

Jonathan R. Polimeni

Associate Professor of Radiology (Radiological Sciences Laboratory)

Bio

ACADEMIC APPOINTMENTS

- Associate Professor, Radiology
- Member, Bio-X
- Member, Wu Tsai Neurosciences Institute

Teaching

STANFORD ADVISEES

Postdoctoral Faculty Sponsor

Shota Hodono, Zhangxuan Hu, Quimby Lee, Sébastien Proulx, Nadira Yusif Rodriguez

Doctoral Dissertation Advisor (AC)

Megan Martin

Publications

PUBLICATIONS

- **Visual stimulus-evoked blood velocity responses in individual human posterior cerebral arteries measured with dynamic phase-contrast functional MR angiography.** *Imaging neuroscience (Cambridge, Mass.)*
Hu, Z., Proulx, S., Hartung, G. A., Gomez, D. E., Chen, J. E., Varadarajan, D., Gökçal, E., Bollmann, S., Tan, C. O., Gurol, M. E., Polimeni, J. R.
2025; 3
- **In vivo 7 Tesla MRI of non-human primate intracortical microvascular architecture.** *Neuron*
Wang, J., Liu, Y., Ma, Y., Feng, Y., Lin, L., Ping, A., Tian, F., Zhang, X., Berman, A. J., Bollmann, S., Polimeni, J. R., Roe, A. W.
2025
- **Imaging Neuroscience opening editorial.** *Imaging neuroscience (Cambridge, Mass.)*
Smith, S., Bergmann, T. O., Forstmann, B., Dagher, A., Keilholz, S., Kennedy, K., Kotz, S. A., Lustig, C., Pike, B., Tittgemeyer, M., Woolrich, M., Yeo, B. T., Alexander, et al
2023; 1
- **Imaging of the pial arterial vasculature of the human brain in vivo using high-resolution 7T time-of-flight angiography** *ELIFE*
Bollmann, S., Mattern, H., Bernier, M., Robinson, S. D., Park, D., Speck, O., Polimeni, J. R., Jbabdi, S.
2022; 11
- **Probing in vivo cortical myeloarchitecture in humans via line-scan diffusion acquisitions at 7 T with 250-500 micron radial resolution** *MAGNETIC RESONANCE IN MEDICINE*
Balasubramanian, M., Mulkern, R., Neil, J. J., Maier, S. E., Polimeni, J. R.
2021; 85 (1): 42-55
- **Ultra-high spatial resolution BOLD fMRI in humans using combined segmented-accelerated VFA-FLEET with a recursive RF pulse design** *MAGNETIC RESONANCE IN MEDICINE*
Berman, A. J. L., Grissom, W. A., Witzel, T., Nasr, S., Park, D. J., Setsompop, K., Polimeni, J. R.

2020

- **Laminar (f)MRI: A short history and future prospects** *NEUROIMAGE*
Norris, D. G., Polimeni, J. R.
2019; 197: 643-649
- **Automated In-line Normalization Procedure for BOLD-CVR Using the Resting-State Temporal Shift with Machine Learning.** *AJNR. American journal of neuroradiology*
Zhu, Y., Dogra, S., Wang, X., Polimeni, J. R., Dehkharghani, S.
2026
- **Large gains in SNR through the application of Shinnar-Le Roux RF pulse design to short-TR spin-echo fMRI acquisitions at 7#T.** *Magnetic resonance imaging*
Balasubramanian, M., Mulkern, R. V., Grissom, W. A., Polimeni, J. R.
2026: 110639
- **Simultaneous EEG-PET-MRI identifies temporally coupled and spatially structured brain dynamics across wakefulness and NREM sleep.** *Nature communications*
Chen, J. E., Lewis, L. D., Coursey, S. E., Catana, C., Polimeni, J. R., Fan, J., Droppa, K. S., Patel, R., Wey, H. Y., Chang, C., Manoach, D. S., Price, J. C., Sander, et al
2025; 16 (1): 8887
- **Mesoscale functional organization of face and body areas in the macaque brain.** *Nature communications*
Zhu, Q., Li, X., Popivanov, I. D., Polimeni, J. R., Vogels, R., Vanduffel, W.
2025; 16 (1): 8862
- **Differentiating BOLD and non-BOLD signals in fMRI time series using cross-cortical depth delay patterns.** *Imaging neuroscience (Cambridge, Mass.)*
Chen, J. E., Blazejewska, A. I., Fan, J., Fultz, N. E., Rosen, B. R., Lewis, L. D., Polimeni, J. R.
2025; 3
- **T1-weighted fMRI in mouse visual cortex using an iron oxide nanoparticle contrast agent and UTE imaging at 9.4 T.** *Magnetic resonance in medicine*
Jain, N., Bollmann, S., Chuang, K. H., Polimeni, J. R., Barth, M.
2025
- **On the analysis of functional PET (fPET)-FDG: Baseline mischaracterization can introduce artifactual metabolic (de)activations.** *Imaging neuroscience (Cambridge, Mass.)*
Coursey, S. E., Mandeville, J., Reed, M. B., Hartung, G. A., Garimella, A., Sari, H., Lanzenberger, R., Price, J. C., Polimeni, J. R., Greve, D. N., Hahn, A., Chen, J. E.
2025; 3
- **Functional MRI signatures of autonomic physiology in aging.** *Communications biology*
Fan, J., Juttukonda, M. R., Goodale, S. E., Wang, S., Orbán, C., Varadarajan, D., Polimeni, J. R., Chang, C., Salat, D. H., Chen, J. E.
2025; 8 (1): 1287
- **Using PINS pulses to saturate inflow effects on fMRI data at 3 and 7 T.** *Magnetic resonance in medicine*
Hodono, S., Wu, C. Y., Jin, J., Polimeni, J. R., Cloos, M. A.
2025
- **Multilayer network analysis across cortical depths in 7-T resting-state fMRI** *NETWORK NEUROSCIENCE*
Kotlarz, P., Lankinen, K., Hakonen, M., Turpin, T., Polimeni, J. R., Ahveninen, J.
2025; 9 (2): 475-503
- **Multilayer network analysis across cortical depths in 7-T resting-state fMRI.** *Network neuroscience (Cambridge, Mass.)*
Kotlarz, P., Lankinen, K., Hakonen, M., Turpin, T., Polimeni, J. R., Ahveninen, J.
2025; 9 (2): 475-503
- **Individual connectivity-based parcellations reflect functional properties of human auditory cortex.** *Imaging neuroscience (Cambridge, Mass.)*
Hakonen, M., Dahmani, L., Lankinen, K., Ren, J., Barbaro, J., Blazejewska, A., Cui, W., Kotlarz, P., Li, M., Polimeni, J. R., Turpin, T., Uluç, I., Wang, et al

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- **Detectability and cortical depth dependence of stimulus-driven high-frequency BOLD oscillations in the human primary somatosensory and motor cortex.** *Imaging neuroscience (Cambridge, Mass.)*
 Hodono, S., Polimeni, J. R., Reutens, D., Cloos, M. A.
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- **The temporal specificity of BOLD fMRI is systematically related to anatomical and vascular features of the human brain.** *Imaging neuroscience (Cambridge, Mass.)*
 Gomez, D. E., Polimeni, J. R., Lewis, L. D.
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- **Romer-EPTI: Rotating-view motion-robust super-resolution EPTI for SNR-efficient distortion-free in-vivo mesoscale diffusion MRI and microstructure imaging** *MAGNETIC RESONANCE IN MEDICINE*
 Dong, Z., Reese, T. G., Lee, H., Huang, S. Y., Polimeni, J. R., Wald, L. L., Wang, F.
 2025; 93 (4): 1535-1555
- **Single-shot echo planar time-resolved imaging for multi-echo functional MRI and distortion-free diffusion imaging** *MAGNETIC RESONANCE IN MEDICINE*
 Dong, Z., Wald, L. L., Polimeni, J. R., Wang, F.
 2025; 93 (3): 993-1013
- **Predicting the macrovascular contribution to resting-state fMRI functional connectivity at 3 Tesla: A model-informed approach.** *Imaging neuroscience (Cambridge, Mass.)*
 Zhong, X. Z., Polimeni, J. R., Chen, J. J.
 2024; 2
- **Reduced physiology-induced temporal instability achieved with variable-flip-angle fast low-angle excitation echo-planar technique with multishot echo planar time-resolved imaging** *MAGNETIC RESONANCE IN MEDICINE*
 Hu, Z., Berman, A. J. L., Dong, Z., Grissom, W. A., Reese, T. G., Wald, L. L., Wang, F., Polimeni, J. R.
 2024: 597-614
- **Mesoscale Brain Mapping: Bridging Scales and Modalities in Neuroimaging - A Symposium Review** *NEUROINFORMATICS*
 Marchant, J. K., Ferris, N. G., Grass, D., Allen, M. S., Gopalakrishnan, V., Olchanyi, M., Sehgal, D., Sheft, M., Strom, A., Bilgic, B., Edlow, B., Hillman, E. M. C., Juttukonda, et al
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- **Individual connectivity-based parcellations reflect functional properties of human auditory cortex.** *bioRxiv : the preprint server for biology*
 Hakonen, M., Dahmani, L., Lankinen, K., Ren, J., Barbaro, J., Blazejewski, A., Cui, W., Kotlarz, P., Li, M., Polimeni, J. R., Turpin, T., Uluc, I., Wang, et al
 2024
- **Impact of repeated blast exposure on active- duty United States Special Operations Forces** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*
 Gilmore, N., Tseng, C. J., Maffei, C., Tromly, S. L., Deary, K. B., McKinney, I. R., Kelemen, J. N., Healy, B. C., Hu, C. G., Llorden, G., Masood, M., Cali, R. J., Guo, et al
 2024; 121 (19): e2313568121
- **Next-generation MRI scanner designed for ultra-high-resolution human brain imaging at 7 Tesla.** *Nature methods*
 Feinberg, D. A., Beckett, A. J., Vu, A. T., Stockmann, J., Huber, L., Ma, S., Ahn, S., Setsompop, K., Cao, X., Park, S., Liu, C., Wald, L. L., Polimeni, et al
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- **Role of articulatory motor networks in perceptual categorization of speech signals: a 7T fMRI study** *CEREBRAL CORTEX*
 Lankinen, K., Ahveninen, J., Uluc, I., Daneshmand, M., Mareyam, A., Kirsch, J. E., Polimeni, J. R., Healy, B. C., Tian, Q., Khan, S., Nummenmaa, A., Wang, Q., Green, et al
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- **Peak width of skeletonized mean diffusivity and cognitive performance in cerebral amyloid angiopathy** *FRONTIERS IN NEUROSCIENCE*
 Horn, M. J., Gokcal, E., Becker, J., Das, A. S., Schwab, K., Zotin, M., Goldstein, J. N., Rosand, J., Viswanathan, A., Polimeni, J. R., Duerig, M., Greenberg, S. M., Gurol, et al
 2023; 17: 1141007

- **High-resolution quantitative and functional MRI indicate lower myelination of thin and thick stripes in human secondary visual cortex** *ELIFE*
Haenelt, D., Trampel, R., Nasr, S., Polimeni, J. R., Tootell, R. B. H., Sereno, M., Pine, K. J., Edwards, L. J., Helbling, S., Weiskopf, N.
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- **Diffusion MRI data analysis assisted by deep learning synthesized anatomical images (DeepAnat)** *MEDICAL IMAGE ANALYSIS*
Li, Z., Fan, Q., Bilgic, B., Wang, G., Wu, W., Polimeni, J. R., Miller, K. L., Huang, S. Y., Tian, Q.
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- **High-resolution motion- and phase-corrected functional MRI at 7 T using shuttered multishot echo-planar imaging.** *Magnetic resonance in medicine*
Sengupta, S., Berman, A., Polimeni, J. R., Setsompop, K., Grissom, W. A.
2023
- **Real-time shimming with FID navigators.** *Magnetic resonance in medicine*
Wallace, T. E., Kober, T., Stockmann, J. P., Polimeni, J. R., Warfield, S. K., Afacan, O.
2022; 88 (6): 2548-2563
- **T1 relaxation time of ISMRM/NIST T1 phantom spheres at 7 T** *NMR IN BIOMEDICINE*
Yen, Y., Stupic, K. F., Janicke, M. T., Greve, D. N., Mareyam, A., Stockmann, J., Polimeni, J. R., Van Der Kouwe, A., Keenan, K. E.
2023; 36 (5): e4873
- **Slice-direction geometric distortion evaluation and correction with reversed slice-select gradient acquisitions** *NEUROIMAGE*
Blazejewska, A., Witzel, T., Andersson, J. L. R., Wald, L. L., Polimeni, J. R.
2022; 264: 119701
- **A temporal sequence of thalamic activity unfolds at transitions in behavioral arousal state** *NATURE COMMUNICATIONS*
Setzer, B., Fultz, N. E., Gomez, D. E. P., Williams, S. D., Bonmassar, G., Polimeni, J. R., Lewis, L. D.
2022; 13 (1): 5442
- **Cortical depth profiles of auditory and visual 7 T functional MRI responses in human superior temporal areas** *HUMAN BRAIN MAPPING*
Lankinen, K., Ahlfors, S. P., Mamashli, F., Blazejewska, A., Rajj, T., Turpin, T., Polimeni, J. R., Ahveninen, J.
2023; 44 (2): 362-372
- **Long-Term Effects of Repeated Blast Exposure in United States Special Operations Forces Personnel: A Pilot Study Protocol** *JOURNAL OF NEUROTRAUMA*
Edlow, B. L., Bodien, Y. G., Baxter, T., Belanger, H. G., Cali, R. J., Deary, K. B., Fischl, B., Foulkes, A. S., Gilmore, N., Greve, D. N., Hooker, J. M., Huang, S. Y., Kelemen, et al
2022; 39 (19-20): 1391-1407
- **Oxygen extraction efficiency and white matter lesion burden in older adults exhibiting radiological evidence of capillary shunting** *JOURNAL OF CEREBRAL BLOOD FLOW AND METABOLISM*
Juttukonda, M. R., Stephens, K. A., Yen, Y., Howard, C. M., Polimeni, J. R., Rosen, B. R., Salat, D. H.
2022; 42 (10): 1933-1943
- **Static and dynamic BOLD fMRI components along white matter fibre tracts and their dependence on the orientation of the local diffusion tensor axis relative to the B₀-field** *JOURNAL OF CEREBRAL BLOOD FLOW AND METABOLISM*
Viessmann, O., Tian, Q., Bernier, M., Polimeni, J. R.
2022; 42 (10): 1905-1919
- **In vivo irreversible and reversible transverse relaxation rates in human cerebral cortex via line scans at 7 T with 250 micron resolution perpendicular to the cortical surface** *MAGNETIC RESONANCE IMAGING*
Balasubramanian, M., Mulkern, R., Polimeni, J. R.
2022; 90: 44-52
- **Critical factors in achieving fine-scale functional MRI: Removing sources of inadvertent spatial smoothing** *HUMAN BRAIN MAPPING*
Wang, J., Nasr, S., Roe, A., Polimeni, J. R.
2022; 43 (11): 3311-3331
- **SDnDTI: Self-supervised deep learning-based denoising for diffusion tensor MRI** *NEUROIMAGE*
Tian, Q., Li, Z., Fan, Q., Polimeni, J. R., Bilgic, B., Salat, D. H., Huang, S. Y.

2022; 253: 119033

- **Effect of vascular amyloid on white matter disease is mediated by vascular dysfunction in cerebral amyloid angiopathy** *JOURNAL OF CEREBRAL BLOOD FLOW AND METABOLISM*
Gokcal, E., Horn, M. J., Becker, J., Das, A. S., Schwab, K., Biffi, A., Rost, N., Rosand, J., Viswanathan, A., Polimeni, J. R., Johnson, K. A., Greenberg, S. M., Gurol, et al
2022; 42 (7): 1272-1281
- **Comprehensive diffusion MRI dataset for in vivo human brain microstructure mapping using 300 mT/m gradients.** *Scientific data*
Tian, Q., Fan, Q., Witzel, T., Polackal, M. N., Ohringer, N. A., Ngamsombat, C., Russo, A. W., Machado, N., Brewer, K., Wang, F., Setsompop, K., Polimeni, J. R., Keil, et al
1800; 9 (1): 7
- **Imaging faster neural dynamics with fast fMRI: A need for updated models of the hemodynamic response** *PROGRESS IN NEUROBIOLOGY*
Polimeni, J. R., Lewis, L. D.
2021; 207: 102174
- **The Global Configuration of Visual Stimuli Alters Co-Fluctuations of Cross-Hemispheric Human Brain Activity** *JOURNAL OF NEUROSCIENCE*
Nasr, S., Kleinfeld, D., Polimeni, J. R.
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- **Investigating mechanisms of fast BOLD responses: the effects of stimulus intensity and of spatial heterogeneity of hemodynamics.** *NeuroImage*
Chen, J. E., Glover, G. H., Fultz, N. E., Rosen, B. R., Polimeni, J. R., Lewis, L. D.
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- **Simultaneous pure T2 and varying T2'-weighted BOLD fMRI using Echo Planar Time-resolved Imaging for mapping cortical-depth dependent responses.** *NeuroImage*
Wang, F., Dong, Z., Wald, L. L., Polimeni, J. R., Setsompop, K.
2021; 245: 118641
- **Altered Blood Flow in the Ophthalmic and Internal Carotid Arteries in Patients with Age-Related Macular Degeneration Measured Using Noncontrast MR Angiography at 7T** *AMERICAN JOURNAL OF NEURORADIOLOGY*
Hibert, M. L., Chen, Y., Ohringer, N., Feuer, W. J., Waheed, N. K., Heier, J. S., Calhoun, M. W., Rosenfeld, P. J., Polimeni, J. R.
2021; 42 (9): 1653-1660
- **Improved cortical surface reconstruction using sub-millimeter resolution MPRAGE by image denoising** *NEUROIMAGE*
Tian, Q., Zaretskaya, N., Fan, Q., Ngamsombat, C., Bilgic, B., Polimeni, J. R., Huang, S. Y.
2021; 233: 117946
- **Lacunes, Microinfarcts, and Vascular Dysfunction in Cerebral Amyloid Angiopathy** *NEUROLOGY*
Gokcal, E., Horn, M. J., van Veluw, S. J., Frau-Pascual, A., Das, A. S., Pasi, M., Fotiadis, P., Warren, A. D., Schwab, K., Rosand, J., Viswanathan, A., Polimeni, J. R., Greenberg, et al
2021; 96 (12): E1646-E1654
- **Efficient whole-brain tract-specific T_2^* mapping at 3T with slice-shuffled inversion-recovery diffusion-weighted imaging** *MAGNETIC RESONANCE IN MEDICINE*
Leppert, I. R., Andrews, D. A., Campbell, J. S. W., Park, D. J., Pike, G., Polimeni, J. R., Tardif, C. L.
2021; 86 (2): 738-753
- **High-resolution fMRI at 7 Tesla: challenges, promises and recent developments for individual-focused fMRI studies** *CURRENT OPINION IN BEHAVIORAL SCIENCES*
Viessmann, O., Polimeni, J. R.
2021; 40: 96-104
- **A suite of neurophotonic tools to underpin the contribution of internal brain states in fMRI** *CURRENT OPINION IN BIOMEDICAL ENGINEERING*
Machler, P., Broggin, T., Mateo, C., Thunemann, M., Fomin-Thunemann, N., Doran, P. R., Sencan, I., Kilic, K., Desjardins, M., Uhlirova, H., Yaseen, M. A., Boas, D. A., Linninger, et al
2021; 18

- **7T Epilepsy Task Force Consensus Recommendations on the Use of 7T MRI in Clinical Practice** *NEUROLOGY*
Opheim, G., van der Kolk, A., Bloch, K., Colon, A. J., Davis, K. A., Henry, T. R., Jansen, J. F. A., Jones, S. E., Pan, J. W., Rossler, K., Stein, J. M., Strandberg, M. C., Tratnig, et al
2021; 96 (7): 327-341
- **Ground-truth "resting-state" signal provides data-driven estimation and correction for scanner distortion of fMRI time-series dynamics** *NEUROIMAGE*
Kumar, R., Tan, L., Kriegstein, A., Lithen, A., Polimeni, J. R., Mujica-Parodi, L. R., Strey, H. H.
2021; 227: 117584
- **In vivo human whole-brain Connectom diffusion MRI dataset at 760 μ m isotropic resolution.** *Scientific data*
Wang, F. n., Dong, Z. n., Tian, Q. n., Liao, C. n., Fan, Q. n., Hoge, W. S., Keil, B. n., Polimeni, J. R., Wald, L. L., Huang, S. Y., Setsompop, K. n.
2021; 8 (1): 122
- **A 31-channel integrated "AC/DC" B0 shim and radiofrequency receive array coil for improved 7T MRI.** *Magnetic resonance in medicine*
Stockmann, J. P., Arango, N. S., Witzel, T., Mareyam, A., Sappo, C., Zhou, J., Jenkins, L., Craven-Brightman, L., Milshteyn, E., Davids, M., Hoge, W. S., Sliwiak, M., Nasr, et al
2021
- **Eye-selective fMRI activity in human primary visual cortex: Comparison between 3 T and 9.4 T, and effects across cortical depth** *NEUROIMAGE*
Zaretskaya, N., Bause, J., Polimeni, J. R., Grassi, P. R., Scheffler, K., Bartels, A.
2020; 220: 117078
- **Dynamic distortion correction for functional MRI using FID navigators** *MAGNETIC RESONANCE IN MEDICINE*
Wallace, T. E., Polimeni, J. R., Stockmann, J. P., Hoge, W., Kober, T., Warfield, S. K., Afacan, O.
2021; 85 (3): 1294-1307
- **Improving in vivo human cerebral cortical surface reconstruction using data-driven super-resolution.** *Cerebral cortex (New York, N.Y. : 1991)*
Tian, Q., Bilgic, B., Fan, Q., Ngamsombat, C., Zaretskaya, N., Fultz, N. E., Ohringer, N. A., Chaudhari, A. S., Hu, Y., Witzel, T., Setsompop, K., Polimeni, J. R., Huang, et al
2020
- **DeepDTI: High-fidelity six-direction diffusion tensor imaging using deep learning.** *NeuroImage*
Tian, Q., Bilgic, B., Fan, Q., Liao, C., Ngamsombat, C., Hu, Y., Witzel, T., Setsompop, K., Polimeni, J. R., Huang, S. Y.
2020; 117017
- **Resting-state "physiological networks"** *NEUROIMAGE*
Chen, J. E., Lewis, L. D., Chang, C., Tian, Q., Fultz, N. E., Ohringer, N. A., Rosen, B. R., Polimeni, J. R.
2020; 213: 116707
- **In vivo functional localization of the temporal monocular crescent representation in human primary visual cortex** *NEUROIMAGE*
Nasr, S., LaPierre, C., Vaughn, C. E., Witzel, T., Stockmann, J. P., Polimeni, J. R.
2020; 209: 116516
- **Two-photon microscopic imaging of capillary red blood cell flux in mouse brain reveals vulnerability of cerebral white matter to hypoperfusion** *JOURNAL OF CEREBRAL BLOOD FLOW AND METABOLISM*
Li, B., Ohtomo, R., Thunemann, M., Adams, S. R., Yang, J., Fu, B., Yaseen, M. A., Ran, C., Polimeni, J. R., Boas, D. A., Devor, A., Lo, E. H., Arai, et al
2020; 40 (3): 501-512
- **Impact of prospective motion correction, distortion correction methods and large vein bias on the spatial accuracy of cortical laminar fMRI at 9.4 Tesla** *NEUROIMAGE*
Bause, J., Polimeni, J. R., Stelzer, J., In, M., Ehses, P., Kraemer-Fernandez, P., Aghaeifar, A., Lacosse, E., Pohmann, R., Scheffler, K.
2020; 208: 116434
- **Advanced Neuroimaging to Unravel Mechanisms of Cerebral Small Vessel Diseases** *STROKE*
Gurol, M., Biessels, G. J., Polimeni, J. R.
2020; 51 (1): 29-37

- **Accelerated spin-echo functional MRI using multisection excitation by simultaneous spin-echo interleaving (MESSI) with complex-encoded generalized slice dithered enhanced resolution (cgSlider) simultaneous multislice echo-planar imaging** *MAGNETIC RESONANCE IN MEDICINE*
Han, S., Liao, C., Manhard, M., Park, D., Bilgic, B., Fair, M. J., Wang, F., Blazejewska, A., Grissom, W. A., Polimeni, J. R., Setsompop, K.
2020; 84 (1): 206–20
- **Image processing and analysis methods for the Adolescent Brain Cognitive Development Study** *NEUROIMAGE*
Hagler, D. J., Hatton, S., Cornejo, M., Makowski, C., Fair, D. A., Dick, A., Sutherland, M. T., Casey, B. J., Barch, D. M., Harms, M. P., Watts, R., Bjork, J. M., Garavan, et al
2019; 202: 116091
- **Coupled electrophysiological, hemodynamic, and cerebrospinal fluid oscillations in human sleep** *SCIENCE*
Fultz, N. E., Bonmassar, G., Setsompop, K., Stickgold, R. A., Rosen, B. R., Polimeni, J. R., Lewis, L. D.
2019; 366 (6465): 628–+
- **⁷ Tesla MRI of the <i>ex vivo</i> human brain at 100 micron resolution** *SCIENTIFIC DATA*
Edlow, B. L., Mareyam, A., Horn, A., Polimeni, J. R., Witzel, T., Tisdall, M., Augustinack, J. C., Stockmann, J. P., Diamond, B. R., Stevens, A., Tirrell, L. S., Folkerth, R. D., Wald, et al
2019; 6: 244
- **Highly accelerated multishot echo planar imaging through synergistic machine learning and joint reconstruction** *MAGNETIC RESONANCE IN MEDICINE*
Bilgic, B., Chatnuntawech, I., Manhard, M., Tian, Q., Liao, C., Iyer, S. S., Cauley, S. F., Huang, S. Y., Polimeni, J. R., Wald, L. L., Setsompop, K.
2019; 82 (4): 1343–58
- **Dependence of resting-state fMRI fluctuation amplitudes on cerebral cortical orientation relative to the direction of B0 and anatomical axes** *NEUROIMAGE*
Viessmann, O., Scheffler, K., Bianciardi, M., Wald, L. L., Polimeni, J. R.
2019; 196: 337–350
- **<i>In vivo</i> measurements of irreversible and reversible transverse relaxation rates in human basal ganglia at 7 T: making inferences about the microscopic and mesoscopic structure of iron and calcification deposits** *NMR IN BIOMEDICINE*
Balasubramanian, M., Polimeni, J. R., Mulkern, R.
2019; 32 (11): e4140
- **The influence of respiration on brainstem and cardiovascular response to auricular vagus nerve stimulation: A multimodal ultrahigh-field (7T) fMRI study** *BRAIN STIMULATION*
Sclocco, R., Garcia, R. G., Kettner, N. W., Isenburg, K., Fisher, H. P., Hubbard, C. S., Ay, I., Polimeni, J. R., Goldstein, J., Makris, N., Toschi, N., Barbieri, R., Napadow, et al
2019; 12 (4): 911–921
- **Echo planar time-resolved imaging (EPTI)** *MAGNETIC RESONANCE IN MEDICINE*
Wang, F., Dong, Z., Reese, T. G., Bilgic, B., Manhard, M., Chen, J., Polimeni, J. R., Wald, L. L., Setsompop, K.
2019; 81 (6): 3599–3615
- **Dependence of the MR signal on the magnetic susceptibility of blood studied with models based on real microvascular networks** *MAGNETIC RESONANCE IN MEDICINE*
Cheng, X., Berman, A. J. L., Polimeni, J. R., Buxton, R. B., Gagnon, L., Devor, A., Sakadzic, S., Boas, D. A.
2019; 81 (6): 3865–3874
- **Teaching NeuroImages: In vivo visualization of Edinger comb and Wilson pencils** *NEUROLOGY*
Horn, A., Ewert, S., Alho, E. J. L., Axer, M., Heinsen, H., Fonoff, E. T., Polimeni, J. R., Herrington, T. M.
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