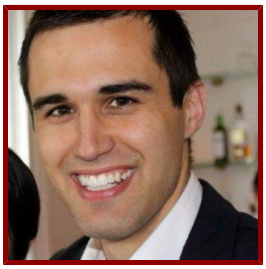
Stanford



Eric Peterson

Casual - Non-Exempt, Neurology

Curriculum Vitae available Online Resume available Online

Bio

BIO

I am a researcher with 10 years of experience in magnetic resonance imaging, which includes project management, data analysis, digital signal and image processing, image reconstruction, and pulse sequence design. I currently manage the day-to-day operations of a small animal MRI facility and work to ensure reliable data are collected for both human and animal imaging. I also work on MRI pulse sequence development, reconstruction, and analysis to better understand the sources and effects of alcohol addiction. I have also worked on clinical stroke imaging in CT and MRI, as well as techniques for high resolution 3D Diffusion-weighted MRI of the brain to better visualize white matter tracts in order to better detect the subtle changes associated with degenerative diseases such as Alzheimer's disease. I earned my PhD with a variety of work including cancer metabolism using hyperpolarized 13C, and data analysis of the effects of asthma on the lungs. My interests are research, technology, and healthcare.

EDUCATION AND CERTIFICATIONS

- Ph.D., University of Wisconsin - Madison , Biomedical Engineering (2010)
- M.S., University of Wisconsin - Madison , Biomedical Engineering (2007)
- B.S., University of Iowa , Biomedical Engineering (2005)

PATENTS

- Eric Peterson, Sean Fain. "United States Patent 7,885,702 Segmentation of the Airway Tree Using Hyperpolarized Noble Gases and Diffusion Weighted Magnetic Resonance Imaging"

Publications

PUBLICATIONS

- **The distortions of the free water model for diffusion MRI data when assuming single compartment relaxometry and proton density.** *Physics in medicine and biology*
  Ferizi, U., Müller-Oehring, E. M., Peterson, E. T., Pohl, K. M.
  2023

- **Distribution of brain iron accrual in adolescence: Evidence from cross-sectional and longitudinal analysis** *HUMAN BRAIN MAPPING*
  Peterson, E. T., Kwon, D., Luna, B., Larsen, B., Prouty, D., De Bellis, M. D., Voyvodic, J., Liu, C., Li, W., Pohl, K. M., Sullivan, E., Pfefferbaunn, A.
  2019; 40 (5): 1480–95

- **Distribution of brain iron accrual in adolescence: Evidence from cross-sectional and longitudinal analysis.** *Human brain mapping*
  Peterson, E. T., Kwon, D., Luna, B., Larsen, B., Prouty, D., De Bellis, M. D., Voyvodic, J., Liu, C., Li, W., Pohl, K. M., Sullivan, E. V., Pfefferbaum, A.
  2018

- **Preface.** *International review of neurobiology*
  Zahr, N. M., Peterson, E. T.

2016; 129: ix-xii

- **Simultaneous imaging of (13) C metabolism and (1) H structure: technical considerations and potential applications.** *NMR in biomedicine*
  Gordon, J. W., Fain, S. B., Niles, D. J., Ludwig, K. D., Johnson, K. M., Peterson, E. T.
  2015; 28 (5): 576-582

- **Real-Time Correction of Rigid Body Motion-Induced Phase Errors for Diffusion-Weighted Steady-State Free Precession Imaging** *MAGNETIC RESONANCE IN MEDICINE*
  O'Halloran, R., Aksoy, M., Aboussouan, E., Peterson, E., Van, A., Bammer, R.
  2015; 73 (2): 565-576

- **Application of a whole-body pharmacokinetic model for targeted radionuclide therapy to NM404 and FLT** *PHYSICS IN MEDICINE AND BIOLOGY*
  Grudzinski, J. J., Floberg, J. M., Mudd, S. R., Jeffery, J. J., Peterson, E. T., Nomura, A., Burnette, R. R., Tome, W. A., Weichert, J. P., Jeraj, R.
  2012; 57 (6): 1641-1657

- **In Vivo Imaging and Spectroscopy of Dynamic Metabolism Using Simultaneous C-13 and H-1 MRI** *IEEE TRANSACTIONS ON BIOMEDICAL ENGINEERING*
  Smith, M. R., Peterson, E. T., Gordon, J. W., Niles, D. J., Rowland, I. J., Kurpad, K. N., Fain, S. B.
  2012; 59 (1): 45-49

- **Measurement of lung airways in three dimensions using hyperpolarized helium-3 MRI** *PHYSICS IN MEDICINE AND BIOLOGY*
  Peterson, E. T., Dai, J., Holmes, J. H., Fain, S. B.
  2011; 56 (10): 3107-3122

- **Dynamic Nuclear Polarization System Output Volume Reduction Using Inert Fluids** *JOURNAL OF MAGNETIC RESONANCE IMAGING*
  Peterson, E. T., Gordon, J. W., Erickson, M. G., Fain, S. B., Rowland, I. J.
  2011; 33 (4): 1003-1008

- **Hyperpolarized (13)Carbon MR** *CURRENT PHARMACEUTICAL BIOTECHNOLOGY*
  Rowland, I. J., Peterson, E. T., Gordon, J. W., Fain, S. B.
  2010; 11 (6): 709-719

- **Severe Asthma Research Program – Phenotyping and Quantification of Severe Asthma** *Imaging Decisions MRI*
  Fain, S. B., Peterson, E. T., Sorkness, R. L., Wenzel, S., Castro, M., Busse, W. W.
  2009; 13 (1): 24-27

- **Evaluation of structure-function relationships in asthma using multidetector CT and hyperpolarized He-3 MRI** *ACADEMIC RADIOLOGY*
  Fain, S. B., Gonzalez-Fernandez, G., Peterson, E. T., Evans, M. D., Sorkness, R. L., Jarjour, N. N., Busse, W. W., Kuhlman, J. E.
  2008; 15 (6): 753-762