FACULTY ACTIVITIES SUMMARY

Sajan Goud Lingala
Associate Professor
Roy J Carver Department of Biomedical Engineering
Department of Radiology
The University of Iowa
sajangoud-lingala@uiowa.edu

General Information

Positions and Affiliations

Primary

Associate Professor	Roy J. Carver Department of Biomedical Engineering University of Iowa, Iowa City, IA	July25-present
Assistant Professor	Roy J. Carver Department of Biomedical Engineering, University of Iowa, Iowa City, IA	May 2018-June 25
Senior Research Scientist	Siemens Healthineers, Princeton, NJ	Mar 2017-May 2018
Post-doctoral Research Associate	Electrical and Computer Engineering, University of Southern California, Los Angeles, CA	Jan 2014 – Mar 2017

Secondary or Affiliated

Associate Professor	Dept. of Radiology	July 25 – Present
Assistant Professor	Dept. of Radiology	May 2018 – June 25
Member	Iowa Institute of Biomedical Imaging Institute	May 2018 – Present

Education

Ph.D.	Biomedical Engineering, University of Iowa, Iowa City, IA *Thesis: Novel adaptive reconstruction schemes for accelerated myocardial perfusion MRI*	2013
M.Tech.	Biomedical Engineering, Indian Institute of Technology, Bombay *Thesis: Signal and Image processing for MRI*	2008
B.E.	Biomedical Engineering, Osmania University, Hyderabad, India *Thesis: Design of a low cost ECG amplifier in a Central Monitoring Station*	2006

Awards and Honors

2023	Early Career Scholar – University of Iowa Office of the Vice President for Research
2023	Radiology Faculty Excellence seed grant recipient, University of Iowa
2022	Early Career Investigator in Imaging, Academy for Radiology and Biomedical Imaging
2022	Old Gold Faculty Scholarship, University of Iowa
2022	Distinguished Reviewer, Journal of Magnetic Resonance Imaging (JMRI)
2021	Summa cum laude merit abstract award, International Society of Magnetic Resonance in Medicine (senior author)
2021	Finalist, Best paper award, SPIE conference on Image perception, observer performance, and technology assessment (coauthor)
2021	Distinguished Reviewer, IEEE Transactions of Medical Imaging (Bronze Level)
2016,17, 18,19	Distinguished Reviewer, Magnetic Resonance in Medicine (MRM)
2016	Junior Fellow of the International Society of Magnetic Resonance in Medicine (ISMRM). Recognition by the ISMRM society as an outstanding researcher at an early stage in career, with an established and long-term commitment to the ISMRM.
2015	University of Southern California (USC) provost's post-doctoral research grant recipient
2015	Rex Montgomery Dissertation Prize, University of Iowa
2015,16	Summa cum laude merit abstract awards, International Society of Magnetic Resonance in Medicine (2 co-authors)
2012,14, 15,17	Magna cum laude merit abstract awards, International Society of Magnetic Resonance in Medicine (4 first authors and 2 coauthors)
2014	Best student paper award in category of Bioimaging and signal processing, IEEE-ICASSP conference (co-author)
2014	Finalist, EMBC student paper award in category of Bioimaging and signal processing, IEEE-EMBC conference (co-author)
2012	American Heart Association predoctoral fellowship award
2012	Outstanding Graduate Student Award, Iowa Insitute of Biomedical Imaging, University of Iowa
2008	Nitish Thakor award for excellence in M.Tech, Biomedical Engineering, Indian Institute of Technology, Bombay
2006	Best undergraduate thesis award, Biomedical Engineering, Osmania University

Professional Memberships

- Radiological Society of North America (2014-Present)
- International Society for Magnetic Resonance in Medicine (2011-Present)
- Institute of Electrical and Electronics Engineers (IEEE) (2012-Present)
- Society of Cardiovascular Magnetic Resonance (SCMR) (2012-2015)
- American Heart Association (AHA) (2012-14)

Grants and Contracts

National Institute of Health. National Heart Lung and Blood Institute (NIH-NHLBI)
R01 HL173483
Novel 3D quantitative Dynamic MRI to characterize obstructive sleep apnea.
Role: Principal Investigator
$ 2,051,143
08/2024-08/2029

National Institute of Health. National Heart Lung and Blood Institute (NIH-NHLBI)
R01 HL1169765
Dynamic Imaging of Lung Ventilation and Perfusion using CT and MRI
Role: Co-Investigator (10%). P.I: Sean Fain
$ 3,817,560
06/2023-06/2028

University of Iowa – Department of Radiology Faculty Excellence Grant
Novel hybrid CT-MRI based methods for quantitative characterization of vocal dynamics during speech production
Role: Principal investigator
$35,000
05/2023-05/2025

University of Iowa - Office of Vice President Research
Seeding Excellence Initiative, Early Career Scholar award
Novel motion-robust 3D dynamic MRI to quantitate airway collapse in obstructive sleep apnea
Role: Principal Investigator
$ 30,000
01/23-10/24

Voice Foundation
Physically Simulated Singing and the psychoacoustics of room and distance
Role: Co-Investigator (33%); P.I: D. Meyer
$ 6500
07/22-07/23

University of Iowa - Office of Vice President Research
Jump Starting Tomorrow Seed Grant
Understanding the nasal complex as a fundamental portal to human health
Role: Co-Investigator (14%); P.I: S. Vigmostad
01/22-06/24
$ 150,000

National Science Foundation

REU Site: Computational Bioengineering
Role: Co-Investigator PI: Sander
05/2021 – 05/2024 $388,427

National Institute of Health: National Institute of Biomedical Imaging and Bioengineering (NIH-NIBIB)
Optimizing acquisition and reconstruction of under-sampled MRI for signal detection
Research Enhancement Award (R15),
R15 EB029172
Role: Co-Investigator (5 %) (PI: Angel Pineda)
05/20-05/23
$ 395,210

University of Iowa – Roy J Carver Department of Biomedical Engineering
Carver Research Excellence Fund
Need for a dedicated airway receive coil to enable comprehensive MRI of sleep apnea
Role: Principal Investigator
03/20
$ 10,000

University of Iowa - Institute of Clinical and Translation science (ICTS)
Cardiovascular and pulmonary effects of e-cigarettes in young adults
Role: Co-Investigator (20 %); P.I: A. Commelas.
$ 75,000
06/19-12/20

University of Southern California, Los Angeles, California. Postdoctoral Provost's grant
Data-driven models for whole heart free breathing first pass myocardial perfusion MRI
07/15-05/16
Role: Principal Investigator
$ 25,000

American Heart Association (AHA) Predoctoral Fellowship
High resolution systolic free breathing perfusion MRI of the whole heart
AHA12PRE11920052
Role: Principal Investigator
$ 39,000
07/12-12/13

Bracco Global Investigator Initiated Research Committee (GIIRC)
Evaluation of regional Gadolinium retention in the brain using QSM with correlation to regional DCE MRI permeability using GOCART technique in intracranial neoplasm patients receiving gadobenate
Role: Co-Investigator (3%)
$150,000

08/16-05/18

Research/Scholarship (as Corresponding and/or first author)

Peer-Reviewed Journal Articles

(Supervised students are underlined)

Articles to be submitted / in-review

1. R. Rusho, M. R Hoffman, C. S. Apfelbach, W. Alam, H. Oya, M. A. Howard, D. Meyer, M. Jacob, **S. G. Lingala**, "Characterizing laryngeal dynamics during voicing and breathing with real-time multi-slice variational manifold learning",
   Journal of Voice
   (to be submitted, based on completed dissertation chapter)

2. W. Alam, R. Rusho, J. Liu, D.V.Daele, **S.G. Lingala**, "Self-supervised variational manifold learning model for dynamic airway collapse imaging"
   Magnetic Resonance in Medicine
   (to be submitted, based on completed dissertation chapter)

Published/in-press articles

1. S. Erattakulangara, S. Gerard, K. Kelat, K. Burnham, R. Balbi, D. Meyer, **S.G. Lingala**, "Open-source manually annotated vocal tract database for automatic segmentation from 3D MRI using Deep Learning: Benchmarking 2D and 3D convolutional and transformer networks"
   Journal of Voice, 2025 Mar 5:S0892-1997(25).

2. J.D. Herman, R.E. Roca, A.G. O Neill, M.L .Wong, **S.G. Lingala**. A.R., Pineda, "Task Based assessment for neural networks: Evaluating under-sampled MRI reconstructions based on human observer signal detection"
   Journal of Medical Imaging, 11(4), 045503-045503, (**2024**).

3. R.Rusho, W. Alam, A. Ahmed, S. Kruger, M. Jacob, **S.G. Lingala**, "Rapid dynamic speech imaging at 3Tesla using combination of custom airway coil, variable density spirals, and manifold regularization",
   NMR in Biomedicine (e5135), (**2024**).

4. S. Erattakulangara, K. Kelat, D.Meyer, S. Priya, **S.G. Lingala**, "Stacked hybrid U-NET for segmentation of multiple articulators in speech MRI",
   Bioengineering, special issue: AI in MRI: frontiers and applications, 10(5),623, (**2023**).

5. S. Babu, **S.G. Lingala**, N. Vaswani,"Fast low rank column wise compressive sensing for accelerated dynamic MRI"
   IEEE Transactions on Computational Imaging, vol.9, 409-424, (**2023**).

6. A.G.O. Neill, E.L. Valdez, **S.G. Lingala**, A. Pineda, "Modeling human observer detection in undersampled MRI reconstruction with total variation and wavelet sparsity regularization"
   Journal of Medical Imaging, Vol. 10, Issue 1, 015502, (**2023)**.

7. W.Alam, S.Reineke, M. Raja, R.Z.Rusho, J. Liu, D.V. Daele, **S.G. Lingala**, "A flexible 16-channel custom coil array for accelerated imaging of upper and infraglottic airway at 3 Tesla",
   Magnetic resonance in medicine, 89(5), pp.2117-2130., (**2023)**.

8. D. Meyer, R.Z. Rusho, W. Alam, G.E. Christensen, D.M. Howard, J. Atha, E.A. Hoffman, B. Story, I.R. Titze, **S.G. Lingala**, "High-resolution three-dimensional hybrid MRI + low dose CT vocal tract modeling: A cadaveric pilot study",
   Journal of Voice, early view, (**2022)**.

9. A. Pineda, H. Miedema, **S.G. Lingala**, K.S. Nayak "Optimizing Constrained Reconstruction in Magnetic Resonance Imaging for signal detection"
   Physics in Medicine and Biology, 66.14 (**2021**): 145014

10. Lim, Y., Toutios, A., Bliesener, Y., Tian, Y., **Lingala, S. G**., Vaz, C., Sorensen, T., Oh, M., Harper, S., Chen, W., others. A multispeaker dataset of raw and reconstructed speech production real-time MRI video and 3D volumetric images.
    Nature: Scientific Data,. 8(1), 187, (**2021**).

11. Christodoulou, A. G., **Lingala, S. G.**. Accelerated dynamic magnetic resonance imaging using learned representations: a new frontier in biomedical imaging.
    IEEE Signal Processing Magazine, 37(1), 83–93, **2020**.

12. Bliesener, Y., **Lingala, S. G**., Haldar, J. P., Nayak, K. S. Impact of (k,t) sampling on DCE MRI tracer kinetic parameter estimation in digital reference objects.
    Magnetic resonance in medicine, 83(5), 1625-1639, **2020**.

13. **Lingala, S. G.,** Guo, Y., Bliesener, Y., Zhu, Y., Lebel, R. M., Law, M., Nayak, K. S. Tracer kinetic models as temporal constraints during brain tumor DCE-MRI reconstruction.
    Medical physics, 47(1), 37-51, **2020**.

14. Lim, Y., Zhu, Y., **Lingala, S. G**., Byrd, D., Narayanan, S., Nayak, K. S. (2019). 3D dynamic MRI of the vocal tract during natural speech.
    Magnetic resonance in medicine, Mar;81(3):1511-1520, **2019**.

15. Y. Lim, **S.G. Lingala**, S. Narayanan, K.S. Nayak "Dynamic off resonance correction for spiral real-time MRI of speech"
Magnetic Resonance in Medicine, Jan;81(1):234-246, **2019**.

16. Y. Guo, **S.G. Lingala,** R.M. Lebel, Y. Zhu, K.S. Nayak, "Joint estimation of arterial input function and tracer kinetic parameters for under-sampled DCE-MRI",
Magnetic Resonance in Medicine, 79(5):2804-2815, **2018**.

17. J. Toger, T. Sorensen, K. Somandepalli, A. Toutios, **S.G. Lingala**, S. Narayanan, K.S. Nayak, "Test-retest repeatability of human speech biomarkers from static and real-time dynamic magnetic resonance imaging",
Journal of Acoustical Society of America (JASA), 141, pp. 3323-3336, **2017**.

18. **S.G.Lingala,** Y. Zhu, Y. Lim, A. Toutios, Y. Ji, W-C. Lo, N. Seiberlich, S. Narayanan, K.S. Nayak, "Feasibility of spiral through-time GRAPPA for low latency accelerated real-time MRI of speech",
Magnetic Resonance in Medicine, 78(6):2275-2282, **2017**.

19. Y. Guo, **S.G. Lingala**, Y. Zhu, R.M. Lebel,, K.S. Nayak, "Direct estimation of pharmaco- kinetic parameters in highly accelerated DCE-MRI",
Magnetic Resonance in Medicine, vol. 78(4). 1566-1578, **2017**.

20. X. Miao, **S.G. Lingala**, Y. Guo, T. Jao, M. Usman, C. Prieto, K.S. Nayak, "Accelerated cardiac cine MRI using locally low rank and finite difference sparsity constraints" ,
Magnetic Resonance Imaging, 34(6), pp.707–714, **2016**.

20. **S.G. Lingala**, Y. Zhu, Y-C. Kim, A. Toutios, S. Narayanan, K.S. Nayak, "A fast and flexible MRI based system for dynamic study of vocal production",
Magnetic Resonance in Medicine, 77(1), 112-125, **2017**.

21. Y.Q. Mohsin, **S.G. Lingala**, E. DiBella, M. Jacob, "Accelerated dynamic MRI using Patch Regularization for Implicit motion Compensation (PRICE)",
Magnetic Resonance in Medicine, 77(3), 1238-1248, **2017**.

22. Y. Zhu, Y. Guo, **S.G. Lingala**, R.M. Lebel, M. Law, K.S. Nayak, "GOCART: GoLden Angle CartesIan Encoded Randomization for time-resolved 3D MRI",
Magnetic Resonance Imaging, 34(7):940-50, **2016**.

23. S. Bhave, **S.G. Lingala**, J. Newell, S. Nagle, M. Jacob, "Blind Compressed Sensing Enables 3D Dynamic Free Breathing MR Imaging of the Respiratory Mechanics: A Feasibility Study",
Investigative Radiology, Special issue on Advances for Clinical Imaging involving Data Sparsity in MRI and CT, 51(6):387-99, **2016**.

24. **S.G. Lingala**, M. Miquel, B.P. Sutton, K.S. Nayak, "Recommendations for real time speech MRI",

Journal of Magnetic Resonance Imaging, vol. 43 (1), pp: 28-44, **2016**.

25. Y. Guo, **S.G. Lingala**, K.S. Nayak, "Constrained Reconstruction enables clinical Whole Brain DCE-MRI",
SPIE News Room, **2017**. doi: 10.1117/2.1201507.006016.

26. **S.G. Lingala**, Y. Zhu, Y-C. Kim, A. Toutios, S. Narayanan, K.S. Nayak, "Towards High Frame Rate Real-Time Magnetic Resonance Imaging of Speech Production",
SPIE News Room, **2017**. doi: 10.1117/2.1201505.005916.

27. S. Bhave, **S.G. Lingala**, C.P. Johnson, V.A. Magnotta, M. Jacob, "Accelerated whole-brain multi-parameter mapping using blind compressed sensing",
Magnetic Resonance in Medicine, 75(3):1175-86., **2016**.

28. **S.G. Lingala,** E. DiBella, M. Jacob, "Deformation corrected compressed sensing (DC-CS): a novel framework for accelerated dynamic MRI",
IEEE Transactions on Medical Imaging, vol.34(1), pp. 72-85, **2015**.

29. **S.G. Lingala,** E. DiBella, G. Adluru, C. McGann, M. Jacob, "Accelerated free breathing myocardial perfusion MRI using multi coil radial k-t SLR",
Physics in Medicine and Biology, vol.58(20),pp.7309-7327, **2013**.

30. **S.G. Lingala**, M. Jacob, "Blind compressive sensing dynamic MRI",
IEEE Transactions on Medical Imaging, pp 1132-1145, vol.32(6), **2013**.

31. Y. Hu, **S.G. Lingala,** M. Jacob, "A fast majorize-minimize algorithm for the recovery of sparse and low rank matrices",
IEEE Transactions on Image Processing, vol.21 (2), pp.742-753, **2012**.

32. **S.G. Lingala,** Y. Hu, E. DiBella, M. Jacob, "Accelerated dynamic MRI using sparsity and low-rank structure: k-t SLR",
IEEE Transactions on Medical Imaging, (Special issue on Compressive Biomedical Imaging), vol. 30 (5), pp. 1042-54, **2011**.

Patents

1. Nayak, K.S., Bliesener, Y., Guo, Y., Zhu, Y., **Lingala, S.G**. and Lebel, R.M., University of Southern California USC,. *Method for joint arterial input function and tracer kinetic parameter estimation in accelerated DCE-MRI using a model consistency constraint*. U.S. Patent 11,982,726, **2024.**

2. Nayak, K.S., Guo, Y., Lebel, R.M., Zhu, Y. and **Lingala, S.G.,** University of Southern California USC. *Method for improved dynamic contrast enhanced imaging using tracer-kinetic models as constraints*. U.S. Patent 11,412,948, **2022**

3. **Lingala, S.G.,** Mailhe, B., Janardhanan, N., Das, J., Grimm, R., Nickel, M.D. and Nadar, M.S., Siemens Healthcare GmbH, 2022. *Streak artifact reduction in magnetic resonance imaging*. U.S. Patent 11,435,419, **2022**

4. Chefd'hotel, C., Jacob, M., **Lingala, S.G.,** Nadar, M.S. and Zhang, L., Siemens AG,. *Unifying reconstruction and motion estimation in first pass cardiac perfusion imaging*. U.S. Patent 8,553,964, **2013**.

Book chapters

1. **Lingala, S. G.,** Rusho. R., Effects of motion in sparsely sampled MRI acquisitions. Motion Correction in MR: Correction of position, motion, and dynamic changes. Advances in Magnetic Resonance Technology and Applications, vol. 6, 2022, pp. 269-285

2. Jacob, M., **Lingala, S. G.,** Mani, M. , Structured Low-Rank and Manifold learning-based reconstruction. Advances in Magnetic Resonance Technology and Applications. Elsevier. vol.7, 2022, pp. 249-279.

3. **S.G. Lingala,** M. Jacob, "Accelerated Dynamic MRI using adaptive signal models", (Book Chapter), MRI: Physics, Image Reconstruction, and Analysis, CRC Press 2015.

Peer reviewed conference proceedings

Average acceptance rates at International Society of Magnetic Resonance in Medicine (ISMRM) (70-80%)

Average acceptance rates at Medical Imaging and Computer-Assisted Intervention Society (MICCAI) (<30%)

Average acceptance rates at IEEE International Symposia of Biomedical Imaging (IEEE-ISBI) (~50%)

Average acceptance rates at IEEE-International Conference on Acoustics, Speech, and Signal Processing (IEEE-ICASSP) (~50%)

Average acceptance rates at IEEE-Engineering in Medicine and Biology Society (IEEE-EMBC) (<30%)

Average acceptance rates at Inter-speech (~50%)

Average acceptance rates at SPIE Medical Imaging Conferences (~80%)

1. M.S. Ali, W. Alam, M. Jacob, **S.G. Lingala**, "Sensitivity Analysis of self-supervised variational manifold learning based accelerated dynamic upper-airway collapse MRI", traditional poster, International Society of Magnetic Resonance in Medicine 2025.

2. S. Erattakulangara, K. Kelat, K. Burnham, R. Balbi, S. Gerard, D.P. Meyer, **S.G. Lingala**, "A Comparative Study on State of the Art Deep Learning based Vocal Tract Segmentation Methods in Volumetric Sustained Speech MRI", digital poster, International Society of Magnetic Resonance in Medicine 2025.

3. S. Babu, **S.G. Lingala**, N. Vaswani, Generalizable Real-time accelerated dynamic MRI, digital poster, International Society of Magnetic Resonance in Medicine 2025.

4. S. Babu, W. Alam, R.Z. Rusho**, S.G.Lingala**, N. Vaswani, Generalizable real-time accelerated dynamic MRI, IEEE International Conference on Acoustics, Speech, and Signal Processing (IEEE-ICASSP), April 2025.

5. S. Ramtilak**,** A. Lu, J. Holmes, J. Atha, E. Hoffman, D.P. Meyer, **S.G. Lingala,** "Non-invasive imaging of the vocal apparatus's bony structures using zero echo time magnetic resonance imaging, (oral presentation), 54th Annual Symposium: Care of the Professional Voice, Voice Foundation, June 2025.

6. S. Erattakulangara**,** S.E. Gerard, D.P. Meyer, K. Kelat, R. Balbi, K. Burnham, **S.G. Lingala**, "Evaluating State-of-the-art Deep Learning MRI Vocal Tract Airway Segmentation Techniques", (oral presentation), 54th Annual Symposium: Care of the Professional Voice, Voice Foundation, June 2025.

7. W. Alam, R. Rusho, J. Liu, D. V. Daele, . Jacob, **S. G. Lingala**, ”Self-supervised variational manifold learning: application to dynamic MRI of airway collapse in obstructive sleep apnea.”, digital poster, International Society of Magnetic Resonance in Medicine 2024.

8. R. Rusho, M. R Hoffman, C. S. Apfelbach, W. Alam, H. Oya, M. A. Howard, D. Meyer, M. Jacob, **S. G. Lingala**, “Characterizing laryngeal dynamics during voicing and breathing with real-time multi-slice variational manifold learning”, digital poster, International Society of Magnetic Resonance in Medicine 2024.

9. S. Erattakulangara, W. Alam, D. V. Daele, J. Liu, **S. G. Lingala**, “Towards quantitative characterization of airway collapse in obstructive sleep apnea”, digital poster, International Society of Magnetic Resonance in Medicine 2024.

10. R.Z. Rusho, B. Story, D. Meyer, M. Jacob, **S.G. Lingala** “Synthesizing speech through a tube talker model informed by dynamic MRI-derived vocal tract area functions” (oral presentation) annual meeting of the International Society of Magnetic Resonance in Medicine, Toronto, June 2023.

11. W. Alam, D.V. Daele, J. Liu, **S.G. Lingala** “Accelerated 3D dynamic upper-airway MRI in natural sleeping obstructive sleep apnea patients” (digital poster presentation) annual meeting of the International Society of Magnetic Resonance in Medicine, Toronto, June 2023.

12. S. Erattakulangara, S. Gerard, K. Kelat, K. Burnham, R. Balbi, D. Meyer, **S.G. Lingala** “Volumetric vocal tract segmentation using a deep transfer learning 3D U-NET model” (digital poster presentation), annual meeting of the International Society of Magnetic Resonance in Medicine, Toronto, June 2023.

13. W. Alam*, R.Z. Rusho*, D.V. Daele, J. Liu, M. Jacob, **S.G. Lingala**; *equal contribution. "Accelerated imaging of airway collapse in obstructive sleep apnea with variable density spirals and variational manifold learning" International Society of Magnetic Resonance in Medicine workshop on data sampling and reconstruction, Sedona, Jan 2023.

14. R.Z. Rusho, B. Story, M. Jacob, **S.G. Lingala** "Towards high spatio-temporal resolution pseudo-3D dynamic imaging of vocal tract shaping during speech production" International Society of Magnetic Resonance in Medicine workshop on data sampling and reconstruction, Sedona, Jan 2023.

15. A. Pineda, **S.G. Lingala**, "Task based assessment of image quality for Magnetic Resonance Imaging" International Society of Magnetic Resonance in Medicine workshop on data sampling and reconstruction, Sedona, Jan 2023.

16. R.Z. Rusho, Q. Zou, W. Alam, S. Erattakulangara, M. Jacob, **S.G. Lingala** "Accelerated pseudo 3d dynamic speech MRI at 3Tesla using unsupervised deep variational manifold learning" annual meeting of Medical Imaging and Computer-Assisted Intervention Society (MICCAI), Sep 2022.

17. S. Babu, S. Nayer, **S.G. Lingala**, N. Vaswani, "Fast low rank compressive sensing for accelerated dynamic MRI", annual meeting of IEEE-ICASSP, May 2022.

18. A.G.O. Neill, **S.G. Lingala**, A.R. Pineda "Predicting human detection performance in magnetic resonance imaging (MRI) with total variation and wavelet sparsity regularizers" annual meeting of SPIE, vol.12035. pp.256-261., Feb 2022.

19. S. Erattakulangara, K. Kelat, **S.G. Lingala**, "Protocol adaptive stacked transfer learning (STL) U-NET with small dataset training for soft tissue segmentation in dynamic speech MRI", (digital poster presentation), annual meeting of International Society of Magnetic Resonance in Medicine, May 2022.

20. W. Alam, **S.G. Lingala**, "Accelerated volumetric vocal tract MRI using model based deep learning", (digital poster presentation), annual meeting of International Society of Magnetic Resonance in Medicine, May 2022.

21. R.Z. Rusho, Q. Zou, M. Jacob, **S.G. Lingala**, "Joint recovery of time aligned multi-slice dynamic speech MR images from under-sampled data using a deep generative manifold model" (digital poster presentation), annual meeting of International Society of Magnetic Resonance in Medicine, May 2022.

22. A.O. Neil, T. M. Kemp, **S.G. Lingala**, A. Pineda "Evaluation of multi coil SENSE reconstruc- tion of undersampled data using a human observer model of signal detection", (digital poster presentation), annual meeting of International Society of Magnetic Resonance in Medicine, May 2022.

23. J. Herman, M. Wong, **S.G. Lingala**, A. Pineda "Evaluation of neural network reconstruction of undersampled data using a human observer model of signal detection", (Online Gather.town power pitch presentation), annual meeting of International Society of Magnetic Resonance in Medicine, May 2022.

24. Alam, W., Rusho, R., Reineke, S., Raja, M., Kruger, S., Reinhardt, J. M., Liu, J., Van Daele, D., **Lingala, S. G.** (2021), "A novel 16 channel flexible coil for highly accelerated upper-airway MRI". 29th annual meeting of International Society of Magnetic Resonance in Medicine.

25. Rusho, R., Alam, W., Ahmed, A., Kruger, S., Jacob, M., **Lingala, S. G**.(2021). "Rapid dynamic speech imaging at 3T using combination of a custom airway coil, variable density spirals, and manifold regularization", 29th annual meeting of International Society of Magnetic Resonance in Medicine. **Recipient of an ISMRM Summa Cum Laude award**.

26. Erattakulangara, S., Kelat, K., Liu, J., **Lingala, S. G.** (2021). "Stacked hybrid learning U-NET for segmentation of multiple articulators in speech MRI". 29th annual meeting of International Society of Magnetic Resonance in Medicine.

27. Herman, J. D., Roca, R. E., Neill, A.G. O., **Lingala, S. G.,** Pineda, A. (2021). "Task based assessment for neural networks: evaluating under-sampled MRI reconstructions based on signal detection", 29th annual meeting of International Society of Magnetic Resonance in Medicine.

28. Roca, R., Herman, J., Neill, A. G.O, **Lingala, S. G.,** Pineda, A. R. (2021). "Task performance or artifact reduction? Evaluating the number of channels and dropout based on signal detection on a U-NET with SSIM loss". 29th annual meeting of International Society of Magnetic Resonance in Medicine.

29. A.G. O'Neill, E.L. Valdez, **S.G. Lingala**, A.R. Pineda (Feb 2021). "Modeling human observer detection in undersampled magnetic resonance imaging (MRI)", annual meeting of SPIE Medical Imaging, Vol. 11599. pp.85-90
Finalist, Student paper award in the SPIE conference on "Image perception, observer performance, and technology assessment.

30. Erattakulangara, S., **Lingala, S. G.** (2020). "Airway segmentation in speech MRI using the U-net architecture". 2020 IEEE 17th International Symposium on Biomedical Imaging (ISBI) (pp. 1887–1890).

31. Kettelkamp, J., **Lingala, S. G**. (2020). "Arterial input function and tracer kinetic model-driven network for rapid inference of kinetic maps in Dynamic Contrast-Enhanced MRI (AIF- TK-net)". 2020 IEEE 17th International Symposium on Biomedical Imaging (ISBI) (pp. 1450– 1453).

32. Erattakulangara, S., **Lingala, S. G.** (2020). "U-net based segmentation of the airway in dynamic speech MRI". 28th Annual meeting of the International Society of Magnetic Resonance in Medicine (ISMRM).

33. **S.G. Lingala**, D. Blake, S. Kruger, D. Meyer, E. Finnegan, I. Titze, E. Hoffman "Fast dynamic speech MRI at 3 Tesla using variable density spirals and constrained reconstruction" Proceedings of the 27th International Society of Magnetic Resonance in Medicine (ISMRM), 2019.

34. **S.G. Lingala**, Y. Lim, S. Kruger, K.S. Nayak "Improved spiral dynamic MRI of vocal tract shaping at 3 Tesla using dynamic off resonance artifact correction" Proceedings of the 27th International Society of Magnetic Resonance in Medicine (ISMRM), 2019.

35. Y. Bliesener, **S.G. Lingala**, J.P. Haldar, K.S. Nayak "Influence of whole-brainee DCE-MRI (k,t) sampling strategies on variance of pharmaco-kinetic parameter estimates" Proceedings of the 26th International Society of Magnetic Resonance in Medicine (ISMRM), 2018. (power- pitch presentation)

36. Y. Lim, Y. Zhu, **S.G. Lingala**, D. Byrd, S. Narayanan, K.S. Nayak "3D Real time MRI of vocal tract shaping" Proceedings of the 26th International Society of Magnetic Resonance in Medicine (ISMRM), 2018. (e-poster presentation)

37. **S.G. Lingala**, Y. Guo, N. Nallapareddy, Y. Bliesener, R. Marc Lebel, K.S. Nayak, "Nested tracer-kinetic model-based DCE-MRI reconstruction from under-sampled data", Proceedings of 25th International Society of Magnetic Resonance in Medicine (ISMRM) Scientific Sessions, 2017.

38. Y. Guo, **S.G. Lingala**, R. Marc Lebel, K.S. Nayak, "Joint estimation of arterial input function and tracer kinetic parameters from under-sampled data", Proceedings of 25th International Society of Magnetic Resonance in Medicine (ISMRM) Scientific Sessions, 2017. **Recipient of an ISMRM Magna Cum Laude award**

39. Y. Guo, **S.G. Lingala**, K.S. Nayak, "Reconstruction of DCE tracer kinetic parameters from under-sampled data with a flexible model consistency constraint", Proceedings of 25th Inter- national Society of Magnetic Resonance in Medicine (ISMRM) Scientific Sessions, 2017.

40. Y. Bliesener, **S.G. Lingala**, J.P. Haldar, K.S. Nayak, "Comparison of (k,t) sampling schemes for DCE-MRI pharmaco-kinetic parameter estimation", Proceedings of 25th International So- ciety of Magnetic Resonance in Medicine (ISMRM) Scientific Sessions, 2017.

41. Y. Lim, **S.G. Lingala**, S. Narayanan, K.S. Nayak, "Correction of dynamic off-resonance in spiral 2D real-time MRI of speech", Proceedings of 25th International Society of Magnetic Resonance in Medicine (ISMRM) Scientific Sessions, 2017. (e-poster presentation).

42. J. Chen, **S.G. Lingala**, Y. Lim, A. Toutios, S. Narayanan, K.S. Nayak, "Task-based Optimiza- tion of Regularization in highly accelerated speech RT-MRI", Proceedings of 25th International Society of Magnetic Resonance in Medicine (ISMRM) Scientific Sessions, 2017.

43. R. Marc Lebel, Y. Guo, **S.G. Lingala**, R. Frayne, K.S. Nayak, "Highly accelerated DCE imaging with integrated T1 mapping", Proceedings of 25th International Society of Magnetic Resonance in Medicine (ISMRM) Scientific Sessions, 2017.

44. J. Toger, T. Sorensen, K. Somandepalli, A. Toutios, **S.G. Lingala**, S. Narayanan, K.S. Nayak, "Test-retest repeatability of human speech biomarkers from static and real-time dynamic magnetic resonance imaging", Proceedings of 25th International Society of Magnetic Resonance in Medicine (ISMRM) Scientific Sessions, 2017.

45. **S.G. Lingala**, A. Toutios, J. Toger, Y. Lim, Y. Zhu, Y-C. Kim, C. Vaz, S. Narayanan, K.S. Nayak, "State-of-the-art MRI Protocol for Comprehensive Assessment of Vocal Tract Structure and Function", Interspeech, 2016, pp.475-479.

46. A. Toutios, **S.G. Lingala**, C. Vaz, J. Kim, J. Esling, P. Keating, M. Gordon, D. Byrd, L. Goldstein, K. Nayak, S. Narayanan, "Illustrating the Production of the International Phonetic Alphabet Sounds using Fast Real-Time Magnetic Resonance Imaging", Interspeech, 2016, pp.2428-2432.

47. J. Toger, Y. Lim, **S.G. Lingala**, S. Narayanan, K. Nayak, "Sensitivity of quantitative RT-MRI metrics of vocal tract dynamics to image reconstruction settings", Interspeech, 2016, pp.165-169.

48. Y. Lim, **S.G. Lingala**, A. Toutios, S. Narayanan, K.S. Nayak, "Improved Depiction of Tissue Boundaries in Vocal Tract Real-time MRI using Automatic Off-resonance Correction", Interspeech, 2016, pp.1765-1769.

49. **S.G. Lingala**, S. Bhave, Y. Zhu, K.S. Nayak, M. Jacob, "Temporal point spread function interpretation of low rank, dictionary learning models in dynamic MRI", Annual meeting of the International Society of the Magnetic Resonance in Medicine (ISMRM), May 2016 (e-poster presentation).

50. **S.G. Lingala**, Y. Guo, Y. Zhu, R.M. Lebel, N. Nallapareddy, M. Law, K.S. Nayak, "Accelerated brain DCE-MRI using Contrast Agent Kinetic Models as Temporal Constraints", Annual meeting of the International Society of the Magnetic Resonance in Medicine (ISMRM), May 2016 (oral presentation).

51. **S.G. Lingala**, Y. Zhu, Y. Ji, A. Toutios, W-C Lo, N. Seiberlich, S. Narayanan, K.S. Nayak, "Accelerating Real-time MRI of speech using spiral through-time GRAPPA", Annual meeting of the International Society of the Magnetic Resonance in Medicine (ISMRM), May 2016 (e- poster presentation).

52. Y. Guo, **S.G. Lingala**, Y. Zhu, R.M. Lebel, K.S. Nayak, "Direct reconstruction of pharma- cokinetic parameter maps in accelerated brain DCE-MRI using the extended Tofts model", Annual meeting of the International Society of the Magnetic Resonance in Medicine (ISMRM), May 2016 (oral presentation).

53. S. Bhave, **S.G. Lingala**, J. Newell, S. Nagle, M. Jacob, "Clinical evaluation of the respiratory mechanics using accelerated 3D dynamic free breathing MRI reconstruction", IAnnual meeting of the International Society of the Magnetic Resonance in Medicine (ISMRM), May 2016 (oral presentation). **Recipient of an ISMRM summa cum Laude merit award**

54. **S.G. Lingala**, Y. Mohsin, S. Bhave, X. Miao, Y. Guo, K.S. Nayak, E. DiBella, M. Jacob, "Data-driven adaptive reconstruction algorithms for accelerated dynamic MRI: an open source MATLAB package". ISMRM Workshop on Data Sampling and Image Reconstruction, Sedona, Arizona, Jan 2016.

55. **S.G. Lingala**, Y. Guo, Y. Zhu, N. Nallapareddy, R.M. Lebel, M. Law, K.S. Nayak. "Accelerated brain DCE-MRI using Contrast Agent Kinetic Models as Temporal Constraints". ISMRM Workshop on Data Sampling and Image Reconstruction, Sedona, Arizona, Jan 2016.

56. Y. Guo, Y. Zhu, **S.G. Lingala**, R.M. Lebel, K.S. Nayak, "Direct Reconstruction of Tracer- Kinetic Parameter Maps from Prospective Highly Under-sampled DCE-MRI". ISMRM Work- shop on Data Sampling and Image Reconstruction, Sedona, Arizona, Jan 2016.

57. K.S. Nayak, Y. Guo, Y. Zhu, **S.G. Lingala**, R.M. Lebel, N. Nallapareddy, M.S. Shiroishi, M. Law. "Improved clinical DCE-MRI pipeline for high resolution, whole brain imaging: application to brain tumor patients." Radiological Society of North America (RSNA), 2015, Chicago.

58. **S.G. Lingala**, Y. Guo, Y. Zhu, S. Barnes, R.M. Lebel, K.S. Nayak, "Accelerated DCE MRI using constrained reconstruction based on pharmaco-kinetic model dictionaries", International Society for Magnetic Resonance in Medicine (ISMRM), 2015, p.196. **Recipient of an ISMRM Magna cum Laude Merit Award**

59. **S.G. Lingala**, Y. Zhu, Y-C Kim, A. Toutios, S. Narayanan, K.S. Nayak, "High spatio-temporal resolution multi-slice real time MRI of speech using golden angle spiral imaging with constrained reconstruction, parallel imaging, and a novel upper airway coil", Proceedings of 23rd Interna- tional Society of Magnetic Resonance in Medicine (ISMRM) Scientific Sessions, 2015, p. 689. **Recipient of an ISMRM Magna cum Laude Merit Award**

60. Y. Guo, Y. Zhu, **S.G. Lingala**, R.M. Lebel, K.S. Nayak, "Highly Accelerated Brain DCE MRI with Direct Estimation of Pharmacokinetic Parameter Maps", Proceedings of 23rd

In- ternational Society of Magnetic Resonance in Medicine (ISMRM) Scientific Sessions, 2015, p. 573. **Recipient of an ISMRM Summa cum Laude Merit Award**

61. X.Miao, **S.G. Lingala**, Y. Guo, T. Jao, K.S. Nayak, "Accelerated cardiac cine MRI using Locally Low rank and Total variation Constraints", Proceedings of 23rd International Society of Magnetic Resonance in Medicine (ISMRM) Scientific Sessions, 2015, p. 571. **Recipient of an ISMRM Magna cum Laude Merit Award**

62. Y. Zhu, Y. Guo, **S.G. Lingala**, R.M. Lebel, M. Law, K.S. Nayak, "Evaluation of GLACIER 3DFT phase encode order for DCE-MRI", Proceedings of 23rd International Society of Magnetic Resonance in Medicine (ISMRM) Scientific Sessions, 2015, pp. 2535.

63. Y. Zhu, Y. Guo, **S.G. Lingala**, S. Barnes, R.M. Lebel, M. Law, K.S. Nayak, "Evaluation of DCE-MRI data sampling, reconstruction and model fitting using digital brain phantom", Proceedings of 23rd International Society of Magnetic Resonance in Medicine (ISMRM) Scientific Sessions, 2015, pp. 3052.

64. R.M. Lebel, Y. Guo, Y. Zhu, **S.G. Lingala**, R. Frayne, L.B. Andersen, J. Easaw, K.S. Nayak, "The Comprehensive Contrast-enhanced Neurovascular Exam", Proceedings of 23rd Interna- tional Society of Magnetic Resonance in Medicine (ISMRM) Scientific Sessions, 2015, pp. 3705.

65. Y.Q. Mohsin, **S.G. Lingala**, E. DiBella, M. Jacob, "Motion Compensated Free Breathing Myocardial Perfusion MRI Using Iterative Non Local Shrinkage", Proceedings of 23rd Inter- national Society of Magnetic Resonance in Medicine (ISMRM) Scientific Sessions, 2015, p. 2684.

66. S. Bhave, **S.G. Lingala**, C.P. Johnson, V.A.Magnotta, M. Jacob, "Whole Brain multi-parameter mapping using dictionary learning", Proceedings of 23rd International Society of Magnetic Resonance in Medicine (ISMRM) Scientific Sessions, 2015, p. 1675.

67. S. Bhave, **S.G. Lingala**, J. Newell, A. Comellas, M. Jacob, "Dynamic 3D MRI Of the whole Lung using Constrained Reconstruction with learned dictionaries", Proceedings of International Society ofMagnetic Resonance in Medicine (ISMRM) Scientific Sessions, 2015, p 1466.

68. S. Bhave, **S.G. Lingala**, M. Jacob, "A variable splitting based algorithm for Fast multi-coil Blind compressed sensing MRI reconstruction", IEEE International conference of the IEEE Engineering in Medicine and Biology Society (IEEE-EMBS), 2014. **Finalist, Student paper competition.**

69. S. Poddar, **S.G. Lingala**, M. Jacob, "Joint recovery of undersampled signals on a manifold: application to free breathing cardiac MRI", IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP), 2014. **Best student paper award in the category of Bio Imaging and Signal processing**.

70. S.G. Lingala, Y. Mohsin, J. Newell, J. Sieren, D. Wang, D. Thedens, M. Jacob, "Towards 3D dynamic MRI of the lung using blind compressed sensing", International Society for Magnetic Resonance in Medicine (ISMRM), 2014. p0298. **Recipient of an ISMRM Magna cum Laude Merit Award**

71. Y. Mohsin, Z. Yang, **S.G. Lingala**, M. Jacob, "Motion compensated dynamic imaging without explicit motion estimation", International Society for Magnetic Resonance in Medicine (ISMRM), 2014.

72. S. Poddar, **S.G. Lingala**, M. Jacob, "Real Time Cardiac MRI using Manifold Sensing", International Society for Magnetic Resonance in Medicine (ISMRM), 2014.

73. **S.G. Lingala**, E. DiBella, M. Jacob, "A generalized motion compensated compressed sensing scheme for highly accelerated myocardial perfusion MRI", (SCMR)-ISMRM workshop on Accelerated CMR: Towards Comprehensive Clinical Cardiovascular Imaging, 2014.

74. **S.G. Lingala**, Y. Mohsin, J. Newell, J. Sieren, D. Thedens, P. Kollasch, M. Jacob, "Accelerated dynamic imaging of the lung using blind compressive sensing", (SCMR)-ISMRM workshop on Accelerated CMR: Towards Comprehensive Clinical Cardiovascular Imaging, 2014.

75. **S.G. Lingala**, E. DiBella and M. Jacob, "Accelerated myocardial perfusion MRI using motion compensated compressed sensing (MC-CS)", International Society for Magnetic Resonance in Medicine (ISMRM), 2013.

76. **S.G. Lingala**, and M. Jacob, "Blind compressed sensing dynamic MRI with sparse dictionaries", International Society for Magnetic Resonance in Medicine (ISMRM), 2013.

77. **S.G. Lingala**, M. Jacob, "Accelerated dynamic MRI using sparse dictionary learning", Wavelets and Sparsity IV, Proceedings of SPIE, 8858, pp.559-566., Aug 2013.

78. **S.G. Lingala** and M. Jacob, "Blind compressed sensing with sparse dictionaries for accelerated dynamic MRI" , IEEE-International Symposia on Biomedical Imaging, ISBI, 2013, pp.5-8.

79. S.G. Lingala and M. Jacob, "Blind Compressed Sensing dynamic MRI", International Society for Magnetic Resonance in Medicine (ISMRM), 2012. **Recipient of an ISMRM Magna Cum Laude Merit award.**

80. **S.G. Lingala**, E. DiBella, M. Nadar, C. Chefd'hotel and M. Jacob, "Motion compensated re- construction for myocardial perfusion MRI", Society for Cardiac Magnetic Resonance (SCMR), 2012.

81. **S.G. Lingala**, E. DiBella and M. Jacob, "Accelerated imaging of rest and stress myocardial perfusion imaging using multi-coil k-t SLR: A feasibility study", Society for Cardiac Magnetic Resonance (SCMR), 2012.

82. **S.G. Lingala** and M. Jacob, "A Blind compressive sensing frame work for accelerated dynamic MRI" , IEEE-International Symposia on Biomedical Imaging, ISBI, 2012, pp.1060-1063.

83. **S.G. Lingala**, Y. Hu, E. DiBella, M. Jacob, "Highly accelerated myocardial perfusion MRI using k-t SLR with parallel imaging", International Society for Magnetic Resonance in Medicine (ISMRM) 2011.

84. Y. Hu, **S.G. Lingala**, M. Jacob, "High resolution structural free breathing cardiac MRI enabled by k-t SLR", International Society for Magnetic Resonance in Medicine (ISMRM) 2011.

85. **S.G. Lingala**, Y. Hu, and M. Jacob, "Blind linear models for the recovery of dynamic MRI data", IV conference on Wavelets and Sparsity, SPIE, Aug 2011, vol.8138, 492-499.

86. **S.G. Lingala**, Y. Hu, E. DiBella, M. Jacob, "Accelerated first pass perfusion cardiac perfusion MRI using improved k-t SLR", IEEE-International symposium on Biomedical Imaging (ISBI) 2011, pp.1280-1283.

87. **S.G. Lingala**, M. Nadar, C. Chefd'hotel, L. Zhang, M. Jacob, "Unified reconstruction and motion estimation in first pass cardiac perfusion imaging", IEEE-International symposium on Biomedical Imaging (ISBI) 2011, pp. 65-68.

88. **S.G. Lingala** , M. Jacob, "Free Breathing Cardiac Perfusion MR Reconstruction using a sparse and low rank model: Validation with the Physiologically Improved NCAT phantom", (in press) IEEE-International conference on Communications and Signal Processing (ICCSP) 2011, pp.236-240.

89. **S.G. Lingala**, Y. Hu, M. Jacob, "Real time Cardiac MRI using low rank and sparsity penalties", IEEE-International symposium on Biomedical Imaging (ISBI) 2010, pp.988-991.

Conference abstracts

1. D. Meyer, R. Rusho, J. Atha, G. E. Christensen, D. M. Howard, S. Vigmostad, E. A. Hoff man, I. R. Titze, C. T. Herbst, B. Story, **S. G. Lingala**, "High-Resolution Hybrid CT+MRI Vocal Tract Modeling in Living Participants", oral presentation, Annual meeting of the Voice Foundation, 2024.

2. D. Meyer, A. Lu, J. Holmes, R. Rusho, J. Bugumba, J. Atha, G. E. Christensen, D. M. Howard, S. Vigmostad, E A. Hoffman, C T. Herbst, A T. Westover, B. Story, **S.G. Lin gala**, "Implementing Teeth in Three-Dimensional Vocal Tract Models: Evaluating Methods Using CT, Intraoral Scanning, and ZTE MRI", oral presentation, Annual meeting of the Voice Foundation, 2024.

3. D.Meyer, **S.G. Lingala**, S. Erattakulangara, W. Alam, R. Rusho, J. Atha, D. Howard, E. Hoffman, I. Titze, Physical modeling of high-resolution hybrid CT+MRI vocal tract images, Voice Foundation, 51st annual symposium, June 2022.

4. D. Meyer, **S.G. Lingala**, J. Atha. D. Howard, E. Hoffman, I. Titze, Minimal CT Dosages Necessary for Blended CT+MRI Vocal Tract Imaging, Voice Foundation, 51st annual symposium, June 2022.

5. Erattakulangara, S., Kelat, K., **Lingala, S. G**. (2020). "Knowledge-net: a transfer learning network for detection of Covid-19 from chest X-ray images", annual meeting of Biomedical Engineering Society (BMES).

6. Rajulapati, N., Reinhardt, J. M., Van Daele, D., **Lingala, S. G.** (2019). "Feasibility of fast dynamic MRI as a tool to investigate swallowing", annual meeting of the Biomedical Engineering Society.

7. Meyer, D., **Lingala, S. G**., Howard, D. M. (2019). "Seeing voice: visualization of vocal tract shaping with magnetic resonance imaging (MRI)". 48th annual symposium of the Voice Foundation.

8. R.M. Lebel, N. Nallapareddy, **S.G. Lingala**, L.B. Andersen, R. Frayne, K.S. Nayak, "Automatic bolus detection for dynamic contrast enhanced imaging with sparse sampling", Society of Magnetic Resonance Angiography, p. 76, (2016).

9. A. Kammen, B. Mordkin, S. Cen, **S.G. Lingala**, M. Law, K.S. Nayak, "High resolution DCE- MRI permeability differentiates pseudoprogression from true disease progression in primary high-grade gliomas and metastatic melanoma", ASNR (American Society of Neuroradiology) 54th Annual meeting, Washington, May 2016.

10. A. Kammen, B. Morkin, S. Cen, **S.G. Lingala**, J. Arevalo-Perez, A. Thomas, K. Peck, T. Kaley, M. Law, R. Young, K.S. Nayak, "Multi-center study demonstrates dynamic contrast enhanced permeability MRI differentiates pseudo progression from true progression in primary high-grade gliomas and metastatic melanoma", ASNR (American Society of Neuroradiology) 54th Annual meeting, Washington, May 2016.

11. N. Nallapareddy, **S.G. Lingala**, Y. Guo, R.M. Lebel, B. Driscoll, R.J. Bosca, C. Coolens, M. Shiroishi, C. Chung, M. Law, K.S. Nayak, "Validation of highly accelerated DCE-MRI using a perfusion phantom", Annual meeting of Radiological Society of North America (RSNA), 2016.

Invited Talks

1. Invited speaker. Department of Radiology, University of Utah, **Mar 2025**
   Invited to present my lab's recent work on *"Information efficient upper-airway MRI".*

2. Invited speaker. Midwest Voice Symposium, University of Iowa,
   Nov 2024
   Invited to present my lab's recent work on *"MRI methods for functional imaging of upper-airway".*

3. Invited speaker. Medical Image Processing Group. Department of Radiology, University of Pennsylvania, **Oct 2024**
   Invited to present my lab's recent work on *"4D upper-airway MRI".*

4. Invited speaker. 3rd Annual symposium of the NIH funded P50 program on Next generation clinical phenotyping of laryngeal dystonia and voice tremor, Massachusetts Eye and Ear Institute, Harvard Medical School, **Sep 2024**.
   Invited to present my lab's recent work on "*Quantitative and dynamic imaging of vocal apparatus during speech/voice production"*.

5. Invited presentation. Medical Imaging technology showcase on Capitol Hill, Washington DC, **May 2023**.
   Sleep apnea and imaging research at University of Iowa

6. Invited speaker, Annual meeting of the International Society of Magnetic Resonance in Medicine (ISMRM) **June 2023.**
   Invited to deliver an educational talk on *"Dynamic Imaging Models"* in the weekend educational session track on "Retrospective strategies to handle motion"

7. Invited speaker, Insight Lecture. Department of Radiology, University of Iowa, Iowa City, **April 2023.**
   "Functional upper-airway imaging"

8. Invited speaker, Annual meeting of the International Society of Magnetic Resonance in Medicine (ISMRM) **May 2022.**
   Invited to deliver an educational talk on *"Manifold reconstruction in MRI"* in the weekend educational session track on "Image Reconstruction"

9. Invited speaker, Human Brain Research Conference, Department of Neurosurgery, University of Iowa, Iowa city **Oct 2022**.
   Title: Visualizing upper airway dynamics using high speed MRI methods

10. Invited speaker, Graduate seminar, Roy J Carver Department of Biomedical Engineering, University of Iowa, Iowa City, **Fall 2021**.

Title: Novel MRI methods for functional imaging of the upper-airway

11. Invited speaker, Sleep Medicine Conference, Department of Neurology, University of Iowa, Iowa city **Spring 2020**.
    Title: Multi-dimensional, multi contrast MRI for obstructive sleep apnea imaging

12. Invited speaker, Graduate seminar, Department of BioEngineering, University of Illinois, Urbana Champaign **Fall 2018.**
    Title: Seeing speech using fast dynamic magnetic resonance imaging

13. Invited speaker, Graduate seminar, Department of Biomedical Engineering, University of Iowa **Fall 2018.**
    Title: *Seeing speech using fast dynamic magnetic resonance imaging*

14. Invited speaker, Prosem, Department of Communication Sciences and Disorders, University of Iowa **Fall 2018**
    Title: *Seeing speech using novel dynamic magnetic resonance imaging*

15. Invited speaker, Annual meeting of the International Society of Magnetic Resonance in Medicine (ISMRM) **April 2017**.
    Delivered an educational talk on "*Motion Compensated Reconstruction*" in the weekend educational session track on "Image Acquisition and Reconstruction"

Teaching

Scheduled Teaching

Spring 2025	BME: 2210, Bioimaging and Bioinformatics (Bioimaging portion)
	BME: 2200, Systems, Instrumentation and Data Acquisition
Fall 2024	BME:5210, Medical Imaging Physics
Spring 2024	BME:2210, Bioimaging and Bioinformatics (Bioimaging portion)
Fall 2023	BME:2210, Bioimaging and Bioinformatics (Bioimaging portion)
Spring 2023	BME: 1010, First year forum
Fall 2022	BME: 5210, Medical Imaging Physics
	BME: 2200, Systems, Instrumentation and Data Acquisition
Spring 2022	BME: 2210, Bioimaging and Bioinformatics (Bioimaging portion)
	BME: 5340, Principles of Magnetic Resonance Imaging
Fall 2021	BME: 5210, Medical Imaging Physics
Spring 2021	BME: 5340, Principles of Magnetic Resonance Imaging
Fall 2020	BME: 5210, Medical Imaging Physics
Spring 2020	BME: 2210, Bioimaging and Bioinformatics (Bioimaging portion)
Fall 2019	BME: 5210, Medical Imaging Physics
Spring 2019	BME: 2210, Bioimaging and Bioinformatics (Bioimaging portion)

Graduate Student Supervision

Name	Degree	Dates	Post-graduate Position
Swati Ramtilak	Ph.D.	08/24 – present	N/A
Md. Shahin Ali	Ph.D.	08/24 – present	N/A
Subin Erattakulangara	Ph.D.	08/19 – 04/25	Post. Doctoral Fellow, Memorial Sloan Kettering Cancer Center, NY
Wahidul Alam	Ph.D.	08/19 – 09/24	Lead MR Applications/Recon Development Engineer, GE HealthCare, Waukesha, WI
Rushdi Rusho	Ph.D.	08/19 – 08/24	Post. Doctoral Scholar, Computational Biomedical Imaging Group, University of Virginia, Charlottesville, VA.

Undergraduate Student Supervision

Name	Program	Dates Supervised	Post-graduate Position
William Dong	BME	08/23-05/24	PhD Graduate Research Assistant, BME, North Western University, Evanston, IL
Jacques Bugumba	LSAMP scholar BME	08/23 – 05/24	Engineer, IDT, Coralville, IA
Nicholas J Mathews	BME	08/22 – 01/23	N/A
Arianna Brenes	BME	01/21-05/21	M.S. Graduate Research Assistant, Cornell University, NY
Michael Arrington	NSF REU Scholar	05/21 –07/21	MSTP student, Carver College of Medicine, University of Iowa
	BME	02/19-05/19	

Sanjay Ananthanarayan			Application Engineer Analyst, Accenture, Pittsburgh, PA
Nikhil Rajulapati	Visiting UG student	05/19-07/19	M.D. student, Florida Atlantic University, Boca Raton, FL
Joseph Kettelkamp	BME	08/18 – 05/21	Graduate Research Assistant (Ph.D. in BME), Mathews Jacob Lab, University of Iowa

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Notable awards/achievements of students in my lab

- Subin Erattakulangara (PhD student)
  Best poster award
  Research Open House, College of Engineering, University of Iowa (2024)

- Wahidul Alam (PhD student)
  Dare to Discover Research Scholar
  Office of Vice President of Research University of Iowa (2024)

- Wahidul Alam (PhD student)
  Ballard and Seashore Dissertation Fellowship University of Iowa (2024)

- Subin Erattakulangara (PhD student)
  Shark's Top Choice award in the ISMRM Shark Tank Competition
  Annual meeting of the International Society of Magnetic Resonance in Medicine (2023)

- Rushdi Rusho (PhD student)
  One of 100 high impact abstracts; Selected by the annual meeting program committee
  Annual meeting of the International Society of Magnetic Resonance in Medicine (2023)

- Subin Erattakulangara (PhD student)
  secured a 6 month internship with KitWare Technologies, NY (2023)

- Wahidul Alam (PhD student)
  secured a 6 month internship with GE HealthCare, Wisconsin (2023)

- Rushdi Rusho (PhD student)
  secured a 3 month internship with Canon Medical Systems, Ohio (2023)

- Rushdi Rusho (PhD student)
  summa cum laude merit award; highest honor for a trainee abstract
  Annual meeting of the International Society of Magnetic Resonance in Medicine (2021)

- Subin Erattakulangara (PhD student)
  Best poster award
  Research Open House, College of Engineering, University of Iowa (2022)

- Joseph Kettelkamp (UG student)
  Dare to Discover Research Scholar
  Office of Vice President of Research, University of Iowa (2020)

Other Dissertation and Thesis Committees

02/23 – present	Sayantan Bhattacharya	PhD	BME
11/21 – 12/23	Jeffrey Snyder	PhD	BME
08/21 – 08/22	Sean Mullan	PhD	BME
04/21– 04/22	Kevin Knoernschild	MS	BME
11/20 – 11/21	Adam Coats	MS	BME
05/20 – 07/21	Zachary Althof	MS	BME
08/19 – 05/23	Aniket Pramanik	PhD	ECE
08/18 – 12/21	Nana Owusu	PhD	BME
08/18 – 07/19	Zhihui Guo	PhD	BME
05/18 – 09/18	Sampurna Biswas	PhD	ECE
05/18 – 08/18	Arvind Balanchandrasekaran	PhD	ECE
05/18 – 08/18	Sunrita Poddar	PhD	ECE

Professional Service

2018-present	Member, Graduate committee, Department of BME, University of Iowa
2022-present	Member of Awards committee , Roy J Carver Department of BME, University of Iowa
2019 – present	Judge, Research Open House, College of Engineering, University of Iowa
2024	Associate Editor, IEEE International Symposium on Biomedical Imaging
Sep 24-Apr 25	Member of Faculty search committee, Roy J Carver Department of BME, University of Iowa
Aug 22-Apr 23	Member of Department Executive officer (DEO) search committee , Roy J Carver Department of BME, University of Iowa
2023	Mentor, Iowa Sciences Academy, University of Iowa
2023	Associate Editor, IEEE International Symposium on Biomedical Imaging
2022	Associate Editor, IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP)
2022	Associate Editor, IEEE International Symposium on Biomedical Imaging
2020	Associate Editor, IEEE International Symposium on Biomedical Imaging
2020	Local Organizing committee member of the IEEE-International Symposia on Biomedical Imaging

Academic Journals (Reviewer)

Magnetic Resonance in Medicine
Journal of Magnetic Resonance Imaging
NMR in Biomedicine
Journal of Voice
Medical Physics
Scientific Reports, Nature
IEEE Transactions on Medical Imaging
IEEE Transactions on Biomedical Engineering
IEEE Transactions on Computational Imaging
IEEE Signal Processing Letters
PLOS ONE

Funding Agencies (Reviewer/Panelist)

2021 Netherlands Organization for Scientific Research, NWO *ad hoc*

Conference (Reviewer)

2023 IEEE International Symposium on Biomedical Imaging
2022 IEEE International Symposium on Biomedical Imaging
2022 IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP)
2017 IEEE International Symposium on Biomedical Imaging
2016 IEEE International Symposium on Biomedical Imaging
2016 International Society for Magnetic Resonance in Medicine
2015 International Society for Magnetic Resonance in Medicine
2015 IEEE International Symposium on Biomedical Imaging
2013 IEEE International Symposium on Image Processing
2011 IEEE International Symposium on Biomedical Imaging
2010 IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP)