Yohan **Jun**

Postdoctoral Research Fellow, Ph.D.

Athinoula A. Martinos Center for Biomedical Imaging, Bldg 149 13th St Rm 2301, Charlestown MA 02129

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Research Interests

Machine/Deep Learning	Inverse Problem, Self-Supervised/Zero-Shot Learning
Magnetic Resonance Imaging	Fast Magnetic Resonance Imaging (MRI), Image Reconstruction, Rapid Quantitative Mapping
Deep Learning for Automatic Diagnosis	Automatic Detection, Segmentation, and Diagnosis using Medical Images

Education

Yonsei University — *Seoul, S.Korea*

Ph.D. in Electrical & Electronic Engineering — *Mar. 2016 - Feb. 2022*

- **Thesis:** "Model-based Deep Learning Reconstruction Methods for Fast Magnetic Resonance Imaging"
- **Scholarship:** Brain Korea 21 Plus Outstanding Student Fellow Scholarship of Korea Research Foundation

Yonsei University — *Seoul, S.Korea*

B.S. in Electrical & Electronic Engineering — *Mar. 2012 - Feb. 2016*

- **Scholarship:** National Scholarship for Science & Engineering of Korea Student Aid Foundation

Research Experience

Athinoula A. Martinos Center for Biomedical Imaging — *Boston, US*

Research Fellow @ Athinoula A. Martinos Center for Biomedical Imaging, Massachusetts General Hospital (MGH), and Harvard Medical School (HMS), **Advisor: Prof. Berkin Bilgic, Prof. Michael Gee** — *Mar. 2022 - Now*

- **Accelerating Quantitative MRI**
  1. **Subspace Reconstruction for Multiparametric Mapping:**
     - Developed a zero-shot deep subspace reconstruction network (**Zero-DeepSub**) for fast multiparametric quantiative MRI.
  2. **Rapid Quantitative MRI:**
     - Developed a self-supervised learning scheme for multiparametric mapping using QALAS (**SSL-QALAS**).
- **Rapid and Motion-Robust Fetal and Pediatric Imaging**
  - **Fast Quantitative/Synthetic Imaging:** Developing a fast and motion-robust quantitative and synthetic fetal/pediatric MR imaging.

Yonsei University — *Seoul, S.Korea*

Research Assistant @ Medical Artificial Intelligence Lab, **Advisor: Prof. Dosik Hwang** — *Jan. 2016 - Feb. 2022*

- **Accelerating MR Imaging with Deep Learning Techniques**
  1. **Accelerating MRI:**
     - Developed a joint deep model-based MR image and coil sensitivity reconstruction network (**Joint-ICNet**) for fast MRI.
     - Validated domain-transform manifold learning in phase-encoding direction for accelerating cartesian MRI (**DOTA-MRI**).
     - Implemented cross-domain CNNs (**KIKI-net**) for reconstructing undersampled MR images.
  2. **Rapid MR Parameter Mapping:** Developed a deep model-based MR parameter mapping network (**DOPAMINE**) for a fast T1 mapping.
  3. **Parallel Imaging in TOF-MRA:** Developed a deep multistream CNNs (**DPI-net**) for parallel imaging in TOF-MRA.
- **Computer-aided Diagnosis (CAD) for Brain Tumors**
  1. **Metastasis:** Developed a deep learning model for automatic detection and segmentation of brain metastases.
  2. **Meningioma:** Implemented meningioma segmentation and grading models using two-stage deep learning models.
  3. **Glioblastoma:** Developed an automatic deep-learning-based segmentation model for glioblastoma analysis.
- **MRI Applications**
  1. **Standardization of Quantitative MRI:** Developed a deep-learning-based model for standardization of MOLLI T1 mapping.
  2. **Increasing MRI SNR:** Analyzed a denoising method based on tissue characteristics for High-SNR multiple T2(*)-contrast MRI.
  3. **MRI-compatible Sensor:** Validated a megahertz-wave-transmitting conducting polymer electrode (MRI-compatible pressure sensor).

Philips Korea — *Seoul, S.Korea*

Internship — *Oct. 2017 - Dec. 2017*

- DFI Project Intern

Philips Korea & Gyrotools *Seoul, S.Korea*

Course Certificate *Sep. 25-30. 2017*

- Philips Pulse Programming Course

Teaching Experience

Yonsei University *Seoul, S.Korea*

Guest Lecturer, Teaching Assistant *Sep. 2021 - Dec. 2021*

- **Introduction Artificial Intelligence**
  - Presented a lecture on principles of deep learning and convolutional neural networks

Guest Lecturer, Teaching Assistant *Mar. 2021 - Jun. 2021*

- **Medical Imaging Artificial Intelligence**
  - Presented a lecture on MR image reconstruction using deep learning methods

Guest Lecturer, Teaching Assistant *Sep. 2020 - Dec. 2020*

- **Medical Artificial Intelligence**
  - Presented a lecture on principles of MRI and reconstruction methods for fast MRI

Teaching Assistant *Mar. 2018 - Jun. 2018*

- **Introduction to Bioengineering for Electrical and Electronic Engineering**

Teaching Assistant *Mar. 2017 - Jun. 2017*

- **Electrical and Electronic Engineering Capstone Design**

Honors & Awards

International

2023	**ISMRM Summa Cum Laude**, The ISMRM 31st Annual Meeting	*Toronto, Canada*
2021	**1st Rank**, Cross-Modality Domain Adaptation for Medical Image Segmentation (crossMoDA-2021 challenge)	*Virtual Conference*
2021	**ISMRM Magna Cum Laude (1)**, The ISMRM 29th Annual Meeting	*Virtual Conference*
2021	**ISMRM Magna Cum Laude (2)**, The ISMRM 29th Annual Meeting	*Virtual Conference*
2020	**3rd Rank**, fastMRI Challenge 2020, Facebook AI Research & NYU Langone Health	*Virtual Conference*
2020	**ISMRM Summa Cum Laude**, The ISMRM 28th Annual Meeting	*Virtual Conference*
2020	**ISMRM The Poster Award of 2nd Place (Silver)**, 2020 ISMRM Workshop on Data Sampling & Image Reconstruction	*Sedona, US*
2019	**4th Rank**, fastMRI Challenge 2019, Facebook AI Research & NYU Langone Health	*Vancouver, Canada*
2017	**ISMRM Summa Cum Laude**, The ISMRM 25th Annual Meeting	*Hawaii, US*

Domestic

2021	**Excellence Award**, Medical Artificial Intelligence Datathon 2021, Ministry of Science and ICT and National Information Society Agency	*Seoul, S.Korea*
2021	**Excellence Award**, Hackathon of Development of AI-based Image Diagnosis using Medical Big Data 2021, Korea Testing Laboratory (KTL)	*Seoul, S.Korea*
2021	**Best Paper Award**, Graduate Student Paper Award, Yonsei University	*Seoul, S.Korea*
2019	**Participation Prize**, Samsung Humantech Paper Award (first author)	*Seoul, S.Korea*
2019	**1st Rank and Grand Prize**, HeLP Challenge 2018, Brain Tumor Segmentation Contest	*Seoul, S.Korea*
2018	**Participation Prize**, Samsung Humantech Paper Award (co-author)	*Seoul, S.Korea*
2017	**Grand Prize**, Yonsei Junior Convergence Science	*Seoul, S.Korea*

Scholarship

2023	**ISMRM Trainee Stipend**, ISMRM Workshop on Data Sampling and Image Reconstruction	*US*
2021	**Dissertation Fellowship**, Graduate Students Idea Incubation Fund, Yonsei University	*S.Korea*
2021	**Academy Research Fellowship**, Graduate Students Idea Incubation Fund, Yonsei University	*S.Korea*
2021	**Best Paper Award Scholarship**, Graduate Student Paper Award, Yonsei University	*S.Korea*
2020	**ISMRM Trainee Stipend**, ISMRM Workshop on Data Sampling and Image Reconstruction	*US*
2017-2019	**ISMRM Educational Stipend**, ISMRM	*US*
2019	**Brain Korea 21 Plus Outstanding Student Fellow Scholarship**, Korea Research Foundation	*S.Korea*
2018	**Teaching Assistant Scholarship**, Yonsei Univeristy	*S.Korea*
2017-2020	**Brain Korea 21 Plus Scholarship**, Korea Research Foundation	*S.Korea*
2016	**Research Assistant Scholarship**, Yonsei Univeristy	*S.Korea*
2012-2015	**National Scholarship for Science & Engineering**, Korea Student Aid Foundation	*S.Korea*

Invited Talks

Self-Supervised Learning for Rapid Quantitative MRI — *Boston, US*

Athinoula A. Martinos Center for Biomedical Imaging — *May. 2023*

- Athinoula A. Martinos Center for Biomedical Imaging, Massachusetts General Hospital

Deep Model-based MR Parameter Mapping Network (DOPAMINE) for Fast MR Reconstruction — *Seoul, S.Korea*

34th KSIIM Conference, 2020 — *Oct. 2020*

- Korean Society of Imaging Informatics in Medicine

Medical Imaging Research using Artificial Intelligence — *Seoul, S.Korea*

HUFS AIM LAB, 2020 — *Jan. 2020*

- The Catholic University of Korea, Eunpyeong St. Mary's Hospital

Presented Talks

Zero-DeepSub: Zero-Shot Deep Subspace Reconstruction for Multiparametric Quantitative MRI Using QALAS — *Toronto, Canada*

ISMRM Annual Meeting, 2023 — *June. 2023*

- International Society for Magnetic Resonance in Medicine (ISMRM) Annual Meeting, 2023

Deep Subspace Reconstruction with Zero-Shot Learning for Multiparametric Quantitative MRI — *Sedona, US*

ISMRM Workshop on Data Sampling and Image Reconstruction, 2023 — *Jan. 2023*

- International Society for Magnetic Resonance in Medicine (ISMRM) on Data Sampling and Image Reconstruction, 2023

Joint Reconstruction of MR Image and Coil Sensitivity Maps using Deep Model-based Network — *Virtual Conference*

ISMRM Annual Meeting, 2021 — *May. 2021*

- International Society for Magnetic Resonance in Medicine (ISMRM) Annual Meeting, 2021

Deep Learning-based Automatic Detection and Segmentation of Brain Metastases Using Multi-Task Learning with 3D Black-Blood and GRE Imaging — *Virtual Conference*

ISMRM Annual Meeting, 2021 — *May. 2021*

- International Society for Magnetic Resonance in Medicine (ISMRM) Annual Meeting, 2021

Deep Model-based MR Parameter Mapping Network (DOPAMINE) for Fast MR Reconstruction — *Virtual Conference*

ISMRM Annual Meeting, 2020 — *Aug. 2020*

- International Society for Magnetic Resonance in Medicine (ISMRM) Annual Meeting, 2020

Deep Convolutional Neural Network for Acceleration of Magnetic Resonance Angiography (MRA) — *Hawaii, US*

ISMRM Annual Meeting, 2017 — *Apr. 2017*

- International Society for Magnetic Resonance in Medicine (ISMRM) Annual Meeting, 2017

Publications - Preprints

SDC-UDA: Volumetric Unsupervised Domain Adaptation Framework for Slice-Direction Continuous Cross-Modality Medical Image Segmentation *2023*

H Shin, H Kim, S Kim, **Y Jun**, T Eo, D Hwang

- *arXiv preprint arXiv:2305.11012*

SSL-QALAS: Self-Supervised Learning for Rapid Multiparameter Estimation in Quantitative MRI Using 3D-QALAS *2023*

Y Jun, J Cho, X Wang, M Gee, PE Grant, B Bilgic*, B Gagoski*

- *arXiv preprint arXiv:2302.14240*

COSMOS: Cross-Modality Unsupervised Domain Adaptation for 3D Medical Image Segmentation based on Target-aware Domain Translation and Iterative Self-Training *2022*

H Shin, H Kim, S Kim, **Y Jun**, T Eo, D Hwang

- *arXiv preprint arXiv:2203.16557*

Self-Training Based Unsupervised Cross-Modality Domain Adaptation for Vestibular Schwannoma and Cochlea Segmentation *2021*

H Shin, H Kim, S Kim, **Y Jun**, T Eo, D Hwang

- *arXiv preprint arXiv:2109.10674*

Results of the 2020 fastMRI Challenge for Machine Learning MR Image Reconstruction *2020*

MJ Muckley, B Riemenschneider, …, **Y Jun**, H Shin, D Hwang, …, Florian Knoll

- *arXiv preprint arXiv:2012.06318*

Publications - Peer-Review Journal

SSL-QALAS: Self-Supervised Learning for Rapid Multiparameter Estimation in Quantitative MRI Using 3D-QALAS *2023*

Y Jun, J Cho, X Wang, M Gee, PE Grant, B Bilgic*, B Gagoski*

- *Magnetic Resonance in Medicine* (In Press)

Deep learning referral suggestion and tumour discrimination using explainable artificial intelligence applied to multiparametric MRI *2023*

H Shin, JE Park, **Y Jun**, T Eo, J Lee, JE Kim, DH Lee, HH Moon, SI Park, S Kim, D Hwang, HS Kim

- *European Radiology*

Intelligent Noninvasive Meningioma Grading with a Fully Automatic Segmentation using Interpretable Multiparametric Deep Learning *2023*

Y Jun*, YW Park*, H Shin*, Y Shin, JR Lee, K Han, SS Ahn, SM Lim, D Hwang, SK Lee

- *Co-first Authors, *European Radiology*

Ultrathin crystalline-silicon-based strain gauges with deep learning algorithms for silent speech interfaces *2022*

T Kim*, Y Shin*, K Kang*, K Kim*, G Kim*, Y Byeon*, …, JR Lee, G Son, T Kim, **Y Jun**, …, HG Kang, D Hwang, KJ Yu

- *Nature Communications*, 13:5815

Results of the 2020 fastMRI Challenge for Machine Learning MR Image Reconstruction *2021*

MJ Muckley*, B Riemenschneider*, …, **Y Jun**, H Shin, D Hwang, …, Florian Knoll

- *IEEE Transactions on Medical Imaging*, 40(9):2306-2317

Deep model-based magnetic resonance parameter mapping network (DOPAMINE) for fast T1 mapping using variable flip angle method *2021*

Y Jun, H Shin, T Eo, T Kim, D Hwang

- *Medical Image Analysis*, 70:102017

Robust performance of deep learning for automatic detection and segmentation of brain metastases using three-dimensional black-blood and three-dimensional gradient echo imaging *2021*

YW Park*, **Y Jun***, Y Lee, K Han, C An, SS Ahn, D Hwang, SK Lee

- *Co-first Authors, *European Radiology*, 31:6686-6695

The Latest Trends in Attention Mechanisms and Their Application in Medical Imaging *2020*

H Shin, J Lee, T Eo, **Y Jun**, S Kim, D Hwang

- *Journal of the Korean Society of Radiology*, 81(6):1305-1333

Accelerating Cartesian MRI by domain-transform manifold learning in phase-encoding direction *2020*

T Eo*, H Shin*, **Y Jun**, T Kim, D Hwang

- *Medical Image Analysis*, 63:101689

Parallel imaging in time-of-flight magnetic resonance angiography using deep multistream convolutional neural networks *2019*

Y Jun, T Eo, H Shin, T Kim, HJ Lee, D Hwang

- *Magnetic Resonance in Medicine*, 81(6):3840-3853

Megahertz-wave-transmitting conducting polymer electrode for device-to-device integration *2019*

T Kim, G Kim, H Kim, HJ Yoon, T Kim, **Y Jun**, TH Shin, S Kang, J Cheon, D Hwang, BW Min, W Shim

- *Nature Communications*, 10:653

Deep-learned 3D black-blood imaging using automatic labelling technique and 3D convolutional neural networks for detecting metastatic brain tumors *2018*

Y Jun, T Eo, T Kim, H Shin, D Hwang, SH Bae, YW Park, HJ Lee, BW Choi, SS Ahn

- *Scientific Reports*, 8:9450

KIKI-net: cross-domain convolutional neural networks for reconstructing undersampled magnetic resonance images *2018*

T Eo, **Y Jun**, T Kim, J Jang, HJ Lee, D Hwang

- *Magnetic Resonance in Medicine*, 80(5):2188-2201

High-SNR multiple T2 (*)-contrast magnetic resonance imaging using a robust denoising method based on tissue characteristics *2017*

T Eo, T Kim, **Y Jun**, H Lee, SS Ahn, DH Kim, D Hwang

- *Journal of Magnetic Resonance Imaging*, 45(6):1835-1845

Publications - Conference Papers

SDC-UDA: Volumetric Unsupervised Domain Adaptation Framework for Slice-Direction Continuous Cross-Modality Medical Image Segmentation *2023*

H Shin, H Kim, S Kim, **Y Jun**, T Eo, D Hwang

- *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, pp.7412-7421

Evaluation of the Robustness of Learned MR Image Reconstruction to Systematic Deviations Between Training and Test Data for the Models from the fastMRI Challenge *2021*

PM Johnson, …, H Shin, **Y Jun**, T Eo, S Kim, T Kim, D Hwang, …, F Knoll

- *International Workshop on Machine Learning for Medical Image Reconstruction (MLMIR)*, pp. 25-34

Joint Deep Model-based MR Image and Coil Sensitivity Reconstruction Network (Joint-ICNet) for Fast MRI *2021*

Y Jun, H Shin, T Eo, D Hwang

- *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, pp. 5266-5275

Translation of 1D Inverse Fourier Transform of K-space to an Image Based on Deep Learning for Accelerating Magnetic Resonance Imaging *2018*

T Eo, H Shin, T Kim, **Y Jun**, D Hwang

- *International Conference on Medical Image Computing and Computer-Assisted Intervention (MICCAI)*, pp. 241-249

Publications - Conference Abstracts

Zero-DeepSub: Zero-Shot Deep Subspace Reconstruction for Multiparametric Quantitative MRI Using QALAS *2023*

Y Jun, Y Arefeen, J Cho, X Wang, M Gee, B Gagoski, B Bilgic

- **[*Oral Presentation]** *International Society for Magnetic Resonance in Medicine (ISMRM)*

SSL-QALAS: Self-Supervised Learning for Multiparametric Quantitative MRI Using QALAS *2023*

Y Jun, J Cho, X Wang, M Gee, PE Grant, B Bilgic, B Gagoski

- *International Society for Magnetic Resonance in Medicine (ISMRM)*

Improved T1 and T2 mapping in 3D-QALAS using temporal subspaces and Cramer-Rao-bound flip angle optimization enabled by auto-differentiation *2023*

Y Arefeen, **Y Jun**, B Gagoski, B Bilgic, E Adalsteinsson

- **[*Oral Presentation]** *International Society for Magnetic Resonance in Medicine (ISMRM)*

Self-Supervised Deep Learning Reconstruction for Highly Accelerated Diffusion Imaging *2023*

A Vurankaya, **Y Jun**, J Cho, B Bilgic

- **[*Oral Presentation]** *International Society for Magnetic Resonance in Medicine (ISMRM)*

Model-based phase-difference reconstruction for accelerated phase-based T2 mapping *2023*

X Wang, J Cho, **Y Jun**, B Gagoski, B Bilgic

- *International Society for Magnetic Resonance in Medicine (ISMRM)*

VUDU-SAGE: Efficient T2 and T2* Mapping using Joint Reconstruction for Motion-Robust, Distortion-Free, Multi-Shot, Multi-Echo EPI *2023*

J Cho, TH Kim, AJL Berman, **Y Jun**, X Wang, B Gagoski, B Bilgic

- *International Society for Magnetic Resonance in Medicine (ISMRM)*

Deep Subspace Reconstruction with Zero-Shot Learning for Multiparametric Quantitative MRI *2023*

Y Jun, Y Arefeen, J Cho, X Wang, M Gee, B Gagoski, B Bilgic

- **[*Oral Presentation]** *International Society for Magnetic Resonance in Medicine (ISMRM) Workshop on Data Sampling and Image Reconstruction*

Improved T1 and T2 Mapping in 3D-QALAS Using Temporal Subspaces and Flip Angle Optimization Enabled by Auto-Differentiation *2023*

Y Arefeen, B Gagoski, **Y Jun**, B Bilgic, E Adalsteinsson

- *International Society for Magnetic Resonance in Medicine (ISMRM) Workshop on Data Sampling and Image Reconstruction*

Model-Based Phase-Difference Reconstruction for Accelerated Phase-Based T2 Mapping *2023*

X Wang, J Cho, **Y Jun**, B Gagoski, B Bilgic

- *International Society for Magnetic Resonance in Medicine (ISMRM) Workshop on Data Sampling and Image Reconstruction*

VUDU-SAGE: Efficient T2 and T2* Mapping Using Joint Reconstruction for Motion-Robust, Distortion-Free, Multi-Shot, Multi-Echo EPI *2023*

J Cho, TH Kim, AJL Berman, **Y Jun**, X Wang, B Gagoski, B Bilgic

- *International Society for Magnetic Resonance in Medicine (ISMRM) Workshop on Data Sampling and Image Reconstruction*

Interpretable Meningioma Grading and Segmentation with Multiparametric Deep Learning *2022*

Y Jun*, YW Park*, H Shin, Y Shin, JR Lee, K Han, SM Lim, SK Lee, SS Ahn, D Hwang

- *International Society for Magnetic Resonance in Medicine (ISMRM)*, pp. 3064

Joint Generation of Multi-contrast Magnetic Resonance Images and Segmentation Map Using StyleGAN2-based Generative Network *2022*

G Son, T Eo, **Y Jun**, H Shin, D Hwang

- **[*Oral Presentation]**, *International Society for Magnetic Resonance in Medicine (ISMRM)*, pp. 0102

Arbitrary Missing Contrast Generation Using Multi-Contrast Generative Network with An Encoder Network *2022*

G Son, **Y Jun**, S Kim, D Hwang, T Eo

- *International Society for Magnetic Resonance in Medicine (ISMRM)*, pp. 4308

Deep residual network with data consistency for subsampled Fourier ptychographic microscopy *2022*

HG Kim, KW Kim, KC Lee, TJ Eo, K Lee, **Y Jun**, SA Lee, D Hwang

- *Quantitative Phase Imaging VIII*, p. PC119700B. SPIE

Deep Learning-based Automatic Detection and Segmentation of Brain Metastases Using Multi-Task Learning with 3D Black-Blood and GRE Imaging *2021*

Y Jun*, YW Park*, Y Lee, K Han, C An, SK Lee, SS Ahn, D Hwang

- **[*Oral Presentation]** *International Society for Magnetic Resonance in Medicine (ISMRM)*, pp. 0662

Joint Reconstruction of MR Image and Coil Sensitivity Maps using Deep Model-based Network *2021*

Y Jun, H Shin, T Eo, D Hwang

- **[*Oral Presentation]** *International Society for Magnetic Resonance in Medicine (ISMRM)*, pp. 0206

Results of the 2020 fastMRI Brain Reconstruction Challenge *2021*

B Riemenschneider, …, **Y Jun**, H Shin, D Hwang, F Knoll

- **[*Oral Presentation]** *International Society for Magnetic Resonance in Medicine (ISMRM)*, pp. 0063

Explainable And Fully Automated Clinical Referral Suggestion For Mass Like Lesions In The Brain Using Multi-contrast MRI *2021*

H Shin, JE Park, **Y Jun**, HS Kim, D Hwang

- *Radiological Society of North America (RSNA)*, pp. SDP-NR-16

Deep Model-based MR Parameter Mapping Network (DOPAMINE) for Fast MR Reconstruction *2020*

Y Jun, H Shin, T Eo, T Kim, D Hwang

- **[*Oral Presentation]** *International Society for Magnetic Resonance in Medicine (ISMRM)*, pp. 0988

Deep Model-Based Network for Fast MR Parameter Map Reconstruction *2020*

Y Jun, H Shin, T Eo, T Kim, D Hwang

- *International Society for Magnetic Resonance in Medicine (ISMRM) Workshop on Data Sampling and Image Reconstruction*

Parallel Imaging in Time-of-Flight Magnetic Resonance Angiography Using Deep Multi-Stream Convolutional Neural Networks *2019*

Y Jun, T Eo, H Shin, T Kim, H Lee, D Hwang

- *International Society for Magnetic Resonance in Medicine (ISMRM)*, pp. 4659

Parallel Imaging based on k-x Domain Interpolation using Deep Neural Networks *2019*

H Shin, T Eo, **Y Jun**, T Kim, H Lee, D Hwang

- *International Society for Magnetic Resonance in Medicine (ISMRM)*, pp. 4660

Deep-learned 3D black-blood imaging using automatic labeling technique and 3D convolutional neural networks for detection of metastatic brain tumors *2018*

Y Jun, T Eo, T Kim, H Shin, D Hwang, S Bae, Y Park, H Lee, B Choi, S Ahn

- *International Society for Magnetic Resonance in Medicine (ISMRM)*, pp. 4857

Brain Vessel Extraction without MRA / V using Deep Convolutional Neural Network *2018*

H Shin, **Y Jun**, T Kim, T Eo, S Ahn, D Hwang

- *International Society for Magnetic Resonance in Medicine (ISMRM)*, pp. 3171

Automatic Selection of Optimal Regularization Parameters in Compressed Sensing using No Reference Magnetic Resonance Image Quality Assessment *2018*

K Bang, J Jang, **Y Jun**, H Jang, H Lee, D Hwang

- *International Society for Magnetic Resonance in Medicine (ISMRM)*, pp. 2816

Deep Sinogram Learning for Radial MRI: Comparison with k-space and Image Learning *2018*

T Kim, T Eo, D Park, **Y Jun**, D Hwang

- *International Society for Magnetic Resonance in Medicine (ISMRM)*, pp. 2799

Reconstruction of brain vessel signals from undersampled time-of-flight magnetic resonance angiography using deep learning *2018*

Y Jun, T Eo, H Shin, T Kim, HJ Lee, H Jang, D Hwang

- *The 21th Annual Meeting of the the Korean Society for Brain and Neural Sciences (KSBNS)*, pp. 1097

Deep Convolutional Neural Network for Acceleration of Magnetic Resonance Angiography (MRA) *2017*

Y Jun, T Eo, T Kim, J Jang, D Hwang

- **[*Oral Presentation]** *International Society for Magnetic Resonance in Medicine (ISMRM)*, pp. 0686

Cascaded Convolutional Neural Network (CNN) for Reconstruction of Undersampled Magnetic Resonance (MR) Images *2017*

T Eo, Y Jun, T Kim, J Jang, D Hwang

- *International Society for Magnetic Resonance in Medicine (ISMRM)* pp. 3974

Patents

2022	**Method And Device For Correcting Medical Image Using Phantom**, Registered, 10-2481027	*S.Korea*
2022	**Apparatus And Method For Reconstructing MR Parameter Map**, Registered, 10-2352004	*S.Korea*
2021	**Device And Method For Reconstructing Magnetic Resonance Image Thereof**, Registered, 10-2233996	*S.Korea*
2021	**Makeup evaluation system and operation method thereof**, Registered, US11113511B2	*US*
2020	**Make-up Evaluation System and Operating Method Thereof**, Registered, 10-2066892	*S.Korea*
2019	**Makeup evaluation system and operation method thereof**, Applied, EP3579176A1	*Europe*
2019	**Capacitive Pressure Sensor And Method Of The Same**, Applied, 10-2019-0145371	*S.Korea*
2018	**Learning Apparatus and Method for Generating Encephaloma Discriminative Image, Apparatus and Method for Generating Encephaloma Discriminative Image, and Recording Medium thereof**, Registered, 10-1928213	*S.Korea*
2018	**Device and Method for Reconstructing Undersampled Magnetic Resonance Image**, Registered, 10-1886575	*S.Korea*

Skills

Programming Languages Python, Matlab, Pytorch, Tensorflow/Keras, C/C++
Korean, English

Activities

Reviewer
- IEEE Transactions on Medical Imaging (IEEE TMI)
- IEEE Sensors Letters
- Scientific Reports
- Magnetic Resonance in Medicine
- International Society for Magnetic Resonance in Medicine (ISMRM 2022-2023)
- International Conference on Medical Image Computing and Computer Assisted Intervention (MICCAI 2020-2023)

Poster Facilitator
- International Society for Magnetic Resonance in Medicine (ISMRM 2021)

Membership
- Trainee Memmber of International Society for Magnetic Resonance in Medicine (ISMRM)

ISMRM Study Groups
- Quantitative MR
- Pediatric MR
- High Field Systems and Applications
- MR of Cancer
- MR Engineering

References

Available upon request