

## EDUCATION

### STANFORD UNIVERSITY

*Postdoctoral Fellowship in Radiology*

Stanford, CA  
September 2015

### UNIVERSITY OF PENNSYLVANIA

*Doctor of Philosophy in Bioengineering*

Philadelphia, PA  
May 2013

- Engineering Coursework focused on all aspects of biomedical imaging

*University of Pennsylvania School of Medicine*

- Completed two years of academic curriculum at the University of Pennsylvania School of Medicine

### UNIVERSITY OF ROCHESTER

*Bachelor of Science in Optics and*

*Bachelor of Science in Applied Math, with minor in Economics – cum laude*

Rochester, NY

May 2007

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## RESEARCH EXPERIENCE

### STANFORD UNIVERSITY

*Instructor – Department of Radiology*

Stanford, CA  
January 2017-Present

- Studying spatiotemporal relationships between subchondral bone remodeling and biochemical changes in cartilage and meniscus with PET-MR to detect the earliest changes that occur in osteoarthritis
- Development of rapid MR imaging and reconstruction techniques acquire greater morphologic and physiological information in clinical scan times or much faster, and to improve the clinical value of MRI
- Independent direction of PET-MRI technical development as well as continued management of research strategies, grant writing and reporting as well as co-mentorship of students in Dr. Gold's research team

*Research Associate - Radiological Sciences Lab (Dr. Garry Gold)*

**October 2015-December 2016**

- Developed methods for simultaneous musculoskeletal PET and MR imaging to correlate metabolic information about bone remodeling and inflammation from PET with high resolution quantitative MRI
- Management of Dr. Gold's research team including direction of research strategies, overseeing of lab meeting content, considerable grant writing and reporting, and co-mentoring graduate students

*Postdoctoral Fellow - Radiological Sciences Lab (Dr. Garry Gold)*

**September 2013-September 2015**

- Created faster and more sensitive methods to assess proteoglycan content in articular cartilage as a potential biomarker for early diagnosis of Osteoarthritis

### UNIVERSITY OF PENNSYLVANIA

*Postdoctoral Researcher - Department of Radiology*

Philadelphia, PA  
April 2013 – September 2013

- Led research on the development of Arterial Spin Labeling (ASL) methods to measure resting state perfusion in skeletal muscle of the lower leg.
- Correlated increases in muscle perfusion with changes in creatine levels following exercise to better understand the contribution of increased blood flow to CrCEST measurements of muscle metabolism

*PhD Candidate – Department of Bioengineering (Dr. Ravinder Reddy)*

**January 2009 – April 2013**

***Dissertation: Endogenous Chemical Exchange Based Magnetic Resonance Imaging Techniques and Their Applications***

- Developed and patented new MRI techniques that utilize chemical exchange to quantitatively image glutamate in order to study glutamate function in the central nervous system and as a potential biomarker for diagnosis and treatment of neurologic disorders
- Created a new MRI pulse sequence (CESTrho) to decouple the confounding effects of changing pH from measurements of metabolite concentration in studies of stroke and other pH modifying disorders
- Developed new MRI method to image endogenous creatine distribution in muscle with high spatial resolution. Investigated the potential of this technique to provide key information about primary disorders of skeletal and cardiac muscle metabolism and secondary complications associated with heart failure, renal failure, and peripheral vascular disease. Correlated results with <sup>31</sup>P MRS and ASL Perfusion Data.

**RESEARCH SUPPORT**ACTIVE

- K99 EB022634-01A1** (PI: **Feliks Kogan, Ph.D.**) **9/2017 – 6/2019**  
**Title:** Quantitative Assessment of Early Metabolic and Biochemical Changes in Osteoarthritis  
**Goals:** To develop a novel integrated Hybrid PET-MRI technology to study metabolic measures of bone remodeling as an early marker of knee OA progression as well as their relationship to biochemical changes in adjacent articular cartilage  
**Role:** Principal Investigator
- R01 EB002524-01** (PI: **Garry Gold, M.D.**) **9/2003 – 3/2019**  
**Title:** Rapid MRI for Evaluation of Osteoarthritis  
**Goals:** This project seeks to use MRI to understand whole joint progression of Osteoarthritis  
**Role:** Co-Investigator
- R01 AR0063643** (PI: **Brian Hargreaves, Ph.D.**) **9/2013 – 7/2019**  
**Title:** Quantitative 3D Diffusion and Relaxometry of the Knee  
**Goals:** This work aims to develop a novel MRI approach that offers three-dimensional imaging of knee structure as well as multiple quantitative measures that can be used to assess joint health  
**Role:** Co-Investigator
- Sponsored Project** (PI: **Garry Gold, M.D.**) **9/2017– 8/2020**  
 General Electric Health Care - *Knee and Patellofemoral Overload*  
**Title:** Knee and Patellofemoral Overload and Articular Cartilage Injuries: Advanced Imaging Protocol Study  
**Goals:** Acquire high-quality advanced longitudinal MRI data in basketball players and correlate the microstructural changes seen in cartilage, meniscus, subchondral bone, tendon, and other tissues with activity tracking.  
**Role:** Co-Investigator
- Sponsored Project** (PI: **Richard Reimer, M.D.**) **9/2018– 8/2019**  
 Cystinosis Research Foundation  
**Title:** The effect of resistant exercise on muscle dysfunction in cystinosis  
**Goals:** To address progressive muscular dysfunction in cystinosis by studying the effect of high intensity exercise with respect to overall muscle function and especially muscle mitochondrial function in the disease.  
**Role:** Co-Investigator
- COMPLETED:
- T32 CA074781-04** (PI: **Felix Wehrli, Ph.D.**) **03/2010-02/2012**  
**Title:** Training in Quantitative Magnetic Resonance Imaging  
**Goals:** Training in quantitative MRI methodology focusing on MR image acquisition, reconstruction and postprocessing tools for diagnosis and treatment monitoring  
**Role:** Predoctoral Trainee
- Howard Hughes Medical Institute (HHMI) Interfaces Fellowship** **08/2007-07/2009**  
**Title:** Predoctoral Training in Clinical Imaging and Information Sciences  
**Goals:** Immersive medical school coursework concomitant with advanced training in imaging to develop hypothesis-driven, clinically focused biomedical imaging research  
**Role:** Graduate Fellow

**AWARDS**

2003	Rush Rhees Scholarship for academic achievement
2007	Distinction in Applied Mathematics, University of Rochester
2007	High Distinction in Optics, University of Rochester
2007	University of Rochester Optics Faculty Award
2007	HHMI-NIBIB Interfaces Fellowship in Imaging Sciences
2007	National Science Foundation Graduate Fellowship Honorable Mention
2010	NIH National Institute of Biomedical Imaging and Bioengineering (NIBIB) Training Grant
2010	ENC Student Travel Stipend
2010	Juan Grana Graduate Teaching Assistantship
2010-2012	ISMRM Educational Stipend
2012, 2015	ISMRM Summa Cum Laude Merit Award
2013, 2018	ISMRM Magna Cum Laude Merit Award
2014	Editors Pick Article – Magnetic Resonance in Medicine (January 2014)
2015	ISMRM Junior Fellow
2015	Merit Award for Highest Scoring Trainee Abstract – International Workshop on OA Imaging
2016, 2017	Distinguished Reviewer – Journal of Magnetic Resonance Imaging
2016	Editors Recognition Award – Current Radiology Reports (Top 10 Most Downloaded Articles)
2017	ISMRM Young Investigator Cum Laude Award (W. S. Moore Award Finalist)
2017	MRM Top-5 (#4) Most Cited Articles of 2014 (ISMRM)
2017	Young Investigator Award – ISMRM Workshop on OA Imaging
2017	NIH – NIBIB Pathway to Independence Award (K99/R00)
2018	Council of Early Investigators in Imaging Travel Award (Academy for Radiology & Biomedical Imaging Research)

**SERVICE (Societies, Journals and Reviewing)**

2003 – 2007	Member - Optical Society of America (OSA)
2009 – Present	Member - International Society for Magnetic Resonance in Medicine (ISMRM)
2014 – Present	Multiple Sclerosis (MS) Society Grant Reviewer
2014 – Present	Reviewer - ISMRM Annual Meeting
2014 – 2015	Radiologic Sciences Annual Retreat Planning Committee Member
2015 – Present	Associate Editor – Medical Physics
2015 – Present	Reviewer - Magnetic Resonance in Medicine
2015 – Present	Reviewer – Journal of Translational Medicine
2015 – 2016	ISMRM Publications Committee Member (Non-Voting)
2015 – 2016	ISMRM Trainee Working Advisory Group Member
2015 – Present	Reviewer – Journal of Magnetic Resonance Imaging
2016, 2017	Session Moderator - ISMRM Annual Meeting
2016 – Present	Member – Society of Nuclear Medicine and Molecular Imaging (SNMMI)
2016 – Present	ISMRM Musculoskeletal Study Group Executive Committee (Trainee Representative)
2017 – Present	Reviewer – Neuroimage
2017 – Present	Reviewer – PLoS ONE
2017 – Present	Reviewer – Magnetic Resonance Materials in Physics, Biology and Medicine (MAGMA)
2017 – Present	Reviewer – NMR in Biomedicine
2017	Moderator – ISMRM-SNMMI Workshop on PET/MRI
2018 – Present	Council of Early Investigators in Imaging (CECI <sup>2</sup> ) – Academy for Radiology & Biomedical Imaging Research
2018 – Present	Reviewer – European Radiology
2018 – Present	Reviewer – Journal of Orthopedic Research

## PUBLICATIONS

### PEER-REVIEWED PUBLICATIONS

1. Chaudhari A, Stevens K, Sveinsson B, Wood J, Beaulieu CF, Oei EHG, Rosenberg J, **Kogan F**, Alley M, Gold GE, Hargreaves BA. 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*. 2018. *In Press*
2. Yoder JS, **Kogan F**, Gold GE. PET-MRI for the Study of Metabolic Bone Disease. *Current Osteoporosis Reports*. 2018. *In Press*
3. **Kogan F**, Broski S, Yoon D, Gold G. Applications of PET-MRI in Musculoskeletal Disease. *Journal of Magnetic Resonance Imaging*. 2018; 48(1): 27-47.
4. **Kogan F**, Fan A, Monu U, Iagaru A, Hargreaves B, Gold G. Quantitative Imaging of Bone-Cartilage Interactions in ACL-Injured Patients with PET-MRI. *Osteoarthritis and Cartilage*. 2018; 26(6): 790-796.
5. Chaudhari A, Fang Z, **Kogan F**, Wood J, Stevens K, Gibbons E, Lee JH, Gold GE, Hargreaves BA. Super-Resolution Musculoskeletal MRI Using Deep Learning. *Magnetic Resonance in Medicine*. 2018; 80 (5):2139-2154. **(Editors Pick)**
6. **Kogan F**, Levine E, Chaudhari A, Monu U, Epperson K, Oei E, Gold G, Hargreaves B. Simultaneous Bilateral-Knee MR Imaging. *Magnetic Resonance in Medicine*. 2018; 80(2):529-537.
7. **Kogan F**, Fan A, McWalter E, Oei E, Quon A, Gold G. PET/MR Imaging of Metabolic Activity in Osteoarthritis: A Feasibility Study. *Journal of Magnetic Resonance Imaging*. 2017;45(6):1736-1745. **(ISMRM Young Investigator Award Finalist (Cum Laude Award), Lodwick Award – Best paper of 2016 in the fields of musculoskeletal radiology, medicine, or biology - Musculoskeletal Division of the Department of Radiology at the Massachusetts General Hospital)**
8. **Kogan F**, Fan AP, Gold GE. Potential of PET-MRI for imaging of non-oncologic musculoskeletal disease. *Quantitative Imaging in Medicine and Surgery*. 2016;6(6):756-771.
9. **Kogan F**, Stafford R, Englund E, Gold G, Hariharan H, Detre J, Reddy R. Perfusion has no effect on the in vivo CEST effect from Cr (CrCEST) in skeletal muscle. *NMR In Biomedicine*. 2017;30(1)
10. **Kogan F**, Hargreaves B, Gold G. Volumetric Multi-Slice GagCEST Imaging of Articular Cartilage: Optimization & Comparison with T1rho. *Magnetic Resonance in Medicine*. 2017;77(3):1134-1141
11. Dorsey S, Haris M, Singh A, Witschey W, Rodell C, **Kogan F**, Reddy R, Burdick J. Visualization of Injectable Hydrogels using Chemical Exchange Saturation Transfer MRI. *ACS Biomaterials Science & Engineering*. 2015 1 (4):227–237
12. Matzat S, McWalter EJ, **Kogan F**, Chen W, Gold GE. T2 Relaxation time quantitation differs between pulse sequences in articular cartilage. *Journal of Magnetic Resonance Imaging*. 2015 Jul;42(1):105-13
13. Matzat SJ, **Kogan F**, Fong G, Gold GE. Imaging strategies for assessing cartilage composition in osteoarthritis. *Current Rheumatology Reports*. 2014 Nov;16(11):462.
14. **Kogan F**, Haris M, Singh A, DeBrosse C, Cai K, Nanga RP, Hariharan H, Reddy R. In vivo CEST Imaging of Creatine (CrCEST) at 3T. *Journal of Magnetic Resonance Imaging*. 2014 Sep;40(3):596-602
15. Haris M, Singh A, Mohammad I, Ittyerah R, Nath K, Nanga RP, DeBrosse C, **Kogan F**, Cai K, Poptani H, Reddy D, Hariharan H, Reddy R. In vivo magnetic resonance imaging of tumor protease activity. *Scientific Reports*. 2014 Aug 15;4:6081
16. Singh A, Haris M, Cai K, **Kogan F**., Hariharan H, Reddy R. High Resolution T1p Mapping of In Vivo Human Knee Cartilage at 7T. *PLoS One*. 2014;9(5):e97486
17. **Kogan F**, Singh A, DeBrosse C, Haris M, Cai K, Nanga RP, Hariharan H, Reddy R. Imaging of glutamate in the spinal cord using GluCEST. *Neuroimage* 2013; 77:262-67

18. Haris M, Singh A, Cai K, **Kogan F**, McGarvey J, DeBrosse C, Zsido G, Witschey W, Koomalsingh K, Pilla J, Chirinos J, Ferrari V, Gorman J, Hariharan H, Gorman R, Reddy R. A Novel Technique for *In Vivo* Mapping of Myocardial Creatine Kinase Metabolism. *Nature Medicine* 2014; 20:209-214.
19. **Kogan F**, Haris M, Singh A, Cai K, DeBrosse C, Nanga RP, Hariharan H, Reddy R. A Method for high-resolution imaging of creatine in vivo using chemical exchange saturation transfer. *Magnetic Resonance in Medicine* 2014 Jan;71(1):164-72. – **(Editors Pick, MRM Top-5 (#4) Most Cited Articles of 2014)**
20. **Kogan F**, Hariharan H, Reddy R. Chemical Exchange Saturation Transfer (CEST) Imaging: Description of Technique and Potential Clinical Applications. *Current Radiology Reports* 2013;1(2):102-114. – **(Editors Recognition Award)**
21. Cai K, Haris M, Singh A, **Kogan F**, Greenberg JH, Hariharan H, Detre J, Reddy R. Magnetic Resonance Imaging of Glutamate. *Nature Medicine*. 2012 Jan 22;18(2):302-6
22. Haris M, Nath K, Singh A, Cai K, Crescenzi R, **Kogan F**, Verma G, Reddy S, Hariharan H, Melhelm E, Reddy R. Imaging of Glutamate Neurotransmitter Alterations in Alzheimer's Disease. *NMR in Biomedicine*. 2013 Apr;26(4):386-91
23. Haris M, Singh A, Cai K, Nath K, **Kogan F**, Hariharan H, Reddy R. MICEST: a Potential Tool for Non-invasive Detection of Molecular Changes in Alzheimer's Disease. *Journal of Neuroscience Methods* 2012;212(1):87-93
24. Singh A, Haris M, Cai K, Kasse V, **Kogan F**, Reddy D, Hariharan H, Reddy R. Chemical Exchange Saturation Transfer Magnetic Resonance Imaging of Human Cartilage at 3T and 7T. *Magnetic Resonance in Medicine*. 2012 Aug;68(2):588-94 – **(MRM Top-5 (#5) Most Cited Articles of 2012)**
25. **Kogan F**, Singh A, Cai K, Haris M, Hariharan H, Reddy R. Investigation of Chemical Exchange at Intermediate Exchange Rates using a Combination of Chemical Exchange Saturation Transfer (CEST) and Spin-Locking methods (CESTRho). *Magnetic Resonance in Medicine*. 2012 Jul; 68(1):107-19
26. Haris M, Nanga RP, Singh A, Cai K, **Kogan F**, Hariharan H, Reddy R. Exchange rates of creatine kinase metabolites: feasibility of imaging creatine by chemical exchange saturation transfer MRI. *NMR in Biomedicine*. 2012;25(11):1305-9

## BOOK CHAPTERS

1. DeBrosse C, **Kogan F**, Singh A, Haris M, Nanga RP, Crescenzi R, Hariharan H, Reddy R. Creatine Chemical Exchange Saturation Transfer Imaging. 2016. In: McMahon M, Bulte J, Gilad A. Chemical Exchange Saturation Transfer Imaging: Advances and Applications. *CRC Press*

## INVITED TALKS

1. Advanced Imaging of Whole-Joint Disease in Early Osteoarthritis. *Chinese Society of Radiology Annual Meeting*. Beijing, China. November 2018
2. Skiing Forever: How advanced imaging can help us understand and prevent joint breakdown. *Grand Rounds - University of Utah Department of Orthopedic Surgery*. Salt Lake City, UT. September 2018
3. Hybrid MR Imaging in MSK. *25<sup>th</sup> Annual Meeting of ISMRM – Educational Session*. Paris, Fr. June 2018
4. Multimodality Quantitative Imaging of Early Osteoarthritis. *Imaging Elevated: Utah Symposium of Emerging Investigators*. Salt Lake City, UT. September 2017
5. PETMR Imaging of metabolic bone activity in knee osteoarthritis. *GE PET-MRI Users Meeting*. Denver, CO 2017
6. PET-MRI Multimodality Imaging of Bone-Cartilage Interactions in Early Osteoarthritis. *Hospital of the University of Pennsylvania, Radiology Department Seminar*. Philadelphia, PA. April 2017
7. Skiing Forever: How advanced imaging can help us understand and prevent joint breakdown. *McCaig Institute Seminar, University of Calgary Cummings School of Medicine*. Calgary, Ca. December 2016

8. High Resolution Volumetric Imaging of Endogenous Metabolites with Chemical Exchange Saturation Transfer (CEST) Imaging. *Translational and Molecular Imaging Institute Seminar Series, Mount Sinai School of Medicine*. New York, NY. August 2016
9. Evaluation of Bone Metabolism & Remodeling with PET/MR. *23<sup>rd</sup> Annual Meeting of ISMRM – Educational Session*. Singapore. May 2016
10. Advancing Volumetric GagCEST: Imaging strategies, Analysis, and Standardization of Methods. *5<sup>th</sup> Annual Workshop on CEST Imaging*. Philadelphia, PA. October 2015
11. Advanced Quantitative Cartilage Imaging Techniques. *23<sup>rd</sup> Annual Meeting of ISMRM – Combined Educational & Scientific Session*. Toronto, Canada. June 2015
12. Combined PET-MRI Imaging of Osteoarthritis. *Erasmus MC Department of Radiology Seminar Series*. Rotterdam, Netherlands. April 2015
13. CEST: Description of Technique and Emerging Biomedical Applications. *Annual CMROI Workshop on Imaging Biomarkers*. Philadelphia, PA. March 2014
14. Amine Chemical Exchange Saturation Transfer Imaging. *NYU Imaging Seminar*. New York. June 2013.
15. Endogenous Amine Proton Exchange Based MRI and Their Applications. *Vanderbilt University Institute of Imaging Sciences Founders Lectures*. Nashville, Tn. March 2013.

#### SELECTED CONFERENCE PRECEEDINGS

1. **Kogan F**, Chaudhari A, Black M, Epperson Ke, Epperson Ka, Gold G, Hargreaves B. High Patient Throughput 5-Minute Comprehensive Quantitative Bilateral Knee MRI. *12<sup>th</sup> International Workshop on Osteoarthritis Imaging*, Menton, France 2018
2. **Kogan F**, Levine E, Chaudhari A, Monu U, Epperson K, Oei E, Gold G, Hargreaves B. Simultaneous Bilateral Knee MR Imaging. *Proceedings of 26th Annual Meeting of ISMRM*, Paris, France 2018 – **(Oral Presentation)**
3. Chaudhari AS, Sveinsson B, Wood JP, Stevens KJ, Beaulieu CF, Oei EH, Rosenberg J, Levine EG, **Kogan F**, Alley MT, Gold GE, Hargreaves BA. Diagnostic Comparison of Two Rapid Knee MRI Protocols for Comprehensive Whole-Joint Assessment: A Multi-Reader Feasibility Study. *Proceedings of 26th Annual Meeting of ISMRM*, Paris, France 2018 – **(Oral Presentation)**
4. Chaudhari A, Fang Z, **Kogan F**, Wood J, Stevens K, Lee J, Gold GE, Hargreaves BA. Super-Resolution Musculoskeletal MRI using Deep Learning. *Proceedings of 26th Annual Meeting of ISMRM*, Paris, France 2018 – **(Oral Presentation)**
5. Young K, **Kogan F**, Peters R, Koff M, Padoia V, Safran M, Ma B, Williams R, Wickiewicz T, Black M, Sabol J, Amrami K, Potter H, Majumdar S, Gold G. Advanced Knee Imaging Study in NCAA Division 1 Basketball: Protocol Development and Preliminary Results. *Proceedings of 26th Annual Meeting of ISMRM*, Paris, France 2018
6. Langner J, **Kogan F**, Haddock B, Gold G. Measurement of Acute Changes in Articular Cartilage T2 Relaxation Times Immediately After Exercise. *Proceedings of 26th Annual Meeting of ISMRM*, Paris, France 2018
7. Haddock B, **Kogan F**, Fan A Suetta C, Gold G. Image derived arterial input function using popliteal artery for [18F]-sodium fluoride (NaF) PET/MRI. *Proceedings of 26th Annual Meeting of ISMRM*, Paris, France 2018
8. Watkins L, **Kogan F**, Black M, Levenston M, Gold G. Quantitative GagCEST MRI in Juvenile Bovine Articular Cartilage Exhibit Correlations between 3T and 7T. *Proceedings of 26th Annual Meeting of ISMRM*, Paris, France 2018
9. Black MS, Young K, Chaudhari A, Sveinsson B, **Kogan F**, Monu U, McWalter E, Levenston M, Gold GE, Hargreaves BA. T2-mapping of Femoral Cartilage 3-months Following ACL Reconstruction Surgery. *Proceedings of 26th Annual Meeting of ISMRM*, Paris, France 2018

10. Chaudhari A, Fang Z, **Kogan F**, Gibbons E, Wood J, Stevens K, Lee JH, Gold G, Hargreaves B. Enhancing MRI Resolution and Fully-Automating Tissue Segmentation Using Deep Learning. *NVIDIA GPU Technology Conference*, San Jose, CA. 2018.
11. Chaudhari A, Fang Z, **Kogan F**, Gibbons E, Wood J, Stevens K, Lee JH, Gold G, Hargreaves B. Deep-Learning-Based Super-Resolution and Segmentation for Clinical and Research Musculoskeletal MRI. *ISMRM Workshop on Machine Learning*, Pacific Grove, CA. 2018.
12. **Kogan F**, Fan A, Black M, Hargreaves B, Gold G. Imaging of Bone Metabolism and Its Spatial Relationship with Cartilage Matrix Changes in ACL-Injured Patients. *Orthopaedic Research Society 2018 Annual Meeting*, New Orleans, LA 2018
13. Black M, Xiao M, Watkins L, **Kogan F**, Rosenberg J, Gold G, Levenston M, Hargreaves B. Choice of Ex Situ Scan Environment Can Substantially and Differentially Alter Quantitative MRI Values of Bovine Menisci. *Orthopaedic Research Society 2018 Annual Meeting*, New Orleans, LA 2018
14. **Kogan F**, Chaudhari A, Levine E, Epperson K, Oei E, Gold G, Hargreaves B. Feasibility of Simultaneous Bilateral Knee Imaging for Enhanced Value Osteoarthritis Studies. ISMRM-RSNA Co-Provided Workshop on High-Value MRI, Washington, DC 2018 – **(Oral Presentation)**
15. Chaudhari AS, Sveinsson B, Wood JP, Stevens KJ, Beaulieu CF, Oei EH, Rosenberg J, Levine EG, **Kogan F**, Alley MT, Gold GE, Hargreaves BA. Diagnostic Comparison of Two High-Value Diagnostic and Quantitative Rapid Knee MRI Protocols. *ISMRM and RSNA Co-Provided Workshop on High-Value MRI*, Washington, DC 2018. – **(Oral Presentation)**
16. **Kogan F**, Fan A, Hargreaves B, Gold G. PET-MR Imaging of Bone Metabolism & Bone-Cartilage Interactions in Early Osteoarthritis. *ISMRM-SNMMI Co-Provided Workshop on PET/MRI*, Chicago, IL 2017 – **(Oral Presentation)**
17. Haddock B, Fan A, Suetta C, **Kogan F**, Gold G. Assessment of acute bone loading in humans using [18F]-NaF PET - a PET/MRI pilot study. *European Association of Nuclear Medicine Annual Meeting*, Vienna, Austria 2017
18. **Kogan F**, Fan A, Gold G. Imaging Early Bone-Cartilage Interactions in Knee Osteoarthritis with PET-MRI. *World Molecular Imaging Congress*, Philadelphia, PA 2017 – **(Oral Presentation)**
19. **Kogan F**, Fan A, McWalter E, Monu U, Oei E, Gold G. Quantitative Imaging of Bone-Cartilage Interactions after ACL Injury with PET-MRI. *ISMRM Workshop on Osteoarthritis*, Sydney, Australia 2017 – **(Oral Presentation)**
20. **Kogan F**, Fan A, McWalter E, Monu U, Oei E, Quon A, Gold G. PET/MR Imaging of Metabolic Activity in Osteoarthritis. *Proceedings of 25<sup>th</sup> Annual Meeting of ISMRM*, Honolulu, HI 2017 – **(Young Investigator Award Finalist - Oral)**
21. **Kogan F**, Levine E, Monu U, Chaudhari A, Gold GE, Hargreaves BA. Feasibility of Simultaneous Bilateral Knee Imaging with a Dual-Coil Setup. *Proceedings of 25<sup>th</sup> Annual Meeting of ISMRM*, Honolulu, HI 2017
22. **Kogan F**, Fan A, McWalter E, Quon A, Oei E, Gold G. Assessment of Metabolic and Structural Bone Abnormalities in Knee Osteoarthritis with Simultaneous PET and MR Imaging. *RSNA Annual Meeting*, Chicago, IL 2016. - **(Oral Presentation)**
23. **Kogan F**, Fan A, McWalter E, Quon A, Oei E, Gold G. 18F-Fluoride PET-MR Imaging of Metabolic Bone Activity in Knee Osteoarthritis. *Proceedings of the 2016 SNMMI Annual Meeting*, San Diego, CA 2016. - **(Oral Presentation)**
24. **Kogan F**, Fan A, McWalter E, Oei E, Quon A, Gold G. Correlation of Bone Pathology on MRI with 18F-fluoride PET Uptake in Subchondral Bone. *Proceedings of the 24<sup>th</sup> Annual Meeting of ISMRM*, Singapore, Singapore 2016. - **(Oral Presentation)**

25. Gold G, Sveinsson B, Epperson K, Chaudhari A, Alley M, Yoon D, Hargreaves B, **Kogan F**. Comparison of DESS T2 Relaxation times and apparent diffusion coefficient in articular cartilage at 3T and 7T. *Proceedings of the 24<sup>th</sup> Annual Meeting of ISMRM*, Singapore, Singapore 2016. - **(Oral Presentation)**
26. Fan A, **Kogan F**, Patel A, Oei E, Quon A, Gold G. Dynamic analysis of [18F]-sodium fluoride uptake in knee osteoarthritis with PET-MRI. *Proceedings of the 24<sup>th</sup> Annual Meeting of ISMRM*, Singapore, Singapore 2016. - **(Oral Presentation)**
27. Monu U, **Kogan F**, McWalter E, Hargreaves B, Gold G. A method to quantitatively compare bone and cartilage changes post knee injury: Initial results. *Proceedings of the 24<sup>th</sup> Annual Meeting of ISMRM*, Singapore, Singapore 2016. - **(Oral Presentation)**
28. **Kogan F**, Fan A, McWalter E, Quon A, Oei E, Gold G. PET-MR Imaging of Metabolic Activity in Knee Osteoarthritis. *Osteoarthritis Research Society International, Amsterdam*, Netherlands 2016.
29. Fan A, **Kogan F**, Patel A, Quon A, Oei E, Gold G. Dynamic imaging of [18f]-fluoride uptake in knee osteoarthritis with PET-MRI. *Osteoarthritis Research Society International, Amsterdam*, Netherlands 2016.
30. **Kogan F**, Fan A, Quon A, Gold G. PET-MR Imaging of Osseous and Inflammatory Metabolic Activity Post Knee Injury. *8<sup>th</sup> International Workshop on Osteoarthritis Imaging*, Pacific Grove, USA 2015. - **(Oral Presentation)**
31. **Kogan F**, Hargreaves B, Gold G. Volumetric GagCEST Imaging: Optimization and Comparison with T1rho. *8<sup>th</sup> International Workshop on Osteoarthritis Imaging*, Pacific Grove, USA 2015.
32. **Kogan F**, Fan A, Brazina S, Holley D, Quon A, Gold G. 18F-FDG and 18F-NaF PET/MR Imaging of Osteoarthritis in the Knee: Considerations and Initial Results. *Proceedings of the 23<sup>rd</sup> Annual Meeting of ISMRM*, Toronto, Canada 2015. - **(Oral Presentation)**
33. **Kogan F**, Hargreaves B, Gold G. Multi-Slice gagCEST Sequence for Whole-Joint gagCEST mapping: Application to Articular Cartilage in the Ankle. *Proceedings of the 23<sup>rd</sup> Annual Meeting of ISMRM*, Toronto, Canada 2015.
34. **Kogan F**, Rosenberg J, Brazina S, Fan A, Holley D, Gold G. Effect of 16-Channel Flex Array Coil on PET Standardized Uptake Values for PET/MR Imaging of the knee. *Proceedings of the 23<sup>rd</sup> Annual Meeting of ISMRM*, Toronto, Canada 2015.
35. Fan A, **Kogan F**, Holley D, Iagaru A, Zaharchuk G, Gold G. Characterization of [18F]-FDG Uptake by Hybrid PET-MRI in Osteoarthritis of the Hip. *Proceedings of the 23<sup>rd</sup> Annual Meeting of ISMRM*, Toronto, Canada 2015.
36. Kogan F, Rosenberg J, McWalter EJ, Park D, Matzat S, Prekins K, Tran C, Taylor MI, Sveinsson B, Newbould RD, Monu U, Wang H, Bangerter N, Gold GE. Quantitative MRI of Osteoarthritis for Multicenter Trials: Standardization Between Different Centers and Manufacturers. *Proceedings of the 22<sup>nd</sup> Annual Meeting of ISMRM*, Milan, Italy 2014
37. Matzat S, McWalter E, **Kogan F**, Chen W, Gold GE. Comparison of Quantitative T2 Mapping Techniques for Articular Cartilage. *Proceedings of the 22<sup>nd</sup> Annual Meeting of ISMRM*, Milan, Italy 2014 **(Oral Presentation)**
38. Haris M, Singh A, Mohammed I, Ittyerah R, Nath K, Nanga RP, DeBrosse C, **Kogan F**, Cai K, Poptani H, Reddy D, Hariharan H, Reddy R. GluCEST Imaging of Tumor Protease Activity. *Proceedings of the 22<sup>nd</sup> Annual Meeting of ISMRM*, Milan, Italy 2014 **(Oral Presentation)**
39. Cai K, Hariharan H, Singh A, Haris M, D'Aquila K, Nanga RP, **Kogan F**, Reddy R. Optimization of 3D Turbo GluCEST MRI of Healthy Brain at 7T. *Proceedings of the 22<sup>nd</sup> Annual Meeting of ISMRM*, Milan, Italy 2014 **(Oral Presentation)**
40. Singh A, Nanga RP, Haris M, Cai K, **Kogan F**, Hariharan H, Reddy R. Transverse Relaxation Amplified by Chemical Exchange (TRACE): A New Method for Mapping Molecular Integrity of Cartilage. *Proceedings of the 22<sup>nd</sup> Annual Meeting of ISMRM*, Milan, Italy 2014



41. **Kogan F**, Haris M, Singh A, Cai K, Nanga RP, Hariharan H, Reddy R. Correlation of Exercise Induced Changes in Cr CEST and 31P MRS in Human Calf Muscles. *Proceedings of the 21<sup>st</sup> Annual Meeting of ISMRM*, Salt Lake City, Utah 2013. - **(Oral Presentation)**
42. **Kogan F**, Stafford R, Haris M, Englund E, Singh A, Cai K, DeBrosse C, Nanga RP, Hariharan H, Detre J, Reddy R. Contribution of Tissue Perfusion to the CEST Effect from Creatine in Skeletal Muscle. *Proceedings of the 21<sup>st</sup> Annual Meeting of ISMRM*, Salt Lake City, Utah 2013.
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## TEACHING

- BMB 601 (UPenn) – Fundamentals of Magnetic Resonance – Teaching Assistant and Lecturer
- ISMRM Annual Meeting – Educational Session – “Advanced Cartilage Imaging”
- BIOE 390 (Stanford) – Introduction to Bioengineering Research - Lecturer
- BIOE 301C (Stanford) – Diagnostic Devices Lab – Lecturer
- ISMRM Annual Meeting – Educational Session – “All About Bones”
- BIOE 326B (Stanford) – In Vivo MR: Relaxation Theory and Contrast Mechanisms - Lecturer
- BIOE 393 (Stanford) – Bioengineering Research Colloquium – Lecturer
- ISMRM Annual Meeting – Educational Session – “Hybrid MR Imaging in MSK”
- BioE 389 (Stanford) – Orthopedic Bioengineering - Lecturer

## MENTORSHIP

- |                                                      |               |                                           |
|------------------------------------------------------|---------------|-------------------------------------------|
| • Stephen Matzat B.S. (Gap Year Student)             | 10/13-08/14   | <i>Current:</i> Medical Student – Cornell |
| • Sloane Brazina B.S. (Stanford Honors Thesis)       | 06/14-06/15   | <i>Current:</i> Medical Student – UCSF    |
| • Uche Monu Ph.D. (Stanford EE Grad. Student)        | 05/16-01/17   | <i>Current:</i> Boston Consulting Group   |
| • Akshay Chaudhari Ph.D. (Stanford BE Grad. Student) | 01/17-present | <i>Current:</i> Postdoc – Stanford        |
| • Lauren Watkins M.S. (Stanford BE Grad. Student)    | 05/17-present | <i>Current:</i> Grad. Student - Stanford  |
| • Bryan Haddock M.S. (Stanford Visiting Student)     | 03/17-present | <i>Current:</i> Rigshospitalet - Denmark  |
| • Joanna Langner (Stanford Honors Thesis)            | 06/17-present | <i>Current:</i> Undergraduate - Stanford  |

## SKILLS

- Knowledge of and extensive experience with multi-nuclear 1.5T, 3.0T, and 7.0T Whole Body MRI and hybrid PET/MRI Systems
- MR Pulse Sequence design and programming with C++ (Siemens-IDEA & GE-EPIC)
- Data and statistical analysis using MATLAB, ImageJ, OsiriX, and Excel
- Multi-nuclear MR Imaging and Spectroscopy acquisition and analysis
- MR based Attenuation Correction methods for PET/MRI systems
- Strong communication and presentation skills – proven ability to work in a team-oriented environment

## PERSONAL

- Bilingual US Citizen, fluent in English and Russian
- Hobbies include soccer, skiing, and tennis