Nicole Seiberlich, PhD

Co-Director, MIITT (Michigan Institute for Imaging Technology and Translation)
Research Professorship, Cardiovascular Imaging
Professor, Radiology & Biomedical Engineering
1301 Catherine St., Ann Arbor, MI 48109
nse@umich.edu

Education and Training

Education

08/1997-05/2001	BS, Yale University, New Haven, Connecticut
03/2003-02/2008	PhD, University of Würzburg, Würzburg, Germany

Work Experience

Academic Appointment

12/2010-08/2011	Instructor, Case Western Reserve University and University Hospitals of Cleveland. Department of Radiology, Cleveland
09/2011-07/2016	Assistant Professor, Case Western Reserve University, Biomedical Engineering, Cleveland
07/2016-06/2019	Elmer Lincoln Lindseth Associate Professor, Case Western Reserve University, Biomedical Engineering, Cleveland
07/2016-06/2019	Associate Professor, Case Western Reserve University, Department of Electrical Engineering and Computer Science, Cleveland
07/2016-06/2019	Associate Professor, Case Western Reserve University, Department of Radiology, Cleveland
07/2016-06/2019	Associate Professor, Case Western Reserve University, Department of Cardiology, Cleveland
07/2019-Present	Associate Professor, University of Michigan, Department of Biomedical Engineering, Ann Arbor
07/2019-Present	Associate Professor, University of Michigan, Department of Radiology, Ann Arbor, (Tenured)
07/2019-Present	Associate Professor, University of Michigan, Department of Internal Medicine, Ann Arbor
02/2023-Present	Research Professorship of Cardiovascular Imaging, University of Michigan, University of Michigan
08/2023--Present	Professor, University of Michigan, Department of Internal Medicine, Ann Arbor

Administrative Appointment

07/2019-Present	Co-Director, Michigan Institute for Imaging Technology and Translation, University of Michigan Health System, Michigan Institute for Imaging Technology and Translation, Ann Arbor

Research Interests

- Rapid Magnetic Resonance Imaging: My research seeks to reduce the amount of time needed to acquire MRI data by using efficient data collection schemes (non-Cartesian sampling) along with signal processing methods to reconstruct images from a reduced dataset.

- Quantitative Magnetic Resonance Imaging: My goal is to use novel MRI data collection and processing schemes to enable rapid and accurate measurement of tissue properties including T1, T2, diffusion, perfusion, and volume fraction.
- Accessible MRI: I seek to develop new MRI approaches which can be used to compensate for the hardware limitations of older or less expensive scanners. My aim is to develop technology which will enable MRI to be used to help more patients around the world.
- Clinical Translation of Advanced Imaging: My goal is to develop technologies (acquisition and image reconstruction methods as well as post-processing platforms) which can be translated for clinical use and transferred to other institutions without the need for extensive scientific expertise.

Grants

Current Grants

R21EB030762:*Machine Learning-Based Real-Time Adaptation of Data Sampling and Reconstruction for Efficient Dynamic MRI:*
PI
NIH-DHHS-US-SubK sourced funding through Michigan State University (MSU
09/2022 - 07/2024
$148,019

R01HL163991:*Magnetic Resonance Imaging Guided Robotic Catheter System for Left Atrial Appendage Occlusion Procedures:*
PI
National Heart Lung and Blood Institute
07/2022 - 06/2026
$883,657

R01CA263583:*3D High Resolution Magnetic Resonance Fingerprinting for Prostate Cancer:*
Co-I (Principal Investigator:Yun Jiang)
NIH-DHHS-US
08/2021 - 07/2026
$3,223,147

Siemens Advisory:
MPI
Nicole Seiberlich(MPI);Vikas Gulani(MPI)
Siemens Medical Solutions USA,
01/2021 - 12/2023
$370,000

MIITT-Siemens Collaboration Proposal:
MPI
Nicole Seiberlich(MPI);Vikas Gulani(MPI)
Siemens Medical Solutions USA,
12/2020 - 12/2023
$500,000

R01CA208236:*MR Fingerprinting and Computerized Decision Support for Prostate Cancer:*
Co-I (Principal Investigator:Vikas Gulani)
NIH-DHHS-US
03/2020 - 02/2024
$1,762,339

Submitted - Open

R21:*Low field mobile MRI using nanoparticle enhanced sense coils:*
PI
NIH-DHHS-US-SubK sourced funding through Virginia Commonwealth Univ
07/2025 - 06/2026
$93,488

T32:*Michigan Translational Imaging Program (M-TIP):*
MPI
Nicole Seiberlich(MPI);Peter Scott(MPI);Vikas Gulani(MPI)
NIH-DHHS-US
04/2024 - 03/2029
$1,248,760

R25:*Training in Functional Magnetic Resonance Imaging:*
Co-I (Principal Investigator:John Jonides)
NIH-DHHS-US
01/2024 - 12/2028
$1,151,933

R01:*Quantitative Magnetic Resonance Imaging for Myofascial Pain:*
Co-I
NIH-DHHS-US
07/2023 - 06/2028
$3,785,051

NSF Engine: Type I: Improve patient outcomes and eliminate ionizing radiation by merging diagnostic imaging and interventional medicine:
PI
NSF-US-SubK sourced funding through Cook Medical Inc.
04/2023 - 03/2025
$49,559

MR Fingerprinting and IV contrast agent for the assessment of tissue properties in the abdomen:
PI
Bayer AG
10/2022 - 09/2024
$200,000

Training in Functional Magnetic Resonance Imaging:
Consultant on (Principal Investigator:John Jonides)
NIH-DHHS-US
09/2022 - 08/2027
$1,073,792

Past Grants

R01HL153034:*Real-Time MRI Guided Robotic Catheter System for Atrial Fibrillation Ablation:*
PI
NIH-DHHS-US-SubK sourced funding through Case Western Reserve Univ
07/2020 - 06/2023
$505,156

U01CA248226:*RadxTools for assessing tumor treatment response on imaging:*
PI
NIH-DHHS-US-SubK sourced funding through Case Western Reserve Univ

07/2020 - 06/2021
$6,225

R21EB030208:*Exploration of Ultrasound-Activated Bubbles as a Switchable MRI Contrast Agent:*
PI
NIH-DHHS-US
06/2020 - 03/2023
$448,193

R01HL094557:*Improved Cardiac and Vascular MRI Using Parallel Imaging and Compressed Sensing:*
PI
NIH-DHHS-US
03/2020 - 06/2020
$108,690

1563805:*RI: Medium: Active Sensing, Localization, and Mapping in Dynamic Deformable Environments for Image-Guided Interventions:*
Funded by
Directorate for Computer & Information Science & Engineering
08/2016 - 07/2023
$1,056,000

1553441:*CAREER: Tissue Microstructure Characterization through Exchange Mapping with Magnetic Resonance Fingerprinting:*
Funded by
Directorate for Engineering
03/2016 - 02/2022
$504,316

R21EB019206:*Early-to-late gadolinium enhancement cardiac MRI in ischemic and non-ischemic cardiomyopathies:*
Funded by
National Institute of Biomedical Imaging and Bioengineering
07/2015 - 06/2019
$433,140

R01DK098503:*Comprehensive quantitative ultrafast 3D liver MRI:*
Funded by
National Institute of Diabetes and Digestive and Kidney Diseases
08/2013 - 07/2019
$2,572,938

R00EB011527:*Novel Fast Imaging and Reconstruction Strategies for Dynamic MRI:*
Funded by
National Institute of Biomedical Imaging and Bioengineering
03/2010 - 06/2015
$718,676

K99EB011527:*Novel Fast Imaging and Reconstruction Strategies for Dynamic MRI:*
Funded by
National Institute of Biomedical Imaging and Bioengineering
03/2010 - 08/2011
$100,683

Patents / Disclosures

Patent

Granted

Magnetic resonance imaging (MRI) based quantitative liver perfusion analysis, US10388151B2, Author, Gulani V, Chen Y, **Seiberlich N**, Griswold M, US, 1/1/2013

12/2018 Multi-Component Voxel Separation Using Magnetic Resonance Fingerprinting With Compartment Exchange, USPAN 14/932,100, Author, **Seiberlich N**, Hamilton J, Griswold M, US, 11/4/2015

09/2021 System and method for out-of-view artifact suppression for magnetic resonance fingerprinting, US11125847B2, Author, Eck B, Hamilton J, **Seiberlich N**, Griswold M, US, 4/24/2020

04/2022 System and method for quantifying T1, T2 and resonance frequency using rosette trajectory acquisition and read segmented reconstruction, US11313931B2, Author, Liu Y, Hamilton J, Griswold M, **Seiberlich N**, US, 5/17/2019

Pending

04/2022 Multiresolution Magnetic Resonance Fingerprinting Systems and Methods, Author, Ropella-Panagis K, Hamilton J, **Seiberlich N**, US, 4/13/2022

01/2022 Multicontrast Synthetic Late Gadolinium Enhancement Imaging Using Post-Contrast Magnetic Resonance Fingerprinting, 17/589,780, Author, Rashid I, Rajagopalan S, **Seiberlich N**, Hamilton J, US, 1/31/2022

11/2022 Cardiac Magnetic Resonance Fingerprinting Using Rosette Trajectories for Simultaneous Myocardial T1, T2, and Proton Density Fat Fraction Mapping, 2022-162, Author, Jiang Y, Hamilton J, Liu Y, **Seiberlich N**, US, 11/18/2022

11/2022 Quantitative Reduced Field-of-view Imaging using 3D Tailored Inner Volume Excitation and Pattern Recognition, Author, Jiang Y, Nielsen J-F, **Seiberlich N**, Gulani V, United States, 11/18/2022

Disclosure

Active

Magnetic Resonance Fingerprinting Sequence Optimization by Minimizing Dictionary Compressibility, Author, Hamilton J, Jiang Y, **Seiberlich N**, US, 2/4/2020

Personalized Contrast of Magnetic Resonance Imaging for Disease Diagnosis, Author, Jiang Y, Hamilton J, Gulani V, **Seiberlich N**, US, 1/17/2020

Granted

Deep Learning Reconstruction for Cardiac Magnetic Resonance Fingerprinting, Author, Hamilton J, **Seiberlich N**, US, 8/26/2020

Improved T1, T2 and PDFF mapping with rosette MRF using virtual-coil + low-rank + patch-based regularization, Author, Lima da Cruz G, Liu Y, Cummings E, Hamilton J, Gulani V, **Seiberlich N**, 11/28/2022

MR Fingerprinting with a Deep Image Prior Reconstruction for Combined T1, T2, and M0 Mapping and Multi-Contrast Cine Imaging, Author, Hamilton J, Lima da Cruz G, Rashid I, Rajagopalan S, **Seiberlich N**, 11/22/2022

Simultaneous Magnetic Resonance Angiography and Perfusion (MRAP) for Assessment of Severity of Peripheral Arterial Disease, USPAN 14/444,737, Author, US, 1/1/2013

Magnetic Resonance Fingerprinting (MRF) for rapid quantitative abdominal imaging, USPAN 14/746,575, Author, US, 1/1/2015

3D Pancreatic Perfusion MRI Using Through Time Spiral GRAPPA Acceleration,

USPAN 62/485,125, Author, US, 1/1/2017

Free-Breathing 3D Abdominal Fingerprinting Using Navigators, USPAN 15/928,647, Author, US, 1/1/2018

Quantifying Perfusion Properties with DCE MRI Using a Dictionary Matching Approach, USPAN 62/673,823, Author, US, 1/1/2018

Systems and Methods for Magnetic Resonance Fingerprinting for Quantitative Breast Imaging, USPAN 15/888,653, Author, US, 1/1/2018

Ultrasound-Activated Bubbles as a Switchable MRI Contrast Agent, 2020-062, Author, US, 1/1/2020

Personalized Contrast of Magnetic Resonance Imaging for Disease Diagnosis, 2020-258, Author, US, 1/1/2020

Automated Magnetic Resonance Imaging Protocol Selection Using a Machine Learning Algorithm, 2020-290, Author, US, 1/1/2020

Magnetic Resonance Fingerprinting Sequence Optimization by Minimizing Dictionary Compressibility, 2020-297, Author, US, 1/1/2020

Deep Learning Reconstruction for Cardiac Magnetic Resonance Fingerprinting, 2020-513, Author, US, 1/1/2020

Multi-Resolution MR Fingerprinting: High-Resolution Maps from a Combination of High- and Low-Resolution Data, 2021-320, Author, US, 1/1/2021

Multicontrast Synthetic LGE Using Post-Contrast MR Fingerprinting, 2022-052, Author, US, 1/1/2022

Through-time non-cartesian grappa calibration, 8542012, Author, US, 1/1/2010

Relaxometry, 8558546, Author, US, 1/1/2011

MRI Fingerprinting, 8,723,518 B2, Author, US, 1/1/2011

Combined correlation parameter analysis, 8773129, Author, US, 1/1/2011

Non-cartesian caipirinha, US 8,717,020, Author, US, 1/1/2009

Motion Artifact Removal by Retrospective Resolution Reduction (MARs), 8649579, Author, US, 1/1/2010

MRI Fingerprinting, 201380059266.7, Author, CN, 1/1/2011

MRI Fingerprinting, EP20130838364, Author, DE, 1/1/2011

Through time GRAPPA, 9069051, Author, US, 1/1/2012

MRI Fingerprinting, JP 2015-532171, Author, JP, 1/1/2011

MRI Fingerprinting, 10-2015-7009905, Author, US, 1/1/2011

Through-time non-cartesian grappa calibration, 200910253052.9, Author, CN, 1/1/2010

Magnetic resonance trajectory correcting with GRAPPA operator gridding, 9417306, Author, US, 1/1/2012

Magnetic resonance imaging (MRI) with self-navigation and self-registration, 9640070, Author, US, 1/1/2014

Simultaneous Magnetic Resonance Angiography and Perfusion (MRAP) Combined With Magnetic Resonance Fingerprinting(MRF) For Assessment Of Severity Of Peripheral Arterial Disease, 9,640,069, Author, US, 1/1/2014

Reducing Acquisition Time, 9734432, Author, US, 1/1/2009

Magnetic resonance imaging (MRI) based quantitative kidney perfusion analysis, 10147314, Author, US, 1/1/2013

Fast 3D T1 Mapping with Through-time 3D non-Cartesian GRAPPA Acceleration, 9,640,069 B2, Author, US, 1/1/2016

Honors and Awards

International

2010 - 2011	Magnetic Resonance In Medicine Honored Referee
2012	ISMRM Outstanding Teacher Award Awarded for Sunrise Session, "Parallel Imaging Reconstruction II: Non-Cartesian Imaging"
2012 - 2013	Magnetic Resonance In Medicine Honored Referee
2017	ISMRM Outstanding Teacher Award Awarded for Sunrise Session, "MR Fingerprinting"
2021	Program Chair, Annual Meeting of the ISMRM
2022	Distinguished Investigator Award, Academy for Radiology & Biomedical Imaging Research

National

2009	Honorable Mention, L'Oreal For Women in National Science Fellowship

Institutional

2001	Arthur C. Fleischer Award, Excellence in Chemistry, Yale University
2001	Distinction in the Chemistry Major, Yale University
2001	Graduated Summa cum Laude, Yale University
2012	GSA Graduate Student Mentorship Award, Biomedical Engineering, Case Western Reserve University
2013	CWRU Mather Spotlight Prize for Women's Scholarship
2014	Case Western Reserve University Diekhoff Award for Excellence in Graduate Mentorship
2015	UCITE Glennan Fellowship, Case Western Reserve University
2016	Endowed Chair, Elmer Lincoln Lindseth Associate Professor of Biomedical Engineering
2019	BMES Outstanding Undergraduate Teaching Award, Case Western Reserve University

Study Sections, Editorial Boards, Journal & Abstract Review

Study Sections

International

2015	Proposal reviewer for the Czech Science Foundation

National

2012	Early Career Reviewer, Biomedical Imaging Technology Study Section A, National Institutes of Health
2018	NIH Special Emphasis Panel: High End Instrumentation
2019	NIH Review Panel: NHLBI Outstanding Investigator Award (R35)
2021 - present	Center for Advanced Imaging Innovation and Research (CAI2R) Scientific Advisory Board, (Ad Hoc)

Editorial Boards / Journal & Abstract Reviews

Editorial Boards

2015 - present	Editorial Board, Magnetic Resonance in Medicine
2015 - 2021	Associate Editor, IEEE Transactions on Medical Imaging

2016	Guest Editor, Investigative Radiology Special issue entitled "Advances for Clinical Imaging Magnetic Resonance Imaging Involving Sparse Reconstruction"
2005 - present	Journal of Magnetic Resonance in Imaging
2005 - present	Magnetic Resonance in Medicine
2009 - present	Magnetic Resonance Materials in Physics, Biology and Medicine
2009 - present	NMR in Biomedicine
2011 - present	IEEE Transactions on Image Processing
2013 - present	Journal of Cardiovascular Magnetic Resonance
2014 - present	Biomedical Signal Processing and Control
2014 - present	International Journal of Imaging Systems and Technology
2014 - present	Medical Physics
2015 - present	Investigative Radiology
2018 - present	Nature Medicine

Teaching

Mentorship

Faculty Member

01/2017-01/2019	Ya-Ting Liao, Case Western Reserve University
01/2019-Present	Saiprasad Ravishankar, Michigan State University, Successful R21 Submission (2022)
01/2019-01/2021	William Masch, University of Michigan
01/2019-01/2021	Prasad Shankar, University of Michigan-Radiology
01/2020-Present	Jesse Hamilton, University of Michigan-Radiology
01/2020-Present	Yun Jiang, University of Michigan-Radiology
01/2022-Present	Gastao Lima da Cruz, University of Michigan, Currently working in lab

Clinical Fellow

01/2012-01/2013	Vidya Nadig, Case Western Reserve University
01/2012-01/2013	Gunhild Aandal, University Hospitals of Cleveland
01/2016-01/2017	Shivani Pahwa, University Hospitals of Cleveland
09/2021-06/2023	Anupama Ramachandran, University of Michigan
09/2021-08/2023	Anna Lavrova, University of Michigan

Postdoctoral Fellow

01/2012-01/2014	Kestutis Barkauskas, Case Western Reserve University
01/2016-01/2017	Andrew Coristine, Case Western Reserve University
01/2017-01/2020	Jesse Hamilton, Case Western Reserve University
01/2017-12/2022	Yuchi Liu, Case Western Reserve University and University of Michigan
01/2018-01/2019	Brendan Eck, Case Western Reserve University
01/2019-01/2020	Yun Jiang, University of Michigan-Radiology
01/2019-01/2021	Kathleen Ropella, University of Michigan-Radiology
01/2020-01/2021	Jacob MacDonald, University of Michigan-Radiology
01/2020-06/2022	Alexander Fyrdahl, University of Michigan-Radiology

Medical Student

01/2012-01/2012	Victoria Yeh, Case Western Reserve University
01/2022-Present	Seth Garrett, University of Michigan

Graduate Student

01/2011-01/2013	Xu Han, Case Western Reserve University
01/2012-01/2017	Jesse Hamilton, Case Western Reserve University
01/2013-01/2022	Wei-Ching Lo, Case Western Reserve University
01/2014-01/2020	Madison Kretzler, Case Western Reserve University
01/2014-01/2022	Dominique Franson, Case Western Reserve University
01/2016-01/2019	Naren Nallapareddy, Case Western Reserve University
01/2017-05/2023	James Ahad, Case Western Reserve University
01/2019-Present	Evan Cummings, University of Michigan
01/2022-Present	Sydney Kaplan, University of Michigan

Undergraduate Student

01/2011-01/2012	Ian Liu, Case Western Reserve University
01/2012-01/2012	Srijita Sarkar, Case Western Reserve University
01/2012-01/2013	Mingyuan Huang, Case Western Reserve University
01/2013-01/2013	Madhukar Kumar, Case Western Reserve University
01/2013-01/2013	Tony Zhang, Case Western Reserve University
01/2014-01/2014	John Conrad McGarry, Case Western Reserve University
01/2016-01/2018	Scott Muller, Case Western Reserve University
01/2016-01/2019	Alexander Hurwitz, Case Western Reserve University
01/2017-01/2018	Herman Lee, Case Western Reserve University
01/2017-01/2019	Joshua Rosenburg, Case Western Reserve University
01/2017-01/2019	Evan Cummings, Case Western Reserve University
01/2018-01/2020	Danielle Curry, John Hopkins University
01/2020-01/2020	Kyla Kwan-Liu, University of Michigan

Visiting Scholar

01/2007-01/2012	Andre Fischer, University of Wuerzburg
01/2009-01/2014	Daniel Neumann, University of Wurzburg
01/2010-01/2015	Johannes Tran-Gia, University of Wuerzburg

Teaching Activity

Institutional

01/2009-01/2009	MRI Physics: The Basics, University Hospitals Case Medical Center, 2 x 1 hour lecture for Radiology residents
01/2010-01/2011	Fast Magnetic Resonance Imaging, EBME 462: Molecular Imaging, 1 hour lecture for BME graduate students
01/2011-01/2018	EBME 615/616: Topic: Seminar in Imaging, Case Western Reserve University, Course Coordinator and Lecturer, 1 contact hour/week, x 14 weeks, Fall and Spring

~20 BME graduate students

01/2012-01/2012 EBME 308: Signals and Systems, Undergraduate Core,
Case Western Reserve University,
Lecturer,
3 contact hours/week x 8 weeks, Fall
~120 third year BME undergraduate students

01/2012-01/2015 EBME 401: Instrumentation/Analysis, Graduate Core,
Case Western Reserve University,
Course Coordinator and Lecturer,
3 contact hours/week x 6 weeks, Spring
~40 first year BME graduate students

01/2013-01/2013 EBME 460: NMR Spectroscopy and Imaging,
Case Western Reserve University,
Course Coordinator and Lecturer,
3 contact hours/week x 14 weeks, Spring
~5 BME graduate students

01/2014-01/2014 Magnetic Resonance Imaging for Atrial Fibrillation
EBME 105: Introduction to Biomedical Engineering,
Case Western Reserve University,
1 hour lecture for 1st year BME students

01/2014-01/2018 IBMS 500: On Being a Professional Scientist,
Case Western Reserve University,
Small Group Facilitator,
1 contact hours/week x 1 weeks, Spring
~20 School of Medicine graduate students

01/2015-01/2015 EBME 460: NMR Spectroscopy and Imaging,
Case Western Reserve University,
Course Coordinator and Lecturer,
3 contact hours/week x 14 weeks, Spring
~5 BME graduate students

01/2015-01/2019 EBME 401D: Instrumentation/Analysis, Graduate Core,
Case Western Reserve University,
Course Coordinator and Lecturer, online
3 contact hours/week x 6 weeks, Spring
~40 first year BME graduate students

01/2016-01/2016 Medical Scholars Training Program, "Rapid Magnetic Resonance Imaging: From Signal Processing to Improved Clinical Care", Case Western Reserve University

01/2016-01/2018 EBME 320: Fundamentals of Medical Imaging,
3 contact hours/week x 14 weeks, Fall Semester
~25 fourth year BME and EE undergraduate students, Case Western Reserve University, Course Coordinator and Lecturer

01/2017-01/2017 EBME 460: NMR Spectroscopy and Imaging,
Case Western Reserve University,
Course Coordinator and Lecturer,
3 contact hours/week x 14 weeks, Spring
~5 BME graduate students

01/2019-01/2019 Basic Concepts in Cardiac MRI,
University Hospitals Cleveland Medical Center,
1 hour lecture for Cardiology residents

01/2019-01/2019 ENGR 131B: Introduction to Engineering and Programming,
Case Western Reserve University,
Lecturer and Lab Leader,
3 contact hours/week x 2 weeks, Spring
~20 first year engineering undergraduate students

01/2019-01/2019	EBME 460: NMR Spectroscopy and Imaging, Case Western Reserve University, Course Coordinator and Lecturer, 3 contact hours/week x 14 weeks, Spring ~5 BME graduate students
01/2020-01/2020	Radiology Research Conference, Quantitative MRI: Technical Developments and Clinical Translation, University of Michigan, Department of Radiology
01/2020-01/2020	Multidisciplinary Cardiac Imaging Conference, Real-Time MRI for Ejection Fraction Measurement, University of Michigan, Departments of Radiology and Cardiology
01/2020-01/2020	fMRI Symposium, Rethinking MRI: Magnetic Resonance Fingerprinting and Beyond, University of Michigan (virtual)
01/2021-01/2021	Biomedical Engineering Research Symposium, Translating Quantitative MRI to the Clinic, University of Michigan, Department of Biomedical Engineering
01/2021-01/2022	Psychology fMRI Course, University of Michigan, Department of Psychology 1 x 4.5 hour lecture for fMRI trainees
01/2021-01/2023	MRI: Board Review, University of Michigan, Department of Radiology, 6 x 1.5 hour lectures for Radiology residents, University of Michigan, Radiology

Dissertation Committees

01/2012-Present	Scott Fassett, MS, Electrical Engineering and Computer Science, Case Western Reserve University, Electrical Engineering and Computer Science, Committee Member
01/2014-Present	Matthew Riffe, PhD, Biomedical Engineering, Case Western Reserve University, Biomedical Engineering, Chair
01/2015-Present	Dan Ma, PhD, Biomedical Engineering, Case Western Reserve University, Biomedical Engineering, Chair
01/2015-Present	Kai Jiang, PhD, Biomedical Engineering, Case Western Reserve University, Biomedical Engineering, Committee Member
01/2016-Present	Daniel Kernan, MS, Biomedical Engineering, Case Western Reserve University, Biomedical Engineering, Committee Member
01/2016-Present	Yun Jiang, PhD, Biomedical Engineering, Case Western Reserve University, Biomedical Engineering, Chair
01/2016-Present	Michael Twieg, PhD, Electrical Engineering and Computer Science, Case Western Reserve University, Electrical Engineering and Computer Science, Committee Member
01/2017-Present	Anagha Deshmane, PhD, Biomedical Engineering, Case Western Reserve University, Biomedical Engineering, Chair
01/2017-Present	Alice Yang, MS, Biomedical Engineering, Case Western Reserve University, Biomedical Engineering, Chair
01/2017-Present	Yuchi Liu, PhD, Biomedical Engineering, Case Western Reserve University, Biomedical Engineering, Committee Member
01/2017-Present	Prateek Prasanna, PhD, Biomedical Engineering, Case Western Reserve University, Biomedical Engineering, Committee Member
01/2018-Present	Kun Yang, MS, Biomedical Engineering, Case Western Reserve University, Biomedical Engineering, Chair
01/2018-Present	Brendan Eck, PhD, Biomedical Engineering, Case Western Reserve University, Biomedical Engineering, Committee Member
01/2018-Present	Rebecca Schur, PhD, Biomedical Engineering, Case Western Reserve University,

	Biomedical Engineering, Committee Member
01/2018-Present	Danielle Kara, PhD, Physics, Case Western Reserve University, Physics, Committee Member
01/2019-Present	Andrew Dupuis, PhD, Biomedical Engineering, Case Western Reserve University, Biomedical Engineering, Committee Member
01/2019-Present	Sherry Huang, PhD, Biomedical Engineering, Case Western Reserve University, Biomedical Engineering, Committee Member
01/2019-Present	Nadia Ayat, PhD, Biomedical Engineering, Case Western Reserve University, Biomedical Engineering, Committee Member
01/2019-Present	Jacob Antunes, PhD, Biomedical Engineering, Case Western Reserve University, Biomedical Engineering, Committee Member
01/2019-Present	Peter Qiao, PhD, Biomedical Engineering, Case Western Reserve University, Biomedical Engineering, Committee Member
01/2019-Present	Eser Erdem Tuna, PhD, Electrical Engineering and Computer Science, Case Western Reserve University, Electrical Engineering and Computer Science, Committee Member
01/2020-Present	Amos Cao, PhD, Biomedical Engineering, University of Michigan, Biomedical Engineering, Committee Member
01/2021-Present	Zidan Yu, PhD, Biomedical Engineering, New York University, Biomedical Engineering, Committee Member
01/2021-Present	Anish Lahiri, PhD, Electrical & Computer Engineering, University of Michigan, Electrical & Computer Engineering, Committee Member
01/2022-Present	Naveen Murthy, PhD, Electrical Engineering and Computer Science, University of Michigan, Electrical Engineering and Computer Science, Committee Member
01/2022-Present	Steven Whitaker, PhD, Electrical & Computer Engineering, University of Michigan, Electrical & Computer Engineering, Committee Member
01/2022-Present	Tianrui Lao, PhD, Biomedical Engineering, University of Michigan, Biomedical Engineering, Committee Member
01/2022-Present	Siddhant Guatam, MRI Sampling Schemes with ML, Michigan State, Biomedical Engineering, Committee Member
01/2023-Present	Jana Zhang, Université de Lausanne, Faculté de biologie et de médecine, Committee Member

Memberships in Professional Societies

2004 - Present	Deutsche Sektion der ISMRM (German Division of the ISMRM)
2004 - Present	International Society for Magnetic Resonance in Medicine (ISMRM)
2008 - Present	American Association for the Advancement of Science (AAAS)
2010 - Present	Society of Women Engineers (SWE)
2011 - Present	Society for Cardiovascular Magnetic Resonance (SCMR)
2011 - 2019	Institute of Electrical and Electronics Engineers (IEEE)
2014 - 2019	Biomedical Engineering Society (BMES)
2017 - Present	Radiological Society of North America (RSNA)
2017 - Present	American Heart Association (AHA)
2017 - Present	Indian Chapter of the ISMRM
2021 - Present	Society for Abdominal Radiology (SAR)

Committee/Service

International

2009	Poster Presentation Award Committee, ISMRM Data Sampling and Image Reconstruction Workshop, Sedona, AZ, Other, Member
2009	Abstract Review Committee, ISMRM Data Sampling and Image Reconstruction Workshop, Sedona, AZ, Other, Member
2012 - present	Abstract Review Committee, International Society of Magnetic Resonance in Medicine, Other, Member
2012 - 2014	Cross-Cutting and Emerging Technologies Educational Sessions, Annual Meeting Program Committee, International Society for Magnetic Resonance in Medicine, Other, Chair
2012 - 2015	Annual Meeting Program Committee, International Society of Magnetic Resonance in Medicine, Other, Member
2013	Student Presentation Award Committee, ISMRM Data Sampling and Image Reconstruction Workshop, Sedona, AZ, Other, Member
2013 - 2014	Organizing Committee, Joint Annual ISMRM/SCMR Workshop, Accelerated CMR: Towards Comprehensive Clinical Cardiovascular Imaging, New Orleans, LA, Other, Co-Chair
2014 - 2015	Organizing Committee, International Biomedical and Astronomical Signal Processing (BASP) Frontiers Workshop, 2015 Villars-sur-Ollon, Switzerland, Other, Member
2015	Relaxometry Scientific Session, Annual Meeting Program Committee, International Society for Magnetic Resonance in Medicine, Other, Chair
2015 - 2016	Abstract Review Committee, ISMRM Data Sampling and Image Reconstruction Workshop, Sedona, AZ, Other, Member
2016 - 2017	Nominating Committee, International Society of Magnetic Resonance in Medicine, Other, Chair
2016 - 2017	Organizing Committee, ISMRM Workshop on Magnetic Resonance Fingerprinting, Cleveland, OH, Other, Member
2016 - 2017	Abstract Review Committee, ISMRM Workshop on Magnetic Resonance Fingerprinting, Cleveland, OH, Other, Member
2016 - 2018	Membership Committee, Society for Cardiovascular Magnetic Resonance, Other, Chair
2016 - 2021	Board of Trustees, International Society for Magnetic Resonance in Medicine, Other, Member
2017 - present	Abstract Review Committee, Biomedical Engineering Society, Other, Member
2017 - 2018	Nominating Committee, Society for Cardiovascular Magnetic Resonance, Other, Member
2017 - 2018	Organizing Committee, ISMRM Workshop on Quantitative Body Imaging, New Delhi, India, Other, Member
2018 - present	Program Committee, Society for Cardiovascular Magnetic Resonance, Other, Member
2018	Abstract Review Committee, ISMRM Workshop on Quantitative Body Imaging, New Delhi, India, Other, Member
2018 - 2019	Nominating Committee, International Society of Magnetic Resonance in Medicine, Other, Member
2018 - 2022	Annual Meeting Program Committee, International Society of Magnetic Resonance in Medicine, Other, Member
2019 - 2022	Organizing Committee, From Cells To Galaxies Workshop 2020, Santa Fe, NM (Postponed due to COVID-19), Other, Member

2019 - 2020	Annual Meeting Program Committee, International Society of Magnetic Resonance in Medicine, Other, Vice-Chair
2020	ISMRM Equity, Diversity & Inclusion (EDI) Virtual Meeting: Work-Life-Family Balance in the Era of COVID-19, Other, Organizer and Moderator
2020 - 2021	Trainee Advisory Working Group, International Society of Magnetic Resonance in Medicine, Other, Chair
2020 - 2021	Annual Meeting Program Committee, International Society of Magnetic Resonance in Medicine, Other, Chair
2021 - present	Board of Trustees, Society for Cardiovascular Magnetic Resonance, Other, Member
2021 - present	Research Committee, Society for Cardiovascular Magnetic Resonance, Other, Board Liaison
2021 - 2023	Organizing Committee, ISMRM Data Sampling and Image Reconstruction Workshop, Sedona, AZ, scheduled for 2023, Other, Member
2021 - present	Abstract Review Committee, Radiological Society of North America, Other, Member
2021 - 2022	Finance Committee, International Society of Magnetic Resonance in Medicine, Other, Member
2021 - present	Session Organizer "Practical Aspects of MRI," Annual Meeting of the Radiological Society of North America, Other, Organizer
2022 - present	Standards Committee, International Society for Magnetic Resonance in Medicine, Other, Member
2022 - present	ISMRM Ad Hoc Committee for MD Engagement Member, Other, Member
2022	ISMRM Junior Fellows Selection Committee, Other, Member
2023 - present	Program Committee for the 2024 SCMR-ISMRM Co-Sponsored Workshop, Low-Field and High-Field CMR, Society for Cardiovascular Magnetic Resonance, Co-Chair

National

2020 - 2021	Pocket Mentor Working Group, American Association of Women in Radiology, Other, Member

Regional

2020	Organizing Committee, Midwest MRI Potluck Workshop, Other, Member
2020	Abstract Review Committee, Midwest MRI Potluck Workshop, Other, Member

Institutional

2011 - 2014	Graduate Education Committee, Department of Biomedical Engineering, Case Western Reserve University, Other, Member
2013	Search Committee for EECS Chairperson, Department of Electrical Engineering and Computer Science, Case Western Reserve University, Other, Member
2014	PhD Qualifier Committee, Department of Biomedical Engineering, Case Western Reserve University, Other, Member
2014	BME Departmental Ford Lecture Organizing Committee, Other, Chair
2014 - 2016	Graduate Studies Committee, School of Engineering, Case Western Reserve University, Other, Member
2014 - 2017	Graduate Awards Subcommittee, Department of Biomedical Engineering, Case Western Reserve University, Other, Chair and Founder
2014 - 2019	Graduate Education Committee, Department of Biomedical Engineering, Case Western Reserve University, Other, Vice-Chair

2016	PhD Qualifier Committee, Department of Biomedical Engineering, Case Western Reserve University, Other, Member
2016 - 2017	Strategic Hiring in Informatics and Computing Search Committee, Department of Electrical Engineering and Computer Science, Case Western Reserve University, Other, Member
2016 - 2019	Graduate Studies Committee, School of Engineering, Case Western Reserve University, Other, Vice-Chair
2017	PhD Qualifier Committee, Department of Biomedical Engineering, Case Western Reserve University, Other, Chair
2017	Search Committee, Translational Research Faculty, Department of Biomedical Engineering, Case Western Reserve University, Other, Member
2017 - 2018	Dean Search Committee, School of Engineering, Case Western Reserve University, Other, Member
2017 - 2018	Search Committee, Imaging Faculty in Physics, Department of Physics, Case Western Reserve University, Other, Member
2017 - 2019	Graduate Awards Subcommittee, Department of Biomedical Engineering, Case Western Reserve University, Other, Chair
2017 - 2019	Undergraduate Recruitment Presenter, Case Western Reserve University, Other, Presenter
2018	Ohio Board of Regents CCGS Graduate Program Assessment for Biomedical Engineering, Other, Organizer
2018 - 2019	Research Strategic Planning Committee, School of Engineering, Case Western Reserve University, Other, Member
2018 - 2019	MSTP Steering Committee, Case Western Reserve University, Other, Member
2018 - 2019	Academic Integrity Investigation Committee, Case Western Reserve University, Other, Member
2019 - present	Michigan Institute of Imaging Technology and Translation (MIITT), Other, Co-Director
2019	General Education Requirements Subcommittee of the University Senate, Engineering Representative, Case Western Reserve University, Other, Member
2020 - present	Women in Radiology, Steering Committee, University of Michigan, Other, Member
2022 - present	Department of Radiology Research Retreat Planning Committee, University of Michigan, Other, Member
2023 - present	Department of Internal Medicine Chair Search Committee, University of Michigan, other, Member

Volunteer Service

Volunteer

2012 - 2013	Science Fair Judge, Shaker Heights, OH, Hathaway Brown High School Science Fair
2013	Organizer, Shaker Heights, OH, Organized a session of the Aspire summer program at Hathaway Brown High School for 6th through 8th grade girls from under-resourced public schools
2013	Organizer, Cleveland, OH, Organized two sessions of the REACH program at CWRU for high achieving African American boys in the Cleveland area
2014 - 2019	Outreach, Cleveland, OH, Outreach research demo sessions with the CWRU Leonard Gelfand STEM Center
2017 - 2019	Volunteer, Cleveland, OH, Stay Well Program
2017 - 2019	Volunteer, Cleveland, OH, Volunteered time and services at the Heights Emergency Food Center

2021	Presenter, Virtual, students in Columbus, MO, Presented "Medical Imaging: The Inside Story" to middle school students, organized by Dr. Joe, UM Radiology
2022	Presenter, Dexter, MI, Presented "Medical Imaging: The Inside Story" to female high school students
2022	Presenter, Big House, Ann Arbor, MI, Regional outreach event aimed at engaging and exposing diverse middle school students from schools across southeast Michigan to Michigan Medicine health care
2022	Mentor, Ann Arbor, Speed Job Networking Activity, Frankel CVC Careers in Cardiovascular Science and Medicine Program
2022	Presenter, Frankel Cardiovascular Center, University of Michigan, a summer program for high school students which outlines the many potential careers in cardiovascular science, medicine, and healthcare at the FCVC to promote diversity, equity, and inclusion in the STEM and healthcare fields

Scholarly Activities

Presentations

Extramural Invited Presentation

Speaker

1. Parallel Imaging: From Cartesian to the More Exotic, Deutsches Krebsforschungzentrum (DKFZ), 10/2006, Heidelberg, Germany

2. Advances in Parallel Imaging using the GRAPPA Operator, Forschungszentrum Jülich, 07/2008, Jülich, Germany

3. Non-Cartesian Parallel Imaging, International Society for Magnetic Resonance in Medicine, Workshop for Data Sampling and Image Reconstruction, 01/2009, Sedona, AZ

4. Challenges in Applying Compressive Sampling to MR Imaging, Institute for Operations Research and the Management Sciences, 05/2009, San Diego, CA

5. Parallel MR Image Reconstruction, International Society for Magnetic Resonance in Medicine, Third International Workshop on Parallel Imaging, 09/2009, Santa Cruz, CA

6. Compressed Sensing in MRI, Norwegian Institute of Science and Technology, 04/2010, Trondheim, Norway

7. Less is More: Constrained Reconstruction, International Society for Magnetic Resonance in Medicine (ISMRM), 05/2010, Stockholm, Sweden

8. Parallel Imaging: Principles and Implementation, International Society for Magnetic Resonance in Medicine, 05/2010, Stockholm, Sweden

9. Parallel Imaging within the Constrained Reconstruction Framework, Madison Workshop on Rapid MR Imaging: Beyond the Nyquist Limit, 06/2010, Madison, WI

10. K-Space Based Non-Cartesian Parallel Imaging, European Society for Magnetic Resonance in Medicine and Biology, Hands-On Parallel Imaging Workshop, 08/2010, Würzburg, Germany

11. Non-Cartesian Parallel Imaging based on the GRAPPA Method, Novel Reconstruction Strategies in Nuclear Magnetic Resonance (NMR) and MRI: Mathematics meets MR, 10/2010, Göttingen, Germany

12. Rapid MRI: Challenges, Solutions, and Clinical Applications, University Hospitals of Cleveland, 01/2011, Cleveland, OH

13. Compressed Sensing & Sparsity, International Society for Magnetic Resonance in Medicine, 05/2011, Montreal, Quebec, Canada

14. Parallel Imaging Reconstruction II: Non-Cartesian, International Society for Magnetic Resonance in Medicine, 05/2011, Montreal, Quebec, Canada

15. Parallel Imaging: Principles and Implementation, International Society for Magnetic Resonance in Medicine, 05/2011, Montreal, Quebec, Canada

16. Parallel Imaging Reconstruction II: Non-Cartesian, International Society for Magnetic Resonance in

Medicine, 05/2012, Melbourne, Australia

17. Parallel Imaging: Principles and Implementation, International Society for Magnetic Resonance in Medicine, 05/2012, Melbourne, Australia

18. Rapid MR Imaging using Through-Time Non-Cartesian GRAPPA, Max Planck Institue for Biological Cybernetics, 05/2012, Tübingen, Germany

19. K-Space Based Non-Cartesian Parallel Imaging, European Society for Magnetic Resonance in Medicine and Biology, Hands-On Parallel Imaging Workshop, 08/2012, Würzburg, Germany

20. Rapid MR Imaging: Compressed Sensing and Parallel Imaging, Gordon Research Conference: In Vivo MRI, 08/2012, Waterville, ME

21. Novel Non-Cartesian Parallel Imaging Techniques for Rapid MRI, University of Southern California, Medical Imaging Seminar Series, 10/2012, Los Angeles, CA

22. Parallel Imaging for Clinicians, Society for Cardiovascular Magnetic Resonance, 01/2013, San Francisco, CA

23. Rapid Magnetic Resonance Imaging using Novel Parallel Imaging Techniques, University of Colorado Denver, 01/2013, Denver, CO

24. Pushing the Limits: Novel Acquisition and Reconstruction Strategies for Rapid and Quantitative MRI, New York University, Langone Medical Center, 05/2013, New York, NY

25. Rapid CMR: Technology Driving Innovation, Society for Cardiovascular Magnetic Resonance, 01/2014, New Orleans, LA

26. Welcome and Introduction to Rapid Imaging, International Society for Magnetic Resonance in Medicine and Society for Cardiovascular Magnetic Resonance, Jointly Sponsored Workshop, 01/2014, New Orleans, LA

27. Rapid Magnetic Resonance Imaging using Novel Parallel Imaging Techniques, Mount Sinai, Translational and Molecular Imaging Institute, 02/2014, New York, NY

28. Rapid Magnetic Resonance Imaging using Novel Parallel Imaging Techniques, University of Michigan, Department of Radiology, 07/2014, Ann Arbor, MI

29. Magnetic Resonance Fingerprinting: Beyond Parameter Mapping to Clinical Application, International Biomedical and Astronomical Signal Processing, Workshop, 01/2015, Villars-sur-Ollon, Switzerland

30. Rapid Magnetic Resonance Imaging using Novel Parallel Imaging Techniques, Universitaets-Klinik Essen, Department of Radiology, 01/2015, Essen, Germany

31. Parallel Imaging and Compressed Sensing for Clinicians, Society for Cardiovascular Magnetic Resonance / EuroCMR, 02/2015, Nice, France

32. Rapid and Quantitative Cardiac MRI: From Non-Cartesian Parallel Imaging to MR Fingerprinting, University of Wisconsin, Madison, Department of Medical Physics, 03/2015, Madison, WI

33. Numbers How: Emerging Techniques for Quantitative MRI, International Society for Magnetic Resonance in Medicine, Workshop for Data Sampling and Image Reconstruction, 01/2016, Sedona, AZ

34. Current and Emerging Trends in MRI, i2i Workshop, New York University, 10/2016, New York, NY

35. Fast and Parallel Imaging, Society for Cardiovascular Magnetic Resonance, 02/2017, Washington, DC

36. Novel CMR Methods, Society for Cardiovascular Magnetic Resonance, 02/2017, Washington, DC

37. Women in ISMRM, International Society for Magnetic Resonance in Medicine, 04/2017, Honolulu, HI

38. Cardiac MR Fingerprinting, International Society for Magnetic Resonance in Medicine, 04/2017, Honolulu, HI

39. Strength in Numbers: Unleashing the Power of Quantitative MRI, International Society for Magnetic Resonance in Medicine, 04/2017, Honolulu, HI

40. Making the Case for Fingerprinting, 5th Annual Retreat of the Centre d'Imagerie Biomedicale / Centre Hospitalier Universitaire Vaudois, 09/2017, Lausanne, Switzerland

41. Challenges & Opportunities for MRF, International Society for Magnetic Resonance in Medicine, 10/2017, Cleveland, OH

42. Quantitative Abdominal Perfusion MRI, Radiological Society of North America, 11/2017, Chicago, IL

43. Synthetic CMR and CMR Fingerprinting, Society for Cardiovascular Magnetic Resonance, 02/2018, Barcelona, Spain

44. Rapid and Quantitative MRI of the Heart: Real-Time Imaging and Magnetic Resonance Fingerprinting, University of Michigan, Department of Biomedical Engineering, 02/2018, Ann Arbor, MI

45. Future of Quantitative Body Imaging, International Society for Magnetic Resonance in Medicine, 03/2018, New Delhi, India

46. The Intersection Between Rapid and Quantitative Imaging, International Society for Magnetic Resonance in Medicine, 03/2018, New Delhi, India

47. Solutions for Quantitative MRI, PET/MR and SPECT/MR Conference, 05/2018, Elba, Italy

48. Tissue Characterization: Cardiac Magnetic Resonance Fingerprinting, International Society for Magnetic Resonance in Medicine, 06/2018, Paris, France

49. Strength in Numbers: Unleashing the Power of Quantitative MRI, Medical Physics, University College of London, 06/2018, London, UK

50. Magnetic Resonance Fingerprinting, International Society for Magnetic Resonance in Medicine, 06/2018, Paris, France

51. Rapid and Quantitative MRI of the Heart: Real-Time Imaging and Magnetic Resonance Fingerprinting, Department of Cardiology, Cleveland Clinic, 07/2018, Cleveland, OH

52. Rapid and Quantitative MRI of the Heart: Real-Time Imaging and Magnetic Resonance Fingerprinting, Department of Cardiology, University of Glasgow, 09/2018, Glasgow, UK

53. K-Space and Parallel Imaging, Educational Pre-Conference of the Society for Magnetic Resonance Angiography, 09/2018, Glasgow, UK

54. Cardiac Magnetic Resonance Fingerprinting, Society for Magnetic Resonance Angiography, 09/2018, Glasgow, UK

55. Advanced MRI Analysis Methods, Imaging in 2020, 10/2018, Woods Hole, WY

56. Rapid and Quantitative MRI of the Heart: Real-Time Imaging and Magnetic Resonance Fingerprinting, Bioengineering, University of California, 10/2018, Berkeley, CA

57. Quantitative Abdominal Perfusion MRI, Radiological Society of North America, 11/2018, Chicago, IL

58. Rapid and Quantitative MRI of the Heart: Real-Time Imaging and Magnetic Resonance Fingerprinting, Department of Biomedical Engineering, University of Virginia, 11/2018, Charlottesville, VA

59. Recent Advances in Myocardial Relaxometry, Society for Cardiovascular Magnetic Resonance, 02/2019, Bellevue, WA

60. Fast and Parallel Imaging, Society for Cardiovascular Magnetic Resonance, 02/2019, Bellevue, WA

61. Accelerating Access to Quantitative MRI, International Society for Magnetic Resonance in Medicine, Workshop on Accessible MRI, 03/2019, New Delhi, India

62. Non-Nyquist Image Reconstruction, the International Society for Magnetic Resonance in Medicine, 05/2019, Montreal, Quebec, Canada

63. Rapid and Quantitative MRI of the Heart: Real-Time Imaging and Magnetic Resonance Fingerprinting, GE Healthcare, 06/2019, Aurora, OH

64. Challenges and Opportunities in Magnetic Resonance Fingerprinting, Institute for Mathematics and Its Applications, Computational Imaging Workshop, 10/2019, Minneapolis, MN

65. Rapid and Quantitative MRI of the Heart: Real-Time Imaging and Magnetic Resonance Fingerprinting, Stanford University, 11/2019, Stanford, CA

66. Career development for Physicists/Engineers/Basic Scientists, Society for Cardiovascular Magnetic Resonance, 02/2020, Orlando, FL

67. Fast and Parallel Imaging, Society for Cardiovascular Magnetic Resonance, 02/2020, Orlando, FL

68. CMR Year in Review: At the Frontline of Methods and Innovation, Society for Cardiovascular Magnetic Resonance, 02/2020, Orlando, FL

69. Value of MRI, International Society for Magnetic Resonance in Medicine, 08/2020, Virtual

70. Cardiac Magnetic Resonance Fingerprinting, University of Oxford, 09/2020, Virtual

71. Quantitative MRI: Technical Developments and Clinical Translation, Signal Processing And Computational Image Formation (SPACE) Webinar Series, 11/2020, Virtual

72. Quantitative and Intelligent MR for Underserved Populations, Siemens MAGNETOM World Summit, 11/2020, Virtual

73. MR Fingerprinting in 2030, Radiological Society of North America, 11/2020, Virtual

74. Magnetic Resonance Fingerprinting: Challenges and Opportunities, Cincinnati Children's Hospital Medical Center, 11/2020, Virtual

75. What ISMRM Abstract Reviewers Look For in an Abstract, International Society for Magnetic Resonance in Medicine, 12/2020, Virtual

76. Making SENSE (and GRAPPA) of Parallel Imaging, Society of Cardiovascular Magnetic Resonance Physics, 12/2020, Virtual

77. Magnetic Resonance Fingerprinting, Karmanos Cancer Institute, Wayne State University, 12/2020, Virtual

78. Cardiac Magnetic Resonance Fingerprinting, New York University, 12/2020, Virtual

79. Parametric Mapping: The Basics of T1, T2, and ECV, Society for Cardiovascular Magnetic Resonance, 01/2021, Virtual

80. Career development for Physicists/Engineers/Basic Scientists, Society for Cardiovascular Magnetic Resonance, 02/2021, Virtual

81. GRASS MRI - Green Recovery to Address Sustainable Scientific - Future in MRI, International Society for Magnetic Resonance in Medicine, 05/2021, Virtual

82. Fireside Chat with 2020 and 2021 Program Chairs, International Society for Magnetic Resonance in Medicine, 05/2021, Virtual

83. Cardiac Magnetic Resonance Fingerprinting, EuroCMR, 05/2021, Virtual

84. CMR Fingerprinting and Clinical Applications, Congress of the Asian Society of Cardiovascular Imaging, 08/2021, Virtual

85. Quantitative MRI: A Fool's Errand, Swiss Federal Institute of Technology Lausanne, "New Horizons in MRI" Workshop, 09/2021, Lausanne, Switzerland

86. Translation of Magnetic Resonance Fingerprinting, University of Bern, Switzerland, 09/2021, Virtual

87. Quantitative MRI: Promises and Challenges, Biomedical Engineering, University of Pittsburgh, 10/2021, Pittsburgh, PA

88. Cardiac Magnetic Resonance Fingerprinting, Grand Rounds, Virginia Commonwealth University, 11/2021, Virtual

89. Fast Imaging, SCMR 25th Annual Scientific Sessions, 02/2022, virtual

90. 30-minute CMR for common clinical indications: a Society for Cardiovascular Magnetic Resonance white paper. Raman SV, **Seiberlich N**, JCMR Journal Club, 03/2022, England

91. Rethinking MRI: Magnetic Resonance Fingerprinting, Mt. Sinai Radiology Research Retreat, 04/2022, Mt. Sinai, New York

92. AI for Rapid CMR: Parametric Mapping, Artificial Intelligence in Cardiovascular Magnetic Resonance Imaging, Joint Summit of the EACVI and SCMR, 05/2022, London, England

93. MRF and the Evolution of MRI, Freiburg International Workshop on MR - yesterday, today, and tomorrow, 07/2022, Freiburg Germany

94. MAGNETOM Free.Max at UM: The First 14 Months, Universitätsspital Basel, 07/2022, Basel, Switzerland

95. MAGNETOM Free.Max at UM: The First 18 Months, **Seiberlich N**, Inselspital, University of Bern, 09/2022, Bern, Switzerland

96. Magnetic Resonance Fingerprinting: How we do it at UM, **Seiberlich N**, Physikalisch-Technische Bundesanstalt, 07/2023, Berlin, Germany

97. Rapid Magnetic Resonance Imaging: From Signal Processing to Improved Clinical Care, Case Western Reserve University, Medical Scholars Training Program, 07/2016, Maumee Bay State Park, OH

98. BrainMap: Magnetic Resonance Fingerprinting: An Emerging Tool for Neuroimaging, Athinoula A. Martinos Center for Biomedical Imaging, 05/2022, Virtual

99. (Finally) Enabling Quantitative MRI through Magnetic Resonance Fingerprinting, **Seiberlich N**, Gordon Conference on In Vivo MRI, 07/2022, Andover, NH

100. Working with MRI Data: An Intro for Radioastronomers, From Cells To Galaxies Workshop, 09/2022, St. Paul, MN

101. How to get your abstract accepted to the ISMRM, **Seiberlich N**, Workshop, International Society for Magnetic Resonance in Medicine, 10/2022, Virtual

102. The Role of Quantitative MRI in Personalized Medicine, Seiberlich N, Annual Meeting, Radiological Society of North America, 11/2022, Chicago, IL

103. Magnetic Resonance Fingerprinting: Challenges and Opportunities, Seiberlich N, Max Planck Institute for Human Cognitive and Brain Sciences, 12/2022, Leipzig, Germany

104. Sampling and Image Reconstruction After 16 Years of Sedona: Are We Moving the Needle?, Seiberlich N, ISMRM Workshop on Data Sampling and Image Reconstruction, 01/2023, Sedona, AZ

105. Fast Imaging, **Seiberlich N**, Annual Meeting, Society for Cardiovascular Magnetic Resonance, 01/2023, San Diego, CA

106. Magnetic Resonance Fingerprinting, Seiberlich N, Workshop, Quantitative MRI For Characterising Brain Tissue, Max Planck Institute, 02/2023, Leipzig, Germany

107. Challenges and Opportunities in Quantitative MRI, **Seiberlich N**, Gulani V, Radiology Research Retreat, University of Wisconsin, Madison, 05/2023, Madison, WI

108. CMR Fingerprinting, Seiberlich N, European Association for Cardiovascular Imaging, 05/2023, Barcelona, Spain

109. Pushing the Frontiers of Quantitative MRI Towards Clinical Adoption of MR Fingerprinting, Seiberlich N, Annual Meeting of the International Society for Magnetic Resonance in Medicine, 06/2023, Toronto, Canada

110. Magnetic Resonance Fingerprinting: Acquisition, Seiberlich N, Annual Meeting of the International Society for Magnetic Resonance in Medicine, 06/2023, Toronto, Canada

Other

1. Guess that Artifact Session: Parallel Imaging Artifacts, International Society for Magnetic Resonance in Medicine, 04/2009, Honolulu, HI

2. Guess that Artifact Session: Parallel Imaging Artifacts, International Society for Magnetic Resonance in Medicine, 05/2010, Stockholm, Sweden

3. Guess that Artifact Session: Parallel Imaging Artifacts, International Society for Magnetic Resonance in Medicine, 05/2011, Montreal, Quebec, Canada

4. Guess that Artifact Session: Parallel Imaging Artifacts, International Society for Magnetic Resonance in Medicine, 05/2012, Melbourne, Australia

5. MRI Squares: Image Artifact Game Show, International Society for Magnetic Resonance in Medicine, 04/2013, Salt Lake City, UT

6. Ciao Artifatti: An Artifact Game Show, International Society for Magnetic Resonance in Medicine, 05/2014, Milan, Italy

7. ISMRM Image Reconstruction Challenge, Annual Meeting of the International Society for Magnetic Resonance in Medicine, 05/2014, Milan, Italy

8. Artefacts, Eh?: An Artifact Game Show, International Society for Magnetic Resonance in Medicine, 06/2015, Toronto, Ontario, Canada

Publications/Scholarship

(Co-First Author *; Corresponding author **; Co-Last author ***)

Peer-Reviewed

Journal Article

1. Lo W-C, Bittencourt LK, Panda A, Jiang Y, Tokuda J, Seethamraju R, Tempany-Afdhal C, Obmann V, Wright K, Griswold M, **Seiberlich N**, Gulani V: Multicenter Repeatability and Reproducibility of MRFingerprinting in Phantoms and in Prostatic Tissue. PM35713379

2. Breuer FA, Blaimer M, Mueller MF, **Seiberlich N**, Heidemann RM, Griswold MA, Jakob PM: Controlled aliasing in volumetric parallel imaging (2D CAIPIRINHA). *Magn Reson Med*.55(3): 549-556, 03/2006. PM16408271

3. Heidemann RM, **Seiberlich N**, Griswold MA, Wohlfarth K, Krueger G, Jakob PM: Perspectives and limitations of parallel MR imaging at high field strengths. *Neuroimaging Clin N Am*.16(2): 311-xi, 05/2006. PM16731369

4. Blaimer M, Breuer FA, **Seiberlich N**, Mueller MF, Heidemann RM, Jellus V, Wiggins G, Wald LL, Griswold MA, Jakob PM: Accelerated volumetric MRI with a SENSE/GRAPPA combination. *J Magn Reson Imaging*.24(2): 444-450, 08/2006. PM16786571

5. Heidemann RM, Griswold MA, **Seiberlich N**, Krüger G, Kannengiesser SA R, Kiefer B, Wiggins G, Wald LL, Jakob PM: Direct parallel image reconstructions for spiral trajectories using GRAPPA. *Magn Reson Med*.56(2): 317-326, 08/2006. PM16826608

6. Kaufmann I, **Seiberlich N**, Haase A, Jakob P: Diffusion generated T1 and T2 contrast. *J Magn Reson*.192(1): 139-150, 05/2008. PM18316216

7. **Seiberlich N**, Breuer F, Heidemann R, Blaimer M, Griswold M, Jakob P: Reconstruction of undersampled non-Cartesian data sets using pseudo-Cartesian GRAPPA in conjunction with GROG. *Magn Reson Med*.59(5): 1127-1137, 05/2008. PM18429026

8. Saybasili H, Derbyshire JA, Kellman P, Griswold MA, Ozturk C, Lederman RJ, **Seiberlich N**: RT-GROG: parallelized self-calibrating GROG for real-time MRI. *Magn Reson Med*.64(1): 306-312, 07/2010. PM20577983

9. **Seiberlich N**, Ehses P, Duerk J, Gilkeson R, Griswold M: Improved radial GRAPPA calibration for real-time free-breathing cardiac imaging. *Magn Reson Med*.65(2): 492-505, 02/2011. PM20872865

10. Yutzy SR, **Seiberlich N**, Duerk JL, Griswold MA: Improvements in multislice parallel imaging using radial CAIPIRINHA. *Magn Reson Med*.65(6): 1630-1637, 06/2011. PM21287592

11. **Seiberlich N**, Lee G, Ehses P, Duerk JL, Gilkeson R, Griswold M: Improved temporal resolution in cardiac imaging using through-time spiral GRAPPA. *Magn Reson Med*.66(6): 1682-1688, 12/2011. PM21523823

12. Wright KL, * Seiberlich N, Jesberger JA, Nakamoto DA, Muzi Jr RF, Griswold MA, Gulani V: Simultaneous Magnetic Resonance Angiography and Perfusion (MRAP) Measurement: Initial Application in Lower Extremity Skeletal Muscle. *J. Magn. Reson. Imag*.38(5)01/2013. PM23389970

13. Ehses P, **Seiberlich N**, Breuer FA, Jakob PM, Griswold MA, Gulani V: IR TrueFISP with a golden-ratio based radial readout: Fast quantification of T1, T2, and proton density. *Magn. Reson. Med*.69: 71-81, 01/2013. PM22378141

14. Margosian PM, **Seiberlich N**, Takizawa M: Exploitation of Sparsity in MRI. *eMagRes*.-: 289-306, 01/2013

15. Lee GR, **Seiberlich N**, Sunshine JL, Carroll TJ, Griswold MA: Rapid time-resolved magnetic resonance angiography via a multiecho radial trajectory and GraDeS reconstruction. *Magn Reson Med*.69(2): 346-359, 02/2013. PM22473742

16. Barkauskas KJ, Rajiah P, Ashwath R, Hamilton JI, Chen Y, Ma D, Wright KL, Gulani V, Griswold MA, **Seiberlich N**: Quantification of Left Ventricular Functional Parameter Values Using 3D Spiral bSSFP and Through-time Non-Cartesian GRAPPA. *J. Cardiovasc. Magn. Reson*.16: 65-77, 01/2014. PM25231607

17. Saybasili H, Herzka DA, **Seiberlich N**, Griswold MA: Real-time imaging with radial GRAPPA: Implementation on a heterogeneous architecture for low-latency reconstructions. *Magn Reson Imaging*.32(6): 747-758, 07/2014. PM24690453

18. Wright KL, Lee GR, Ehses P, Griswold MA, Gulani V, **Seiberlich N**: Three-dimensional through-time radial GRAPPA for renal MR angiography. *J Magn Reson Imaging*.40(4): 864-874, 10/2014. PM24446211

19. Wright KL, Chen Y, Saybasili H, Griswold MA, **Seiberlich N**, Gulani V: Quantitative high-resolution renal perfusion imaging using 3-dimensional through-time radial generalized autocalibrating partially parallel acquisition. *Invest Radiol*.49(10): 666-674, 10/2014. PM24879298

20. Chen Y, Lee GR, Wright KL, Badve C, Nakamoto D, Yu A, Schluchter MD, Griswold MA, **Seiberlich N**, Gulani V: Free-breathing liver perfusion imaging using 3-dimensional through-time spiral generalized autocalibrating partially parallel acquisition acceleration. *Invest Radiol*.50(6): 367-375, 06/2015. PM25946703

21. Jiang Y, Ma D, **Seiberlich N**, Gulani V, Griswold M: MR Fingerprinting Using Fast Imaging with Steady State Precession (FISP) with Spiral Readout. *Magnetic Resonance in Medicine*.74(6)12/2015

22. Deshmane A, Blaimer M, Breuer F, Jakob P, Duerk J, **Seiberlich N**, Griswold M: Self-calibrated trajectory estimation and signal correction method for robust radial imaging using GRAPPA operator gridding. *Magn Reson Med*.75(2): 883-896, 02/2016. PM25765372

23. Chen Y, Jiang Y, Pahwa S, Ma D, Lu L, Twieg MD, Wright KL, **Seiberlich N**, Griswold MA, Gulani V: MR Fingerprinting for Rapid Quantitative Abdominal Imaging. *Radiology*.279(1): 278-286, 04/2016. PM26794935

24. Chen Y, Lee GR, Aandal G, Badve C, Wright KL, Griswold MA, **Seiberlich N**, Gulani V: Rapid volumetric T1 mapping of the abdomen using three-dimensional through-time spiral GRAPPA. *Magn Reson Med*.75(4): 1457-1465, 04/2016. PM25980949

25. Yang AC, Kretzler M, Sudarski S, Gulani V, **Seiberlich N**: Sparse Reconstruction Techniques in Magnetic Resonance Imaging: Methods, Applications, and Challenges to Clinical Adoption. *Invest Radiol*.51(6): 349-364, 06/2016. PM27003227

26. Liu T, Poirot NL, Franson D, **Seiberlich N**, Griswold MA, Cavusoglu MC: Modeling and Validation of the Three-Dimensional Deflection of an MRI-Compatible Magnetically Actuated Steerable Catheter. *IEEE Trans Biomed Eng*.63(10): 2142-2154, 10/2016. PM26731519

27. Sayin O, Saybasili H, Zviman MM, Griswold M, Halperin H, **Seiberlich N**, Herzka DA: Real-time free-breathing cardiac imaging with self-calibrated through-time radial GRAPPA. *Magn Reson Med*.77(1): 250-264, 01/2017. PM26969611

28. Jiang Y, Ma D, Jerecic R, Duerk JL, **Seiberlich N**, Gulani V, Griswold MA: MR Fingerprinting Using Quick Echo Splitting NMR Imaging Technique. *Magn. Reson. Med*.77(3): 979-988, 03/2017. PM26924639

29. Liu T, Jackson R, Franson D, Poirot NL, Criss RK, **Seiberlich N**, Griswold MA, Çavuşoğlu MC: Iterative Jacobian-Based Inverse Kinematics and Open-Loop Control of an MRI-Guided Magnetically Actuated Steerable Catheter System. *IEEE ASME Trans Mechatron*.22(4): 1765-1776, 08/2017. PM29255343

30. Hamilton J, Franson D, **Seiberlich N**: Recent advances in parallel imaging for MRI. *Prog Nucl Magn Reson Spectrosc*.101: 71-95, 08/2017. PM28844222

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