

Stanford



Adam Kerr

Research 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

- **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
2021: 118430
- **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. Z.
2021
- **The human connectome project for disordered emotional states: Protocol and rationale for a research domain criteria study of brain connectivity in young adult anxiety and depression.** *NeuroImage*
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.
2019
- **SMS MUSSELS: A navigator-free reconstruction for simultaneous multi-slice-accelerated multi-shot diffusion weighted imaging.** *Magnetic resonance in medicine*
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
- **Technique development of 3D dynamic CS-EPSI for hyperpolarized C-13 pyruvate MR molecular imaging of human prostate cancer** *MAGNETIC RESONANCE IN MEDICINE*
Chen, H., Larson, P. 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
2018; 80 (5): 2062–72
- **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.
2018
- **Body diffusion-weighted imaging using magnetization prepared single-shot fast spin echo and extended parallel imaging signal averaging** *MAGNETIC RESONANCE IN MEDICINE*
Gibbons, E. K., Vasanaawala, S. S., Pauly, J. M., Kerr, A. B.
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- **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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2016
- **Lowering the B1 threshold for improved BEAR B1 mapping.** *Magnetic resonance in medicine*
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- **Measuring B1 distributions by B1 phase encoding.** *Magnetic resonance in medicine*
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- **Multiband RF pulses with improved performance via convex optimization** *JOURNAL OF MAGNETIC RESONANCE*
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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- **Controlling Radiofrequency-Induced Currents in Guidewires Using Parallel Transmit** *MAGNETIC RESONANCE IN MEDICINE*
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2015; 74 (6): 1790-1802
- **Controlling radiofrequency-induced currents in guidewires using parallel transmit.** *Magnetic resonance in medicine*
Etezadi-Amoli, M., Stang, P., Kerr, A., Pauly, J., Scott, G.

2015; 74 (6): 1790-802

- **Chemical Shift Separation with Controlled Aliasing for Hyperpolarized C-13 Metabolic Imaging** *MAGNETIC RESONANCE IN MEDICINE*
Shin, P. J., Larson, P. E., Uecker, M., Reed, G. D., Kerr, A. B., Tropp, J., Ohliger, M. A., Nelson, S. J., Pauly, J. M., Lustig, M., Vigneron, D. B.
2015; 74 (4): 978-989
- **Non-contrast-enhanced peripheral angiography using a sliding interleaved cylinder acquisition** *MAGNETIC RESONANCE IN MEDICINE*
Kwon, K. T., Kerr, A. B., Wu, H. H., Hu, B. S., Brittain, J. H., Nishimura, D. G.
2015; 74 (3): 727-738
- **Non-contrast-enhanced peripheral angiography using a sliding interleaved cylinder acquisition.** *Magnetic resonance in medicine*
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- **B-1 Estimation Using Adiabatic Refocusing: BEAR** *MAGNETIC RESONANCE IN MEDICINE*
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2014; 72 (5): 1302-1310
- **B1 estimation using adiabatic refocusing: BEAR.** *Magnetic resonance in medicine*
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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.
2014; 49 (5): 290-298
- **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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- **Optimal variable flip angle schemes for dynamic acquisition of exchanging hyperpolarized substrates** *JOURNAL OF MAGNETIC RESONANCE*
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- **Adiabatic RF pulse design for Bloch-Siegert B-1(+) mapping** *MAGNETIC RESONANCE IN MEDICINE*
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- **RF pulse optimization for Bloch-Siegert B-1(+) mapping** *MAGNETIC RESONANCE IN MEDICINE*
Khalighi, M. M., Rutt, B. K., Kerr, A. B.
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- **RF Field Visualization of RF Ablation at the Larmor Frequency** *IEEE TRANSACTIONS ON MEDICAL IMAGING*

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- Shultz, K., Stang, P., Kerr, A., Pauly, J., Scott, G.
2012; 31 (4): 938-947
- **A method for simultaneous echo planar imaging of hyperpolarized C-13 pyruvate and C-13 lactate** *JOURNAL OF MAGNETIC RESONANCE*
Reed, G. D., Larson, P. E., Von Morze, C., Bok, R., Lustig, M., Kerr, A. B., Pauly, J. M., Kurhanewicz, J., Vigneron, D. B.
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Lee, D., Grissom, W. A., Lustig, M., Kerr, A. B., Stang, P. P., Pauly, J. M.
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 - **Generating Super Stimulated-Echoes in MRI and Their Application to Hyperpolarized C-13 Diffusion Metabolic Imaging** *IEEE TRANSACTIONS ON MEDICAL IMAGING*
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Zanchi, M. G., Stang, P., Kerr, A., Pauly, J. M., Scott, G. C.
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 - **Spiral Imaging Artifact Reduction: A Comparison of Two k-Trajectory Measurement Methods** *JOURNAL OF MAGNETIC RESONANCE IMAGING*
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 - **In vivo real-time intravascular MRI** *JOURNAL OF CARDIOVASCULAR MAGNETIC RESONANCE*
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