

*Curriculum Vitae***DAHAN KIM, Ph.D.**

Research Associate, Advanced Imaging Research Center  
 UT Southwestern Medical Center, Dallas, TX, USA  
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**EDUCATION**


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<b>Ph.D. Physics, University of Wisconsin</b> , Madison, Wisconsin	2020
<b>M.S. Physics, University of Maine</b> , Orono, Maine	2013
<b>B.S. Physics (<i>magna cum laude</i>), University of Maine</b> , Orono, Maine	2009

**RESEARCH EXPERIENCE**


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<b>Research Associate</b>	2023 – current
Advanced Imaging Research Center, UT Southwestern Medical Center, Dallas, Texas Advisor: Dr. Jiaen Liu	
<b>Postdoctoral Fellow</b>	2020 - 2023
Department of Radiology, Mayo Clinic, Rochester, Minnesota Research focus: SNR-efficient volumetric spin-echo imaging using quadratic-phase RF encoding and spiral readout Advisor: Dr. James G. Pipe	
<b>Graduate Research Assistant</b>	2015-2020
Department of Medical Physics, University of Wisconsin, Madison, Wisconsin Dissertation: Techniques to Improve Neurovascular 4D-flow MRI and Its Applications Advisor: Dr. Kevin M. Johnson	
<b>Graduate Research Assistant</b>	2009-2013
Department of Physics and Astronomy, University of Maine, Orono, Maine Thesis: Bleed-through Correction Analysis for Localization Microscopy Advisor: Dr. Samuel T. Hess	

**TEACHING EXPERIENCE**


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<b>Lecturer in Physics</b>	2019
Madison College, Madison, Wisconsin	
<b>Graduate Teaching Assistant</b>	2013-2015
Department of Physics, University of Wisconsin, Madison, Wisconsin	
<b>Graduate Teaching Assistant</b>	2009-2013
Department of Physics and Astronomy, University of Maine, Orono, Maine	

**ORAL PRESENTATIONS**


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ISMRM Annual Meeting Proceedings	2017, 2022
ISMRM Workshop on Data Sampling and Image Reconstruction	2023
Society for Magnetic Resonance Angiography	2016, 2019

**RELEVANT SKILLS**


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- MR pulse sequence programming skills with Philips (extremely proficient) and GE (some familiarity) scanners

- Programming skills in MATLAB and Python (both extremely proficient), and C/C++ (from pulse sequence programming)
- Strong understanding of MR physics based upon extensive formal physics education
- Excellent writing and oral skills evidenced by first-authored journal papers and conference oral presentations

## PUBLICATIONS

### Peer-reviewed Journal Papers

1. **Kim D**, Wang D, Chao T, Campeau N, Pipe JG. ‘Volumetric T2-weighted spin echo imaging with improved SNR using localized quadratic encoding and spiral readout’. *Magn Reson Med.* (accepted)
2. **Kim D**, Jen M, Eisenmenger LB, Johnson KM. ‘Accelerated 4D-flow MRI with 3-point encoding enabled by machine learning’. *Magn Reson Med.* 2022
3. **Kim D**, Eisenmenger LB, Turski P, Johnson KM. ‘Simultaneous 3D-TOF angiography and 4D-flow MRI with enhanced flow signal using multiple overlapping thin slab acquisition and magnetization transfer’. *Magn Reson Med.* 2021 (featured on the journal’s front cover)
4. **Kim D**, Edjlali M, Turski P, Johnson KM. ‘Composite MRA: statistical approach to generate an MR angiogram from multiple contrasts’. *Magn Reson Med.* 2020
5. Gabor KA, **Kim D**, Kim CH, Hess ST. ‘Nanoscale imaging of caveolin-1 membrane domains in vivo’. *PLoS One.* 2015
6. **Kim D**, Curthoys NM, Parent MT, Hess ST. ‘Bleed-through correction for rendering and correlation analysis in multi-colour localization microscopy’. *J Opt.* 2013 (invited paper)
7. Gudheti MV, Curthoys NM, Gould TJ, **Kim D**, Gunewardene MS, Gabor KA, Gosse JA, Kim CH, Zimmerberg J, Hess ST. ‘Actin mediates the nanoscale membrane organization of the clustered membrane protein influenza hemagglutinin’. *Biophys J.* 2013
8. Curthoys NM, Mlodzianoski MJ, **Kim D**, Hess ST. ‘Simultaneous multicolor imaging of biological structures with fluorescence photoactivation localization microscopy’. *J Vis Exp.* 2013

### Conference Abstracts

9. **Kim D**, Wang D, Chao T, Pipe JG. ‘Temporally efficient high-SNR, high-Contrast, volumetric T1W FLAIR enabled by LQ encoding’. *ISMRM Workshop on Data Sampling and Image Reconstruction.* 2022
10. **Kim D**, Chao T, Wang D, Pipe JG. ‘Optimized, volumetric, isotropic-resolution T2W 2D FLAIR with maximized temporal and SNR efficiencies’. *ISMRM Annual Meeting & Exhibition.* 2022 (submitted)
11. **Kim D**, Wang D, Chao T, Pipe JG. ‘Volumetric T2-weighted spin-echo MRI with improved SNR using localized quadratic encoding’. *Joint Annual Meeting ISMRM-ESMRMB*, London, UK. 2022
12. **Kim D**, Wang D, Pipe JG. ‘Towards automated scanning: a framework for maintaining constant SNR and T1-contrast for SPGR and MP-RAGE’. *ISMRM & SMRT Annual Meeting & Exhibition.* 2021
13. **Kim D**, Eisenmenger L, Johnson KM. ‘Accelerated 4D-flow MRI using Machine Learning (ML) Enabled Three Point Flow Encoding’. *ISMRM & SMRT Virtual Conference & Exhibition.* 2020
14. Chen R, Nguyen S, Ludwig KD, Seiter D, Murphy ME, Anthony KM, Morgan TK, Zhu A, **Kim D**, Fain SB, Wieben O, Golos TG, Johnson KM. ‘Placental Perfusion Imaging on Zika-Infected Rhesus Macaques using Velocity-Selective ASL MRI’. *ISMRM & SMRT Virtual Conference & Exhibition.* 2020
15. **Kim D**, Eisenmenger L, Johnson KM. ‘Accelerated 4D-flow MRI using Machine Learning (ML) Enabled Three Point Flow Encoding’. *Society for Magnetic Resonance Angiography 30th Annual International Conference*, Nantes, France. 2019
16. **Kim D**, Rivera-Rivera L, Turski P, Johnson KM. ‘Multiple overlapping slab 4D-flow imaging using distributed-spiral acquisition with magnetization transfer (MT) preparation for inflow signal enhancement and simultaneous 3D time-of-flight (3D-TOF) angiogram’. *ISMRM 27th Annual Meeting & Exhibition*, Montreal, QC, Canada. 2019
17. **Kim D**, Ruedinger K, Rutkowski D, Roldan-Alzate A, Turski P, Johnson KM. ‘Characterization of ultra-short echo and standard echo phase-Contrast MRI for neurovascular disease application’. *Joint Annual Meeting ISMRM-ESMRMB*, Paris, France. 2018

18. **Kim D**, Turski P, Wieben O, Johnson KM. 'Statistical paradigm for composite MR Angiography generated from multi-contrast MRI'. *ISMRM 25th Annual Meeting & Exhibition*, Honolulu, HI. April 2017
19. **Kim D**, Wieben O, Turski P, Johnson KM. 'Statistical approach to derive angiograms from multi-contrast MR images'. *Society for Magnetic Resonance Angiography 28th Annual International Conference*, Chicago, Illinois, USA. 2016
20. **Kim D**, Hoffman C, Wieben O, Johnson KM. 'Flow and Structure with Simultaneous Visualization of Registered 4D Flow and Black Blood MRI'. *ISMRM 24th Annual Meeting & Exhibition*, Singapore. 2016.
21. Kwon M, Ebert M, **Kim D**, Walker T, Saffman M. 'Rydberg blockade of atomic ensemble qubits'. *46th Annual Meeting of APS Division of Atomic, Molecular, and Optical Physics*, Columbus, Ohio. June 2015.
22. Gudheti MV, Curthoys NM, **Kim D**, Gunewardene MS, Gould TJ, Gabor KA, Gosse JA, Zimmerberg J, Kim CH, Hess CT. 'Actin and Influenza Hemagglutinin Colocalize but Laterally Exclude Cofilin Near the Cell Membrane'. *Biophysical Society Conference*, San Diego, CA. February 2012.
23. Gudheti MV, Gould TJ, **Kim D**, Curthoys NM, Gabor KA, Gunewardene MS, Verkhusha VV, Zimmerberg J, Gosse JA, Kim CH, Hess ST. 'Cofilin is Excluded from Clusters of Influenza Hemagglutinin at the Host Cell Membrane'. *ASCB: American Society for Cell Biology*, Denver, CO. December 2011.

## SCHOLARSHIPS & AWARDS

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Best Teaching Assistant Award, University of Wisconsin.	2014
Most Outstanding Graduating Student, University of Maine.	2009
4-year full tuition scholarship, University of Maine.	2005-2009