Stanford



Feliks Kogan

Assistant Professor (Research) of Radiology (Musculoskeletal Imaging)

Curriculum Vitae available Online

Bio

BIO

Dr. Kogan is an Assistant Professor with a research focus on imaging of musculoskeletal function and disease. He earned his PhD in Bioengineering at the University of Pennsylvania in 2013 during which he received a HHMI interfaces fellowship and completed the pre-clinical academic curriculum at the UPenn School of Medicine. Afterwards, he did his postdoctoral fellowship in the Radiology Department at Stanford. His group is focused on the development of early markers of disease with novel imaging methods, and the translation of these methods to produce actionable information to impact patient outcomes. He has extensive experience with cutting-edge imaging technologies including multimodal PET-MRI systems, novel quantitative imaging biomarkers and Ultra-high magnetic field (7T). In addition to research, Dr. Kogan has taught lectures in numerous courses at Stanford. He is a junior fellow of the International Society for Magnetic Resonance in Medicine and a member of Council of Early Investigators in Imaging of the Academy for Radiology & Biomedical Imaging Research.

ACADEMIC APPOINTMENTS

- Assistant Professor-Research, Radiology
- Member, Bio-X
- Member, Wu Tsai Human Performance Alliance

HONORS AND AWARDS

- NIBIB Trailblazer Award, National Institutes of Health (NH) (2020)
- NIH Pathway to Independence Award (K99/R00), National Institutes of Health (NIH - NIBIB) (2017)
- Young Investigator Cum Laude Award (W. S. Moore Award Finalist), International Society of Magnetic Resonance in Medicine (2017)
- ISMRM Junior Fellow, International Society of Magnetic Resonance in Medicine (2015)
- Council of Early Investigators in Imaging (CECI2), Academy for Radiology & Biomedical Imaging Research (2018)
- National Institute of Biomedical Imaging and Bioengineering (NIBIB) Training Grant, National Institute of Health (NIH) (2010)
- HHMI Interfaces Fellowship in Imaging Sciences, Howard Hughes Medical Institute (HHMI) (2007)
- Distinguished Reviewer, Magnetic Resonance in Medicine (2019)
- Top-5 (#4) Most Cited Articles of 2014, Magnetic Resonance in Medicine (2017)
- Young Investigator Award, International Workshop on Osteoarthritis Imaging (2017)
- Distinguished Reviewer, Journal of Magnetic Resonance Imaging (2016, 2017)
- Editors Recognition Award (Top 10 Most Downloaded Articles), Current Radiology Reports (2016)
- Editors Pick Article, Magnetic Resonance in Medicine (2015)

- Merit Award for Highest Scoring Trainee Abstract, International Workshop on OA Imaging (IWOAI) (2015)
- Summa Cum Laude Merit Award, International Society of Magnetic Resonance in Medicine (2012, 2015)
- Graduate Fellowship (Honorable Mention), National Science Foundation (NSF) (2007)

PROFESSIONAL EDUCATION

- B.S, University of Rochester , Optics, Applied Math (2007)
- Ph.D, University of Pennsylvania , Bioengineering (2013)
- Postdoctoral Fellowship, Stanford University , Radiology (2015)

LINKS

- Imaging of Musculoskeletal Function Group Website: https://med.stanford.edu/imfgroup.html
- Stanford Musculoskeletal Imaging Workshop: https://nilab.stanford.edu/stanford-musculoskeletal-imaging-workshop
- Knee MRI Analysis Pipeline: https://openmsk.com/
- MuscleMap Analysis Pipeline: https://musclemap.github.io/MuscleMap/

Research & Scholarship

CURRENT RESEARCH AND SCHOLARLY INTERESTS

My research is focused on the development and clinical translation of novel quantitative and molecularly specific imaging technologies geared toward detection of disease at the earliest causative stages. Specifically, I am motivated to study the causes and treatment of osteoarthritis (OA) and other musculoskeletal disorders, which have a large physical and financial impact but remain poorly understood. Research projects include development of (1) novel PET and MRI imaging methods to study early tissue changes at the cellular and molecular level, (2) functional imaging methods to study important relationships between mechanics, physiology and tissue microstructure, (3) rapid, comprehensive and quantitative MRI methods for early, low-cost, and precise detection of musculoskeletal disease.

CLINICAL TRIALS

- Use of PET/MR Imaging in Chronic Pain, Not Recruiting

Teaching

COURSES

2026-27

- Clinical Seminar Series for Biomedical Physics: BMP 210B, RAD 210B (Spr)
- Research Seminar Series for Biomedical Physics: BMP 210A, RAD 210A (Aut)

2025-26

- Research Seminar Series for Biomedical Physics: BMP 210A, RAD 210A (Aut)

2024-25

- Clinical Seminar Series for Biomedical Physics: BMP 210B, RAD 210B (Spr)
- Research Seminar Series for Biomedical Physics: BMP 210A, RAD 210A (Aut)

2023-24

- Seminar Series for Biomedical Physics: BMP 210, RAD 210 (Aut)

STANFORD ADVISEES

Postdoctoral Faculty Sponsor

Olivia Bruce, Songyun Liu

Doctoral Dissertation Advisor (AC)

Madison George, Katie Sofko

GRADUATE AND FELLOWSHIP PROGRAM AFFILIATIONS

- Bioengineering (PhD Program)
- Biomedical Physics (PhD Program)

Publications

PUBLICATIONS

- **Personalised gait retraining for medial compartment knee osteoarthritis: a randomised controlled trial.** *The Lancet. Rheumatology*
  Uhlrich, S. D., Mazzoli, V., Silder, A., Finlay, A. K., Kogan, F., Gold, G. E., Delp, S. L., Beaupre, G. S., Kolesar, J. A.
  2025
- **[18F]Sodium Fluoride PET-MRI Detects Increased Metabolic Bone Response to Whole-Joint Loading Stress in Osteoarthritic Knees.** *Osteoarthritis and cartilage*
  Watkins, L. E., Haddock, B., MacKay, J. W., Baker, J., Uhlrich, S. D., Mazzoli, V., Gold, G. E., Kogan, F.
  2022
- **Non-contrast MRI of synovitis in the knee using quantitative DESS.** *European radiology*
  Thoenen, J., Stevens, K. J., Turmezei, T. D., Chaudhari, A., Watkins, L. E., McWalter, E. J., Hargreaves, B. A., Gold, G. E., MacKay, J. W., Kogan, F.
  2021
- **[18F]NaF PET-MRI provides direct in-vivo evidence of the association between bone metabolic activity and adjacent synovitis in knee osteoarthritis: a cross-sectional study.** *Osteoarthritis and cartilage*
  MacKay, J., Watkins, L., Gold, G., Kogan, F.
  2021
- **Assessment of acute bone loading in humans using [18F]NaF PET/MRI.** *European journal of nuclear medicine and molecular imaging*
  Haddock, B., Fan, A. P., Uhlrich, S. D., Jorgensen, N. R., Suetta, C., Gold, G. E., Kogan, F.
  2019
- **Quantitative imaging of bone–cartilage interactions in ACL-injured patients with PET–MRI** *Osteoarthritis and Cartilage*
  Kogan, F., Fan, A., Monu, U. D., Iagaru, A., Hargreaves, B., Gold, G.
  2018; 26 (6): 790-796
- **Quantitative imaging of bone-cartilage interactions in ACL-injured patients with PET-MRI.** *Osteoarthritis and cartilage*
  Kogan, F. n., Fan, A. P., Monu, U. n., Iagaru, A. n., Hargreaves, B. A., Gold, G. E.
  2018
- **Simultaneous bilateral-knee MR imaging.** *Magnetic resonance in medicine*
  Kogan, F. n., Levine, E. n., Chaudhari, A. S., Monu, U. D., Epperson, K. n., Oei, E. H., Gold, G. E., Hargreaves, B. A.
  2018; 80 (2): 529–37
- **PET/MRI of Metabolic Activity in Osteoarthritis: A Feasibility Study** *JOURNAL OF MAGNETIC RESONANCE IMAGING*
  Kogan, F., Fan, A. P., McWalter, E. J., Oei, E. H., Quon, A., Gold, G. E.
  2017; 45 (6): 1736-1745
- **A technique for in vivo mapping of myocardial creatine kinase metabolism.** *Nature medicine*
  Haris, M., Singh, A., Cai, K., Kogan, F., McGarvey, J., Debrosse, C., Zsido, G. A., Witschey, W. R., Koomalsingh, K., Pilla, J. J., Chirinos, J. A., Ferrari, V. A., Gorman, et al
  2014

- **Method for high-resolution imaging of creatine in vivo using chemical exchange saturation transfer.** *Magnetic resonance in medicine*
  Kogan, F., Haris, M., Singh, A., Cai, K., Debrosse, C., Nanga, R. P., Hariharan, H., Reddy, R.
  2014; 71 (1): 164-172

- **Magnetic resonance imaging of glutamate** *NATURE MEDICINE*
  Cai, K., Haris, M., Singh, A., Kogan, F., Greenberg, J. H., Hariharan, H., Detre, J. A., Reddy, R.
  2012; 18 (2): 302-306

- **OpenMSK: A modular open-source framework for comprehensive analysis of imaging biomarkers in knee osteoarthritis.** *Osteoarthritis and cartilage open*
  Goyal, A., Belibi, F., Sahani, V., Pedersen, R., Vainberg, Y., Williams, A., Chu, C., Haddock, B., Gold, G. E., Chaudhari, A. S., Kogan, F., Gatti, A. A.
  2026; 8 (4): 100886

- **Colocalization between bone loading and metabolic activity in the human tibia in response to acute exercise.** *Journal of bone and mineral research : the official journal of the American Society for Bone and Mineral Research*
  Bruce, O. L., Goyal, A., Vainberg, Y., Gatti, A. A., Kogan, F.
  2026

- **BMI and Varus Malalignment Compound to Define a High-Risk Phenotype for Compartment-Specific Knee Osteoarthritis Progression.** *Osteoarthritis and cartilage*
  White, M. S., Kogan, F., Delp, S. L., Chu, C. R., Sherman, S. L., Pai S, A., Gold, G. E., Chaudhari, A. S., Gatti, A. A.
  2026

- **Relationships between cam morphology and [18F]sodium fluoride PET uptake in asymptomatic hips.** *Skeletal radiology*
  Watkins, L., Datta, S., Goyal, A., Vainberg, Y., Shalit, R., Stevens, K. J., Gold, G. E., Kogan, F.
  2026

- **OpenMSK: A modular open-source framework for comprehensive analysis of imaging biomarkers in knee osteoarthritis** *OSTEOARTHRITIS AND CARTILAGE OPEN*
  Goyal, A., Belibi, F., Sahani, V., Pedersen, R., Vainberg, Y., Williams, A., Chu, C., Haddock, B., Gold, G. E., Chaudhari, A. S., Kogan, F., Gatti, A. A.
  2026; 8 (4)

- **Neural Shape Modeling Reveals Early and Progressive Femoral Bone Shape and Cartilage Thickness Changes After Anterior Cruciate Ligament Reconstruction.** *Journal of orthopaedic research : official publication of the Orthopaedic Research Society*
  Pai S, A., White, M. S., Black, M. S., Young, K. A., Sherman, S. L., Chu, C. R., Williams, A., Gold, G. E., Kogan, F., Hargreaves, B. A., Chaudhari, A. S., Gatti, A. A.
  2026; 44 (9): e70274

- **Comparison of accelerated MRI protocol approaches for clinical assessment of the knee.** *Skeletal radiology*
  Goyal, A., MacKay, J., Petterson, M., van der Heijden, R., Stevens, K., Yoon, M., Liang, T., Wong, J., Chaudhari, A., Kogan, F.
  2026

- **Patterns of Muscle Health in Single- and Multi-Site Chronic Pain: A UK Biobank Normative Modeling Study.** *medRxiv : the preprint server for health sciences*
  Kaptan, M., Wang, Y., de Boer, A., Goyal, A., Holmes, S., Ozkan, K., Bédard, S., Indriolo, T., Law, C. S., Pfyffer, D., Fundaun, J., Berhe, E., Gold, et al
  2026

- **MOAKS-BASED OSTEOARTHRITIS SHAPE SCORE (MOSS) ENABLES PREDICTION OF CLINICAL OUTCOMES**
  Pai, S., White, M. S., Gold, G., Kogan, F., Chaudhari, A., Gatti, A.
  ELSEVIER SCI LTD.2026: 978-979

- **Tension-Dependent Variability and Repeatability of Achilles Tendon UTE-T2* Mapping Using Mono- and Bi-Exponential Models.** *NMR in biomedicine*
  Goyal, A., Barbieri, M., Mazzoli, V., Kogan, F.
  2026; 39 (6): e70302

- **INTEGRATED [¹⁸F]NAF PET-MRI REVEALS METABOLIC AND MICROSTRUCTURAL ABNORMALITIES IN SUBCHONDRAL BONE, CARTILAGE, AND MENISCUS IN KNEE OSTEOARTHRITIS**
  Goyal, A., Vainberg, Y., Shalit, R., Gatti, A., Collins, J., Kogan, F.
  ELSEVIER SCI LTD.2026: S249-S250

- **Advances in cartilage imaging techniques.** *Nature reviews. Rheumatology*
  Guermazi, A., Eckstein, F., Gold, G., Hayashi, D., Jarraya, M., Kogan, F., Li, X., Link, T. M., Nebelung, S., Oei, E. H., Omoumi, P., Saarakkala, S., Trattnig, et al
  2026
- **Smartphone Video-Based Knee Extension Moments During Chair Rise Relate to MRI Measures of Muscle Force-Generating Capacity** *IEEE TRANSACTIONS ON NEURAL SYSTEMS AND REHABILITATION ENGINEERING*
  Magruder, R., Hall, M., Vainberg, Y., Asay, J. L., Kogan, F., Hicks, J. L., Gold, G. E., Delp, S. L., Uhlrich, S. D., Mazzoli, V.
  2026; 34: 3824-3831
- **A Novel Method in PET Image Reconstruction Using MRI Anatomical Priors.** *IEEE transactions on radiation and plasma medical sciences*
  Khalighi, M. M., Young, C. B., Spangler-Bickell, M. G., Deller, T. W., Jansen, F., Holley, D., Vossler, H., Zhao, M., Kogan, F., Steinberg, G., Mormino, E., Moseley, M., Zaharchuk, et al
  2025; 9 (8): 1074-1082
- **A Novel Method in PET Image Reconstruction Using MRI Anatomical Priors** *IEEE TRANSACTIONS ON RADIATION AND PLASMA MEDICAL SCIENCES*
  Khalighi, M., Young, C. B., Spangler-Bickell, M. G., Deller, T. W., Jansen, F., Holley, D., Vossler, H., Zhao, M. Y., Kogan, F., Steinberg, G., Mormino, E., Moseley, M., Zaharchuk, et al
  2025; 9 (8): 1074-1082
- **Improved Strength Prediction Combining MRI Biomarkers of Muscle Quantity and Quality.** *NMR in biomedicine*
  Mazzoli, V., Vainberg, Y., Hall, M. E., Barbieri, M., Asay, J., Muccini, J., Rosenberg, J., Kogan, F., Delp, S., Gold, G. E.
  2025; 38 (9): e70112
- **Exercise-Induced Changes in Knee Cartilage In Vivo: Comparing MRI Sequences.** *Journal of orthopaedic research : official publication of the Orthopaedic Research Society*
  Ivanochko, N. K., Gatti, A. A., Wiebenga, E. G., Noseworthy, M. D., Kogan, F., Maly, M. R.
  2025
- **Hamstring muscle architecture and microstructure changes following Nordic hamstring exercise training and detraining.** *Journal of sport and health science*
  S, A. P., Andrews, M. H., Gurchiek, R. D., Pincheira, P. A., Barbieri, M., Friedrich, T., Kogan, F., Gold, G. E., Mazzoli, V., Lichtwark, G. A., Delp, S. L., Chaudhari, A. S.
  2025: 101070
- **PATIENT-SPECIFIC CARTILAGE PRESSURES ARE RELATED TO OSTEOARTHRITIS PROGRESSION AND DISEASE SEVERITY**
  Gatti, A. A., Marusich, K. R., Ong, C., Chu, C. R., Esrafilian, A., Delp, S., Gold, G. E., Kogan, F., Chaudhari, A.
  ELSEVIER SCI LTD.2025
- **T2 Clusters Are More Sensitive Than Mean T2 Change to Detect Early and Longitudinal Changes in Anterior Cruciate Ligament Reconstructed and Healthy Knees.** *Journal of magnetic resonance imaging : JMRI*
  Pai S, A., Gatti, A. A., Black, M. S., Young, K. A., Desai, A. D., Barbieri, M., Asay, J. L., Sherman, S. L., Gold, G. E., Kogan, F., Hargreaves, B. A., Chaudhari, A. S.
  2024
- **PET-MRI: the promise of multi-tissue imaging of early disease mechanisms in osteoarthritis.** *Osteoarthritis and cartilage*
  Kogan, F., Watkins, L. E., Goyal, A.
  2024
- **Improving Accuracy and Reproducibility of Cartilage T2 Mapping in the OAI Dataset Through Extended Phase Graph Modeling.** *Journal of magnetic resonance imaging : JMRI*
  Barbieri, M., Gatti, A. A., Kogan, F.
  2024
- **ShapeMed-Knee: A Dataset and Neural Shape Model Benchmark for Modeling 3D Femurs.** *IEEE transactions on medical imaging*
  Gatti, A. A., Blankemeier, L., Veen, D. V., Hargreaves, B., Delp, S. L., Gold, G. E., Kogan, F., Chaudhari, A. S.
  2024; PP
- **Metabolic bone imaging and its relationship with biomechanics.** *Osteoarthritis imaging*
  Goyal, A., Watkins, L., Bruce, O., Gatti, A., Kogan, F.

2024; 4 (3): 100242

- **ShapeMed-Knee: A Dataset and Neural Shape Model Benchmark for Modeling 3D Femurs.** *medRxiv : the preprint server for health sciences*
  Gatti, A. A., Blankemeier, L., Van Veen, D., Hargreaves, B., Delp, S. L., Gold, G. E., Kogan, F., Chaudhari, A. S.
  2024
- **A deep learning approach for fast muscle water T2 mapping with subject specific fat T2 calibration from multi-spin-echo acquisitions.** *Scientific reports*
  Barbieri, M., Hooijmans, M. T., Moulin, K., Cork, T. E., Ennis, D. B., Gold, G. E., Kogan, F., Mazzoli, V.
  2024; 14 (1): 8253
- **Correction to: Multimodal positron emission tomography (PET) imaging in non-oncologic musculoskeletal radiology.** *Skeletal radiology*
  Kogan, F., Yoon, D., Teeter, M. G., Chaudhari, A. J., Hales, L., Barbieri, M., Gold, G. E., Vainberg, Y., Goyal, A., Watkins, L.
  2024
- **Multimodal positron emission tomography (PET) imaging in non-oncologic musculoskeletal radiology.** *Skeletal radiology*
  Kogan, F., Yoon, D., Teeter, M. G., Chaudhari, A. J., Hales, L., Barbieri, M., Gold, G. E., Vainberg, Y., Goyal, A., Watkins, L.
  2024
- **Advanced Magnetic Resonance Imaging and Molecular Imaging of the Painful Knee.** *Seminars in musculoskeletal radiology*
  Mostert, J. M., Dur, N. B., Li, X., Ellermann, J. M., Hemke, R., Hales, L., Mazzoli, V., Kogan, F., Griffith, J. F., Oei, E. H., van der Heijden, R. A.
  2023; 27 (6): 618-631
- **Advanced MRI Approaches for Evaluating Common Lower Extremity Injuries in Basketball Players: Current and Emerging Techniques.** *Journal of magnetic resonance imaging : JMRI*
  Rubin, E. B., Schmidt, A. M., Koff, M. F., Kogan, F., Gao, K., Majumdar, S., Potter, H., Gold, G. E.
  2023
- **[Formula: see text] Field inhomogeneity correction for qDESS [Formula: see text] mapping: application to rapid bilateral knee imaging.** *Magma (New York, N.Y.)*
  Barbieri, M., Watkins, L. E., Mazzoli, V., Desai, A. D., Rubin, E., Schmidt, A., Gold, G. E., Hargreaves, B. A., Chaudhari, A. S., Kogan, F.
  2023
- **Design and Rationale of RE-ENERGIZE FONTAN: RandomizEd Exercise iNtERvention desiGned to maximIZE fitness in FONTAN patients.** *American heart journal*
  Tierney, E. S., Palaniappan, L., Leonard, M., Long, J., Myers, J., Dávila, T., Lui, M. C., Kogan, F., Olson, I., Punn, R., Desai, M., Schneider, L. M., Wang, et al
  2023
- **Imaging of joint response to exercise with MRI and PET.** *Skeletal radiology*
  Watkins, L. E., Goyal, A., Gatti, A. A., Kogan, F.
  2023
- **PET Imaging in Osteoarthritis.** *PET clinics*
  Jarraya, M., Roemer, F. W., Bäuerle, T., Kogan, F., Guermazi, A.
  2023; 18 (1): 21-29
- **Effects of dynamic [18F]NaF PET scan duration on kinetic uptake parameters in the knee.** *Frontiers in nuclear medicine (Lausanne, Switzerland)*
  Watkins, L. E., Haddock, B., Goyal, A., Kogan, F.
  2023; 3: 1194961
- **Latest advancements in imaging techniques in OA.** *Therapeutic advances in musculoskeletal disease*
  Hayashi, D., Roemer, F. W., Link, T., Li, X., Kogan, F., Segal, N. A., Omoumi, P., Guermazi, A.
  2022; 14: 1759720X221146621
- **Editorial for "Local Patterns in Two-Year T1rho and T2 Changes in Hip Cartilage Are Related to Sex and Functional Data: A Prospective Evaluation on Hip Osteoarthritis Participants".** *Journal of magnetic resonance imaging : JMRI*
  MacKay, J., Watkins, L., Kogan, F.
  2022

- **A method for measuring B0 field inhomogeneity using quantitative double-echo in steady-state.** *Magnetic resonance in medicine*
  Barbieri, M., Chaudhari, A. S., Moran, C. J., Gold, G. E., Hargreaves, B. A., Kogan, F.
  2022

- **Generalizability of Deep Learning Segmentation Algorithms for Automated Assessment of Cartilage Morphology and MRI Relaxometry.** *Journal of magnetic resonance imaging : JMRI*
  Schmidt, A. M., Desai, A. D., Watkins, L. E., Crowder, H. A., Black, M. S., Mazzoli, V., Rubin, E. B., Lu, Q., MacKay, J. W., Boutin, R. D., Kogan, F., Gold, G. E., Hargreaves, et al
  2022

- **Gadolinium-free assessment of synovitis using diffusion tensor imaging.** *NMR in biomedicine*
  Sandford, H. J., MacKay, J. W., Watkins, L. E., Gold, G. E., Kogan, F., Mazzoli, V.
  2021: e4614

- **Imaging of Synovial Inflammation in Osteoarthritis, From the AJR Special Series on Inflammation.** *AJR. American journal of roentgenology*
  Thoenen, J., MacKay, J. W., Sandford, H. J., Gold, G. E., Kogan, F.
  2021

- **Characterization of Structural Bone Properties through Portable Single-Sided NMR Devices: State of the Art and Future Perspectives.** *International journal of molecular sciences*
  Barbieri, M., Fantazzini, P., Testa, C., Bortolotti, V., Baruffaldi, F., Kogan, F., Brizi, L.
  2021; 22 (14)

- **Assessment of Quantitative [18F]Sodium Fluoride PET Measures of Knee Subchondral Bone Perfusion and Mineralization in Osteoarthritic and Healthy Subjects.** *Osteoarthritis and cartilage*
  Watkins, L., MacKay, J., Haddock, B., Mazzoli, V., Uhlrich, S., Gold, G., Kogan, F.
  2021

- **Characterizing the transient response of knee cartilage to running: Decreases in cartilage T2 of female recreational runners.** *Journal of orthopaedic research : official publication of the Orthopaedic Research Society*
  Crowder, H. A., Mazzoli, V. n., Black, M. S., Watkins, L. E., Kogan, F. n., Hargreaves, B. A., Levenston, M. E., Gold, G. E.
  2021

- **Effects of the Competitive Season and Off-Season on Knee Articular Cartilage in Collegiate Basketball Players Using Quantitative MRI: A Multicenter Study.** *Journal of magnetic resonance imaging : JMRI*
  Rubin, E. B., Mazzoli, V. n., Black, M. S., Young, K. n., Desai, A. D., Koff, M. F., Sreedhar, A. n., Kogan, F. n., Safran, M. R., Vincentini, D. J., Knox, K. A., Yamada, T. n., McCabe, et al
  2021

- **Diffusion Tensor Imaging of Skeletal Muscle Contraction Using Oscillating Gradient Spin Echo.** *Frontiers in neurology*
  Mazzoli, V. n., Moulin, K. n., Kogan, F. n., Hargreaves, B. A., Gold, G. E.
  2021; 12: 608549

- **Standardized multi-vendor compositional MRI of knee cartilage: a key step towards clinical translation?** *Osteoarthritis and cartilage*
  MacKay, J. W., Roemer, F. W., Kogan, F.
  2020

- **Identifying Musculoskeletal Pain Generators Using Clinical PET.** *Seminars in musculoskeletal radiology*
  Yoon, D. n., Kogan, F. n., Gold, G. E., Biswal, S. n.
  2020; 24 (4): 441–50

- **Rapid volumetric gagCEST imaging of knee articular cartilage at 3 T: evaluation of improved dynamic range and an osteoarthritic population.** *NMR in biomedicine*
  Watkins, L. E., Rubin, E. B., Mazzoli, V. n., Uhlrich, S. D., Desai, A. D., Black, M. n., Ho, G. K., Delp, S. L., Levenston, M. E., Beaupré, G. S., Gold, G. E., Kogan, F. n.
  2020: e4310

- **The prevalence of femoroacetabular impingement anatomy in Division 1 aquatic athletes who tread water** *Journal of Hip Preservation Surgery*
  Langner, J. L., Black, M. S., MacKay, J. W., Hall, K. E., Safran, M. R., Kogan, F., Gold, G. E.
  2020; 0: 1-9

- **Multiparametric MRI Characterization of Knee Articular Cartilage and Subchondral Bone Shape in Collegiate Basketball Players.** *Journal of orthopaedic research : official publication of the Orthopaedic Research Society*
  Gao, K. T., Pedoia, V. n., Young, K. A., Kogan, F. n., Koff, M. F., Gold, G. E., Potter, H. G., Majumdar, S. n.
  2020
- **Rapid Knee MRI Acquisition and Analysis Techniques for Imaging Osteoarthritis.** *Journal of magnetic resonance imaging : JMRI*
  Chaudhari, A. S., Kogan, F., Pedoia, V., Majumdar, S., Gold, G. E., Hargreaves, B. A.
  2019
- **Combined 5-minute double-echo in steady-state with separated echoes and 2-minute proton-density-weighted 2D FSE sequence for comprehensive whole-joint knee MRI assessment** *JOURNAL OF MAGNETIC RESONANCE IMAGING*
  Chaudhari, A. S., Stevens, K. J., Sveinsson, B., Wood, J. P., Beaulieu, C. F., Oei, E. H. G., Rosenberg, J. K., Kogan, F., Alley, M. T., Gold, G. E., Hargreaves, B. A.
  2019; 49 (7): E183–E194
- **Kinetic [F-18]-Fluoride of the Knee in Normal Volunteers** *CLINICAL NUCLEAR MEDICINE*
  Haddock, B., Fan, A. P., Jorgensen, N. R., Suetta, C., Gold, G., Kogan, F.
  2019; 44 (5): 377–85
- **Applications of PET-Computed Tomography-Magnetic Resonance in the Management of Benign Musculoskeletal Disorders.** *PET clinics*
  Yoder, J. S., Kogan, F., Gold, G. E.
  2019; 14 (1): 1–15
- **PET-MRI for the Study of Metabolic Bone Disease.** *Current osteoporosis reports*
  Yoder, J. S., Kogan, F., Gold, G. E.
  2018
- **Applications of PET-MRI in musculoskeletal disease.** *Journal of magnetic resonance imaging : JMRI*
  Kogan, F., Broski, S. M., Yoon, D., Gold, G. E.
  2018; 48 (1): 27–47
- **Super-resolution musculoskeletal MRI using deep learning.** *Magnetic resonance in medicine*
  Chaudhari, A. S., Fang, Z., Kogan, F., Wood, J., Stevens, K. J., Gibbons, E. K., Lee, J. H., Gold, G. E., Hargreaves, B. A.
  2018
- **Volumetric Multislice GagCEST Imaging of Articular Cartilage: Optimization and Comparison With T1rho** *MAGNETIC RESONANCE IN MEDICINE*
  Kogan, F., Hargreaves, B. A., Gold, G. E.
  2017; 77 (3): 1134-1141
- **Perfusion has no effect on the in vivo CEST effect from Cr (CrCEST) in skeletal muscle.** *NMR in biomedicine*
  Kogan, F., Stafford, R. B., Englund, E. K., Gold, G. E., Hariharan, H., Detre, J. A., Reddy, R.
  2017; 30 (1)
- **Potential of PET-MRI for imaging of non-oncologic musculoskeletal disease.** *Quantitative imaging in medicine and surgery*
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