



## Shreyas Vasanaawala, MD/PhD

Professor of Radiology (Pediatric Radiology)

Radiology - Pediatric Radiology

### CLINICAL OFFICES

- **Pediatric Radiology**

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### ACADEMIC CONTACT INFORMATION

- **Administrative Contact**

Marissa Lee - Administrative Associate

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### Bio

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#### BIO

Dr. Vasanaawala received his bachelor's degree in mathematics from Caltech, and then completed his medical training and PhD at Stanford. His research efforts are focused on developing fast and quantitative MRI methods. He serves as the Director of MRI at Stanford Hospital and Clinics and at Stanford Children's. He also serves as the division chief of Body MRI.

#### CLINICAL FOCUS

- Diagnostic Radiology
- Pediatric and Abdominal MRI
- Cardiovascular Diagnostic Techniques

#### ACADEMIC APPOINTMENTS

- Professor, Radiology - Pediatric Radiology
- Member, Bio-X
- Member, Maternal & Child Health Research Institute (MCHRI)

#### ADMINISTRATIVE APPOINTMENTS

- Director of MRI, Stanford Children's, (2017- present)
- Chief, Body MRI, Stanford, (2011- present)
- Co-Director of MRI, Stanford, (2011- present)

#### HONORS AND AWARDS

- Tashia and John Morgridge Faculty Endowed Scholar in Pediatric Translational Medicine, Child Health Research Institute

#### BOARDS, ADVISORY COMMITTEES, PROFESSIONAL ORGANIZATIONS

- Member, SPR (2007 - present)

- Member, ISMRM (1997 - present)

## PROFESSIONAL EDUCATION

- Fellowship: Stanford University - Fellowship (2007) CA
- Residency: Stanford University - Fellowship (2006) CA
- Fellowship: Children's Hospital Medical Center (2006) OH
- Internship: Stanford University - Dept of Surgery (2002) CA
- Medical Education: Stanford University School of Medicine (2001) CA
- Board Certification: Diagnostic Radiology, American Board of Radiology (2006)
- Board Certification: Pediatric Radiology, American Board of Radiology (2008)
- Fellowship: Hospital for Sick Children (2007) Canada

## PATENTS

- Shreyas Vasanaawala. "United States Patent 10,114,099 High resolution magnetic resonance imaging with reduced distortion based on reduced-field-of-view and generalized parallel imaging", Leland Stanford Junior University
- Shreyas Vasanaawala. "United States Patent 10,132,902 Intrinsic navigation from velocity-encoding gradients in phase-contrast MRI"
- Shreyas Vasanaawala. "United States Patent 6,307,368 Linear combination steady-state free precession MRI"
- Shreyas Vasanaawala. "United States Patent 6,452,387 Catalyzing the transient response in steady-state MRI sequences"
- Shreyas Vasanaawala. "United States Patent 6,922,054 Steady state free precession magnetic resonance imaging using phase detection of material separation"
- Shreyas Vasanaawala. "United States Patent 8,538,115 Coil compression for three dimensional autocalibrating parallel imaging with cartesian sampling"
- Shreyas Vasanaawala. "United States Patent 8,638,096 Method of autocalibrating parallel imaging interpolation from arbitrary K-space sampling with noise correlations weighted to reduce noise of reconstructed images"
- Shreyas Vasanaawala. "United States Patent 8,791,696 System and method providing preamplifier feedback for magnetic resonance imaging"
- Shreyas Vasanaawala. "United States Patent 9,513,357 Comprehensive cardiovascular analysis with volumetric phase-contrast MRI"
- Shreyas Vasanaawala. "United States Patent 9,535,148 Dynamic contrast enhanced magnetic resonance imaging with high spatial-temporal resolution"
- Shreyas Vasanaawala. "United States Patent 9,726,737 Radio-frequency coil arrays and methods of arranging the same"
- Shreyas Vasanaawala. "United States Patent 9,797,974 Nonrigid motion correction in 3D using autofocusing with localized linear translations"
- Shreyas Vasanaawala. "United States Patent 9,857,446 Robust self-navigating MRI using large coil arrays"
- Shreyas Vasanaawala, Tao Zhang, Yuxin Chen, John Pauly. "United States Patent 10,338,174 Robust Dual Echo Dixon Imaging with Flexible Echo Times", Leland Stanford Junior University, Jul 2, 2019

## LINKS

- Webpage: <http://bodymri.stanford.edu/shreyasvasanaawala>

## Research & Scholarship

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### CURRENT RESEARCH AND SCHOLARLY INTERESTS

Our group is focused on developing new MRI techniques, and in particular, developing novel applications for children. We take a comprehensive approach, exploring novel hardware, data acquisition, image reconstruction, and image analysis techniques. These approaches are then evaluated for cardiovascular, abdominal, and musculoskeletal pediatric MRI exams. Additionally, we seek to develop quantitative MRI methods, including those for cardiovascular function, renal function, and tumor perfusion.

### CLINICAL TRIALS

- A Study to Evaluate Sildenafil for the Treatment of Lymphatic Malformations, Not Recruiting

- Combined 18F-NaF/18F-FDG PET/MRI for Detection of Skeletal Metastases, Not Recruiting
- Confounder-Corrected Quantitative MRI Biomarker of Hepatic Iron Content, Not Recruiting
- Feasibility of Using Real-time Cine-MRI for Treating Moving & Deforming Tumors, Not Recruiting

## Teaching

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### COURSES

#### 2018-19

- Introduction to Imaging and Image-based Human Anatomy: BIOE 220, RAD 220 (Win)

#### 2017-18

- Introduction to Imaging and Image-based Human Anatomy: BIOE 220, RAD 220 (Win)

#### 2016-17

- Introduction to Imaging and Image-based Human Anatomy: BIOE 220, RAD 220 (Win)

### STANFORD ADVISEES

#### Doctoral Dissertation Reader (AC)

Elizabeth Cole, Kwangeun Jang, Sri Koundinyan, Lisa Lei, David Zeng

#### Postdoctoral Faculty Sponsor

Adam Bush, Zhitao Li, Ukash Nakarmi, Edgar Rios Piedra, Kanghyun Ryu

#### Doctoral Dissertation Advisor (AC)

Christopher Sandino

#### Postdoctoral Research Mentor

Ukash Nakarmi, Edgar Rios Piedra

### GRADUATE AND FELLOWSHIP PROGRAM AFFILIATIONS

- Biophysics (Phd Program)

## Publications

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### PUBLICATIONS

- **4D flow vs. 2D cardiac MRI for the evaluation of pulmonary regurgitation and ventricular volume in repaired tetralogy of Fallot: a retrospective case control study.** *The international journal of cardiovascular imaging*  
Jacobs, K. G., Chan, F. P., Cheng, J. Y., Vasanaawala, S. S., Maskatia, S. A.  
2020
- **Reversal of epigenetic aging and immunosenescent trends in humans.** *Aging cell*  
Fahy, G. M., Brooke, R. T., Watson, J. P., Good, Z., Vasanaawala, S. S., Maecker, H., Leipold, M. D., Lin, D. T., Kobor, M. S., Horvath, S.  
2019: e13028
- **F-18-FDG PET/MR Refines Evaluation in Newly Diagnosed Metastatic Urethral Adenocarcinoma** *NUCLEAR MEDICINE AND MOLECULAR IMAGING*  
Laudicella, R., Davidzon, G., Vasanaawala, S., Baldari, S., Iagaru, A.  
2019; 53 (4): 296–99
- **Simultaneous PET/MRI in the Evaluation of Breast and Prostate Cancer Using Combined Na[18F] F and [18F]FDG: a Focus on Skeletal Lesions.** *Molecular imaging and biology : MIB : the official publication of the Academy of Molecular Imaging*  
Sonni, I., Minamimoto, R., Baratto, L., Gambhir, S. S., Loening, A. M., Vasanaawala, S. S., Iagaru, A.  
2019

- **Evaluation of the routine use of pelvic MRI in women presenting with symptomatic uterine fibroids: When is pelvic MRI useful?** *JOURNAL OF MAGNETIC RESONANCE IMAGING*  
Kim-Nhien Vu, Fast, A. M., Shaffer, R. K., Rosenberg, J., Dababou, S., Marrocchio, C., Vasanaawala, S. S., Lum, D. A., Chen, B., Hovsepian, D. M., Ghanouni, P.  
2019; 49 (7): E271–E281
- **Targeted rapid knee MRI exam using T-2 shuffling** *JOURNAL OF MAGNETIC RESONANCE IMAGING*  
Tamir, J. I., Taviani, V., Alley, M. T., Perkins, B. C., Hart, L., O'Brien, K., Wishah, F., Sandberg, J. K., Anderson, M. J., Turek, J. S., Willke, T. L., Lustig, M., Vasanaawala, et al  
2019; 49 (7): E195–E204
- **How Often is the Dynamic Contrast Enhanced Score Needed in PI-RADS Version 2?** *Current problems in diagnostic radiology*  
Roh, A. T., Fan, R. E., Sonn, G. A., Vasanaawala, S. S., Ghanouni, P., Loening, A. M.  
2019
- **An MRI Compatible RF MEMs Controlled Wireless Power Transfer System** *IEEE TRANSACTIONS ON MICROWAVE THEORY AND TECHNIQUES*  
Byron, K., Winkler, S. A., Robb, F., Vasanaawala, S., Pauly, J., Scott, G.  
2019; 67 (5): 1717–26
- **Evaluation of a Flexible 12-Channel Screen-printed Pediatric MRI Coil** *RADIOLOGY*  
Winkler, S., Corea, J., Lechene, B., O'Brien, K., Bonanni, J., Chaulhari, A., Alley, M., Taviani, V., Grafendorfer, T., Robb, F., Seem, G., Pauly, J., Lustig, et al  
2019; 291 (1): 179–84
- **Evaluation of a Flexible 12-Channel Screen-printed Pediatric MRI Coil.** *Radiology*  
Winkler, S. A., Corea, J., Lechene, B., O'Brien, K., Bonanni, J. R., Chaudhari, A., Alley, M., Taviani, V., Grafendorfer, T., Robb, F., Scott, G., Pauly, J., Lustig, et al  
2019: 181883
- **Motion-robust reconstruction of multishot diffusion-weighted images without phase estimation through locally low-rank regularization** *MAGNETIC RESONANCE IN MEDICINE*  
Hu, Y., Levine, E. G., Tian, Q., Moran, C. J., Wang, X., Taviani, V., Vasanaawala, S. S., McNab, J. A., Daniel, B. L., Hargreaves, B. A.  
2019; 81 (2): 1181–90
- **Targeted rapid knee MRI exam using T2 shuffling.** *Journal of magnetic resonance imaging : JMRI*  
Tamir, J. I., Taviani, V., Alley, M. T., Perkins, B. C., Hart, L., O'Brien, K., Wishah, F., Sandberg, J. K., Anderson, M. J., Turek, J. S., Willke, T. L., Lustig, M., Vasanaawala, et al  
2019
- **Evaluation of the routine use of pelvic MRI in women presenting with symptomatic uterine fibroids: When is pelvic MRI useful?** *Journal of magnetic resonance imaging : JMRI*  
Vu, K., Fast, A. M., Shaffer, R. K., Rosenberg, J., Dababou, S., Marrocchio, C., Vasanaawala, S. S., Lum, D. A., Chen, B., Hovsepian, D. M., Ghanouni, P.  
2019
- **Data-driven self-calibration and reconstruction for non-cartesian wave-encoded single-shot fast spin echo using deep learning.** *Journal of magnetic resonance imaging : JMRI*  
Chen, F., Cheng, J. Y., Taviani, V., Sheth, V. R., Brunsing, R. L., Pauly, J. M., Vasanaawala, S. S.  
2019
- **18F-FDG PET/MR Refines Evaluation in Newly Diagnosed Metastatic Urethral Adenocarcinoma.** *Nuclear medicine and molecular imaging*  
Laudicella, R., Davidzon, G., Vasanaawala, S., Baldari, S., Iagaru, A.  
2019; 53 (4): 296–99
- **An MRI Compatible RF MEMs Controlled Wireless Power Transfer System.** *IEEE transactions on microwave theory and techniques*  
Byron, K., Winkler, S. A., Robb, F., Vasanaawala, S., Pauly, J., Scott, G.  
2019; 67 (5): 1717–26
- **Deep Generative Adversarial Neural Networks for Compressive Sensing MRI** *IEEE TRANSACTIONS ON MEDICAL IMAGING*  
Mardani, M., Gong, E., Cheng, J. Y., Vasanaawala, S. S., Zaharchuk, G., Xing, L., Pauly, J. M.  
2019; 38 (1): 167–79
- **Deep residual network for off-resonance artifact correction with application to pediatric body MRA with 3D cones.** *Magnetic resonance in medicine*  
Zeng, D. Y., Shaikh, J., Holmes, S., Brunsing, R. L., Pauly, J. M., Nishimura, D. G., Vasanaawala, S. S., Cheng, J. Y.

2019

- **Near-silent distortionless DWI using magnetization-prepared RUFIS.** *Magnetic resonance in medicine*  
Yuan, J., Hu, Y., Menini, A., Sandino, C. M., Sandberg, J., Sheth, V., Moran, C. J., Alley, M., Lustig, M., Hargreaves, B., Vasanaawala, S.  
2019
- **Unsupervised clustering method to convert high-resolution magnetic resonance volumes to three-dimensional acoustic models for full-wave ultrasound simulations.** *Journal of medical imaging (Bellingham, Wash.)*  
Looby, K., Herickhoff, C. D., Sandino, C., Zhang, T., Vasanaawala, S., Dahl, J. J.  
2019; 6 (3): 037001
- **View-Sharing Artifact Reduction With Retrospective Compressed Sensing Reconstruction in the Context of Contrast-Enhanced Liver MRI for Hepatocellular Carcinoma (HCC) Screening.** *Journal of magnetic resonance imaging : JMIR*  
Shaikh, J., Stoddard, P. B., Levine, E. G., Roh, A. T., Saranathan, M., Chang, S. T., Muelly, M. C., Hargreaves, B. A., Vasanaawala, S. S., Loening, A. M.  
2018
- **Variable-Density Single-Shot Fast Spin-Echo MRI with Deep Learning Reconstruction by Using Variational Networks** *RADIOLOGY*  
Chen, F., Taviani, V., Malkiel, I., Cheng, J. Y., Tamir, J. I., Shaikh, J., Chang, S. T., Hardy, C. J., Pauly, J. M., Vasanaawala, S. S.  
2018; 289 (2): 366–73
- **Motion-robust reconstruction of multishot diffusion-weighted images without phase estimation through locally low-rank regularization.** *Magnetic resonance in medicine*  
Hu, Y., Levine, E. G., Tian, Q., Moran, C. J., Wang, X., Taviani, V., Vasanaawala, S. S., McNab, J. A., Daniel, B. A., Hargreaves, B. L.  
2018
- **4D Flow MRI Quantification of Mitral and Tricuspid Regurgitation: Reproducibility and Consistency Relative to Conventional MRI** *JOURNAL OF MAGNETIC RESONANCE IMAGING*  
Feneis, J. F., Kyubwa, E., Atianzar, K., Cheng, J. Y., Alley, M. T., Vasanaawala, S. S., Demaria, A. N., Hsiao, A.  
2018; 48 (4): 1147–58
- **Volumetric segmentation-free method for rapid visualization of vascular wall shear stress using 4D flow MRI** *MAGNETIC RESONANCE IN MEDICINE*  
Masutani, E. M., Contijoch, F., Kyubwa, E., Cheng, J., Alley, M. T., Vasanaawala, S., Hsiao, A.  
2018; 80 (2): 748–55
- **Conical ultrashort echo time (UTE) MRI in the evaluation of pediatric acute appendicitis.** *Abdominal radiology (New York)*  
Roh, A. T., Xiao, Z., Cheng, J. Y., Vasanaawala, S. S., Loening, A. M.  
2018
- **18F-florbetaben whole-body PET/MRI for evaluation of systemic amyloid deposition.** *EJNMMI research*  
Baratto, L., Park, S. Y., Hatami, N., Gulaka, P., Vasanaawala, S., Yohannan, T. K., Herfkens, R., Witteles, R., Iagaru, A.  
2018; 8 (1): 66
- **Variable-Density Single-Shot Fast Spin-Echo MRI with Deep Learning Reconstruction by Using Variational Networks.** *Radiology*  
Chen, F., Taviani, V., Malkiel, I., Cheng, J. Y., Tamir, J. I., Shaikh, J., Chang, S. T., Hardy, C. J., Pauly, J. M., Vasanaawala, S. S.  
2018: 180445
- **Safety of ferumoxytol in children undergoing cardiac MRI under general anaesthesia.** *Cardiology in the young*  
Wise-Faberowski, L., Velasquez, N., Chan, F., Vasanaawala, S., McElhinney, D. B., Ramamoorthy, C.  
2018; 28 (7): 916–21
- **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.  
2018; 79 (6): 3032–44
- **Automatic renal segmentation for MR urography using 3D-GrabCut and random forests.** *Magnetic resonance in medicine*  
Yoruk, U., Hargreaves, B. A., Vasanaawala, S. S.  
2018; 79 (3): 1696–1707
- **A Wireless Power Transfer System for MRI Scanners**  
Byron, K., Robb, F., Vasanaawala, S., Pauly, J., Scott, G., IEEE

IEEE.2018

- **K-Means Clustering for High-Resolution, Realistic Acoustic Maps**  
Looby, K., Sandino, C., Zhang, T., Vasanaawala, S., Dahl, J., Duric, N., Byram, B. C.  
SPIE-INT SOC OPTICAL ENGINEERING.2018
- **Pelvic Blood Flow Predicts Fibroid Volume and Embolic Required for Uterine Fibroid Embolization: A Pilot Study With 4D Flow MR Angiography** *AMERICAN JOURNAL OF ROENTGENOLOGY*  
Malone, C. D., Banerjee, A., Alley, M. T., Vasanaawala, S. S., Roberts, A. C., Hsiao, A.  
2018; 210 (1): 189–200
- **Robust Self-Calibrating nCPMG Acquisition: Application to Body Diffusion-Weighted Imaging** *IEEE TRANSACTIONS ON MEDICAL IMAGING*  
Gibbons, E. K., Le Roux, P., Vasanaawala, S. S., Pauly, J. M., Kerr, A. B.  
2018; 37 (1): 200–209
- **The impact of computed high b-value images on the diagnostic accuracy of DWI for prostate cancer: A receiver operating characteristics analysis.** *Scientific reports*  
Ning, P., Shi, D., Sonn, G. A., Vasanaawala, S. S., Loening, A. M., Ghanouni, P., Obara, P., Shin, L. K., Fan, R. E., Hargreaves, B. A., Daniel, B. L.  
2018; 8 (1): 3409
- **Self-Calibrating Wave-Encoded Variable-Density Single-Shot Fast Spin Echo Imaging.** *Journal of magnetic resonance imaging : JMRI*  
Chen, F., Taviani, V., Tamir, J. I., Cheng, J. Y., Zhang, T., Song, Q., Hargreaves, B. A., Pauly, J. M., Vasanaawala, S. S.  
2018; 47 (4): 954–66
- **A Novel High-Resolution Magnetic Resonance Imaging Protocol Detects Aldosterone-Producing Adenomas in Patients with Negative Computed Tomography.** *American journal of hypertension*  
Raber, I., Isom, R. T., Louie, J. D., Vasanaawala, S., Bhalla, V.  
2018
- **High-resolution 3D volumetric contrast-enhanced MR angiography with a blood pool agent (ferumoxytol) for diagnostic evaluation of pediatric brain arteriovenous malformations.** *Journal of neurosurgery. Pediatrics*  
Iv, M., Choudhri, O., Dodd, R. L., Vasanaawala, S. S., Alley, M. T., Moseley, M., Holdsworth, S. J., Grant, G., Cheshier, S., Yeom, K. W.  
2018: 1–10
- **An RF-gated wireless power transfer system for wireless MRI receive arrays** *CONCEPTS IN MAGNETIC RESONANCE PART B-MAGNETIC RESONANCE ENGINEERING*  
Byron, K., Robb, F., Stang, P., Vasanaawala, S., Pauly, J., Scott, G.  
2017; 47B (4)
- **Free-breathing pediatric chest MRI: Performance of self-navigated golden-angle ordered conical ultrashort echo time acquisition.** *Journal of magnetic resonance imaging : JMRI*  
Zucker, E. J., Cheng, J. Y., Haldipur, A., Carl, M., Vasanaawala, S. S.  
2017
- **Free-breathing pediatric chest MRI: Performance of self-navigated golden-angle ordered conical ultrashort echo time acquisition.** *Journal of magnetic resonance imaging : JMRI*  
Zucker, E. J., Cheng, J. Y., Haldipur, A., Carl, M., Vasanaawala, S. S.  
2017
- **Fast Comprehensive Single-Sequence Four-Dimensional Pediatric Knee MRI With T-2 Shuffling** *JOURNAL OF MAGNETIC RESONANCE IMAGING*  
Bao, S., Tamir, J. I., Young, J. L., Tariq, U., Uecker, M., Lai, P., Chen, W., Lustig, M., Vasanaawala, S. S.  
2017; 45 (6): 1700-1711
- **Feasibility of Ferumoxytol-Enhanced Neonatal and Young Infant Cardiac MRI Without General Anesthesia** *JOURNAL OF MAGNETIC RESONANCE IMAGING*  
Lai, L. M., Cheng, J. Y., Alley, M. T., Zhang, T., Lustig, M., Vasanaawala, S. S.  
2017; 45 (5): 1407-1418
- **Resolving phase ambiguity in dual-echo dixon imaging using a projected power method** *MAGNETIC RESONANCE IN MEDICINE*  
Zhang, T., Chen, Y., Bao, S., Alley, M. T., Pauly, J. M., Hargreaves, B. A., Vasanaawala, S. S.  
2017; 77 (5): 2066-2076

- **3D Cartesian MRI with compressed sensing and variable view sharing using complementary poisson-disc sampling** *MAGNETIC RESONANCE IN MEDICINE*  
Levine, E., Daniel, B., Vasanaawala, S., Hargreaves, B., Saranathan, M.  
2017; 77 (5): 1774-1785
- **Current and potential imaging applications of ferumoxytol for magnetic resonance imaging.** *Kidney international*  
Toth, G. B., Varallyay, C. G., Horvath, A., Bashir, M. R., Choyke, P. L., Daldrup-Link, H. E., Dosa, E., Finn, J. P., Gahramanov, S., Harisinghani, M., Macdougall, I., Neuwelt, A., Vasanaawala, et al  
2017
- **MRI vs. Ultrasound as the initial imaging modality for pediatric and young adult patients with suspected appendicitis.** *Academic emergency medicine*  
Imler, D., Keller, C., Sivasankar, S., Wang, N. E., Vasanaawala, S., Bruzoni, M., Quinn, J.  
2017
- **Increased Speed and Image Quality for Pelvic Single-Shot Fast Spin-Echo Imaging with Variable Refocusing Flip Angles and Full-Fourier Acquisition.** *Radiology*  
Loening, A. M., Litwiller, D. V., Saranathan, M., Vasanaawala, S. S.  
2017; 282 (2): 561-568
- **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
- **Conspicuity of Malignant Lesions on PET/CT and Simultaneous Time-Of-Flight PET/MRI** *PLOS ONE*  
Minamimoto, R., Iagaru, A., Jamali, M., Holley, D., Barkhodari, A., Vasanaawala, S., Zaharchuk, G.  
2017; 12 (1)
- **An RF-gated wireless power transfer system for wireless MRI receive arrays.** *Concepts in magnetic resonance. Part B, Magnetic resonance engineering*  
Byron, K., Robb, F., Stang, P., Vasanaawala, S., Pauly, J., Scott, G.  
2017; 47B (4)
- **Comprehensive Multi-Dimensional MRI for the Simultaneous Assessment of Cardiopulmonary Anatomy and Physiology.** *Scientific reports*  
Cheng, J. Y., Zhang, T., Alley, M. T., Uecker, M., Lustig, M., Pauly, J. M., Vasanaawala, S. S.  
2017; 7 (1): 5330
- **Variable refocusing flip angle single-shot fast spin echo imaging of liver lesions: increased speed and lesion contrast.** *Abdominal radiology (New York)*  
Hicks, R. M., Loening, A. M., Ohliger, M. A., Vasanaawala, S. S., Hope, T. A.  
2017
- **Prospective Evaluation of 68Ga-RM2 PET/MRI in Patients with Biochemical Recurrence of Prostate Cancer and Negative Conventional Imaging.** *Journal of nuclear medicine : official publication, Society of Nuclear Medicine*  
Minamimoto, R., Sonni, I., Hancock, S., Vasanaawala, S., Loening, A., Gambhir, S. S., Iagaru, A.  
2017
- **Relative value of three whole-body MR approaches for PET-MR, including gadofosveset-enhanced MR, in comparison to PET-CT.** *Clinical imaging*  
Obara, P., Loening, A., Taviani, V., Iagaru, A., Hargreaves, B. A., Vasanaawala, S.  
2017; 48: 62-68
- **High-resolution diffusion-weighted imaging of the breast with multiband 2D radiofrequency pulses and a generalized parallel imaging reconstruction** *MAGNETIC RESONANCE IN MEDICINE*  
Taviani, V., Alley, M. T., Banerjee, S., Nishimura, D. G., Daniel, B. L., Vasanaawala, S. S., Hargreaves, B. A.  
2017; 77 (1): 209-220
- **T-2 shuffling: Sharp, multicontrast, volumetric fast spin-echo imaging** *MAGNETIC RESONANCE IN MEDICINE*  
Tamir, J. I., Uecker, M., Chen, W., Lai, P., Alley, M. T., Vasanaawala, S. S., Lustig, M.  
2017; 77 (1): 180-195
- **Autocalibrating motion-corrected wave-encoding for highly accelerated free-breathing abdominal MRI.** *Magnetic resonance in medicine*  
Chen, F., Zhang, T., Cheng, J. Y., Shi, X., Pauly, J. M., Vasanaawala, S. S.  
2016

- **Depletion-Mode GaN HEMT Q-Spoil Switches for MRI Coils** *IEEE TRANSACTIONS ON MEDICAL IMAGING*  
Lu, J. Y., Grafendorfer, T., Zhang, T., Vasawala, S., Robb, F., Pauly, J. M., Scott, G. C.  
2016; 35 (12): 2558-2567
- **Body diffusion weighted imaging using non-CPMG fast spin echo.** *IEEE transactions on medical imaging*  
Gibbons, E., Le Roux, P., Vasawala, S., Pauly, J., Kerr, A.  
2016: -?
- **Fast comprehensive single-sequence four-dimensional pediatric knee MRI with T2 shuffling.** *Journal of magnetic resonance imaging : JMRI*  
Bao, S., Tamir, J. I., Young, J. L., Tariq, U., Uecker, M., Lai, P., Chen, W., Lustig, M., Vasawala, S. S.  
2016
- **Cloud-processed 4D CMR flow imaging for pulmonary flow quantification.** *European journal of radiology*  
Chelu, R. G., Wanambiro, K. W., Hsiao, A., Swart, L. E., Voogd, T., van den Hoven, A. T., van Kranenburg, M., Coenen, A., Bocalini, S., Wielopolski, P. A., Vogel, M. W., Krestin, G. P., Vasawala, et al  
2016; 85 (10): 1849-1856
- **Feasibility of ferumoxytol-enhanced neonatal and young infant cardiac MRI without general anesthesia.** *Journal of magnetic resonance imaging : JMRI*  
Lai, L. M., Cheng, J. Y., Alley, M. T., Zhang, T., Lustig, M., Vasawala, S. S.  
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- **Predictors of Nondiagnostic Ultrasound for Appendicitis.** *journal of emergency medicine*  
Keller, C., Wang, N. E., Imler, D. L., Vasawala, S. S., Bruzoni, M., Quinn, J. V.  
2016
- **Decompressing vein and bilateral superior venae cavae in a patient with hypoplastic left heart syndrome.** *Echocardiography (Mount Kisco, N.Y.)*  
Stauffer, K. J., Arunamata, A., Vasawala, S. S., Behera, S. K., Kipps, A. K., Silverman, N. H.  
2016; 33 (9): 1428-1431
- **A semiflexible 64-channel receive-only phased array for pediatric body MRI at 3T.** *Magnetic resonance in medicine*  
Zhang, T., Grafendorfer, T., Cheng, J. Y., Ning, P., Rainey, B., Giancola, M., Ortman, S., Robb, F. J., Calderon, P. D., Hargreaves, B. A., Lustig, M., Scott, G. C., Pauly, et al  
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