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EDUCATION

B.Eng. in Electronic Engineering, Feb. 1998
Inha University, Incheon, Republic of Korea

M.S. in Electrical Engineering, May. 2004
University of Wisconsin-Madison, Madison, WI
Advisor: *Willis J. Tompkins*
Thesis: *Detecting and Classifying Life-threatening ECG Ventricular Arrhythmias using Wavelet Decomposition*

Ph.D in Electrical Engineering, minor in Biomedical Engineering, Aug. 2007
University of Wisconsin-Madison, Madison, WI
Advisor: *Walter F. Block*
Dissertation: *Reconstruction Methods for Exploiting non-Cartesian Steady-State MR imaging*

PROFESSIONAL EMPLOYMENT

Magnetic Resonance Imaging Research Laboratory *University of Wisconsin-Madison*
Research Assistant Jul. 2003 ~ Aug. 2007

Magnetic Resonance Imaging Research Laboratory *University of Wisconsin-Madison*
Research Associate Sep. 2007 ~ Dec. 2007

UCSD Center for functional MRI *University of California, San Diego*
Assistant Project Scientist Jan. 2008 ~ Dec. 2010

Radiology *Wake Forest School of Medicine*
Assistant Professor Jan. 2011 ~ Present

Biomedical Engineering *Wake Forest School of Medicine*
Assistant Professor Jan. 2011 ~ Present

PUBLICATIONS & PATENTS

a) Journal Papers

1. **Youngkyoo Jung**, Yogesh Jashnani, Richard Kijowski, Walter Block. *Consistent Non-Cartesian Off-Axis MRI Quality: Calibrating and Removing Multiple Sources of Demodulation Phase Errors*. *Magn Reson Med*, 2007; 57: pp 206-212.
2. James H. Holmes, Rafael L. O'Halloran, Ethan K. Brodsky, **Youngkyoo Jung**, Walter F. Block, Sean B. Fain. *3D hyperpolarized He-3 MRI of ventilation using a multi-echo projection acquisition* *Magn Reson Med*, 2008; 59: pp 1062-1071.
3. Mark Bydder, **Youngkyoo Jung**. *A Regularization Strategy for GRAPPA Calibration*. *Magn Res Imag*, 2009; 27: pp 137-41.
4. **Youngkyoo Jung**, Samsonov Alexey, Walter F. Block, Lazar Mariana, Jing Liu, Andrew L. Alexander. *3D Diffusion Tensor MRI with Isotropic Resolution Using a Steady-State*

Radial Acquisition. J Magn Res Imag, 2009; 29: pp 1175-1184.

5. Catherine J. Moran, Frederick Kelcz, **Youngkyoo Jung**, Ethan Brodsky, Sean B. Fain, Walter F. Block. *A Pilot Study of Improved Lesion Characterization in Breast MRI Using a 3D Radial Balanced SSFP Technique with Isotropic Resolution and Efficient Fat-water Separation*. J Magn Res Imag, 2009; 30: pp 135-144.
6. Lawrence R. Frank, **Youngkyoo Jung**, Souheil Inati, J. Michael Tyszka, Eric C. Wong. *High Efficiency, Low Distortion 3D Diffusion Tensor Imaging with Variable Density Spiral Fast Spin Echoes*. NeuroImage, 2010; 49 (2): pp 1510-1523.
7. Jessica Klaers, Yogesh Jashnani, **Youngkyoo Jung**, Ethan Brodsky, Josh Jacobson, Rick Kijowski, Walter F. Block. *Dual Half-Echo Phase Correction for Implementation of 3D Radial SSFP at 3.0T*. Magn Reson Med, 2010; 63: pp 282-289.
8. Alexey A. Samsonov, Julia Velikina, **Youngkyoo Jung**, Chris R. Johnson, Walter F. Block. *POCS-Enhanced Correction of Motion Artifacts in Multicoil MRI*. Magn Reson Med, 2010; 63: pp 1104-1110.
9. Jing Liu, Oliver Wieben, **Youngkyoo Jung**, Alexey A. Samsonov, Scott B. Reeder, Walter F. Block. *Multi-Echo 3D Hybrid Radial SSFP Cardiac CINE Imaging for Whole Heart Coverage in a Single Breath-Hold*. J Magn Res Imag, 2010; 32: pp 434-440.
10. **Youngkyoo Jung**, Eric C. Wong, Thomas T. Liu. *Multi-Phase Pseudo-continuous Arterial Spin Labeling (MP-PCASL) for Robust Quantification of Cerebral Blood Flow*. Magn Reson Med, 2010; 64: pp 799-810.
11. **Youngkyoo Jung**, Alexey A Samsonov, Mark Bydder, Walter F. Block. *Self-calibrated Multiple-echo Acquisition with Radial Trajectories using a Conjugate Gradient Method (SMART-CG)*. J Magn Res Imag 2011; 33: pp 980-987.

b) Conference Papers

1. **Youngkyoo Jung**, Willis J. Tompkins. *Detecting and classifying life-threatening ECG ventricular arrhythmias using wavelet decomposition*, EMBS, 2003, Proc. of the 25th Annual Inter. Conf. of the IEEE, v. 3, pp. 2390-2393.
2. Amrish O. Chourasia, Mary E. Sesto, **Youngkyoo Jung**, Robert S. Howery, Robert G. Radwin, *Comparison of Biomechanical and Anatomical Effects Following Eccentric and Concentric Exertions*, Human Factors and Ergonomics Society Annual Meeting Proceedings, 2005. v. 49, pp. 1287-1291.
3. Walter F. Block, Jessica Klaers, **Youngkyoo Jung**, Ethan Brodsky, Richard Kijowski. *Rapid 3D Isotropic Cartilage Assessment with VIPR MRI*. In. Proc. SPIE. Medical Imaging 2007: Physiology, functional, and structure from medical Images, v. 6511, pp. 651117-651127

c) Conference Proceedings

1. **Youngkyoo Jung**, Aiming Lu, Jing Liu, Thomas M. Grist, Walter F. Block, *Vastly undersampled Isotropic Projection Fluid Attenuated Inversion Recovery (VIPR FLAIR) Imaging*, 16th Annual Intl. Workshop on Mag. Reson. Angio., London, Ontario, Canada, 2004.
2. **Youngkyoo Jung**, Aiming Lu, Andrew L. Alexander, M. Lazar, Walter F. Block, *Cardiac-*

synchronized isotropic steady-state diffusion imaging with true 3D projection reconstruction, ISMRM Workshop on Methods for Quantitative Diffusion MRI of Human Brain, Lake Louise, Alberta, Canada, 2005.

3. **Y. Jung**, A. Lu, T. M. Grist, W. F. Block, *Non-Contrast-Enhanced SSFP MRA with Improved Consistency and Fluid Suppression*, In: Proceedings of 13th Annual Meeting of ISMRM, Miami Beach, FL, USA, 2005. p1712.
4. C. J. Moran, E. K. Brodsky, **Y. Jung**, S. B. Fain, T. M. Grist, W. F. Block, *Bilateral Breast DCE-MRI with Retrospective Variable Temporal and Isotropic Spatial Resolution*, In: Proceedings of 13th Annual Meeting of ISMRM, Miami Beach, FL, USA, 2005. p 2719.
5. Holmes J, **Jung Y**, O'Halloran R, Block W, Peterson E, Fain S. *3D He-3 Ventilation Imaging Using Multi-echo VIPR*. In: Proceedings of 14th Annual Meeting of ISMRM, Seattle, WA, USA, 2006. p 867.
6. **Jung Y**, Jashnani Y, Kijowski R, Block W. *Characterization of Receiver Demodulation for Correcting Off-axis MR Imaging Degradation*. In: Proceedings of 14th Annual Meeting of ISMRM, Seattle, WA, USA, 2006. p 2025.
7. Moran C, Liu A, **Jung Y**, Kelcz F, Brodsky E, Grist T, Fain S, Block W. *Simultaneous Acquisition of Fat and Water Volume Images of the Breast with T2-like Contrast Using Vastly Undersampled Isotropic Projection (VIPR) SSFP*. In: Proceedings of 14th Annual Meeting of ISMRM, Seattle, WA, USA, 2006. p 2868.
8. Jashnani Y, **Jung Y**, Kijowski R, Block W. *Consistent non-Cartesian off axis image quality: Removing multiple sources of demodulation phase errors*. In: Proceedings of 14th Annual Meeting of ISMRM, Seattle, WA, USA, 2006. p 3211.
9. Liu J, **Jung Y**, Vigen K, Block W. *Multiple Echo 3D Hybrid Radial SSFP: Initial Applications in a Single Breath-hold Cardiac Imaging*. In: Proceedings of 14th Annual Meeting of ISMRM, Seattle, WA, USA, 2006. p 3376.
10. Jashnani Y, Lu A, **Jung Y**, Kijowski R, Block W. *Linear Combination SSFP at 3T: Improved spectral response using multiple echoes*. In: Proceedings of 14th Annual Meeting of ISMRM, Seattle, WA, USA, 2006. p 3607.
11. **Youngkyoo Jung**, Yogesh Jashnani, Richard Kijowski, Walter Block. *Consistent Non-Cartesian Off-Axis MRI Quality: Calibrating and Removing Multiple Sources of Demodulation Phase Errors*. In: Proceedings of World Congress on Medical Physics and Biomedical Engineering, Seoul, Korea, 2006. p 4411.
12. **Youngkyoo Jung**, Andrew Alexander, Mariana Lazar, Walter Block. *Isotropic Steady-State Diffusion MR Imaging with True 3D Radial Acquisition*. In: Proceedings of World Congress on Medical Physics and Biomedical Engineering, Seoul, Korea, 2006. p 4451.
13. Catherine J. Moran, Frederick Kelcz, Jessica L. Klaers, **Youngkyoo Jung**, Sean Fain, Walter F. Block. *Lesion Characterization in Breast Imaging: VIPR-SSFP Versus FSE* In: Proceedings of 15th Annual Meeting of ISMRM, Berlin, Germany, 2007. p 137.
14. **Youngkyoo Jung**, Walter F. Block, Alexey Samsonov. *Self-Calibrated Multi-Echo Sequences: Use of Conjugate Gradient Method with Radial Trajectories to Remove Phase Cancellation*. In: Proceedings of 15th Annual Meeting of ISMRM, Berlin, Germany, 2007. p 979.
15. **Youngkyoo Jung**, Walter F. Block, Alexey Samsonov, M. Lazar, J. Liu, A. L. Alexander. *3D diffusion tensor MRI with isotropic resolution using a steady-state radial acquisition*. In: Proceedings of 15th Annual Meeting of ISMRM, Berlin, Germany, 2007. p 1483.

16. Mohammed Farhoud, Andrew L. Wentland, Oliver Wieben, Jessica L. Klaers, Walter F. Block, **Youngkyoo Jung**, Alejandro Roldán, Victor M. Haughton. *Physical Models of Cerebrospinal Fluid Flow in Patients with Chiari I Malformation*. In: Proceedings of 15th Annual Meeting of ISMRM, Berlin, Germany, 2007. p 1890.
17. Alejandro Roldán, Andrew L. Wentland, Oliver Wieben, Walter F. Block, Jessica L. Klaers, **Youngkyoo Jung**, Victor Haughton, Tim Osswald. *Numerical Modeling of CSF Flow in Patient - Specific Anatomical Models*. In: Proceedings of 15th Annual Meeting of ISMRM, Berlin, Germany, 2007. p 1891.
18. Jessica L. Klaers, Yogesh Jashnani, **Youngkyoo Jung**, Joshua J. Jacobson, Richard Kijowski, Walter F. Block. *3T VIPR-SSFP: High Isotropic Resolution MSK Imaging (0.33 mm)*. In: Proceedings of 15th Annual Meeting of ISMRM, Berlin, Germany, 2007. p 3817.
19. Walter F. Block, Jing Liu, **Youngkyoo Jung**, Huimin Wu, Alexey A. Samsonov, Ethan Brodsky, Oliver Wieben, *Breath-held Coronary SSFP Imaging at 3T with LCSSFP: Minimizing Flow and Undersampling Artifacts*. 19th Annual Intl. Conf. on Mag. Reson. Angio., Istanbul, Turkey, 2007.
20. **Youngkyoo Jung**, Alexey A. Samsonov, Walter F. Block, *Non-contrast-enhanced MRA with Dual-echo Radial SSFP: Advances through off-resonance correction and parallel imaging*, 19th Annual Intl. Workshop on Mag. Reson. Angio., Istanbul, Turkey, 2007.
21. Alexey A. Samsonov, **Youngkyoo Jung**, Walter F. Block, *Time-Dimension Regularized Parallel MRI for CE MRA with Highly Undersampled Radial Trajectories*, 19th Annual Intl. Workshop on Mag. Reson. Angio., Istanbul, Turkey, 2007.
22. F Kelcz, CJ Moran, **Y Jung**, WF Block. *3D Radial SSFP - a new approach to providing high-resolution fat and water T2-like images for breast MRI studies: preliminary clinical findings*, In: Proceedings of the 93rd Annual Meeting of RSNA, 2007.
23. Samsonov, Alexey; **Jung, Youngkyoo**; Alexander, Andrew; Block, Walter F.; Field, Aaron S. *MRI Compressed Sensing Via Sparsifying Images* In: Proceedings of 16th Annual Meeting of ISMRM, Toronto, Canada, 2008. p 342.
24. **Jung, Youngkyoo**; Samsonov, Alexey; Kijowski, Richard; Klaers, Jessica; Block, Walter F. *Phase Constrained Parallel Imaging for Improved Fat Suppression in Multi-Echo LC SSFP*. In: Proceedings of 16th Annual Meeting of ISMRM, Toronto, Canada, 2008. p 1269.
25. Klaers, Jessica; Johnson, Kevin M.; Francois, Christopher; Brodsky, Ethan K.; **Jung, Youngkyoo**; Wieben, Oliver; Block, Walter F. *Non-Contrast Enhanced Renal Artery Angiography with a Respiratory Gated 3D Radial Linear Combination SSFP Sequence* In: Proceedings of 16th Annual Meeting of ISMRM, Toronto, Canada, 2008. p 2906.
26. Samsonov, Alexey; Alexander, Andrew; **Jung, Youngkyoo**; Field, Aaron S. *Practical Optimum Experimental Designs for Fast T1 Relaxometry with SPGR Sequences* In: Proceedings of 16th Annual Meeting of ISMRM, Toronto, Canada, 2008. p 3081.
27. **Jung, Youngkyoo**; Samsonov, Alexey; Block, Walter F. *Rapid CSF Measurement Without Operator Intervention Using bSSFP 3D Radial Acquisition* In: Proceedings of 16th Annual Meeting of ISMRM, Toronto, Canada, 2008. p 3512.
28. **Youngkyoo Jung**, Anna L. Rack-Gomer, Thomas T.Liu, Giedrius T. Buracas, *Multi-shot Interleaved Spiral In/Out Acquisition for bSSFP fMRI*, ISMRM Workshop on Data Sampling and Image Reconstruction, Sedona, AZ, USA. 2009.

29. Klaers JL, Samsonov AA, **Jung Y**, Johnson KM, Brodsky EK, Block WF, Kijowski R. *Rapid High Resolution Whole Knee Assessment Using Radial LC-SSFP with Parallel Imaging*. ISMRM Workshop on Advances in Musculoskeletal Magnetic Resonance Imaging, February 2009, San Francisco, CA, USA.
30. **Y. Jung**, E. C. Wong, T. T. Liu. *Multi-Phase Pseudo-Continuous Arterial Spin Labeling (MP PCASL): Robust PCASL method for CBF quantification*. In: Proceedings of 17th Annual Meeting of ISMRM, Honolulu, HI, USA, 2009. p 621.
31. K. Lu, T. T. Liu, **Y. Jung**. *Regional White Matter Perfusion Measurement Using an Optimized Pseudo-Continuous ASL MRI* In: Proceedings of 17th Annual Meeting of ISMRM, Honolulu, HI, USA, 2009. p 1521.
32. A. L. Rack-Gomer, G. Buracas, **Y. Jung**, T. T. Liu. *Interleaved Spiral In/Out b-SSFP Acquisition for Functional Imaging*. In: Proceedings of 17th Annual Meeting of ISMRM, Honolulu, HI, USA, 2009. p 1555.
33. **Y. Jung**, A. L. Rack-Gomer, E. C. Wong, G. Buracas, T. T. Liu. *Pseudo-Continuous Arterial Spin Labeling with Optimized Tagging Efficiency for Quantitative ASL fMRI*. In: Proceedings of 17th Annual Meeting of ISMRM, Honolulu, HI, USA, 2009. p 1578.
34. J. Liau, **Y. Jung**, A. L. Rack-Gomer, and T. Liu, *Dependence of Bold Signal Amplitude on Baseline Venous Oxygenation and Cerebral Blood Flow* In: Proceedings of 17th Annual Meeting of ISMRM, Honolulu, HI, USA, 2009. p 1635.
35. G. T. Buracas, **Y. Jung**, E. C. Wong, R. B. Buxton, T. T. Liu. *Stability of Alternating bSSFP Signal in the Presence of Driving Perturbations*. In: Proceedings of 17th Annual Meeting of ISMRM, Honolulu, HI, USA, 2009. p 3662.
36. Buracas GT, Liu TT, **Jung Y**. *Detection of Cognitive Brain Activation using Balanced Steady State Free Precession Imaging*. OHBM 15th Annual Meeting. San Francisco, CA, USA, 2009. NeuroImage v. 47. s. 1. p s196.
37. **Y. Jung**, T. T. Liu. *Fast CBF Estimation in Multi-Phase Pseudo-Continuous Arterial Spin Labeling (MP-PCASL) Using Signal Demodulation*. In: Proceedings of 18th Annual Meeting of ISMRM, Stockholm, Sweden, 2010. p 1739.
38. D. D. Shin, **Y. Jung**, A. Shankaranarayanan, K. Restom, J. Guo, W-M. Luh, P. Bandettini, E. C. Wong, and T. T. Liu. *Semi-Automated Correction of Phase Errors in Optimized Pseudo-Continuous Arterial Spin Labeling*. In: Proceedings of 18th Annual Meeting of ISMRM, Stockholm, Sweden, 2010. p 1744.
39. K. Lu, T. T. Liu, **Y. Jung**. *Arterial Transit Delay Measurement Using Pseudo-Continuous ASL with Variable TR and Interleaved Post-Labeling Delays*. In: Proceedings of 18th Annual Meeting of ISMRM, Stockholm, Sweden, 2010. p 1769.
40. **Y. Jung**, T. T. Liu, G. T. Buracas. *High Resolution GRE BOLD fMRI Using Multi-Shot Interleaved Spiral In/Out Acquisition*. In: Proceedings of 18th Annual Meeting of ISMRM, Stockholm, Sweden, 2010. p 3449.

e) Patents

1. **Youngkyoo Jung**, Yogesh A. Jashnani, Walter F. Block. Characterization of Receiver Demodulation for Correcting Off-axis MR Imaging Degradation. US 7132826, Issued: Nov. 7, 2006, Licensed to GE.

2. **Youngkyoo Jung**, Yogesh A. Jashnani, Walter F. Block. Characterization of Receiver Demodulation for Correcting Off-axis MR Imaging Degradation. US 7327141, Issued: Feb. 5, 2008, Licensed to GE.
3. **Youngkyoo Jung**, Eric C. Wong, Thomas T. Liu. Multi-Phase Pseudocontinuous Arterial Spin Labeling Method. Patent Pending. Application No. 12/728,170. Licensed to GE.
4. **Youngkyoo Jung**, Kun Lu. Arterial Blood Flow and Transit Delay Measurement using Arterial Spin Labeling. Patent Pending. UCSD Docket No. SD2010-177. Licensed to GE.

AWARDS & SOCIETY

Student stipend for ISMRM diffusion workshop, Lake Louise, AB, Canada (2005)

Educational stipend for 13th ISMRM meeting in Miami Beach, FL (2005)

Educational stipend for 14th ISMRM meeting in Seattle, WA (2006)

UW Graduate school dissertator travel grant (2006)

Educational stipend for 15th ISMRM meeting in Berlin, Germany (2007)

Student member of International Society of Magnetic Resonance in Medicine (2005~2007)

Member of International Society of Magnetic Resonance in Medicine (since 2008)

Member of Organization for Human Brain Mapping (since 2009)

REVIEWER SERVICE

Ad-hoc reviewer

EURASIP Journal on Advances in Signal Processing (2007)

Journal of Magnetic Resonance Imaging (since 2009)

Magnetic Resonance in Medicine (since 2010)