



Adam Kerr

Co-Director CNI / Sr Research Engineer
Electrical Engineering

Bio

ACADEMIC APPOINTMENTS

- Sr Research Engineer, Electrical Engineering

ADMINISTRATIVE APPOINTMENTS

- Research Director, Stanford Center for Cognitive and Neurobiological Imaging, (2017- present)

Publications

PUBLICATIONS

- **Basis function compression for field probe monitoring.** *Magnetic resonance in medicine*
Dubovan, P. I., Varela-Mattatall, G., Michael, E. S., Hennel, F., Menon, R. S., Pruessmann, K. P., Kerr, A. B., Baron, C. A.
2025
- **Spherical echo-planar time-resolved imaging (sEPTI) for rapid 3D quantitative T₂* and susceptibility imaging.** *Magnetic resonance in medicine*
Wang, N., Liao, C., Cao, X., Nishimura, M., Brackenier, Y. W., Yurt, M., Gao, M., Abraham, D., Alkan, C., Iyer, S. S., Zhou, Z., Jeong, H., Kerr, et al
2024
- **Rapid and accurate navigators for motion and B₀ tracking using QUEEN: Quantitatively enhanced parameter estimation from navigators.** *Magnetic resonance in medicine*
Brackenier, Y., Wang, N., Liao, C., Cao, X., Schauman, S., Yurt, M., Cordero-Grande, L., Malik, S. J., Kerr, A., Hajnal, J. V., Setsompop, K.
2024
- **High-resolution myelin-water fraction and quantitative relaxation mapping using 3D ViSta-MR fingerprinting.** *Magnetic resonance in medicine*
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2023
- **High-resolution myelin-water fraction and quantitative relaxation mapping using 3D ViSta-MR fingerprinting.** *ArXiv*
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2023
- **DTI-MR fingerprinting for rapid high-resolution whole-brain T₁, T₂, proton density, ADC, and fractional anisotropy mapping.** *Magnetic resonance in medicine*
Cao, X., Liao, C., Zhou, Z., Zhong, Z., Li, Z., Dai, E., Iyer, S. S., Hannum, A. J., Yurt, M., Schauman, S., Chen, Q., Wang, N., Wei, et al
2023
- **High-fidelity mesoscale in-vivo diffusion MRI through gSlider-BUDA and circular EPI with S-LORAKS reconstruction.** *NeuroImage*
Liao, C., Yarach, U., Cao, X., Iyer, S. S., Wang, N., Kim, T. H., Tian, Q., Bilgic, B., Kerr, A. B., Setsompop, K.
2023: 120168

- **Measuring brain beats: Cardiac-aligned fast functional magnetic resonance imaging signals.** *Human brain mapping*
Hermes, D., Wu, H., Kerr, A. B., Wandell, B. A.
2022
- **Convergence, preliminary findings and future directions across the four human connectome projects investigating mood and anxiety disorders.** *NeuroImage*
Tozzi, L., Anene, E. T., Gotlib, I. H., Wintermark, M., Kerr, A. B., Wu, H., Seok, D., Narr, K. L., Sheline, Y. I., Whitfield-Gabrieli, S., Williams, L. M.
2021: 118694
- **Utilizing the Wavelet Transform's Structure in Compressed Sensing.** *Signal, image and video processing*
Dwork, N., O'Connor, D., Baron, C. A., Johnson, E. M., Kerr, A. B., Pauly, J. M., Larson, P. E.
2021; 15 (7): 1407-1414
- **Frequency Drift in MR Spectroscopy at 3T.** *NeuroImage*
Hui, S. C., Mikkelsen, M., Zollner, H. J., Ahluwalia, V., Alcauter, S., Baltusis, L., Barany, D. A., Barlow, L. R., Becker, R., Berman, J. I., Berrington, A., Bhattacharyya, P. K., Blicher, et al
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Tozzi, L., Staveland, B., Holt-Gosselin, B., Chesnut, M., Chang, S. E., Choi, D., Shiner, M. L., Wu, H., Lerma-Usabiaga, G., Sporns, O., Barch, D., Gotlib, I. H., Hastie, et al
2020: 116715
- **Combined T2 -preparation and multidimensional outer volume suppression for coronary artery imaging with 3D cones trajectories.** *Magnetic resonance in medicine*
Zeng, D. Y., Baron, C. A., Malave, M. O., Kerr, A. B., Yang, P. C., Hu, B. S., Nishimura, D. G.
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Mani, M., Jacob, M., McKinnon, G., Yang, B., Rutt, B., Kerr, A., Magnotta, V.
2019
- **MR susceptibility contrast imaging using a 2D simultaneous multi-slice gradient-echo sequence at 7T.** *PLoS one*
Bian, W., Kerr, A. B., Tranvinh, E., Parivash, S., Zahneisen, B., Han, M. H., Lock, C. B., Goubran, M., Zhu, K., Rutt, B. K., Zeineh, M. M.
2019; 14 (7): e0219705
- **Advantages of short repetition time resting-state functional MRI enabled by simultaneous multi-slice imaging** *JOURNAL OF NEUROSCIENCE METHODS*
Jahanian, H., Holdsworth, S., Christen, T., Wu, H., Zhu, K., Kerr, A. B., Middione, M. J., Dougherty, R. F., Moseley, M., Zaharchuk, G.
2019; 311: 122–32
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Chen, H., Larson, P. E. Z., Gordon, J. W., Bok, R. A., Ferrone, M., van Criekinge, M., Carvajal, L., Cao, P., Pauly, J. M., Kerr, A. B., Park, I., Slater, J. B., Nelson, et al
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- **Advantages of Short Repetition Time Resting-State Functional MRI Enabled by Simultaneous Multi-slice Imaging.** *Journal of neuroscience methods*
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2018
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2018; 79 (6): 3032–44
- **Slice profile effects on nCPMG SS-FSE.** *Magnetic resonance in medicine*
Gibbons, E. K., Le Roux, P., Pauly, J. M., Kerr, A. B.

2017

- **Body Diffusion Weighted Imaging Using Non-CPMG Fast Spin Echo** *IEEE TRANSACTIONS ON MEDICAL IMAGING*
Gibbons, E. K., Le Roux, P., Vasanaawala, S. S., Pauly, J. M., Kerr, A. B.
2017; 36 (2): 549-559
- **Measuring B-1 distributions by B-1 phase encoding** *MAGNETIC RESONANCE IN MEDICINE*
Jordanova, K. V., Nishimura, D. G., Kerr, A. B.
2017; 77 (1): 229-236
- **Spectrally selective three-dimensional dynamic balanced steady-state free precession for hyperpolarized C-13 metabolic imaging with spectrally selective radiofrequency pulses.** *Magnetic resonance in medicine*
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- **H-1 MR spectroscopic imaging of the prostate at 7T using spectral-spatial pulses** *MAGNETIC RESONANCE IN MEDICINE*
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2016
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Shang, H., Larson, P. E., Kerr, A., Reed, G., Sukumar, S., Elkhaled, A., Gordon, J. W., Ohliger, M. A., Pauly, J. M., Lustig, M., Vigneron, D. B.
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- **Interventional Device Visualization with Toroidal Transceiver and Optically Coupled Current Sensor for Radiofrequency Safety Monitoring** *MAGNETIC RESONANCE IN MEDICINE*
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2015; 73 (3): 1315-1327
- **B-1 Estimation Using Adiabatic Refocusing: BEAR** *MAGNETIC RESONANCE IN MEDICINE*
Jordanova, K. V., Nishimura, D. G., Kerr, A. B.
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- **Optimization of magnetization-prepared 3-dimensional fluid attenuated inversion recovery imaging for lesion detection at 7 T.** *Investigative radiology*
Saranathan, M., Tourdias, T., Kerr, A. B., Bernstein, J. D., Kerchner, G. A., Han, M. H., Rutt, B. K.
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- **Quantitative Measurement of Cancer Metabolism Using Stimulated Echo Hyperpolarized Carbon-13 MRS** *MAGNETIC RESONANCE IN MEDICINE*
Swisher, C. L., Larson, P. E., Kruttwig, K., Kerr, A. B., Hu, S., Bok, R. A., Goga, A., Pauly, J. M., Nelson, S. J., Kurhanewicz, J., Vigneron, D. B.
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Xing, Y., Reed, G. D., Pauly, J. M., Kerr, A. B., Larson, P. E.
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- **Reducing artifacts in one-dimensional Fourier velocity encoding for fast and pulsatile flow** *MAGNETIC RESONANCE IN MEDICINE*
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