lee Models for Complex-Valued Functional
Magnetic Resonance Imaging
PhD Student in Statistics, Boston University, 2010–present

Iain P. Bruce 08/2009 – 05/2011
A Statistical Analysis of the SENSE Image Reconstruction Model
PhD Student in Computational Sciences at Marquette University, 5/2011–present

M. Muge Karaman 08/2009 – 05/2011
A Statistical fMRI Model for Differential T_2^* contrast incorporating T_1 and T_2 of
Gray Matter
PhD Student in Computational Sciences at Marquette University, 5/2011–present

Kiersten Purves 01/2012 – present (Expected 05/2012)
The Use of MatLab to Introduce High School Students to Computer Programming
and Problem Solving

Chaitan Parikh 12/2011 – present (Expected 05/2013)
TBD: Functional Magnetic Resonance Imaging

Yuning Chen 12/2011 – present (Expected 05/2013)
TBD: Functional Magnetic Resonance Imaging

2. At Medical College of Wisconsin

Doctoral

Andrew S. Nencka, Ph.D. 07/2004 – 06/2009
Improving the specificity of the functional magnetic resonance imaging
(fMRI) and functional connectivity magnetic resonance imaging (fcMRI)
blood oxygenation level dependent (BOLD) signal
First Place Outstanding Dissertation Award, 2009-2010 AY.
2009–2011 MRI Physicist, Dept of Biophysics, Medical College of Wisconsin
2011–present Asst. Professor, Dept of Biophysics, Medical College of Wisconsin

Andrew D. Hahn, Ph.D. 07/2006 – 08/2011
Mathematical models to improve complex-valued fMRI in the presence of motion,
confounding physiologic phenomena, and temporal variations in bulk B_0 magnetic
field inhomogeneity
Nominated for Outstanding Dissertation Award, 2011-2012 AY.
2011–present Postdoctoral Fellow, Dept of Medical Physics, University of Wisconsin

b. Masters

Christopher P. Meller, M.S. 07/2003 – 12/2004

Modeling fMRI time series using a non-linear method
Sr. Analyst, Decision Sciences, Takeda Pharmaceuticals

XII. Other Teaching Related Activities:

1. At Marquette University
 - a. Doctoral Dissertation Committee
 - Adam Mallen 01/2012 – present
Department of Mathematics, Statistics, and Computer Science
 - Lingtau Zeng 03/2011 – present
Department of Mathematics, Statistics, and Computer Science
 - Nutta-on Promjunyakul 01/2010 – present
Department of Biomedical Engineering
 - b. Summer REU Program Mentor
 - Abby Miller
Mathematics Undergraduate, Wittenberg University
 - Shelby Cummings
Mathematics and Computer Science Undergraduate, Harding University

2. At Medical College of Wisconsin
 - a. Doctoral Dissertation Committee
 - Kevin M. Bennett 09/1998 – 04/2003 Ph.D.
 - Christopher P. Quarles 09/1999 – 08/2004 Ph.D.
 - Matthew Hayat 07/2001 – 09/2002 Ph.D.
 - Hong Wang 03/2002 – 01/2003 Ph.D.
 - Peter R. Kufahl 07/2004 – 12/2005 Ph.D.
 - Jun Xie 07/2007 – 12/2007 Ph.D.

 - b. Masters Dissertation Committee

 - c. Summer Program for Undergraduate Research (SPUR) Mentor
 - Alexander D. Cohen 06/2005-09/2005
Physics Undergraduate, University of Wisconsin, Madison, WI

 - Brian C. Kaster 06/2006-08/2006
Physics Undergraduate, Marquette University

 - Brian C. Kaster 01/2007 – 05/2007
Physics Undergraduate, Marquette University

 - Alexander D. Cohen 06/2007-08/2007
Physics Undergraduate, University of Wisconsin, Madison

3. At Other Universities
 - a. Doctoral Dissertation Committees
 - Daniel W. Adrian 12/2009 – 10/2011
Department of Statistics, Iowa State University, Ames, IA

4. At Conference Courses

Rowe, D.B. Course Instructor. Multivariate Modeling for fMRI. 2004 Institute of Electrical and Electronics Engineers (IEEE) International Symposium on Biomedical Imaging, Arlington, VA, 04/2004

XI. SERVICE ACTIVITIES DATA

1. Marquette Service Activities:

| | | |
|-------------------|--|-----------|
| 09/2011 – 08/2014 | University Board of Graduate Studies | Univ GS |
| 10/2011 – 3/ 2012 | Faculty Search Chair, Department of MSCS | Dept MSCS |
| 06/2011 – present | Graduate Chair (DGS) | Dept MSCS |
| 07/2010 – present | coDirector Bioinformatics MS Program | Dept MSCS |
| 2010F, 2011S | Comprehensive Exam Committee | Dept MSCS |
| 2011F, 2012 S | (Chair 2011-present) | |
| 09/2009 – present | Graduate Committee, Department of MSCS | Dept MSCS |

2. Medical College of Wisconsin Service Activities:

| | |
|-------------------|--|
| 07/2001 – 08/2009 | Director, Biophysics PhD Student Recruitment |
| 07/2001 – 08/2009 | Graduate Studies Council (GSC) |
| 06/2002 – 09/2002 | Ad hoc Advisory Committee on Information Technology to Advance Research Excellence |
| 08/2002 – 07/2006 | Chairman, Graduate Studies Council Student Awards Committee |
| 07/2002 – 08/2009 | Biophysics Steering Committee |
| 06/2007 – 08/2009 | Dean’s Appointee, Faculty Council Information Technology Committee |
| 06/2007 – 08/2009 | Dean’s Appointee, Faculty Council Information Technology Committee |

3. Other

| | |
|-------------------|--|
| 08/2000 – 07/2001 | External Curriculum Advisory Committee Department of Information and Computer Science Riverside Community College, Riverside, CA |
|-------------------|--|