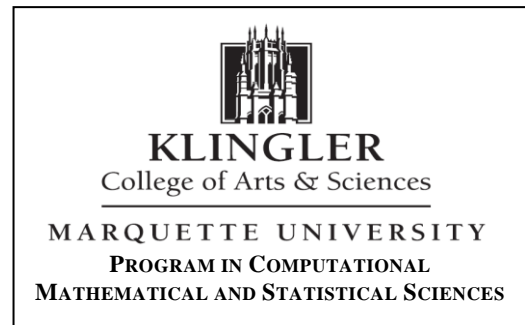


# ROWE, DANIEL B. , Ph.D., ASA Fellow

MSSC Director for Data Science Major and Minor

## Work Address

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## I. EDUCATION BEYOND SECONDARY SCHOOL

- 1/99-7/01 Postdoctoral Scholar in FMRI, California Institute of Technology, Pasadena, CA
- 12/1998 PhD in Applied Statistics (CS/EE Concentration), University of California, Riverside, CA
- 06/1995 MS in Statistics, University of California, Riverside, CA
- 06/1993 BS in Statistics, University of California, Riverside, CA
- 06/1992 BS in Physics (Minor in Applied Mathematics), University of California, Irvine, CA

### Continuing Education: +Denotes Only Attended

- 2019 LOMA Insurance Immersion for Data Scientists course
- 2017 MCW Annual MRI Safety Training (2007-2018)
- 2016 CITI: The Protection of Human Research Subjects-Refresher
- 2013 CITI: The Protection of Human Research Subjects-Refresher
- 2010 CITI: The Protection of Human Research Subjects-Refresher
- 2008 AALAS Learning Library CEU: Working with the IACUC
- 2008 CITI: Biomedical Investigators, Co-Investigators and Study Coordinators-Refresher
- 2008 CITI: The Protection of Human Research Subjects-Refresher
- 2007 fMRI: Basics to Cutting Edge, ISMRM MPCEC<sup>+</sup>
- 2006 MR Physics for Physicists, ISMRM MPCEC<sup>+</sup>
- 2005 CITI Course: Biomedical Investigators, Co-Investigators and Study Coordinators
- 2005 CITI Course: The Protection of Human Research Subjects
- 2005 MR Physics for Physicists, ISMRM MPCEC<sup>+</sup>
- 2004 Brain Function and fMRI, ISMRM MPCEC<sup>+</sup>
- 2003 Alzheimer's: What's New, What's True, Medical College of Wisconsin CME
- 2002 MR Physics for Physicists, ISMRM MPCECP<sup>+</sup>
- 1999 Short Course in fMRI, Medical College of Wisconsin CME

Research Skills: AFNI, C, FORTRAN, LATEX, MATLAB, Python, R, SAS, SPM, SPSS

**II. RANKS AT MARQUETTE**

Professor of Computational Mathematical and Statistical Sciences August 2014  
 Department of Mathematical and Statistical Sciences  
 \* Department name changed in Fall 2019.

Associate Professor of Computational Sciences August 2009  
 Department of Mathematics, Statistics, and Computer Science

ACADEMIC TENURE: Yes

FULL TIME FACULTY SERVICE AT MARQUETTE August 2009 –

**III. OTHER ACADEMIC EXPERIENCE**

11/2022 – Adjunct Professor, School of Mathematical and Statistical Sciences, Clemson University, Clemson SC.  
 10/2019 – Northwestern Mutual Data Science Institute Affiliated Faculty Member, Milwaukee, WI.  
 08/2019 – Full Member Faculty, Neuroscience Graduate Program, Marquette University.  
 08/2017 – Participating Faculty, Cognitive Science Major, Department of Philosophy, Marquette University.  
 08/2015 – 05/2016 Research Fellow, Statistical and Applied Mathematical Sciences Institute (SAMSI) and The University of North Carolina Chapel Hill, NC  
 08/2014 – Professor, Department of Mathematical and Statistical Sciences (Mathematics, Statistics, and Computer Science prior to Fall 2019), Marquette University, Milwaukee, WI  
 09/2014 – Adjunct Professor, Department of Biophysics Medical College of Wisconsin, Milwaukee, WI  
 09/2014 – Adjunct Professor, Department of Biostatistics Medical College of Wisconsin, Milwaukee, WI  
 05/2010 – Faculty of the MCW Neuroscience Research Center (<http://www.mcw.edu/NRC.htm>)  
 09/2012 – 09/2016 Adjunct Professor, Department of Electrical Engineering, University of Wisconsin-Milwaukee, Milwaukee, WI  
 08/2009 – 08/2014 Associate Professor, Department of Mathematics, Statistics, and Computer Science, Marquette University, Milwaukee, WI  
 09/2009 – 06/2014 Associate Adjunct Professor, Department of Biophysics Medical College of Wisconsin, Milwaukee, WI  
 09/2009 – 06/2014 Associate Adjunct Professor, Department of Biostatistics Medical College of Wisconsin, Milwaukee, WI  
 07/2008 – 08/2009 Adjunct Associate Professor, Department of Mathematical Sciences, University 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 – 09/2009 Associate Professor, Department of Biophysics (Primary) Medical College of Wisconsin, Milwaukee, WI  
 01/2002 – 06/2008 Adjunct Assistant Professor, Department of Mathematical Sciences,

10/2001 – 06/2008	University of Wisconsin, Milwaukee, WI Assistant Professor, Department of Biostatistics (Secondary), Medical College of Wisconsin Milwaukee, WI
07/2001 –	Faculty of the MCW Center for Imaging Research ( <a href="http://www.mcw.edu/CIR.htm">http://www.mcw.edu/CIR.htm</a> ) Medical College of Wisconsin, Milwaukee, WI
07/2001 – 06/2008	Assistant Professor, Department of Biophysics (Primary), Medical College of Wisconsin, Milwaukee, WI
07/1998 – 08/1998	Associate Instructor, Department of Statistics, University of California, Riverside, CA
08/1997 – 06/1998	Adjunct Instructor, Department of Mathematics, Riverside Community College, Riverside, CA
09/1996 – 12/1996	Lecturer, Department of Information and Decision Sciences, California State University, San Bernardino, CA

#### IV. OTHER WORK EXPERIENCE

05/2023 – 09/2023	Visiting Researcher, Direct Supply, Milwaukee, WI
05/1998 – 12/1998	Statistical Computing Consultant, Department of Academic Computing University of California, Riverside, CA

#### V. MEMBERSHIP IN PROFESSIONAL AND HONORARY SOCIETIES

01/2011 – present	Member, Canadian Applied and Industrial Mathematics Society
01/2007 – present	Elected Member, International Statistical Institute (ISI), <a href="http://isi.cbs.nl">http://isi.cbs.nl</a>
01/2007 – 12/2008	Full Member, Organization for Human Brain Mapping (OHBM)
01/2001 – present	Full Member, International Society for Magnetic Resonance in Medicine (ISMRM). Study groups: Current Issues in Brain Function, Electro- Magnetic Tissue Properties (formerly SWI).
01/2000 – 12/2000	Mathematical Association of America (MAA)
01/1999 – present	International Society for Bayesian Analysis (ISBA)
02/1995 – present	American Statistical Association (ASA), <b>Elected Fellow 2015</b> , Past and Present Sections Member of: Bayesian, Biometrics, Imaging, Astrostatistics Special Interest Group

#### VI. OFFICES HELD IN PROFESSIONAL AND HONORARY SOCIETIES

07/2015 – 06/2018	Director, Wisconsin Chapter of The American Statistical Association
01/2013 – 12/2013	Past Chair of Section on Statistics in Imaging (SI) of the ASA
01/2012 – 12/2012	<b>Founding Chair</b> of Section on Statistics in Imaging (SI) of The American Statistical Association (ASA)
01/2011 – 12/2011	Chair-Elect of Section on Statistics in Imaging (SI) of The American Statistical Association (ASA)
01/2010 – 12/2013	Council of the Chapters Representative of The American Statistical Association (ASA)
07/2006 – 06/2007	President, Milwaukee Chapter of The American Statistical Association
07/2005 – 06/2006	Vice President, Milwaukee Chapter of The American Statistical Association
07/2002 – 06/2005	Director, Milwaukee Chapter of The American Statistical Association

## VII. HONORS

2015	<b>Elected Fellow</b> of the American Statistical Association (ASA)
2007	<b>Elected Member</b> of the International Statistical Institute (ISI)
2005	Who's Who in Medical Sciences Education, Academic Keys in Medicine
1998	Who's Who in Colleges and Universities
1996	<i>OAK</i> National Leadership Honor Society
09/1996 – 06/1997	Outstanding Teaching Assistant Award
01/1997 – 12/1997	Patricia Roberts Harris Fellowship, U.S. Department of Education
01/1993 – 12/1994	Patricia Roberts Harris Fellowship, U.S. Department of Education
06/1990 – 08/1990	Lawrence Livermore National Laboratory (LLNL) REU Student Research Fellowship, U.S. Department of Energy; L Security Clearance
1989	Anfinson Physics Scholarship for Outstanding Lower Division Physics Students
1988	Golden Key National Honor Society

## VIII. SCHOLARLY PUBLICATIONS \*Corresponding Author, †Current or Former PhD Student

REFEREED JOURNAL PUBLICATIONS [https://www.mssc.mu.edu/~daniel/Daniel\\_B\\_Rowe\\_publications.html](https://www.mssc.mu.edu/~daniel/Daniel_B_Rowe_publications.html)

58. Adrian DW, Maitra R\*, **ROWE DB**: Rice-Distributed Autoregressive Time Series Modeling and Improved Activation Estimation in fMRI Studies. Annals of Applied Statistics, In Press, 2025.
57. Wang Z, **ROWE DB**, Li X, Brown AD\*: Efficient Fully Bayesian Approach to Brain Activity Mapping with Complex-Valued fMRI Data. Journal of Applied Statistics, In Press, 2025.
56. Mathew S†\*, Sra J, **ROWE DB**: Generation of Patient Specific Cardiac Chamber Models Using Interpretable Neural Networks for Electroanatomical Mapping. Journal of Statistical Theory and Practice, In Press, 2025.
55. Sakitis CJ†, **ROWE DB**\*: Bayesian merged utilization of GRAPPA and SENSE (BMUGS) for in-plane accelerated reconstruction increases fMRI detection power. Magnetic Resonance Imaging, In Press, 115(1):xxx-yyy, 2025.
54. Sakitis CJ†, **ROWE DB**\*: A Bayesian Approach to GRAPPA Parallel fMRI Image Reconstruction Increases SNR and Power of Task Detection. Annals of Applied Statistics, In Press, 19(1):xxx-yyy, 2025.
53. Sakitis CJ†, Brown DA, **ROWE DB**\*: A Bayesian Complex-Valued Latent Variable Model Applied to fMRI. Journal of the Royal Statistical Society– Series C, 74(1):100-125, 2025.
52. Wang Z†, **ROWE DB**, Li X, Brown AD\*: A Fully Bayesian Approach for Comprehensive Mapping of Magnitude and Phase Brain Activation in Complex-Valued fMRI Data. Magnetic Resonance Imaging, 109:271-185, 2024.
51. Yu C-H\*, Prado R, Ombao HC, **ROWE DB**: Bayesian Spatial Modeling via Kernel Convolutions on Complex-Valued fMRI Signals. Biometrics, 79(2):616-628, 2023.

50. Herzberg W†, **ROWE DB**, Hauptmann A, Hamilton SJ\*: Graph Convolutional Networks for Model-Based Learning in Nonlinear Inverse Problems. IEEE Transactions on Computational Imaging, 7:1341-1353, 2021.
49. Yu C-H, Prado R\*, Ombao HC, **ROWE DB**: A Bayesian variable selection approach yields improved brain activation from complex-valued fMRI. The Journal of the American Statistical Association, 113(524):1395-1410, 2018.
48. Adrian DW†, Maitra R\*, **ROWE DB**: Complex-valued time series modeling for improved activation detection in fMRI studies. The Annals of Applied Statistics, 12(3):1451-1478, 2018.
47. Risk BB\*, Kociuba MC†, **ROWE DB**: Impacts of simultaneous multislice acquisition on sensitivity and specificity in fMRI. NeuroImage, 172:538-553, 2018.
46. Sra J\*, Krum D, Choudhuri I, Belanger B, Palma M, Brodnick D, **ROWE DB**: Identifying the third dimension in 2D fluoroscopy to create 3D cardiac maps. JCI [Journal of Clinical Investigation] Insight, 1(21): e90453, 2016.
45. Kociuba MC†, **ROWE DB**\*: Complex-Valued Time-Series Correlation Increases Sensitivity in FMRI Analysis. Magnetic Resonance Imaging, 34(6):765-770, 2016.
44. **ROWE DB**\*, Bruce IP†, Nencka AS†, Hyde JS, Kociuba MC†: Separation of Parallel Encoded Complex-valued Slices (SPECS) from a Single Complex-valued Aliased Image. Magnetic Resonance Imaging, 34(3):359-369, 2016.
43. Karaman MM†, Bruce IP†, **ROWE DB**\*: Incorporating relaxivities to more accurately reconstruct MR images. Magnetic Resonance Imaging, 33(4):374-384, 2015.
42. Karaman MM†, Nencka AS†, Bruce IP†, **ROWE DB**\*: Quantification of the statistical effects of spatiotemporal processing of non-task fMRI data. Brain Connectivity, 4(9):649-661, 2014.
41. Bruce IP†, **ROWE DB**\*: Quantifying the statistical impact of GRAPPA in fcMRI data with a real-valued isomorphism. IEEE Transactions on Medical Imaging, 33(2):495-503, 2014.
40. Karaman MM†, Bruce IP†, **ROWE DB**\*: A statistical fMRI model for differential T<sub>2</sub>\* contrast incorporating T<sub>1</sub> and T<sub>2</sub>\* of gray matter. Magnetic Resonance Imaging, 32(1):9-27, 2014.
39. Adrian DW†, Maitra R\*, **ROWE DB**: Ricean versus Gaussian modelling in magnitude fMRI analysis – Added complexity with few practical benefits. Stat (ISI's society journal), 2(1):303-316, 2013.
38. Mazaheri Y\*, Afaq A, **ROWE DB**, Lu Y, Shukla-Dave A, Grover J: Diffusion-weighted MRI of the prostate: Improved robustness with stretched exponential modeling. Journal of Computer Assisted Tomography, 36(6):695-703, 2012.
37. Bruce IP†, Karaman MM†, **ROWE DB**\*: The SENSE-Isomorphism Theoretical Image Voxel Estimation (SENSE-ITIVE) model for reconstruction and observing statistical properties of reconstruction operators. Magnetic Resonance Imaging, 30(8):1143-1166, 2012.

36. Hahn AD†, **ROWE DB\***: Physiologic noise regression, motion regression, and TOAST dynamic field correction in complex-valued fMRI time series, NeuroImage, 59(3):2231-2240, 2012.
  35. Hahn AD†, Nencka AS†, **ROWE DB\***: Enhancing the utility of complex-valued fMRI detection of neurobiological processes through post-acquisition estimation and correction of dynamic B<sub>0</sub> errors and motion. Human Brain Mapping, 33(2):288-306, 2012.
  34. Bruce IP†, Karaman MM†, **ROWE DB\***: A statistical examination of SENSE image reconstruction via an isomorphism representation. Magnetic Resonance Imaging, 29(9):1267-1287, 2011.
  33. Hettinger PC, Li R, Yan J-G, Matloub HS, Cho YR, Pawela CP, **ROWE DB**, Hyde JS\*: Long-term vascular access ports as a means of sedative administration in a rodent fMRI survival model. Journal of Neuroscience Methods, 200(2):106-112, 2011.
  32. Hernandez-Garcia L\*, Jahanian H, **ROWE DB**: Quantitative analysis of arterial spin labeling fMRI data using a general linear model. Magnetic Resonance Imaging, 28(7):919-927, 2010.
  31. **ROWE DB\***, Hahn AD†, Nencka AS†: Functional magnetic resonance imaging brain activation directly from *k*-space. Magnetic Resonance Imaging, 27(10):1370-1381, 2009.
- Pre Marquette Below/Post Marquette Above
30. Hernandez-Garcia L\*, Vazquez AL, **ROWE DB**: Complex-valued analysis of arterial spin labeling based fMRI signals. Magnetic Resonance in Medicine, 62(6):1597-1608, 2009.
  29. **ROWE DB\***: Magnitude and phase signal detection in complex-valued fMRI data. Magnetic Resonance in Medicine, 62(5):1356-1357, 2009.
  28. **ROWE DB\***, Haacke EM: MAgnitude and PHase Thresholding (MAPHT) of noisy complex-valued magnetic resonance images. Magnetic Resonance Imaging, 27(9):1271-1280, 2009.
  27. Nencka AS†, Hahn AD†, **ROWE DB\***: A Mathematical Model for Understanding the STatistical effects of *k*-space (AMMUST-*k*) preprocessing on observed voxel measurements in fcMRI and fMRI. Journal of Neuroscience Methods, 181(2):268-282, 2009.
  26. Zhu H\*, Li Y, Ibrahim JG, Shi X, An H, Chen Y, Lin W, **ROWE DB**, Peterson BS: Regression models for identifying noise sources in magnetic resonance images. Journal of the American Statistical Association, 104(486):623-637, 2009.
  25. Hahn, AD†, Nencka AS†, **ROWE DB\***: 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.
  24. Logan BR, Geliaskova MP, **ROWE DB\***: An evaluation of spatial thresholding techniques in fMRI analysis. Human Brain Mapping, 29(12):1379-1389, 2008.
  23. Xu Y, Xu G, Wu G, Antuono P, **ROWE DB**, Li S-J\*: The phase shift index for marking abnormal functional asynchrony in Alzheimer's patients by fMRI. Magnetic Resonance Imaging, 26(3):379-392, 2008.

22. Kufahl PR, **ROWE DB\***, Li S-J: Processing the acute cocaine fMRI response in human brain with Bayesian source separation. Digital Signal Processing, 17(5):965-978, 2007.
21. Xu Y, Wu G, **ROWE DB**, 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. Magnetic Resonance Imaging, 25(7):1079-1088, 2007.
20. Nencka AS†, **ROWE DB\***: Reducing the unwanted draining vein BOLD contribution in fMRI with statistical post-processing methods. NeuroImage, 37(1):177-188, 2007.
19. Zhu H\*, Ibrahim JG, Tang N, **ROWE DB**, Hao X, Bansal R, Peterson BS: A Statistical analysis of brain morphometric measures: a wild bootstrap method. IEEE Transactions in Medical Imaging, 26(7): 954-966, 2007.
18. **ROWE DB\***, Meller CP, Hoffmann RG: Characterizing phase-only fMRI data with an angular regression model. Journal of Neuroscience Methods, 161(2):331-341, 2007.
17. Grether DM\*, Plott CR, **ROWE DB**, Sereno MI, Allman JM: Mental processes and strategic equilibration: An fMRI study of selling strategies in second price auctions. Experimental Economics, 10(2):105-122, 2007.
16. **ROWE DB\***, Nencka AS†, Hoffmann RG: Signal and noise of Fourier reconstructed fMRI data. Journal of Neuroscience Methods, 159(2):361-369, 2007.
15. **ROWE DB\***, Hoffmann, R.G.: Multivariate statistical analysis in fMRI. IEEE Engineering in Medicine and Biology, 25(2):60-64, 2006.
14. **ROWE DB\***: Modeling both the magnitude and phase of complex-valued fMRI data. NeuroImage, 25(4):1310-1324, 2005.
13. **ROWE DB\***: Parameter estimation in the magnitude-only and complex-valued fMRI data models. NeuroImage, 25(4):1124-1132, 2005.
12. **ROWE DB\***, Logan BR: Complex fMRI analysis with unrestricted phase is equivalent to a magnitude-only model. NeuroImage, 24(2):603-606, 2005.
11. **ROWE DB\***, Logan BR: A complex way to compute fMRI activation. NeuroImage, 23(3):1078-1092, 2004.
10. Logan BR, **ROWE DB\***: An evaluation of thresholding techniques in fMRI analysis. NeuroImage, 22(1):95-108, 2004.
9. **ROWE DB\***: Significant fMRI neurologic synchrony using Monte Carlo methods. Monte Carlo Methods and Applications , 9(4):367-385, 2003.
8. **ROWE DB\***: On using the sample mean in Bayesian factor analysis. Journal of Interdisciplinary Mathematics , 6(3):319-329, 2003.

7. Bennett KM, Schmainda KM, Bennett RT, **ROWE DB**, Lu H, Hyde JS\*: Characterization of continuously distributed restricted water diffusion rates with a stretched-exponential model. Magnetic Resonance in Medicine 50(4):727-734, 2003.
6. **ROWE DB**\*: Bayesian source separation of functional sources. Journal of Interdisciplinary Mathematics, 6(2):129-138, 2003.
5. **ROWE DB**\*: Jointly distributed mean and mixing coefficients for Bayesian source separation using MCMC and ICM. Monte Carlo Methods and Applications, 8(4):395-403, 2002.
4. **ROWE DB**\*: A Bayesian approach to blind source separation. Journal of Interdisciplinary Mathematics, 5(1):49-76, 2002.
3. **ROWE DB**\*: Bayesian source separation for reference function determination in fMRI. Magnetic Resonance in Medicine, 46(2):374-378, 2001.
2. **ROWE DB**\*: Factorization of separable and patterned covariance matrices for Gibbs sampling. Monte Carlo Methods and Applications., 6(3):205-210, 2000.
1. Heinsen AP\*, **ROWE DB**: A comparison of CF<sub>4</sub> + hydrocarbon fast gases for drift chambers and straw tubes. Nuclear Instrumentation and Methods Phys. Res. Section A, 321(1-2):165-171, 1992.

#### REFEREED JOURNAL MANUSCRIPTS IN SUBMISSION

62. Mathew S†\*, **ROWE DB**: Pruning a Neural Network Using Bayesian Inference. In submission to IEEE Transactions on Neural Networks and Learning Systems, 2025.
61. Bodenschatz JC, **ROWE DB**: Simulation and Harmonic Analysis of  $k$ -Space Readout (SHAKER). In submission to the Journal of Computational and Graphical Statistics, 2025.
60. Xu K†, **ROWE DB**\*: A Bayesian CAIPIVAT Approach with Through-Plane Acceleration to Enhance Efficiency of Simultaneously Encoded Slice Acquisition in FMRI. In submission to Annals of Applied Statistics, 2025.
59. An D, Kriegel A, Bergom C, Kumar S, Himburg H, Fish B, Klawikowski S, **ROWE DB**, Lenarczyk M, Baker J, Ibrahim E-S\*: Radiation-induced Cardiotoxicity in Hypertensive Salt-Sensitive Rats. A Feasibility Study. In submission to the Journal of Imaging, 2025.

#### JOURNAL MANUSCRIPTS IN PROGRESS (Tentative Titles)

68. Swanson T\*, **ROWE DB**: Bayesian Statistical Prediction of Patent Application Grant Rate Timelines for Patent Prosecution. In Revision 2025.
67. Bodenschatz JC, **ROWE DB**: Bayesian Estimation and Reconstruction of Under Sampled Non-Cartesian  $k$ -Space for FMRI. In Preparation 2025.
66. Xu K†, **ROWE DB**: A Image Shifted GRAPPA Two-Dimensional Acceleration Technique to Enhance Efficiency of Simultaneously Encoded Slice Acquisition. In Preparation 2025.



65. Adrian DW, Maitra R, **ROWE DB**: Modeling Task-Related Magnitude And/Or Phase Activation in Complex-Valued FMRI. In Preparation 2025.
64. Bodenschatz JC, **ROWE DB**: Bayesian Magnitude and Phase Estimation of Non-Cartesian  $k$ -Space for FMRI. In Preparation 2025.
63. Xu K†, **ROWE DB**: A CAIPI-VAT Approach with In- and Through-Plane Acceleration to Enhance Efficiency of Simultaneously Encoded Slice Acquisition. In Preparation 2025.

#### BOOKS, MONOGRAPHS, CHAPTERS & REVIEWS

7. **ROWE DB**: The Fourier transform: A technical understanding with applications to MRI. (Status: In preparation.)
6. **ROWE DB**: Image Reconstruction in Functional MRI. In Handbook of Statistical Methods for Brain Signals and Images, p. 205-232. Editors Ombao H., Lindquist M., Thompson W., Aston J. Chapman & Hall/CRC Press. November 2016. ISBN: 978-1-4822-20971  
<https://www.crcpress.com/Handbook-of-Neuroimaging-Data-Analysis/Ombao-Lindquist-Thompson-Aston/9781482220971>
5. Biswal B, Pawela C, Grist T, Meyerand ME, Nencka AS, DeYoe EA, Li SJ, **ROWE DB**, Kiviniemi V, Cox RW, Bodurka J, Ogawa S, Koretsky A, Hu X, Kim SG: Personal reflections on James S. Hyde. Brain Connect., 4(9):631-635, 2014. TC=1, PMID: 25415836
4. **ROWE DB**, Jiang J, Haacke EM: 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
3. Barth M, **ROWE DB**: 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
2. **ROWE DB**: Multivariate Bayesian Statistics: Models for Source Separation and Signal Unmixing. Chapman & Hall/CRC Press, Boca Raton, FL, 2003. ISBN: 1584883189
1. **ROWE DB**: Correlated Bayesian factor analysis. Ph.D. Thesis, Department of Statistics, University of California, Riverside, 1998.

## CONFERENCE PROCEEDINGS/ABSTRACTS

91. **ROWE DB:** Bayesian k-Space Estimation Decreases Image Noise and Increased Activation Detection. Proc. Joint Stat. Meet., Section on Bayesian Statistical Science, Portland, OR, 2024. doi.org/10.5281/zenodo.14020584
90. Sakitis CJ, **ROWE DB:** A Bayesian Approach to Fused GRAPPA and SENSE MR Image Reconstruction. Proc. Joint Stat. Meet. Section on Statistics in Imaging, Portland, OR, 2024. doi.org/10.5281/zenodo.14015226
89. Xu K, **ROWE DB:** A CAIPI Approach to Decrease Geometry Factor for Simultaneous Multi-Slice Technique in FMRI. Proc. Joint Stat. Meet., Section on Statistics in Imaging, Portland, OR, 2024. doi.org/10.5281/zenodo.14014372
88. Adrian DW, Maitra R, **ROWE DB:** Magnitude and Phase Activation Detection in Functional MRI Time Series. Proc. Joint Stat. Meet., Section on Statistics in Imaging, Portland, OR, 2024. doi.org/10.5281/zenodo.14010492
87. **ROWE DB:** Statistics of Intrinsic FMRI Data. Proc. Joint Stat. Meet., Section on Imaging, Toronto Ontario, Canada, 2023. doi.org/10.5281/zenodo.10002334
86. Sakitis CJ, **ROWE DB:** Formal Bayesian Approach to GRAPPA Image Reconstruction. Proc. Joint Stat. Meet., Section on Imaging, Toronto Ontario, Canada, 2023. doi.org/10.5281/zenodo.10002387
85. Xu K, **ROWE DB:** Increased SNR using Simultaneous Encoded Complex-Valued Slices with Through-Plane Acceleration in FMRI. Proc. Joint Stat. Meet., Section on Imaging, Toronto Ontario, Canada, 2023. doi.org/10.5281/zenodo.10002017
84. Sakitis CJ, Brown AD, **ROWE DB:** A Full Bayesian Approach to SENSE Image Reconstruction Increases Brain Tissue Contrast and Reduces Noise for More Accurate Statistical Analysis. Proc. Joint Stat. Meet., Section on Imaging, 26:1380-1398, Washington DC, 2022.
83. **ROWE DB:** Utilizing Baseline Information in Addition to Task-Related Information in FMRI. Proc. Joint Stat. Meet., Section on Imaging, 26:1399-1414, Washington DC, 2022.
82. Sakitis CJ, Brown AD, **ROWE DB:** A Full Bayesian Approach to SENSE Image Reconstruction Increases Brain Tissue Contrast and Reduces Noise Leading to More Statistically Significant Task Activation. American Statistical Association Statistical Methods in Imaging Conference, Nashville, TN, 2022.
81. Sakitis CJ, Brown AD, **ROWE DB:** A Formal Bayesian Approach to SENSE Image Reconstruction. Proc. Joint Stat. Meet., Section on Imaging, 25: 1332-1358, Seattle, WA (Virtual), 2021.
80. **ROWE DB:** Utilizing Baseline and Differential Information to Improve FMRI Brain Activation. Proc. Joint Stat. Meet., Section on Imaging, 24:2326-2332, Philadelphia, PA (Virtual) 2020.

79. Adrian DW, Maitra R, **ROWE DB**: Improved activation detection via Rice-distributed fMRI time series modeling. Proc. Joint Stat. Meet., Section on Imaging, 21:1052-1062, Baltimore, MD, 2017.
78. **ROWE DB**: A Bayesian approach to SENSE Image Reconstruction in FMRI. Proc. Joint Stat. Meet., Statistical Society of Canada, 21:378-392, Baltimore, MD, 2017.
77. Liu KK, **ROWE DB**: Image Registration Techniques Alter Image Properties in fMRI. Proc. Joint Stat. Meet., Section on Imaging, 20:1879-1892, Chicago, IL, 2016.
76. Kociuba MC, **ROWE DB**: Complex-Valued Correlation Increases Sensitivity and Specificity in the Analysis of FMRI Time Series. Proc. Intl. Soc. Magn. Reson. Med., 24:3830, Singapore, 2016.
75. Kociuba MC, **ROWE DB**: CSF Signal as a Complex-Valued RETROICOR Regressor Removes Unwanted Physiological Signal and Increases the Accuracy of Spatial Correlation in Complex-Valued fMRI. Proc. Intl. Soc. Magn. Reson. Med., 24:3817, Singapore, 2016.
74. Kociuba MC, **ROWE DB**: Multicoil Separation of Parallel Encoded Complex-valued Slices (mSPECS) with Hadamard Aliasing and Bootstrap Calibration Minimizes Spatial and Temporal Correlations for Faster Brain Observation. ISMRM Workshop on Simultaneous Multi-Slice Imaging: Neuroscience & Clinical Applications, 13, Pacific Grove, CA, USA, 2015.
73. **ROWE DB**, Kociuba MC: Single Coil Multi-Slice Aliasing and Separation for FMRI. Proc. Joint Stat. Meet., Section on Imaging, 20:2951-2963, Seattle, WA, USA, 2015.
72. Paulson EM, **ROWE DB**: Induced Correlation Resulting from Respiration and Motion Correction Processing Operations in fMRI. Proc. Joint Stat. Meet., Section on Imaging, 20:2661-2665, Seattle, WA, USA, 2015.
71. Liu KK, **ROWE DB**: Global Intensity Normalization Induces Correlation in fMRI. Proc. Joint Stat. Meet., Section on Imaging, 20:2053-2064, Seattle, WA, USA, 2015.
70. Kociuba MC, **ROWE DB**: False Activation in Partially Sampled Dual Task fMRI. Proc. Joint Stat. Meet., Section on Imaging, 20:1682-1690, Seattle, WA, USA, 2015.
69. Adrian DW, Maitra R, **ROWE DB**: Improved activation detection via complex-valued AR(p) modelling of fMRI voxel time series. Proc. Joint Stat. Meet., Section on Imaging, 20:42-56, Seattle, WA, USA, 2015.
68. Kociuba MC, **ROWE DB**: Multicoil Separation of Parallel Encoded Complex-valued Slices (mSPECS) with Hadamard Aliasing and Bootstrap Calibration Minimizes Spatial and Temporal Correlations for Faster Brain Observation. ISMRM Workshop on Simultaneous Multi-Slice Imaging: Neuroscience & Clinical Applications, 13, Pacific Grove, CA, USA, 2015.
67. Kociuba MC, **ROWE DB**: Signal Processing Spreads a Voxel's Temporal Frequency Task-Activated Peak and Induces Spatial Correlations in Dual-Task Complex-Valued fMRI. Proc. Intl. Soc. Magn. Reson. Med., 23:2476, Toronto, Canada, 2015.

66. Kociuba MC, **ROWE DB**: Processing Induced Spatial Correlations Are Quantified With A Temporal Frequency Representation in Complex-Valued fMRI. Proc. Intl. Soc. Magn. Reson. Med., 23:2070, Toronto, Canada, 2015.
65. Karaman MM, Nencka AS, **ROWE DB**: Improving the Accuracy of fMRI and fcMRI Analysis by Accounting for Spatiotemporal Processing Induced Correlation. Proc. Joint Stat. Meet., Section on Imaging, 19:3726-3740, Boston, MA, USA, 2014.
64. Karaman MM, **ROWE DB**, Nencka AS: Decreasing False Positives and Negatives from Spatio-Temporal Processing of FMRI. Proc. Intl. Soc. Magn. Reson. Med., 22:4144, Milan, Italy, 2014.
63. Bruce IP, Muftuler LT, **ROWE DB**: Spatial Normalization Can Morph RF Coils into Brain Region Optimized Geometries for fcMRI Studies. Proc. Intl. Soc. Magn. Reson. Med., 22:1328, Milan, Italy, 2014.
62. **ROWE DB**: Separation of several aliased images to increase volume speed. Proc. Joint Stat. Meet., Section on Imaging, 18:3796-3805, Montreal, Canada, August, 2013.
61. **ROWE DB**, Nencka AS, Jesmanowicz A, Hyde JS: Separation of two simultaneously encoded slices with a single coil. Proc. Intl. Soc. Magn. Reson. Med., 21:123, Salt Lake City, Utah, USA, 2013.
60. Karaman MM, Nencka AS, **ROWE DB**: Temporal processing of fMRI data induces functional correlations and potentially alters functional activations. Proc. Intl. Soc. Magn. Reson. Med., 21:2232, Salt Lake City, Utah, USA, 2013.
59. Karaman MM, Bruce IP, **ROWE DB**: Incorporation of gray matter T1 and T2\* improves brain activation statistics in fMRI. Proc. Intl. Soc. Magn. Reson. Med., 21:2285, Salt Lake City, Utah, USA, 2013. Selected for Magna Cum Laude Award to top 15%.
58. Bruce IP, Muftuler LT, **ROWE DB**: SENSE induced correlations are used to optimize RF coil design for specific fcMRI studies. Proc. Intl. Soc. Magn. Reson. Med., 21:2733, Salt Lake City, Utah, USA, 2013.
57. Bruce IP, **ROWE DB**: Artificial correlations induced by SENSE and GRAPPA corrupt fcMRI conclusions. Proc. Intl. Soc. Magn. Reson. Med., 21:2229, Salt Lake City, Utah, USA, 2013.
56. **ROWE DB**, Nencka AS: Statistical image reconstruction of two simultaneously excited fMRI slices, Proc. Joint Stat. Meet., Biometrics Section, 17:201-216, San Diego, CA, USA, 2012.
55. Karaman MM, **ROWE DB**: Incorporating relaxivities to more accurately reconstruct magnetic resonance images. Sixth International Workshop on Statistical Analysis of Neuronal Data (SAND6), University of Pittsburgh, Pittsburgh, PA, 2012. <http://sand.stat.cmu.edu/>
54. Nencka AS, Hahn AD, **ROWE DB**: Phase regression and dynamic B-field correction reduce global time series correlations and increase functional correlations. Proc. Second Biennial International Conference on Resting State Connectivity, Medical College of Wisconsin, Milwaukee, Wisconsin, F040, 2010. <http://www.restingstate.com/>

53. **ROWE DB**, Bruce IP: 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, F052, 2010. <http://www.restingstate.com/>
52. Adrian DW, Maitra R, **ROWE DB**: Time series models for computing activation in fMRI. Fifth International Workshop on Statistical Analysis of Neuronal Data (SAND5), University of Pittsburgh, Pittsburgh, PA, USA, 2010. <http://sand.stat.cmu.edu/>
51. Nencka AS, Shefchik D, Hyde JS, Jesmanowicz A, **ROWE DB**: 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.
50. Mazaheri Y, **ROWE DB**, Zhang J, Hricak H, Koutcher JA: 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.
49. Hahn AD, Nencka AS, **ROWE DB**: 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.
48. Hahn AD, Nencka AS, **ROWE DB**: 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.
47. Hahn AD, **ROWE DB**: Methodology for robust motion correction of complex-valued fMRI time series. Proc. Intl. Soc. Magn. Reson. Med., 18:3051, Stockholm, Sweden, 2010.
46. Hoffmann RG, Simpson P, Li S-H, Yan K, DeYoe EA, **ROWE DB**: A Dirichlet Process Models for Changes in the fMRI Visual Field. International Biometrics Society Eastern North American Region, Miami Beach, FL, USA, 2009.
45. Hernandez-Garcia L, **ROWE DB**: Quantitative general linear model analysis of arterial spin labeling data. Proc. Organization for Hum. Brain Mapp. 15<sup>th</sup> Annual Meeting, Neuroimage 47 (Supplement 1), S82:530, San Francisco, CA, USA, 2009.
- Pre Marquette Below/Post Marquette Above
44. **ROWE DB**, Haacke EM: Complex-valued voxel thresholding increases image contrast in SWI. Proc. Intl. Soc. Magn. Reson. Med., 17:2923, Honolulu, HI, USA, 2009.
43. Hahn AD, Nencka AS, **ROWE DB**: Dynamic magnetic field corrections improve phase-only fMRI activations. Proc. Intl. Soc. Magn. Reson. Med., 17:2789, Honolulu, HI, USA, 2009.
42. **ROWE DB**, Nencka AS: Induced correlation in fMRI magnitude data from k-space preprocessing. Proc. Intl. Soc. Magn. Reson. Med., 17:1721, Honolulu, HI, USA, 2009.
41. **ROWE DB**, Hernandez-Garcia L: An analytic magnitude and phase fMRI activation model applied to ASL. Proc. Intl. Soc. Magn. Reson. Med., 17:1716, Stockholm, Sweden, 2009.

40. Nencka AS, Hahn AD, **ROWE DB**: Phase regression and dynamic B-field correction reduce global time series correlations and increase functional correlations. Proc. Intl. Soc. Magn. Reson. Med., 17:1663, Stockholm, Sweden, 2009.
39. Hoffmann RG, Pajewski NM, DeYoe EA, and **ROWE DB**: A non-parametric mixture model for the fMRI visual field map. Proc. Joint Stat. Meet., Statistical Computing Section, 13:3782-3789, Denver, Colorado, USA, 2008.
38. **ROWE DB**, Haacke EM: Thresholding complex magnetic resonance images using magnitude and phase. Proc. Joint Stat. Meet., Biometrics Section, 13:1922-1929, Denver, Colorado, USA, 2008.
37. Hernandez-Garcia L, **ROWE DB**: Phase modeling in arterial spin Labeling fMRI. Proc. Organization for Hum. Brain Mapp. 14<sup>th</sup> Annual Meeting, Neuroimage 41(Supplement 1), S90:519, Melbourne, Australia, 2008.
36. Hahn AD, Nencka AS, **ROWE DB**: Dynamic compensation of B0 field inhomogeneities restores complex fMRI time series activation power. Proc. Intl. Soc. Magn. Reson. Med., 16:1251, Toronto, Canada, 2008.
35. Nencka AS, Paulson ES, **ROWE DB**: Complex constant phase statistical model reduces venous contributions to BOLD cortical activations in the visual cortex. Proc. Intl. Soc. Magn. Reson. Med., 16:2338, Toronto, Canada, 2008.
34. Nencka AS, Hahn AD, **ROWE DB**: Redundant spatial harmonic information in zeugmatography with linear encoding (R-SHIZLE) theoretically encodes intra-acquisition decay. Proc. Intl. Soc. Magn. Reson. Med., 16:3157, Toronto, Canada, 2008.
33. Nencka AS, Hahn AD, **ROWE DB**: The use of three navigator echoes in cartesian EPI reconstruction reduces Nyquist ghosting. Proc. Intl. Soc. Magn. Reson. Med., 16:3032, Toronto, Canada, 2008.
32. Nencka AS, **ROWE DB**: Apodization and smoothing alter voxel time series correlations. Proc. Intl. Soc. Magn. Reson. Med., 16:2457, Toronto, Canada, 2008.
31. **ROWE DB**: FMRI statistical brain activation from k-space data. Proc. Joint Stat. Meet., Biometrics Section, 12:107-114, Salt Lake City, UT, USA, 2007.
30. Hoffmann RG, Hoffmann TJ, DeYoe EA, **ROWE DB**: Estimation of pre-post surgical changes in the fMRI visual field map. Proc. Joint Stat. Meet., Biometrics Section, 12:383-388, Salt Lake City, UT, USA, 2007.
29. **ROWE DB**: FMRI activation in image space from  $k$ -space data. Proc. Organization for Hum. Brain Mapp. 13<sup>th</sup> Annual Meeting, NeuroImage 37(Supplement 1), S114:377, Chicago, IL, USA, 2007.
28. Nencka AS, **ROWE DB**: Image space correlations induced by  $k$ -space processes. Proc. Organization for Hum. Brain Mapp. 13<sup>th</sup> Annual Meeting, Neuroimage 37 (Supplement 1), S55:284, Chicago, IL, USA, 2007.

27. Logan BR, Geliaskova MP, **ROWE DB**, Laud PW: A Bayesian spatial mixture model for fMRI analysis. International Conference on Multiple Comparison Procedures, Vienna, Austria. 2007.
26. Hoffmann, RG, Macjenskii MJ, DeYoe EA, **ROWE DB**: Spatial statistical methods for detecting changes in visual field maps, Proc. Organization for Hum. Brain Mapp., 13<sup>th</sup> Annual Meeting, Neuroimage 37(Supplement 1), S45:311, Chicago, IL, USA, 2007.
25. **ROWE DB**, Li S-J: Two fMRI indices as markers for Alzheimer's disease. Proc. Intl. Soc. Magn. Reson. Med., 15:3728, Berlin, Germany, 2007.
24. Nencka AS, **ROWE DB**: Constant phase statistical method better localizes activations than phase regressor statistical method. Proc. Intl. Soc. Magn. Reson. Med., 15:3198, Berlin, Germany, 2007.
23. **ROWE DB**, Hernandez-Garcia L, Lee GR: Complex analysis of ASL fMRI data yields more focal activation. Proc. Intl. Soc. Magn. Reson. Med., 15:1422, Berlin, Germany, 2007.
22. Hoffmann RG, Maciejewski MJ, **ROWE DB**, DeYoe EA: Assessing changes in the fMRI visual field map after surgery for epilepsy, Proc. Intl. Biometrics Conference, Montreal, Quebec, Canada, 2006.
21. **ROWE DB**, Nencka AS, Hoffmann RG: Intrinsic voxel correlation in fMRI. Proc. Joint Stat. Meet., Biometrics Section, 11:338-345, Seattle, WA, USA, 2006.
20. Hoffmann RG, Maciejewski MJ, Savarapian P, DeYoe EA, **ROWE DB**: Methods for assessing changes in the fMRI visual field map after surgery. Proc. Joint Stat. Meet., Biometrics Section, 11: 2062-2067, 2006.
19. Kufahl PR, **ROWE DB**, Li S-J: Bayesian source separation of drug-induced BOLD responses with correlated reference functions. Proc. Intl. Soc. Magn. Reson. Med., 14:1160, Seattle, WA, USA, 2006.
18. Nencka AS, **ROWE DB**: Theoretical results demonstrate fundamental differences in venous BOLD reducing activation methods. Proc. Intl. Soc. Magn. Reson. Med., Seattle, WA, USA, 14:3269, 2006.
17. **ROWE DB**, Nencka AS: Complex activation suppresses venous BOLD in GE-EPI fMRI data. Proc. Intl. Soc. Magn. Reson. Med., 14:2834, Seattle, WA, USA, 2006.
16. Hoffmann RG, Deyoe EA, Brefcynski JA, Thakur M, **ROWE DB**: Spatial-temporal models of visual field pathology. Proc. Joint Stat. Meet., Biometrics Section, 10:223-229, Minneapolis, MN, USA, 2005.
15. Meller CP, **ROWE DB**: An angular regression model for phase-only fMRI data. Proc. Am. Stat. Assoc., Biometrics Section, 10:316-323, Minneapolis, MN, USA, 2005.
14. **ROWE DB**, Nencka AS: Magnitude and phase modeling for fMRI brain activation. Proc. Am. Stat. Assoc., Biometrics Section, 10:377-382, Minneapolis, MN, USA, 2005.

13. Nencka AS, **ROWE DB**: Complex constant phase activation model removes venous BOLD contribution in fMRI. Proc. Intl. Soc. Magn. Reson. Med., 13:495, Miami Beach, FL, USA, 2005.
12. Kufahl PR, **ROWE DB**, Li, S-J: Exploring intervoxel dependencies in human pharmacological fMRI data. Proc. Intl. Soc. Magn. Reson. Med., 13:1577, Miami Beach, FL, USA, 2005.
11. **ROWE DB**: Complex activation is more focal and concentrated to parenchymal tissue. Proc. Intl. Soc. Magn. Reson. Med., 13:1575, Miami Beach, FL, USA, 2005.
10. **ROWE DB**: A complex data method to compute fMRI activation. Proc. Joint Stat. Meet., Biometrics Section, 9:440-447, Toronto, Canada, 2004.
9. Logan BR, **ROWE DB**: A comparison of fMRI activation thresholding methods. Proc. Intl. Soc. Magn. Reson. Med., 12:1095, Kyoto, Japan, 2004.
8. **ROWE DB**, Logan BR: An fMRI activation method using complex data. Proc. IEEE International Symposium on Biomedical Imaging, 876-879, Arlington, VA, USA, 2004.
7. **ROWE DB**: Measures of fMRI neurologic synchrony. Joint Stat. Meetings, Session 249: Brain Imaging #300749, San Francisco, CA, USA, 2003.
6. Kufahl, PR, **ROWE DB**, Li S-J: A Bayesian hemodynamic drug response model for fMRI analysis. Proc. Intl. Soc. Magn. Reson. Med., 11:1907, Toronto, Ontario, Canada, 2003.
5. Bennett KM, Schmainda KM, **ROWE DB**, Rebro K, Hyde JS: A stretched-exponential model of sub-voxel diffusion rates in cerebral tissue. Proc. Intl. Soc. Magn. Reson. Med., 11:1479, Toronto, Ontario, Canada, 2003.
4. Bennett KM, Hyde JS, Rebro K, **ROWE DB**, Rand S, Schmainda KM: Detection of brain tumor invasion. Proc. Intl. Soc. Magn. Reson. Med., 1:1285, Toronto, Ontario, Canada, 2003.
3. Stroyny AL, **ROWE DB**: A Re-examination of some popular latent factor estimation methods. The Fifteenth Annual Investment Seminar, Cambridge, UK, September 8-11, 2002. 25 pages
2. Morgan SW, **ROWE DB**: The effect of detrending when computing regression coefficients in block design fMRI. Proc. Intl. Soc. Magn. Res. Med., 10:1424, Honolulu, HI, USA, 2002.
1. **ROWE DB**: Bayesian source separation of fMRI signals. AIP Conference Proceedings: Bayesian inference and maximum entropy methods in science and engineering, 20<sup>th</sup> International Workshop, Gif-sur-Yvette, France, 2000 (Ali Mohammad-Djafari, ed.). American Institute of Physics, Melville, NY, 2001), 375-387.

#### NON-REFEREED JOURNAL PUBLICATIONS/ORIGINAL PAPERS

24. Zhu H, Li Y, Ibrahim JG, Shi X, An H, Chen Y, Lin W, **ROWE DB**, Peterson BG: 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.



23. **ROWE DB**: Can we compute fMRI brain activation directly from k-space? Technical Report 54, Division of Biostatistics, Medical College of Wisconsin, Milwaukee, WI, 2005.
22. **ROWE DB**, Hoffmann RG: Models and applications of multivariate statistical analysis in fMRI. Technical Report 52, Division of Biostatistics, Medical College of Wisconsin, Milwaukee, WI, 2005.
21. **ROWE DB**, Hoffmann RG: Correlated noise of Fourier reconstructed fMRI data. Technical Report 51, Division of Biostatistics, Medical College of Wisconsin, Milwaukee, WI, 2005.
20. Meller CP, **ROWE DB**: A nonlinear model for phase-only fMRI data. Technical Report 50, Division of Biostatistics, Medical College of Wisconsin, Milwaukee, WI, 2004.
19. **ROWE DB**: 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.
18. **ROWE DB**, Logan BR: A complex fMRI activation model with a temporally varying phase. Technical Report 47, Division of Biostatistics, Medical College of Wisconsin, Milwaukee, WI, 2004.
17. **ROWE DB**: On estimating the parameters of the complex fMRI time course model. Technical Report 46, Division of Biostatistics, Medical College of Wisconsin, Milwaukee, WI, 2004.
16. Grether DM, Plott CR, **ROWE DB**, Sereno MI, Allman JM: 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.
15. **ROWE DB**, Logan BR: An fMRI activation method using complex data. Technical Report 45, Division of Biostatistics, Medical College of Wisconsin, Milwaukee, WI, 2004.
14. Logan BR, **ROWE DB**: 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.
13. **ROWE DB**: 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.
12. **ROWE DB**: Multivariate regression generalized likelihood ratio tests for fMRI activation. Technical Report 40, Division of Biostatistics, Medical College of Wisconsin, Milwaukee, WI, 2002.
11. **ROWE DB**, Morgan SW: 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.
10. **ROWE DB**: 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.

9. **ROWE DB:** 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.
8. **ROWE DB:** 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.
7. **ROWE DB:** 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.
6. **ROWE DB:** 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.
5. **ROWE DB:** 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.
4. **ROWE DB:** 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.
3. **ROWE DB:** 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.
2. **ROWE DB, Press SJ:** Gibbs sampling and hill climbing in Bayesian factor analysis. Technical Report No. 255, Department of Statistics, University of California, Riverside, CA, 1998.
1. Heinsen AP, **ROWE DB:** Fast Gas Tests with a Small Drift Chamber and Straw Tubes Technical Report KL 376. Department of Physics, UC Irvine. January 1992.

## OTHER SCHOLARLY ACTIVITIES

1. Grant Reviews
 

04/2015	Grant Proposal Reviewer, National Institutes of Health Biomedical Imaging and Technology (BMIT) Study Section
05/2012	Grant Proposal Reviewer, American Cancer Society Pilot Research Grant from the Cancer Center of MCW
12/2011	Grant Proposal Reviewer, American Cancer Society Pilot Research Grant from the Cancer Center of MCW
10/2004	Grant Proposal Reviewer, Ad Hoc, National Science Foundation
02/2004	Grant Proposal Reviewer, Dutch National Research Council
08/2001	Grant Proposal Reviewer, Ad Hoc, National Science Foundation

2. Editorial Boards
- 07/2012 – 12/2018 Journal of The American Statistical Association - Applications and Case Studies, Associate Editor. <http://amstat.tandfonline.com/loi/jasa/>
- 01/2009 – 12/2014 Medical Physics, Acting Associate Editor  
<http://www.medphys.org/>
- 01/2006 – 08/2016 Journal of Neuroscience Methods, Editorial Board  
[www.elsevier.com/locate/jneumeth](http://www.elsevier.com/locate/jneumeth)
3. Journal Article Reviews (Referee)
- 04/2023 – present Biostatistics (1)
- 12/2019 – present Bayesian Analysis (2)
- 11/2016 – present Current Medical Imaging Reviews (1)
- 07/2014 – present Brain Connectivity (1)
- 05/2014 – present Biometrics (1)
- 03/2011 – present Journal of Statistical Theory and Applications (1)
- 12/2009 – present Sensors (1), Journal of Immunological Methods (2)
- 07/2009 – present Statistics and Its Interface (1)
- 03/2009 – present Medical Physics (2)
- 06/2008 – present IEEE Journal of Selected Topics in Signal Processing (1),  
Magnetic Resonance Imaging (11), PLoS ONE (1)
- 01/2008 – present Computational Statistics and Data Analysis (2)
- 10/2007 – present Journal of Magnetic Resonance Imaging (1)
- 09/2007 – present Journal of Magnetic Resonance (2)
- 11/2006 – present IEEE Transactions on Biomedical Engineering (5)
- 11/2006 – present Signal Processing (1)
- 07/2006 – present Magnetic Resonance in Medicine (11)
- 06/2006 – present Digital Signal Processing (1)
- 04/2005 – present Journal of Multivariate Analysis (2)
- 03/2005 – present Human Brain Mapping (10)
- 03/2005 – present IEEE Transactions on Speech and Audio Processing (1)
- 01/2005 – present IEEE Engineering in Medicine and Biology (2)
- 09/2004 – present Journal of Neuroscience Methods (9)
- 08/2004 – present IEEE Transactions on Medical Imaging (19)
- 06/2004 – present Journal of Computational and Graphical Statistics (1)
- 06/2004 – present Statistical Methods and Applications (1)
- 04/2002 – present Journal of the American Statistical Association (7)
- 08/2001 – present NeuroImage (31)
- 05/2001 – present IEEE Transactions on Image Processing (1)
- 10/1999 – present Psychometrika (1)
- 03/1999 – present Communications in Statistics (1)  
(129 Unique Manuscript Reviews)

## 4. Other Activity

- 07/2024 Session Chair, Imaging Session, Section on Bayesian Statistics. Joint Statistical Meeting, Portland, OR, USA.
- 05/2024 Session Chair, Statistical Methods in Imaging Conference. Indianapolis, IN.
- 03/2024 CoChair Planning Committee for The Deep Learning Foundation and Application Workshop March 2024, Milwaukee, Wisconsin.
- 05/2023 Session Chair, Statistical Methods in Imaging Conference. Minneapolis, MN.
- 03/2023 CoChair Planning Committee for The Deep Learning Foundation and Application Workshop March 24, 2023, Milwaukee, Wisconsin.
- 12/2022 ISMRM Abstract Reviewer for Acquisition and Analysis area.
- 08/2020 Session Chair, Contemporary Statistical Methods for Imaging Data Analysis, Joint Statistical Meeting, Philadelphia, PA, USA. (Virtual due to COVID.)
- 02/2020 CoChair Planning Committee for The Deep Learning Foundation and Application Workshop, Milwaukee, Wisconsin. (Postponed then Cancelled)
- 03/2019 CBS 58 Milwaukee News at 5 O'Clock. March 19, 2019.  
Discussed Bracketology and probabilities of Marquette and Wisconsin men's basketball teams proceeding through the 2019 NCAA tournament.
- 07/2019 Session Chair, Imaging Session, Section on Statistics in Imaging. Joint Statistical Meeting, Denver, CO, USA
- 04/2019 CoChair Planning Committee for Deep Learning Foundations and Applications Workshop, Milwaukee, Wisconsin
- 11/2018 Wrote External Faculty promotion letter from Associate to Full Professor
- 09/2018 ABC WISN12 News at 5 O'Clock. September 25, 2018  
Discussed statistics of the Magic Number for the Milwaukee Brewers winning out the division and for earning a postseason playoff berth.
- 09/2018 NBC TMJ4 News at 6 O'Clock. September 10, 2018  
Discussed statistics of the improbable comeback of the Green Bay Packers over the Chicago Bears.
- 08/2018 Session Chair, Brain structural and functional connectivity analysis, Section on Statistics in Imaging. Joint Statistical Meeting, Vancouver, BC, Canada
- 02/2018 Writer, (Successful) Letter of Recommendation/Support, American Statistical Association Committee on Elected Fellows, Invited, Alexandria, VA.
- 08/2017 Session Chair, Statistical Methods for Studying Brain Connectivity and Networks. Section on Statistics in Imaging. Joint Statistical Meeting, Baltimore, MD, USA.
- 08/2016 Session Chair, Statistical Methods for Brain Connectivity and Network Analysis, Joint Statistical Meeting, Chicago, IL, USA.
- 05/2016 Session Chair, 2015-16: CCNS: Transition Workshop, Research Triangle Park, NC, USA. <https://www.samsi.info/programs-and-activities/research-workshops/2015-16-ccns-transition-workshop-may-4-6-2016/>
- 04/2016 Workshop Organizing Committee, 2015-16: CCNS: Challenges in Functional Connectivity Modeling and Analysis, Research Triangle Park, NC, USA. <http://www.samsi.info/workshop/2015-16-ccns-challenges-functional-connectivity-modeling-and-analysis-april-8-10-2016>
- 04/2016 Session Chair, 2015-16: CCNS: Challenges in Functional Connectivity Modeling and Analysis, Research Triangle Park, NC, USA. <http://www.samsi.info/workshop/2015-16-ccns-challenges-functional-connectivity-modeling-and-analysis-april-8-10-2016>
- 02/2016 Session Chair, Mathematical and Statistical Challenges in Neuroimaging Data

- Analysis, Banff International Research Station (BIRS), Banff, Alberta Canada  
<http://www.birs.ca/events/2016/5-day-workshops/16w5036/schedule>
- 08/2015–  
05/2016 Program Leader, SAMSI 2015-2016: Program on Challenges in Computational Neuroscience (CCNS), Research Triangle Park, NC, USA.  
[www.samsi.info/programs/2015-16-program-challenges-computational-neuroscience-ccns](http://www.samsi.info/programs/2015-16-program-challenges-computational-neuroscience-ccns)
- 08/2015 Session Chair, Statistical Methods for Neuroimaging Data Analysis, Joint Statistical Meeting, Seattle, WA, USA.
- 11/2014 Abstract Reviewer, ISMRM 23rd Scientific Meeting and Exhibition, Toronto, Ontario, Canada.
- 08/2014 Session Chair, Novel Statistical Methods in Brain Imaging, Joint Statistical Meeting, Boston MA, USA.
- 03/2014 WTMJ Radio 620 Interviews on NCAA Basketball Tournament  
 How far will the Panthers and Badgers go?
- 08/2013 Session Chair, Novel Spatial Methods for Neuroimaging Data, Joint Statistical Meeting, Montreal, Canada.
- 06/2013 Program Committee and Working Group coChair, SAMSI Summer 2013 Program: Neuroimaging Data Analysis, Research Triangle Park, NC, USA.  
<http://www.samsi.info/programs/NDA-program-committee>
- 03/2013 CBS 58 News Interviews on NCAA Basketball Tournament  
 What are your chances of filling out a perfect bracket?
- 07/2012 Session Chair, Methods in High Dimensional Regression, Joint Statistical Meeting, San Diego, CA, USA.
- 01/2012 Wrote External Faculty promotion letter from Assistant to Associate Professor
- 03/2011 Program Committee, 2012 Eastern North American Region (ENAR) of the International Biometrics Society Meeting, Washington, DC, USA.
- 09/2010 Session Chair, Innovation in the data-centric world of fMRI, Joint Statistical Meeting, Vancouver, Canada.
- 05/2009 Wrote External Faculty promotion letter for Assistant to Associate Professor.
- 01/2009 Abstract Review Committee, Organization for Human Brain Mapping, 15th Annual Meeting, San Francisco, CA, USA.
- 11/2008 Abstract Reviewer, ISMRM 17th Scientific Meeting and Exhibition, Honolulu, HI, USA.
- 09/2008 Program and Review Committee, MICCAI 2008 Workshop on Analysis of Functional Medical Images, New York University, NY, NY, USA.
- 08/2008 Session Chair, Intelligent Brain Statistics, Joint Statistical Meeting, Denver, CO, USA.
- 01/2008 Abstract Review Committee, Organization for Human Brain Mapping, 14th Annual Meeting, Melbourne, Australia.
- 08/2007 Session Chair, Advanced Quantitative Brain MRI, Joint Statistical Meeting, Salt Lake City, UT, USA.
- 01/2007 Abstract Review Committee, Organization for Human Brain Mapping, 13th Annual Meeting, Chicago, IL, USA.
- 11/2006 Abstract Reviewer, ISMRM 15th Scientific Meeting and Exhibition, Berlin, Germany.
- 08/2006 Session Chair, Recent Advances in Brain Imaging, Joint Statistical Meeting, Seattle, WA, USA.
- 08/2005 Session Chair, Brain Image Analysis, Joint Statistical Meeting, Minneapolis, MN, USA.

- 11/2004 Abstract Reviewer, ISMRM 12th Scientific Meeting and Exhibition, Kyoto, Japan.
- 08/2004 Session Chair, Emerging Technologies in Genetics and Molecular Biology, Joint Statistical Meeting, Toronto, Canada.
- 04/2004 Session Chair, Functional Brain Mapping, 2004 IEEE International Symposium on Biomedical Imaging, Arlington, VA, USA.
- 08/2003 Session Chair, Optimization, Joint Statistical Meeting, San Francisco, CA, USA.

5. Invited University Lectures:

- a. International
- b. National

Rowe DB: TBD School Mathematical and Statistical Sciences, Clemson University, SC, USA, 04/2025. (Planned)

Rowe DB: Functional Magnetic Resonance Imaging: From Measurements to Brain Activation. Brain Imaging Center and Department of Biostatistics, University of Arizona, AZ, USA, 09/2024.

Rowe DB: Modeling and Analysis of Inherently Complex-Valued FMRI Data. Department of Statistics, University of Georgia, GA, USA, 04/2016.

Rowe DB: FMRI Data, Image Processing, and Complex-Valued Analysis. Department of Public Health Sciences, Medical University of South Carolina, SC, USA, 11/2015.

Rowe DB: Measured  $k$ -space, image reconstruction, image processing, and voxel correlation. Department of Biostatistics, Columbia University, NY, USA, 11/2014.

Rowe DB: What has been done to your  $f(c)$ MRI data without your knowledge and what are the implications. Department of Biostatistics, Columbia University, NY, USA, 11/2014.

Rowe DB: Why should my fMRI data be complex-valued, and how did non-biological correlation get in it? Department of Biostatistics, Johns Hopkins University, Baltimore, MD, USA, 12/2013.

Rowe DB: Proper Statistical Modeling of Complex-Valued FMRI Data, Department of Statistics, Texas A&M University, College Station, TX, USA, 4/2013.

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

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

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

- Rowe DB: A Complex-Valued Mathematical Model for fMRI Analysis, Department of Radiology, University of California, San Francisco, CA, USA, 07/2010.
- Rowe DB: A Coherent Statistical Framework for Functional Magnetic Resonance Imaging, Department of Statistics, Iowa State University, Ames, IA, USA, 12/2009.
- Rowe DB: A Mathematical Model for Functional Magnetic Resonance Imaging, Broad Center for Brain Imaging, Caltech, Pasadena, CA, 04/2009.
- Rowe DB: The Distribution of Magnitude and Complex Voxel Values in MRI, Waisman Brain Imaging Center, University of Wisconsin, Madison, WI, USA, 03/2009.
- Rowe DB: FMRI Brain Activation from Preprocessed Complex-Valued Data, Department of Biostatistics, University of North Carolina, Chapel Hill, NC, USA, 01/2009.
- Rowe DB: The Effects of Preprocessing on Functional Magnetic Resonance Images, Brain Imaging Research Center (BRIC), University of North Carolina, Chapel Hill, NC, USA, 01/2009.
- Rowe DB: A coherent framework for fMRI processing and activation. fMRI Lab, University of Michigan, Ann Arbor, MI, USA, 12/2008.
- Rowe DB: Complex-valued fMRI activation with preprocessing, Center for MR Research, University of Illinois College of Medicine, Chicago, IL, USA, 11/2008.
- Rowe DB: FMRI: From  $k$ -Space to activation maps, Center for Computational Biology and Laboratory for NeuroImaging (LONI), University of California, Los Angeles, CA, USA, 04/2007.
- Rowe DB: Computing functional MRI activation from spatial frequencies. Department of Biostatistics, Vanderbilt University School of Medicine, Nashville, TN, USA, 11/2006.
- Rowe DB: FMRI activation from observed Fourier encoded data, Department of Mathematics, Statistics, and Computer Science, Marquette University, Milwaukee, WI, USA, 09/2006.
- Rowe DB: Functional magnetic resonance imaging brain activation from  $k$ -space. Department of Biostatistics, University of Wisconsin, Madison, WI, USA, 09/2006.
- Rowe DB: Increased statistical sensitivity and biological information via complex-valued fMRI time course analysis. Department of Statistics, University of California, Riverside, CA, USA, 04/2006.
- Rowe DB: Experimental Evidence of Improved Detection in fMRI through Complex-Valued Time Series. fMRI Lab, University of Michigan, Ann Arbor, MI, USA, 02/2006.
- Rowe DB: Modeling Complex-Valued Time Series to Improve Detection in fMRI. Department of Biostatistics, University of Michigan, Ann Arbor, MI, USA, 01/2006

Rowe DB: 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, USA, 10/2005

Rowe DB: Experimental and Simulated Data Comparisons of Two Methods for Post-acquisition Suppression of Venous BOLD in fMRI, Broad Center for Brain Imaging, California Institute of Technology, Pasadena, CA, USA, 07/2005.

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

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

Rowe DB: 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, USA, 12/2004.

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

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

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

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

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

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

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

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

c. Local

Rowe DB: FMRI Signal Measurement, Image Reconstruction, And Phase Contrast Information, Department of Mathematical and Statistical Sciences, Marquette University, Milwaukee, WI 09/2024.



Rowe DB: BiLinear, Bicubic, and In Between Spline Interpolation, Department of Mathematics, Statistics and Computer Science, Marquette University, Milwaukee, WI 02/2018.

Rowe DB: Processing, Opening Pandora's Box in fMRI, Statistical and Mathematical Sciences Institute, Research Triangle Park, NC, USA, 10/2015.

Rowe DB: Processing, Reconstruction and Activation of Your Complex-Valued Data, Department of Biophysics, Medical College of Wisconsin, Milwaukee, WI, USA, 01/2014.

Rowe DB: Quantifying induced correlation in fMRI due to processing and reconstruction, Department of Biostatistics, Medical College of Wisconsin, Milwaukee, WI, USA, 12/2013.

Rowe DB: More Biological Information from Complex-Valued fMRI Data. Department of Biological Sciences, Marquette University, Milwaukee WI, USA, 01/12.

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

Rowe DB: A Unified fMRI Model for Preprocessing and Connectivity or Activation Determination, Department of Biophysics, Medical College of Wisconsin, Milwaukee, WI, USA, 02/2009.

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

Rowe DB: On fMRI activation directly from  $k$ -space, Interdepartmental fMRI Seminar, Medical College of Wisconsin, Milwaukee, WI, USA, 07/2006.

Rowe DB: Complex ways to extract information in fMRI, Department of Biophysics Seminar, Medical College of Wisconsin, Milwaukee, WI, USA, 01/2006.

Rowe DB: Postacquisition suppression of venous BOLD via phase information in complex-valued data. Interdepartmental fMRI Seminar, Medical College of Wisconsin, Milwaukee, WI, USA, 10/2005.

Rowe DB: Complex Statistical Analysis in fMRI. Division of Biostatistics, Medical College of Wisconsin, Milwaukee, WI, USA, 03/2005.

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

Rowe DB: A Complex Way to Compute fMRI Activation, Interdepartmental fMRI Seminar, Medical College of Wisconsin, Milwaukee, WI, USA, 02/2004.

Rowe DB: Multivariate Statistical Methods in fMRI: Thresholding, Department of Biophysics Seminar, Medical College of Wisconsin, Milwaukee, WI, USA, 03/2003.

Rowe DB: A Current and a New Measure for Diagnosing Alzheimer's with fMRI, Interdepartmental fMRI Seminar, Medical College of Wisconsin, Milwaukee, WI, USA, 02/2003.

Rowe DB: Multivariate Regression: Is my ROI activated? Interdepartmental fMRI Seminar, Medical College of Wisconsin, Milwaukee, WI, USA, 09/2002.

Rowe DB: Bayesian Basics, Division of Biostatistics Seminar, MCW, Milwaukee, WI, USA, 04/2002.

Rowe DB: Bayesian Source Separation of fMRI Signals, Division of Biostatistics, Medical College of Wisconsin, Milwaukee, WI, USA, 12/2000.

Rowe DB: Bayesian Source Separation of fMRI Signals, Department of Biophysics, Interdepartmental fMRI Seminar, Medical College of Wisconsin, Milwaukee, WI, USA, 12/2000.

## 6. Conference Presentations

McEvoy O, Rowe DB, Erickson-Bhat S, Mitigating Image Artifacts from Inertial Non-Linearity in High-Frequency Galvanometer Scanning Systems. Marquette University Celebration of Research, Milwaukee, WI, 2024.

McEvoy O, Rowe DB, Erickson-Bhat S. Fourier Domain Zero-Padding and Convolution for Image and SNR Enhancement in Confocal Microscopy. Marquette University Celebration of Research, Milwaukee, WI, 2024.

Rowe, DB. Bayesian  $k$ -Space Estimation Decreases Image Noise and Increased Activation Detection. Joint Stat. Meet., Section on Bayesian Statistical Science, Portland, OR, 2024.

Sakitis CJ, Rowe, DB. A Bayesian Approach to Fused GRAPPA and SENSE MR Image Reconstruction. Portland, OR, 2024

Xu K, Rowe, DB. A CAIPI Approach to Decrease Geometry Factor for Simultaneous Multi-Slice Technique in FMRI. Joint Stat. Meet., Section on Imaging, Portland, OR, 2024.

Rowe DB. Bayesian  $k$ -Space Estimation for FMRI. American Statistical Association Statistical Methods in Imaging Conference, Indianapolis, IN, 2024.

Sakitis CJ, Rowe, DB. Formal Bayesian Approach to a Fused GRAPPA and SENSE Parallel Imaging Technique Augmenting Task Detection Power. American Statistical Association Statistical Methods in Imaging Conference, Indianapolis, IN, 2024.

Xu K, Rowe, DB. American Statistical Association Statistical Methods in Imaging Conference, Indianapolis, IN, 2024. American Statistical Association Statistical Methods in Imaging Conference, Indianapolis, IN, 2024.

- Bodenschatz, Rowe, DB. Simulation and Harmonic Analysis of k-Space Readout (SHAKER American Statistical Association Statistical Methods in Imaging Conference, Indianapolis, IN, 2024.
- Rowe DB. Statistics of Intrinsic fMRI Data. Proc. Joint Stat. Meet., Section on Imaging, Toronto, Canada, 2023.
- Sakitis CJ, Rowe DB. Bayesian Approach to GRAPPA Image Reconstruction Leads to Increased Power in Task Detection. Joint Stat. Meet., Section on Imaging, Toronto, Canada, 2023.
- Xu K, Rowe, DB Increased SNR by Simultaneous Encoded Complex-Valued Slices with Through-Plane Acceleration in fMRI. Joint Stat. Meet., Section on Imaging, Toronto, Canada, 2023.
- Rowe DB: Deep Learning Foundation: Neural Network. The 3rd Annual Deep Learning Workshop sponsored by Marquette University Office of Statistical Consulting and Training Annual Meeting, Plenary Lecture and Hands-On Session. Milwaukee Wisconsin. 03/2023
- Sakitis CJ, Brown AD, Rowe DB: A Full Bayesian Approach to SENSE Image Reconstruction Increases Brain Tissue Contrast and Reduces Noise for More Accurate Statistical Analysis. Joint Stat. Meet., Section on Imaging, Washington DC, 2022.
- Rowe DB: Utilizing Baseline Information in Addition to Task-Related Information in fMRI. Joint Stat. Meet., Section on Imaging, Washington DC, 2022.
- Sakitis CJ, Brown AD, Rowe DB: A Full Bayesian Approach to SENSE Image Reconstruction Increases Brain Tissue Contrast and Reduces Noise Leading to More Statistically Significant Task Activation. American Statistical Association Statistical Methods in Imaging Conference, Nashville, TN, 2022.
- Rowe DB. SMI Founders talk titled The Founding of the Section of Imaging and Analysis of Raw fMRI Data. American Statistical Association Statistical Methods in Imaging Conference, Nashville, TN, 2022.
- Sakitis CJ, Rowe DB: A Formal Bayesian Approach to SENSE Image Reconstruction. Sponsor: Section on Imaging, Seattle WA, USA. 08/2021.\*Virtual due to COVID.
- Sakitis CJ, Rowe DB: A Formal Bayesian Approach to SENSE Image Reconstruction. Sponsor: Section on Imaging, Seattle WA, USA. 08/2021.\*Virtual due to COVID.
- Rowe DB: Utilizing Baseline and Differential Information to Improve fMRI Brain Activation Sponsor: Section on Imaging, Philadelphia PA, USA. 08/2020.\*Virtual due to COVID.
- Rowe DB: Detecting fMRI Brain Activation via Neural Networks. Joint Statistical Meetings, Sponsor: Section on Imaging, Denver, CO, USA. 07/2019

Rowe DB: Deep Learning Foundation: Neural Network. Marquette University Office of Statistical Consulting and Training Annual Meeting, Plenary Lecture. Milwaukee Wisconsin. 04/2019 (<https://www.youtube.com/watch?v=KxhKNH6dMDI/> , 58:20 into video)

Rowe DB: The Past, Present, and Future of Complex-Valued fMRI Activation. Session Title: Statistical Analysis of Complex-Valued MRI. Joint Statistical Meetings, Sponsor: Section on Imaging, Vancouver, BC, Canada. 07/2018

Rowe DB: A Bayesian approach to SENSE Image Reconstruction in fMRI. Session Title: Uncover the essential truth by integrating big and complex imaging data with new statistical tools, Joint Statistical Meetings, Sponsor: Statistical Society of Canada (SSC), Baltimore, MD, USA, 08/2017.

Rowe DB: fMRI Preprocessing Changes the Statistical Properties of Your Data. 2017 ICASA (International Chinese Statistical Association) Applied Statistics Symposium, 06/ 2017.

Rowe DB: SENSE-Induced Correlation in Simultaneous Multi-Slice fMRI. Session Title: Novel Statistical Methodologies for Neuroimaging Data, Joint Statistical Meetings, Sponsor: Section on Imaging, Chicago, Illinois, USA, 08/2016.

Rowe DB: The Current State of Image Processing and Reconstruction with Future Directions. Challenges in Computational Neuroscience Transition Workshop  
<https://www.samsi.info/programs-and-activities/research-workshops/2015-16-ccns-transition-workshop-may-4-6-2016/>

Rowe DB: A Gentle Introduction to Image Processing and Reconstruction in fMRI. Challenges in Computational Neuroscience Transition Workshop  
<https://www.samsi.info/programs-and-activities/research-workshops/2015-16-ccns-transition-workshop-may-4-6-2016/>

Rowe DB: How Data Processing Can Change the Statistical Properties of Your Data in fMRI. Network of Greater Georgia Institutions for Neuroimaging and Statistics (NOGGINS) Workshop, Athens, GA, USA. 04/2016.

Rowe DB: Statistical Analysis of Image Reconstructed Fully-Sampled and Sub-Sampled fMRI Data. Mathematical and Statistical Challenges in Neuroimaging Data Analysis, Banff, Alberta, Canada. 02/2016

Rowe DB: An Introduction to Image Reconstruction, Processing, and their Effects in fMRI. Statistical and Mathematical Sciences Institute (SAMSI), Challenges in Computational Neuroscience (CCNS) Workshop, Research Triangle Park, NC, USA, 08/2015.

Rowe DB: Accelerated Imaging Methods in fMRI. Session Title: Statistical Methods for Improved Processing and Analysis of fMRI Data, Section on Imaging, Seattle, Washington, USA, 08/2015.

Rowe DB: Statistical Image Separation of Multiple Simultaneously Excited fMRI Slices Using a Single Coil. Session Title: Topics in Epidemiology and Imaging, Section on Imaging, Boston, Massachusetts, USA, 08/2014.

Rowe DB: Separation of Several Aliased Images to Increase Volume Speed. Session Title: Recent Advances in Image Analysis, Montreal, Canada, USA, 06/2013.

Rowe DB: Is My Correlation of Biological Origin? Statistics and Mathematical Sciences Institute (SAMSI) - Neuroimaging Data Analysis, Research Triangle Park, NC, USA, 06/2013.

Rowe DB: Separation of Two Simultaneously Encoded Slices with a Single Coil. Session Title: Reconstruction, International Society for Magnetic Resonance in Medicine, Salt Lake City, UT, USA, 05/2013.

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

Rowe DB: 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 Beach, FL, USA, 07/2011.

Rowe DB: 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 Beach, FL, USA, 3/2011.

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

Rowe DB: fMRI Statistical Brain Activation from  $k$ -Space Data. Modeling Data from Brain Imaging Studies Session, Joint Statistical Meeting, Biometrics Section, Salt Lake City, UT, USA, 08/2007.

Rowe DB: fMRI Activation in image space from  $k$ -space data. Thirteenth Annual Meeting of the Organization for Human Brain Mapping, Chicago, IL, USA, 6/2007.

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

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

Rowe DB: 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, USA, 06/2006.

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

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

Rowe DB, Nencka AS: Magnitude and phase modeling for fMRI brain activation. American Statistical Association, Joint Statistical Meetings, Biometrics Section, Minneapolis, MN, USA, 8/2005.

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

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

Rowe DB: 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, USA, 05/2005.

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

Rowe DB 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, USA, 05/2004.

Rowe DB: Measures of fMRI neurologic synchrony. American Statistical Association, Joint Statistical Meetings, San Francisco, CA, USA, 8/2003.

## 7. Conferences Attended:

2025	Joint Statistical Meeting (Planned)	August 2 – 7, 2025	Nashville, TN, USA
	Statistical Methods in Imaging Conference (Planned)	May 19 – 21, 2025	Houston, TX, USA
2024	IMSI Workshop on Challenges in Neuroimaging Data Analysis	August 26 – 30, 2024	Chicago, IL, USA
	Joint Statistical Meeting	August 3 – 8, 2024	Portland, OR, USA
	Statistical Methods in Imaging Conference	May 29 – 31, 2024	Indianapolis, IN, USA
	Deep Learning Workshop	March 8, 2024	Milwaukee, WI, USA
2023	Joint Statistical Meeting	August 5 – 10, 2023	Toronto, Ontario, Canada
	Statistical Methods in Imaging Conference	May 22 – 24, 2023	Minneapolis, MN, USA
	Deep Learning Fundamentals and Applications	March 24, 2023	Milwaukee, WI, USA
2022	Joint Statistical Meeting	August 6 – 11, 2022	Washington DC, USA
	Statistical Methods in Imaging	May 25 – 27, 2022	Nashville, TN, USA

	Conference		
2021	Joint Statistical Meeting	August 7 – 12, 2021	Seattle, WA, USA (Virtual Conference)
2020	Joint Statistical Meeting	August 1 – 7, 2020	Philadelphia, PA, USA (Virtual Conference)
	Deep Learning Fundamentals and Applications in Medical Informatics Workshop	April 2 – 3, 2020 (Canceled by COVID)	Milwaukee, WI, USA
2019	Joint Statistical Meeting	July 27 – August 1, 2019	Denver, CO, USA
	Deep Learning Fundamentals and Applications in Medical Informatics Workshop	April 5 – 6, 2019	Milwaukee, WI, USA
2018	Joint Statistical Meeting	July 28 – August 2, 2018	Vancouver, BC, Canada
	The Journey from Machine Learning to Deep Learning	April 13, 2018	Milwaukee, WI, USA
2017	Joint Statistical Meeting	July 29 – August 3, 2017	Baltimore, MD, USA
	ICSA (International Chinese Statistical Association) Applied Statistics Symposium	June 25–28, 2017	Chicago, IL, USA
	ISMIRM	April 22 – April 27, 2017	Honolulu, HI, USA
2016	SAMSI ASTRO Workshop	August 22 – 26, 2016	Research Triangle Park, NC, USA
	Joint Statistical Meeting	July 30 – August 4, 2016	Chicago, IL, USA
	SAMSI CCNS TW	May 4 – 6, 2016	Research Triangle Park, NC, USA
	NOGGINS Workshop	April 15, 2016	Athens, GA, USA
	SAMSI CCNS CFCAW	April 8 – 10, 2016	Research Triangle Park, NC, USA
	BIRS Computational Neuroscience Data Analysis	January 31 – February 5, 2016	Banff, Alberta, Canada
2015	SAMSI CCNS Workshop	August 17 – 21, 2015	Research Triangle Park, NC, USA
	Joint Statistical Meeting	August 8 – 13, 2015	Seattle, WA, USA
	ISMIRM	May 30 – June 5, 2015	Toronto, Ontario, Canada
2014	Joint Statistical Meeting	August 2 – 7, 2014	Boston, MA, USA
2013	ISMIRM	April 20 – 26, 2013	Salt Lake City, UT, USA
	Workshop on Brain Image Analysis	May 21, 2013	Madison, Wisconsin, USA
	SAMSI Summer 2013 Program: Neuroimaging Data Analysis	June 4 – 14, 2013	Research Triangle Park, NC, USA
	Joint Statistical Meetings	August 3 – 8, 2013	Montréal, Québec, Canada
2012	Workshop on Brain Image Analysis	April 20, 2012	Madison, Wisconsin, USA
	Joint Statistical Meetings	July 28 – August 2, 2012	San Diego, CA, USA
2011	ENAR	March 20 – 23, 2011	Miami Beach, FL, USA
	Joint Statistical Meetings	July 30 – August 4, 2011	Miami Beach, FL, USA
2010	Joint Statistical Meetings	July 31 – August 5, 2010	Vancouver, Canada
	Second Biennial International Conference on Resting State Connectivity	September 16 – 19, 2010	Milwaukee, WI, USA
2008	Joint Statistical Meetings	August 3 – 7, 2008	Denver, CO, USA
	ISMIRM	May 3 – 9, 2008	Toronto, Ontario, Canada

2007	Joint Statistical Meetings Organization for Human Brain Mapping ISMRM	July 29 – August 2, 2007 June 10 – 14 May 19 – 25, 2007	Salt Lake City, UT, USA Chicago, IL, USA Berlin, Germany
2006	Joint Statistical Meetings WNAR Intl Biometrics Soc. ISMRM	August 6 – 10, 2006 June 29 – July 1, 2006 May 6 – 12, 2006	Seattle, WA, USA Flagstaff, AZ, USA Seattle, WA, USA
2005	Joint Statistical Meetings ISMRM	August 7 – 11, 2005 May 7 – 13, 2005	Minneapolis, MN, USA Miami Beach, FL, USA
2004	Joint Statistical Meetings ISMRM	August 8 – 12, 2004 May 15 – 21, 2004	Toronto, Canada Kyoto, Japan
2003	Joint Statistical Meetings Santa Cruz Bayesian Workshop ISMRM	August 3 – 7, 2003 August 7 – 10, 2003 July 10 – 16, 2003	San Francisco, CA, USA Santa Cruz, CA, USA Toronto, Ontario, Canada
2002	Joint Statistical Meeting ISMRM	August 11 – 15, 2002 May 18 – 24, 2002	New York City, NY, USA Honolulu, HI, USA
1999	Joint Statistical Meeting	August 10 – 14, 2002	Anaheim, CA, USA

8. Research Support (Including grants and fellowships):

- a. Current
- b. Pending
- c. Prior

Internal

Title: An In-Plane and Through-Plane Multi-Directional Image Shift Acceleration Method Decreases Geometry Factor Penalty and Increases SNR in FMRI

Source: Wehr Foundation Science Funds – Computational Sciences Summer Research Fellowship

Role: Mentor for PhD Student Ke Xu

Direct Funds: \$5,200 stipend to support a student over the summer term

Dates: Summer 2024

Title: Travel Award for 2023 Joint Statistical Meeting, Toronto Ontario Canada.

Source: Marquette University College of Arts and Sciences

Role: Principal Investigator

Direct Funds: \$1,000

Dates: August 5-10, 2023

Title: Faster FMRI Brain Imaging Through Bayesian Statistics Estimation of Unobserved Data.

Source: Marquette University, 2023 Regular Research Grant (RRG)

Role: Principal Investigator

Direct Funds: \$5,500 (PhD student summer support Chase Sakitis)

Dates: January 1, 2023 – June 30, 2023

Title: A Bayesian Approach to Non-Cartesian Image Reconstruction in fMRI



Source: Wehr Foundation Science Funds – Computational Sciences Summer  
 Research Fellowship  
 Role: Mentor for PhD Student John Bodenschatz  
 Direct Funds: \$5,200 stipend to support a student over the summer term  
 Dates: Summer 2023

Title: A Statistical Image Reconstruction Method with In-Plane and Through-Plane Acceleration in FMRI  
 Source: Wehr Foundation Science Funds – Computational Sciences Summer  
 Research Fellowship  
 Role: Mentor for PhD Student Ke Xu  
 Direct Funds: \$5,000 stipend to support a student over the summer term  
 Dates: Summer 2023

Title: Statistical Image Reconstruction of fMRI  
 Source: Wehr Foundation Science Funds – Computational Sciences Summer  
 Research Fellowship  
 Role: Mentor for PhD Student Ke Xu  
 Direct Funds: \$5,250 stipend to support a student over the summer term  
 Dates: Summer 2022

Title: Increasing the Accuracy of Statistical Analysis and Task Activation with a Full Bayesian Approach to SENSE Image Reconstruction  
 Source: Wehr Foundation Science Funds – Computational Sciences Summer  
 Research Fellowship  
 Role: Mentor for PhD Student Chase Sakitis  
 Direct Funds: \$5,250 stipend to support a student over the summer term  
 Dates: Summer 2022

Title: Model Interpretability in Terms of Dropout in Neural Networks using Bayesian Learning  
 Source: Wehr Foundation Science Funds – Computational Sciences Summer  
 Research Fellowship  
 Role: Mentor for PhD Student Sunil Mathew  
 Direct Funds: \$4,500 stipend to support a student over the summer term  
 Dates: Summer 2021

Title: Model Interpretability in Convolutional Neural Networks using Gradient Weighted Class Activation Mapping (Grad-CAM) and Bayesian Learning  
 Source: Wehr Foundation Science Funds – Computational Sciences Summer  
 Research Fellowship  
 Role: Mentor for PhD Student Sunil Mathew  
 Direct Funds: \$4,000 stipend to support a student over the summer term  
 Dates: Summer 2020

Title: Classification of Volumetric Data Using 3D Convolutional Neural Networks  
 Source: Wehr Foundation Science Funds – Computational Sciences Summer  
 Research Fellowship

Role: Mentor for PhD Student Sunil Mathew  
 Direct Funds: \$4,000 stipend to support a student over the summer term  
 Dates: Summer 2019

Title: Respiration and Motion Correction Processing Operations Induce Correlations in fMRI  
 Source: Wehr Foundation Science Funds – Computational Sciences Summer Research Fellowship

Role: Mentor for PhD Student Emily Paulson  
 Direct Funds: \$3,750 stipend to support a student over the summer term  
 Dates: Summer 2015

Title: Global Intensity Normalization induces Correlation in fMRI  
 Source: Wehr Foundation Science Funds – Computational Sciences Summer Research Fellowship

Role: Mentor for PhD Student Kevin Liu  
 Direct Funds: \$3,750 stipend to support a student over the summer term  
 Dates: Summer 2015

Title: SENSE Induced Correlations Can Be Used To Optimize MRI RF Coil Design

Source: Wehr Foundation Science Funds – Computational Sciences Summer Research Fellowship

Role: Mentor for PhD Student Iain Bruce  
 Direct Funds: \$3,750 stipend to support a student over the summer term  
 Dates: Summer 2013

Title: Representing Spatial Correlations in Terms of Temporal Frequencies to Examine Spectral Content of Processing Induced Correlated Voxels and Clinical Interpretations

Source: Wehr Foundation Science Funds – Computational Sciences Summer Research Fellowship

Role: Mentor for PhD Student Mary Kociuba  
 Direct Funds: \$3,750 stipend to support a student over the summer term  
 Dates: Summer 2013

Title: Utilizing Spatio-Temporal Processing Induced Correlations within a Functional Magnetic Resonance Imaging Model to Compute Cognitive Brain Activation

Source: Wehr Foundation Science Funds – Computational Sciences Summer Research Fellowship

Role: Mentor for PhD Student Muge Karaman  
 Direct Funds: \$3,750 stipend to support a student over the summer term  
 Dates: Summer 2013

Title: A Mathematical Description of Induced FMRI Time Series Correlation in Terms of Fourier Frequencies

Source: Wehr Foundation Science Funds – Computational Sciences Summer Research Fellowship

Role: Mentor for PhD Student Mary Kociuba  
 Direct Funds: \$3,650 stipend to support a student over the summer term  
 Dates: Summer 2012

Title: A Mathematical Model for Analyzing Temporal Processing Effects of Fourier Encoding Anomalies and their correction in fMRI Data  
 Source: Wehr Foundation Science Funds – Computational Sciences Summer Research Fellowship  
 Role: Mentor for PhD Student Muge Karaman  
 Direct Funds: \$3,650 stipend to support a student over the summer term  
 Dates: Summer 2012

Title: Quantification of Induced Voxel Correlations by GE and SIEMENS MRI Scanner Algorithms.  
 Source: Marquette University, 2012 Regular Research Grant (RRG)  
 Role: Principal Investigator  
 Direct Funds: \$5,000 (PhD Student Support Iain Bruce)  
 Dates: July 1, 2012 – December 31, 2012

Title: Incorporating Relaxivities to More Accurately Reconstruct Magnetic Resonance Images  
 Source: Wehr Foundation Science Funds – Computational Sciences Summer Research Fellowship  
 Direct Funds: \$3,500 stipend to support a student over the summer term  
 Role: Mentor for PhD Student Muge Karaman  
 Dates: Summer 2011

Title: An Investigation into the Statistical Implications of the SENSE and GRAPPA Parallel Image Reconstruction Models  
 Source: Wehr Foundation Science Funds – Computational Sciences Summer Research Fellowship  
 Direct Funds: \$3,500 stipend to support a student over the summer term  
 Role: Mentor for PhD Student Iain Bruce  
 Dates: Summer 2011

Title: The SENSE-Isomorphism Theoretical Image Voxel Estimation (SENSE-ITIVE) Model for Reconstruction and Observing Statistical Properties of Reconstruction Operators  
 Source: Wehr Foundation Science Funds – Computational Sciences Summer Research Fellowship  
 Role: Mentor for PhD Student Iain Bruce  
 Direct Funds: \$3,400 stipend to support a student over the summer term  
 Dates: Summer 2010

#### External

Title: A More Representative Approach to Simulating Complex Valued fMRI Data Model  
 Source: Northwestern Mutual Data Science Institute Student Scholars Program.

Direct Funds: \$5,250 stipend to support a student Jon Bodenschatz over the summer term  
 Dates: July 1, 2024 – August 15, 2024

Title: Improving f(c)MRI Accuracy by Accounting for the Implications of Data Processing

Source: NIH R21NS087450 (PI: Rowe, MU)

Role: Principal Investigator \$385,698

Dates: September 15, 2014 – August 31, 2017

Title: A Frequency Description of Induced Correlations in FMRI

Source: The Daniel M. Soref Charitable Trust (PI: DB Rowe, MU)

Role: Principal Investigator \$2,500

Dates: January 1, 2015 – December 31, 2015 – June 30, 2016

Title: Research Fellowship Appointment in the Program on Challenges in Computational Neuroscience at the Statistical and Mathematical Sciences Institute (SAMSI) and University of North Carolina (UNC)

Source: NSF 1127914 (PI: Richard Smith)

Role: Research Fellow \$64,098, Other Funds: \$105,000

Dates: August 15, 2015 – May 31, 2016

Title: fMRI Technology and Analysis

Source: NIH R01EB000215 (PI: JS Hyde, MCW)

Role: Co-Investigator

Dates: March 1, 2004 – February 31, 2016

Title: Clinical and Translational Science Award

Source: NIH UL1TR000055 (PI: R Shaker, MCW)

Role: Co-Leader of Key Function Area

Dates: July 1, 2010 – March 31, 2015.

Title: Supraspinal Contributions to Locomotor Control and Recovery after Stroke

Source: NIH K01HD060693 (PI: S Shindler-Ivens, MU)

Role: Mentor

Dates: February 1, 2010 – January 31, 2016

Title: Real-Time Motion Correction and Increased Scan-Session Success in Clinical fMRI

Source: NIH R01EB007827 (PI: JS Hyde, MCW)

Role: Investigator

Dates: September 15, 2008 – December 31, 2012

Title: Training in Functional Neuroimaging

Source: NIH T32MH019992 (PI: EA DeYoe)

Role: Mentor

Dates: July 1, 2003 – June 30, 2008

Title: An fMRI Index as a Marker for Alzheimer's Disease

Source: NIH R01AG020279 (PI: S-J Li, MCW)  
Role: Co-Investigator  
Dates: July 1, 2002 – June 30, 2007

Title: Core B: Functional Magnetic Resonance Imaging of the Brain  
Source: NIH P01EB002014 (PD: JS Hyde, MCW)  
Role: Statistician  
Dates: July 1, 2003 – June 30, 2005

9. Other:

MCW Approved (MU Accepted) IRB Protocol:

Study Full Title: Examining the effects of fcMRI and fMRI analysis procedures

Study #: PRO00009606 (MU #HR-2157)

Approved 08/31/2009–08/30/2010

Renewed 08/31/2010–07/22/2011

Renewed 07/05/2011–07/04/2012

Renewed 06/11/2012–06/10/2013

Renewed 03/11/2014–03/10/2015

Renewed 01/23/2015–01/22/2016

Renewed 11/13/2015–11/12/2016

Renewed 09/19/2016–09/18/2017

Renewed 09/20/2017–09/19/2018

**X. TEACHING ACTIVITIES DATA**

## 1. Courses Taught at Marquette:

<u>Year</u>	<u>Semester</u>	<u>Course # and Title</u>	<u>Credits</u>	<u>Enrollment</u>		
2025	Summer	MATH 4770: Statistical Machine Vision	3	~5		
		/MSSC 5770: Statistical Machine Vision	3	/~5		
2024	Spring	MATH 2780: Introduction to Regression and Classification	3	8		
		MATH 4730: Biostatistical Methods and Models	3	53		
		/MSCS 5730: Biostatistical Methods and Models	/3	/2		
		MATH 4740: Biostatistical Methods and Models	3	41		
		MATH 4995: Independent Study Math or Stats	3	2		
		Topic: Introduction to MRI Analysis				
		MSSC 6960: Seminar in Mathematical or Statistical Sciences	1-3	2		
		MSSC 8995: Independent Study Math or Stats	3	2		
		MSSC 8999: Doctoral Dissertation	3	1		
		MSSC 9999: Doctoral Dissertation Continuation: FT	0	1		
2024	Fall	MATH 1700: Modern Elementary Statistics	3	85		
		MSSC 6010: Computational Probability	3	9		
		MSSC 6960: Seminar in Mathematical or Statistical Sciences	1-3	2		
		MSSC 8995: Independent Study Math or Stats	3	2		
		Topic 1: NonCartesian Bayesian Statistics				
		Topic 2: A TPA & IPA Combined fMRI Imaging Reconstruction Method				
		MSSC 8999: Doctoral Dissertation	3	1		
		MSSC 9999: Doctoral Dissertation Continuation: FT	0	1		
		2024	Summer	MATH 4770: Statistical Machine Vision	3	1
				/MSSC 5770: Statistical Machine Vision	3	/3
2024	Spring	MATH 4730: Biostatistical Methods and Models	3	45		
		/MSCS 5730: Biostatistical Methods and Models	/3	/16		
		MATH 4740: Biostatistical Methods and Models	3	49		
		/MSCS 5740: Biostatistical Methods and Models	/3	/12		
		MSSC 6020: Statistical Simulation	3	16		
		MSSC 6952: Colloquium in Math or Statistical Sciences	1	2		
		MSSC 6960: Seminar in Mathematical or Statistical Sciences	1-3	2		
		MSSC 8995: Independent Study Math or Stats	3	3		
		Topic 1: Bayesian Spatial and Image Domain MR Reconstruction				
		Topic 2: In-Plane Accelerated FMRI Image Reconstruction				
Topic 3: Statistical Simulation of Complex-Valued FMRI Data						
2023	Fall	MSSC 8999: Doctoral Dissertation	3	1		
		MSSC 9970: Graduate Standing Continuation: LTHT	0	1		
		MSSC 9999: Doctoral Dissertation Continuation: FT	0	1		
		MATH 1700: Modern Elementary Statistics/	3	111		
		MATH 4790: Bayesian Statistics/	3	2/		
		MSSC 5790: Bayesian Statistics	3	15		
		MSSC 6952: Colloquium in Math or Statistical Sciences	1	12		
		MSSC 6960: Seminar in Mathematical or Statistical Sciences	3	2		
		MSSC 8995: Independent Study Math or Stats	3	3		
		Topic 1: Bayesian Methods in Functional MRI				
Topic 2: CAIPI/Image Reconstruction in FMRI						

		Topic 3: NonCartesian Image Reconstruction		
		MSSC 8999: Doctoral Dissertation	3	1
2023	Summer	MSSC 9996: Master's Thesis Continuation: Full-Time	0	1
		MSSC 9999: Doc Dissertatn Continuatn: FT	0	1
2023	Spring	MATH 1700: Modern Elementary Statistics/	3	94/
		MATH 1700H: Honors Modern Elementary Statistics	3	26
		MSSC 6020: Statistical Simulation	3	10
		MSSC 6960. Seminar in Mathematical or Statistical Sciences.	1-3	2
		MSSC 8995: Independent Stdy Math or Stats	3	1
		Topic: Formal Bayesian Methods for Aliased MR Image Reconstruction		
		MSSC 8999: Doctoral Dissertation	3	1
		MSSC 9999: Doc Dissertatn Continuatn: FT	0	1
2022	Fall	Sabbatical		
		MSSC 6960. Seminar in Mathematical or Statistical Sciences.	1-3	2
		MSSC 8995: Independent Stdy Math or Stats	3	1
		Topic: Formal Bayesian Methods for Aliased MR Image Reconstruction		
		MSSC 8995: Independent Stdy Math or Stats	3	1
		Topic: Image Reconstruction for FMRI		
		MSSC 9999: Doc Dissertatn Continuatn: FT	0	3
2022	Summer	MATH 4931: Topics in Mathematics or Statistics	3	5
		/MSSC 5931: Topics in Mathematics or Statistics	3	6
		Topic: Statistical Machine Vision		
		MSSC 6975 Practicum for Statistical Consulting (co-Taught with Dr. Yu)	3	4
2022	Spring	MATH 1700H: Honors Modern Elementary Statistics	3	12
		MATH 1700H: Honors Modern Elementary Statistics Lab	3	12
		INDS 4997: Capstone in Data Science	3	10
		MSSC 6975 Practicum for Statistical Consulting	3	2
		MSSC 8995: Independent Stdy Math or Stats	3	1
		Title: Advances Bayesian Statistical Methods For FMRI		
		MSSC 8995: Independent Stdy Math or Stats	3	1
		Title: Image Reconstruction in FMRI		
		MSSC 8999: Doctoral Dissertation	3	2
		MSSC 9999: Doc Dissertatn Continuatn: FT	0	1
		PSYC 2001H: Hnrs Psyc Measurements & Stats	4	12
		PSYC 2001H: Hnrs Psyc Measurements & Stats Lab	0	12
2021	Fall	MATH 4931: Topics in Mathematics or Statistics	3	14
		/MSSC 5931: Topics in Mathematics or Statistics	3	/2
		Topic: Bayesian Statistical Learning		
		MSSC 8995: Independent Stdy Math or Stats	3	1
		Title: Bayesian Approach to SENSE Image Reconstruction in fMRI	3	1
		MSSC 8995: Independent Stdy Math or Stats	3	1
		Title: Image Reconstruction for FMRI		
		MSSC 8999: Doctoral Dissertation	3	2
		MSSC 9999: Doc Dissertatn Continuatn: FT	0	1
2021	Summer	MATH 4931: Topics in Mathematics or Statistics	3	9

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		/MSSC 5931: Topics in Mathematics or Statistics	3	/5
		Topic: Statistical Machine Vision		
		MSSC 6975 Practicum for Statistical Consulting	3	4
		(co-Taught with Dr. Maadooliat)		
		MSSC 9996: Master Thesis Continuation: FT	0	1
2021	Spring	MSSC 6020: Statistical Simulation	3	8
		MSSC 8995: Ind Stdy in Math or Stats	1-3	1
		Title: Bayesian Statistics in Machine Learning		
		MSSC 8995: Ind Stdy in Math or Stats	1-3	1
		Title: Functional Magnetic Resonance Imaging (fMRI)	3	1
		MSSC 9975: Graduate Assistant Teaching: FT	0	1
		MSSC 9999: Doctoral Dissertation Continuation: FT	0	1
2020	Fall	MSSC 6010: Computational Probability	3	11
		MSSC 6975 Practicum for Statistical Consulting	3	1
		MSSC 8995: Independent Stdy Math or Stats	3	1
		Title: Foundations in the Analysis of FMRI		
		MSSC 8999: Doctoral Dissertation	3	1
		MSSC 9995: Master's Thesis Continuation: Half-Time	0	1
		MSSC 9999: Doctoral Dissertation Continuation: FT	0	1
2020	Summer	MSSC 6975 Practicum for Statistical Consulting	3	6
		MSSC 6995: Ind Stdy in Math or Stats	1-3	2
		Title: Current Topics in Modern Statistics		
2020	Spring	MSSC 6020: (Statistical) Simulation	3	16
		MSSC 6995: Ind Stdy in Math or Stats	1-3	1
		Title: Predictive Analytics for Patent Prosecution		
		MSSC 8995: Ind Stdy in Math or Stats	1-3	1
		Title: Fourier Transforms For Machine Learning		
		MSSC 8999: Doctoral Dissertation	1-12	1
2019	Fall	MATH 4931: Topics in Mathematics or Statistics	3	2
		/MSSC 5931: Topics in Mathematics or Statistics	3	/16
		Title: Bayesian Statistical Learning		
		MSSC 8995: Ind Stdy in Math or Stats	1-3	1
		Title: Machine Learning Analysis for fMRI		
		MSSC 8999: Doctoral Dissertation	1-12	1
2019	Summer	MSCS 6975 Practicum for Statistical Consulting	3	4
		MSCS 6999: Master's Thesis	1-6	1
2019	Spring	MSCS 6020: Simulation	3	18
		MSCS 6995: Ind Stdy in Math, Stat, & Comp Sci	1-3	1
		Title: Independent Applied Statistics Research		
		MSCS 8999: Doctoral Dissertation	1-12	1
		MSCS 9999: Doctoral Dissertation Continuation: FT	0	1
2018	Fall	MATH 1700: Modern Elementary Statistics	3	134
		MSCS 6010: Probability	3	16
		MSCS 9999: Doctoral Dissertation Continuation: FT	0	1
2018	Spring	MATH 1700: Modern Elementary Statistics	3	35
		MSCS 6020: Simulation	3	15
		MSCS 8995: Ind Stdy in Math, Stat, & Comp Sci	1-3	1
		Title: Template matching in sequences of images for real-time object tracking.		



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		MSCS 8999: Doctoral Dissertation	1-12	1
		MSCS 9999: Doctoral Dissertation Continuation: FT	0	2
2017	Fall	MATH 1700: Modern Elementary Statistics	3	125
		MSCS 6010: Probability	3	12
		MSCS 8995: Ind Stdy in Math, Stat, & Comp Sci Title: MRI Signal Generation & Reconstruction	1-3	1
		MSCS 8999: Doctoral Dissertation	1-12	1
		MSCS 9998: Doctoral Dissertation Continuation: HT	0	1
2017	Spring	MATH 1700: Modern Elementary Statistics	3	69
		MSCS 6020: Simulation	3	7
		MSCS 8995: Ind Stdy in Math, Stat, & Comp Sci Title: Professional Practices in MRI Image Processing	1-3	1
		MSCS 8995: Ind Stdy in Math, Stat, & Comp Sci Title: Applied Image Registration in FMRI Studies	1-3	1
		MSCS 8999: Doctoral Dissertation	1-12	1
2016	Fall	MATH 4740: Biostatistical Methods and Models	3	27
		/MSCS 5740: Biostatistical Methods and Models	/3	/11
		MSCS 8995: Ind Stdy in Math, Stat, & Comp Sci Title: Image Processing in FMRI	1-3	1
		MSCS 8999: Doctoral Dissertation	1-12	1
2016	Spring	Sabbatical		
		MSCS 8995: Ind Stdy in Math, Stat, & Comp Sci Title: Selected Topics in MRI Image Processing	1-3	1
		MSCS 9999: Doctoral Dissertation Continuation: FT	0	1
2015	Fall	Sabbatical		
		MSCS 9999: Doctoral Dissertation Continuation: FT	0	1
2015	Spring	BIIN 6947: Medical College of Wisconsin/BIIN-Joint degree	1-8	1
		BIIN 6980: Practicum in Bioinformatics	3	1
		BIIN 6999: Master's Thesis	1-6	1
		MSCS 6020: Simulation	3	13
		MSCS 8995: Ind Stdy in Math, Stat, & Comp Sci	1-3	1
		MSCS 8995: Ind Stdy in Math, Stat, & Comp Sci	1-3	1
		MSCS 9999: Doctoral Dissertation Continuation: FT	0	1
2014	Fall	BIIN 6947: Medical College of Wisconsin/BIIN-Joint degree	1-8	2
		BIIN 6999: Master's Thesis	1-6	1
		MATH 1700: Modern Elementary Statistics	3	125
		MSCS 6010: Probability	3	15
		MSCS 6995: Ind Stdy in Math, Stat, & Comp Sci	1-3	1
		MSCS 8995: Ind Stdy in Math, Stat, & Comp Sci	1-3	1
		MSCS 8995: Ind Stdy in Math, Stat, & Comp Sci	1-3	1
		MSCS 8999: Doctoral Dissertation	1-12	1
2014	Summer	BIIN 6980: Practicum in Bioinformatics	3	3
2014	Spring	MATH 1700: Modern Elementary Statistics	3	115
		MSCS 6020: Simulation	3	8
		MSCS 8999: Doctoral Dissertation	1-12	1
		MSCS 8999: Doctoral Dissertation	1-12	1
		MSCS 9999: Doctoral Dissertation Continuation: FT	0	2
2013	Fall	MATH 1700: Modern Elementary Statistics	3	126
		BIIN 6947: Medical College of Wisconsin/BIIN-Joint degree	1-8	1

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		MSCS 6010: Probability	3 12
		MSCS 6995: Ind Stdy in Math, Stat, & Comp Sci	1-3 1
		MSCS 6995: Ind Stdy in Math, Stat, & Comp Sci	1-3 1
		MSCS 8999: Doctoral Dissertation	1-12 1
		MSCS 9999: Doctoral Dissertation Continuation: FT	0 2
2013	Spring	MATH 1700: Modern Elementary Statistics	3 123
		BIIN 6999: Master's Thesis	1-6 1
		MSCS 6974: Practicum for Research in Computational Sci	3 1
		MSCS 6995: Ind Stdy in Math, Stat, & Comp Sci	1-3 5
		MSCS 8999: Doctoral Dissertation	1-12 2
		MSCS 9970: Graduate Standing Continuation: LHT	0 2
		MSCS 9976: Grad Assistant Research: FT	0 1
		MSCS 9999: Doctoral Dissertation Continuation: FT	0 3
2012	Fall	MATH 1700: Modern Elementary Statistics	3 147
		BIIN 6947: Medical College of Wisconsin/BIIN-Joint degree	1-8 1
		BIIN 6980: Practicum in Bioinformatics	3 1
		MSCS 6010: Probability	3 7
		MSCS 6960: Biomath Seminar in Math/Stats/Comp Sci Topic: Fourier MRI Reconstruction	1-3 4
		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
		MSCS 9970: Graduate Standing Continuation: LHT	0 2
		MSCS 9989: Doctoral Comp Exam Prep: FT	0 1
2012	Spring	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 Devl	1 16
		MSCS 6995: Ind Stdy in Math, Stat, & Comp Sci	1-3 5
		MSCS 8999: Doctoral Dissertation	1-12 3
		MSCS 9970: Graduate Standing Continuation: LHT	0 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
		MSCS 9989: Doctoral Comp Exam Prep: FT	0 2
2011	Spring	MATH 1700: Modern Elementary Statistics	3 129
		MATH 1700: Modern Elementary Statistics	3 118
		BIIN 6947: Medical College of Wisconsin/BIIN-Joint degree	1-8 1
		BIIN 6999: Masters Thesis	1-6 2
		MSCS 6995: Ind Stdy in Math, Stat, & Comp Sci	1-3 2
2011	Summer	BIIN 6980: Practicum in Bioinformatics	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	1-3 8

		Topic:Fourier MRI Reconstruction		
2010	Summer	MSCS 6995: Ind Study in Math, Stat, & Comp Sci	1-3	2
		MSCS 6960: Biomath Seminar in Math/Stats/Comp Sci	1-3	1
		Topic: Complex-Valued FMRI		
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	1-3	1
		Topic: Complex-Valued FMRI		
2009	Fall	MATH 4740: Biostatistical Methods and Models	3	18
		/MSCS 5740: Biostatistical Methods and Models	/3	/5
		MSCS 6010: Probability	3	19

## 2. Courses Taught at Medical College of Wisconsin:

<u>Year</u>	<u>Semester</u>	<u>Course # and Title</u>	<u>Credits</u>	<u>Enrollment</u>
2014	Summer	Bioinformatics 294: Practicum for Research & Development in Bioinformatics	3	3
2012	Fall	Bioinformatics 294: Practicum for Research & Development in Bioinformatics	3	1
2012	Summer	Bioinformatics 294: Practicum for Research & Development in Bioinformatics	3	1
2012	Spring	Bioinformatics 294: Practicum for Research & Development in Bioinformatics	3	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
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
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
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
2007	Spring	Biophysics 295: Readings & Research	1-9	2
	Summer	Biophysics 295: Readings & Research	1-9	2
	Fall	Biophysics 240: Fourier Transforms	3	5
		Biophysics 295: Readings & Research	1-9	2
2006	Spring	Biophysics 230: Nuclear Magnetic Resonance (Co-taught)	3	7
		Biophysics 295: Readings & Research	1-9	1
		Biophysics 298: Biophysics Journal Club	1	10
	Fall	Biophysics 295: Readings & Research	1-9	2
2005	Spring	Biophysics 230: Nuclear Magnetic Resonance (Co-taught)	3	
		Biophysics 295: Readings & Research	1-9	1
		Biophysics 298: Biophysics Journal Club	1	10

	Summer	Biophysics 295: Readings & Research	1-9	1
	Fall	Biophysics 240: Fourier Transforms	3	4
		Biophysics 295: Readings & Research	1-9	1
2004	Spring	Biophysics 230: Nuclear Magnetic Resonance (Co-taught)	3	
		Biophysics 298: Biophysics Journal Club	1	8
	Fall	Biophysics 295: Readings & Research	1-9	1
		Biostatistics 295: Readings & Research	1-9	1
		Biostatistics 299: Master's Thesis	1-9	1
2003	Spring	Biophysics 295: Readings & Research	1-9	1
		Biophysics 298: Journal Club	1	10
	Summer	Biophysics 295: Readings & Research	1-9	1
	Fall	Biophysics 240: Fourier Transforms	3	9
2002	Spring	Biophysics 240: Fourier Transforms	3	4
		Biophysics 295: Readings & Research	1-9	1
	Fall	Biophysics 298: Biophysics Journal Club	1	8
2001	Fall	Biophysics 230: Nuclear Magnetic Resonance (Co-taught)	3	4
		Biophysics 295: Readings & Research	1-9	1
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		
7. Primary Director of Essays or Theses:				
	a. At Marquette University			
	i. Doctoral			
		John Bodenschatz	09/2021 – 05/2026 (expected)	

Improved Simulation Software for Functional Magnetic Resonance Imaging, Formal Bayesian Approaches to Enhance k-Space Measurements, and Non-Cartesian Image Reconstruction

External Member: Tugan Muftuler, MCW

Qualifier (dissertation proposal) Fall 2024.

Ke Xu 09/2020 – 05/2025 (expected)

A Statistical Image Reconstruction Method to Separate Simultaneous Encoded Complex-valued Slices with In-plane Acceleration and Through-plane Acceleration in fMRI

External Member: Andrew S. Nencka, MCW

Chase J. Sakitis 01/2021 – 05/2024

Formal Bayesian Approaches to the SENSE and GRAPPA Parallel fMRI Reconstruction Techniques along with their Combination

External Member: Andrew D. Brown, Clemson University.

External Member: Iain P. Bruce, Polarean Imaging plc.

09/2024– Post Doctoral Research Scholar. Fridley Research Lab for Cancer Research. Children’s Mercy Research Institute. Kansas City, MO.

Sunil Mathew 01/2017 – 08/2023

Generation of Cardiac Chamber Models using Interpretable Generative Neural Networks to Aid Navigation in Electrophysiology Studies

External Member: Jasbir Sra, Cardiology at Auroa Health Care and APN Health

09/2023– Postdoctoral Fellow, Rey Lab for Cognitive and Clinical Neuroscience, Department of Neurosurgery, Medical College of Wisconsin, Milwaukee, WI

Billy Herzberg 09/2019 – 12/2022

Graph Neural Networks in Nonlinear Inverse Problems: An Exploration Using Electrical Impedance Tomography

(Co-Advisor with Hamilton.)

12/2022 – Signal Processing Engineer, Advanced Global Clinical Solutions, New Berlin, WI

Kevin K. Liu 10/2014 – 12/2018 (withdrew from PhD program)

TBD: fMRI Image Registration and Image Analysis Statistics

External Member: Andrew S. Nencka, MCW

03/18 – 06/19 Statistical Analyst, IRI, Chicago, Illinois

07/19 – 02/22 Lead Data Scientist, RCS, Austin, Texas

02/22 – Lead Data Scientist, Kestra Financial, Austin, Texas

Mary C. Kociuba 12/2011 – 08/2016

A Fourier description of covariance, and separation of simultaneously encoded slices with in-plane acceleration in fMRI.

External Member: Andrew S. Nencka, MCW.

08/16–09/17 Senior Fellow in the Department of Pediatrics Division of Neonatology (Biomedical Image Computing Group) at the University of Washington School of Medicine (SoM).

10/17–10/20 Research Scientist, Amazon Inc., Seattle, Washington.  
 10/17–11/21 Sr. Research Scientist, Amazon Inc., Seattle, Washington.  
 12/21– Data Science Manager, Google, Inc., Boulder, Colorado.

M. Muge Karaman 08/2009 – 08/2014  
 Incorporating MR Relaxivities for fMRI Activation, for more Accurate MR Image Reconstruction, and for Correlation Effect Examination.  
 External Member: Andrew S. Nencka, MCW.  
 9/15–9/18 Research Associate in the Center for MR Research - 3T Program (CMRR-3T) in the College of Medicine at the University of Illinois at Chicago (UIC)  
 9/18–12/22 Research Assistant Professor, Department of Bioengineering, Center for Magnetic Resonance Research, University of Illinois College of Medicine at Chicago.  
 1/23– Assistant Professor and Assistant Director, Center for Magnetic Resonance Research, Department of Bioengineering, University of Illinois College of Medicine at Chicago.

Iain P. Bruce 08/2009 – 05/2014  
 Determination of Correlations Induced by the SENSE and GRAPPA pMRI Models and its use in Optimizing MRI RF Coil Design  
 External Member: Andrew S. Nencka, MCW  
 7/14–8/19 Postdoctoral Associate within the Duke/UNC Brain Imaging and Analysis Center (BIAC) at Duke University in Durham, NC  
 9/19–01/23 Medical Instructor, Department of Neurology & Brain Imaging Analysis Center, Duke University, Durham, NC  
 1/2023– MR Imaging and Applications Scientist  
 Polarean Imaging plc  
 Durham, North Carolina, United States

ii. Masters

Jack T. Williams, CMPS-MS 02/2023 – 05/2024  
 Title: TBD Physics Statistics  
 Withdrew

Turner Swanson, CMPS-MS 09/2019 – 12/2020  
 Title: Bayesian Statistical Modeling of Enhanced Patent Application Grant Rate Timelines for Temporal Patent Prosecution Prediction  
 08/2021– Patent Engineer at Direct Supply, Milwaukee, WI

Samuel Gailliot, APST-MS 10/2018 – 05/2020  
 Statistical and Dimension Reduction Methodology for Gravitational Wave Astronomy  
 9/2020 PhD Student in Statistics at Texas A&M University

Kevin K. Liu, CMPS-MS 10/2014 – 05/2016  
 Image Registration Techniques Alter Image Properties in fMRI

(See Doctoral Director Section above.)

Yuning Chen, CMPS-MS 01/2012 – 05/2013  
 An Examination of the Rowe and Lee Models for Complex-Valued FMRI  
 5/13–11/17 PhD in Biostatistics at Boston University

Chaitan N. Parikh, CMPS-MS 01/2012 – 05/2013  
 Functional Magnetic Resonance Imaging Coil Building and Quantification  
 5/13 Technology Consultant at Accenture

Mary C. Kociuba, CMPS-MS 12/2011 – 05/2013  
 A Temporal Frequency Description of the Spatial Correlation Between Voxels  
 in FMRI due to Spatial Processing  
 5/13–09/16 PhD Student in Computational Sciences at Marquette University  
 (See Doctoral Director Section)

Kiersten Purves, MSCS-MS 01/2012 – 05/2012  
 The Use of MatLab to Introduce High School Students to Computer Programming  
 and Problem Solving  
 5/12–present Mathematics Teacher at Pius XI High School, Milwaukee, WI and  
 Lecturer of Mathematics, Department of Mathematics, Statistics,  
 and Computer Science, Marquette University, Milwaukee, WI

M. Muge Karaman, CMPS-MS 08/2009 – 05/2011  
 A Statistical FMRI Model for Differential  $T_2^*$  contrast incorporating  $T_1$  and  $T_2$  of  
 Gray Matter  
 5/11–08/14 PhD Student in Computational Sciences at Marquette University  
 (See Doctoral Director Section)

Iain P. Bruce, CMPS-MS 08/2009 – 05/2011  
 A Statistical Examination of the SENSE Image Reconstruction via an Isomorphism  
 Representation  
 (See Doctoral Director Section)

Zhaoyang Teng, CMPS-MS 01/2010 – 05/2010  
 A Comparison of the Rowe and the Lee Models for Complex-Valued Functional  
 Magnetic Resonance Imaging  
 2010–2015 PhD Student in Statistics, Boston University  
 2015–Senior Statistician at Takeda Oncology

b. At University of Wisconsin, Milwaukee

i. Doctoral

Mustafa Farrah 07/2012 – 05/2015  
 Diffusion Weighted Image Reconstruction: A Bayesian Approach  
 2011–2015 Adjunct Instructor, Dept of Electrical Engineering  
 2015–2022 Lecturer, Dept of Electrical Engineering

2022– University of Wisconsin, Milwaukee, WI  
Teaching Faculty III, Dept of Electrical Engineering  
University of Wisconsin, Milwaukee, WI

ii. Masters

c. At Medical College of Wisconsin

i. Doctoral

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 B0 magnetic field inhomogeneity  
External Member: Gary H. Glover, Stanford University.  
Nominated for Outstanding Dissertation Award for MCW, 2011-2012 AY.  
2011–2013 Postdoctoral Fellow, Dept of Medical Physics, University of Wisconsin  
2013–2017 Research Associate, Dept of Medical Physics, University of Wisconsin  
2017–2022 Assistant Scientist, Dept of Medical Physics, University of Wisconsin  
2022–present Associate Research Scientist, Department of Radiology,  
University of Iowa, Iowa City, IA.

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  
External Member: Douglass C. Noll, University of Michigan.  
First Place Outstanding Dissertation Award for MCW, 2009-2010 AY.  
2009–2011 MRI Physicist, Dept of Biophysics, Medical College of Wisconsin  
2011–2016 Asst. Professor, Dept of Biophysics, Medical College of Wisconsin  
2016–2018 Asst. Professor, Dept of Radiology, Medical College of Wisconsin  
2018–present Assoc. Professor, Dept of Radiology, Medical College of Wisconsin  
2016–2021 Associate Director, Center for Imaging Research (CIR);  
Section of Imaging Research, Division of Imaging Sciences,  
Medical College of Wisconsin, Milwaukee, WI  
2021–Present Operations Director, Center for Imaging Research,  
Section of Imaging Research, Division of Imaging Sciences,  
Medical College of Wisconsin, Milwaukee, WI

ii. Masters

Christopher P. Meller, M.S. 07/2003 – 12/2004  
Modeling fMRI time series using a non-linear method  
2009–2013 Sr. Analyst, Decision Sciences, Takeda Pharmaceuticals  
2013–2015 Manager, Marketing Analytics at Astellas Pharma, Chicago, IL  
2015–2020 Senior Manager, Insights and Analytics at Lundbeck, Deerfield, IL  
2015–2021 Director, Insights and Analytics at Lundbeck, Deerfield, IL

d. At Iowa State University



## i. Doctoral

Daniel W. Adrian, PhD      12/2009 – 10/2011 (co-Advisor)  
 Department of Statistics, Iowa State University, Ames, IA  
 2011–2014 Mathematical Statistician, National Agricultural Statistical Service  
 2014–2020 Assistant Professor, Department of Statistics  
 Grand Valley State University, Allendale, MI  
 2020– Associate Professor, Department of Statistics  
 Grand Valley State University, Allendale, MI

## e. At Clemson University

## i. Doctoral

Zhengxin (Jason) Wang 09/2021 – 05/2024  
 Department of Mathematical and Statistical Sciences, Clemson University,  
 Clemson SC.

## 7. Primary Director of Postdoctoral Education

## a. At SAMSI through University of North Carolina-Chapel Hill

Benjamin Risk, PostDoc      08/2015–05/2016  
 2017–2023 Assistant Professor, Department of Biostatistics and Bioinformatics  
 Emory University, Atlanta, GA  
 2023– Associate Professor, Department of Biostatistics and Bioinformatics  
 Emory University, Atlanta, GA

## 8. Other Teaching Related Activities:

## a. At Marquette University

## i. Doctoral Dissertation Committee

Thomas Shomer      04/2024 –  
 Title: Fourth and eighth-grade students' achievement in statistics and probability: An  
 exploratory study of TIMSS data from the United States  
 Marta Magiera Dissertation Advisor  
 Department of Mathematical and Statistical Sciences, Marquette University

Jordan Trinka      09/2019 – 05/2021  
 Univariate and Multivariate Functional Singular Spectrum Analysis with Forecasting  
 Mehdi Maadooliat Dissertation Advisor  
 Department of Mathematical and Statistical Sciences, Marquette University

Cagatay Dursun      02/2018 – 05/2021  
 Uncovering Genotype-Phenotype Relations to Identify Genes-Complex Trait  
 Associations  
 Mary Shimoyama Dissertation Advisor  
 Department of Biomedical Engineering, Marquette University-MCW

Xuyong Yu 03/2017 – 02/2019  
 Evaluating Electrode-Tissue Contact Force Using Cardiac Image Processing  
 Technology  
 Merrill Dissertation Advisor  
 Department of Mathematics, Statistics, and Computer Science

Emily M. Paulson 03/2017 – 05/2018 (withdrew from PhD program)  
 The Nature of Protein Aggregation Movement in *Saccharomyces Cerevisiae*.  
 Merrill Dissertation Advisor  
 Department of Mathematics, Statistics, and Computer Science

Benjamin M. Rizzo 07/2014 – 05/2018  
 Imaging methods for measuring kinetic parameters in lungs using SPECT.  
 Clough Dissertation Advisor  
 Department of Mathematics, Statistics, and Computer Science

Brittany Baur 09/2014 – 05/2017  
 Reverse engineering gene regulatory networks from structural and epigenetic  
 datasets.  
 Bozdogan Dissertation Advisor  
 Department of Mathematics, Statistics, and Computer Science

Adam Mallen 01/2012 – 08/2016  
 Department of Mathematics, Statistics, and Computer Science

Nutta-on Promjunyakul 01/2010 – 12/2012  
 Pedaling-Related Brain Activation In People Post-Stroke: An FMRI Study  
 Department of Biomedical Engineering

ii. Masters Committees

Katharine Finnegan 07/2021 – 08/2022  
 Exploring the Role of Self-Tutorial on Undergraduate Students' Understanding of  
 Vector Mathematics in Introductory Physics  
 MS in Mathematics for Secondary School Teachers (Magiera Advisor)  
 Department of Mathematical and Statistical Sciences

Zerui Zhang 02/2021 – 06/2021  
 Statistical Modeling on Daily Confirmed Covid-19 Cases and Deaths in Europe and  
 United States  
 MS in Computational Sciences (Bansal Advisor)  
 Department of Mathematical and Statistical Sciences

Yi Zheng 02/2021 – 06/2021  
 Predicting Daily Confirmed Cases in Midwestern Central States in U.S.  
 by Using ARIMA and LSTM  
 MS in Computational Sciences (Bansal Advisor)  
 Department of Mathematical and Statistical Sciences

Mingjun (Atlas) Li                      01/2020 – 05/2020  
 A Parallel Algorithm And implementation To Compute Spatial Autocorrelation  
 (Hotspot) Using Matlab  
 MS in Computational Sciences (Puri Advisor)  
 Department of Mathematical and Statistical Sciences  
 9/2020 PhD Student in Computer Science at Georgia State University

Yaorong Xiao                              01/2020 – 05/2020  
 Using Machine Learning Tools To Predict The Severity Of Osteoarthritis Based On  
 Knee X-Ray Data  
 MS in Applied Statistics (Bansal Advisor)  
 Department of Mathematical and Statistical Sciences  
 9/2020 PhD Student in Computer Science at Georgia State University

Ke Xu                                        01/2020 – 05/2020  
 Using Zero Inflated Poisson Model And Zero-Inflated Negative Binomial Model On  
 Dental Services Of Wisconsin, 2014 Data  
 MS in Applied Statistics (Bansal Advisor)  
 Department of Mathematical and Statistical Sciences  
 9/2020 – PhD Student in Computational Mathematical and Statistical Sciences at  
 Marquette University

Seoungbyung (Kobe) Park              01/2017 – 05/2017  
 Implementation of Regime-Switching Model to Factor Based Statistical Arbitrage in  
 U.S. Equity Market  
 MS in Computational Sciences  
 Department of Mathematics, Statistics, and Computer Science  
 2017 MBA Candidate, NYU Stern School of Business

Joseph Fox                                01/2015 – 05/2015  
 Creation of a Computational Pipeline to Extract Candidate Genes from Quantitative  
 Trait Loci (QTL) for Type 2 Diabetes and Obesity  
 MS in Bioinformatics  
 Department of Mathematics, Statistics, and Computer Science

iii. Summer REU Program Mentor

Abby Miller                                05/2012 – 08/2012  
 Mathematics Undergraduate, Harding University  
 Oct 2018 Data Engineer at SpotX

Shelby Cummings                        05/2012 – 08/2012  
 Mathematics and Computer Science Undergraduate, Wittenberg University  
 2016 MS Student in Epidemiology, Texas A & M University

b. At Medical College of Wisconsin

i. Doctoral Dissertation Committee

Robert Wujek	01/2021–	Ph.D.
Dayong (Dana) An	04/2020 – 01/2024	Ph.D.
Title: Advanced Magnetic Resonance Imaging for Reducing Cancer Treatment-Induced Cardiotoxicity		
Ali Esroz	12/2014 – 06/2016	Ph.D.
Jun Xie	07/2007 – 12/2007	Ph.D.
Peter R. Kufahl	07/2004 – 12/2005	Ph.D.
Hong Wang	03/2002 – 01/2003	Ph.D.
Matthew Hayat	07/2001 – 09/2002	Ph.D.
Christopher P. Quarles	09/1999 – 08/2004	Ph.D.
Kevin M. Bennett	09/1998 – 04/2003	Ph.D.

ii. Masters' Thesis Committee

iii. Undergraduate Theses

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

iv. Summer Program for Undergraduate Research (SPUR) Mentor

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

Brian C. Kaster                    06/2006–08/2006  
Physics Undergraduate, Marquette University, Milwaukee, WI  
Went on to complete Masters in Physics from Miami University - Ohio

Alexander D. Cohen            06/2005–09/2005  
Physics Undergraduate, University of Wisconsin, Madison, WI

c. At Other Universities

i. Doctoral Dissertation Committees

Zhengxin (Jason) Wang        10/2021–5/2024  
Dissertation Proposal Defense 12/22  
Doctoral Graduate in School of Mathematical and Statistical Sciences  
Clemson University, Clemson, SC

d. 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 University Service Activities:		
07/2024 – 09/2025	CoDirector of Data Science Major & Minor	Dept MSSC
07/2024 – 06/2027	Undergraduate Committee, Department of MSSC	Dept MSSC
07/2024 – 06/2027	Executive Committee, Department of MSSC	Dept MSSC
09/2023 – 12/2023	TT Search Committee Chair, Department of MSSC	Dept MSSC
08/2023 – 05/2024	Colloquium Coordinator, Department of MSSC	Dept MSSC
01/2023 – 06/2024	Executive Committee, Department of MSSC	Dept MSSC
07/2023 – 10/2023	Comprehensive Exam Committee Member	Dept MSSC
07/2020 – 09/2022	CoDirector of Applied Statistics MS Program	Dept MSSC
03/2021 –	Member of Data Science @ Marquette Committee	University
01/2020 – 10/2020	Member of MSSC Subcommittee to explore a new major in Statistical Science	Dept MSSC
09/2019 – 06/2022	Graduate Chair (Director of Grad Studies, DGS) Duties: Admissions, Student Evaluations, TA Assignments and Evaluations, Student Advisement, Comprehensive Exam, Annual Program Assessments	Dept MSSC
09/2019 – 01/2020	TT Search Committee Chair, Department of MSSC	Dept MSSC
09/2018 – 07/2020	Director of Applied Statistics MS Program	Dept MSSC
08/2018 – 10/2018	Committee Chair, Working Group on CMPS-PhD Program Modification.	Dept MSCS
08/2018 – 10/2018	Committee Chair, Working Group on APST-MS Program Modification.	Dept MSCS
08/2018 – 10/2018	Committee Chair, Working Group on DTSC-BS Program Modification.	Dept MSCS
07/2018 – 12/2018	Committee Chair, Working Group on APST-MS ADP program proposal.	Dept MSCS
07/2018 – 10/2018	Comprehensive Exam Committee Chair	Dept MSCS
07/2018 – 06/2019	Executive Committee, Department of MSCS	Dept MSCS
08/2017 – 05/2018	Colloquium Coordinator, Department of MSCS	Dept MSCS
01/2017 – 06/2017	Executive Committee, Department of MSCS	Dept MSCS
08/2016 – 07/2022	Graduate Committee, Department of MSCS	Dept MSCS
08/2016 – 07/2022	Member of Comprehensive Exam Committee	Dept MSCS
08/2016 – present	Faculty of the Cognitive Science Program <a href="http://www.marquette.edu/cognitive-science/faculty.php">http://www.marquette.edu/cognitive-science/faculty.php</a>	Dept PHIL
08/2016 – 06/2017	Committee on Research, A&S Representative	University
05/2016 – present	Interdisciplinary Neurosciences Working Group	University
07/2013 – 06/2015	Executive Committee, Department of MSCS	Dept MSCS
09/2012 – 03/2013	Faculty Search Committee, Department of MSCS	Dept MSCS
10/2011 – 03/2012	TT Search Committee Chair, Department of MSCS	Dept MSCS
09/2011 – 08/2014	University Board of Graduate Studies	Univ GS
06/2011 – 05/2013	Graduate Chair (Director of Grad Studies, DGS) Duties: Admissions, Student Evaluations, TA Assignments and Evaluations, Student Advisement, Comprehensive Exam, Annual Program Assessments	Dept MSCS
07/2010 – 05/2015	coDirector Bioinformatics MS Program	Dept MSCS
06/2011 – 05/2013	Chair of Comprehensive Exam Committee 2011F, 2012S, 2012F, 2013S	Dept MSCS

09/2009 – 07/2015 Graduate Committee, Department of MSCS Dept MSCS

2. Medical College of Wisconsin Service Activities:
  - 06/2007 – 08/2009 Dean's Appointee, Faculty Council Information Technology Committee
  - 07/2002 – 08/2009 Biophysics Steering Committee
  - 08/2002 – 07/2006 Chairman, Graduate Studies Council Student Awards Committee
  - 06/2002 – 09/2002 Ad hoc Advisory Committee on Information Technology to Advance Research Excellence
  - 07/2001 – 08/2009 Graduate Studies Council (GSC)
  - 07/2001 – 08/2009 Director, Biophysics PhD Student Recruitment
  
3. Other
  - 09/2023 – External Curriculum Advisory Committee
  - 08/2000 – 07/2001 Department of Information and Computer Science  
Riverside Community College, Riverside, CA