

Cover Page



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Author: Brink, Wyger Maurits

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LIST OF PUBLICATIONS

JOURNAL PUBLICATIONS

1. Teeuwisse WM, **Brink WM**, and Webb AG. Quantitative assessment of the effects of high-permittivity pads in 7 Tesla MRI of the brain. *Magnetic Resonance in Medicine* 2012; 67:1285–1293.
2. Teeuwisse WM, **Brink WM**, Haines KN, and Webb AG. Simulations of high permittivity materials for 7T neuroimaging and evaluation of a new barium titanate based dielectric. *Magnetic Resonance in Medicine* 2012; 67:912–918.
3. de Heer P, **Brink WM**, Kooij BJ, and Webb AG. Increasing signal homogeneity and image quality in abdominal imaging at 3T with very high permittivity materials. *Magnetic Resonance in Medicine* 2012; 68:1317–1324.
4. **Brink WM**, and Webb AG. High permittivity pads reduce specific absorption rate, improve B_1 homogeneity, and increase contrast-to-noise ratio for functional cardiac MRI at 3T. *Magnetic Resonance in Medicine* 2014; 71:1632–1640.
5. **Brink WM**, van der Jagt MA, Versluis MJ, Verbist BM, and Webb AG. High permittivity dielectric pads improve high spatial resolution magnetic resonance imaging of the inner ear at 7T. *Investigative Radiology* 2014; 49:271–277.
6. **Brink WM**, Börnert P, Nehrke K, and Webb AG. Ventricular B_1^+ perturbation at 7T - real effect or measurement artifact? *NMR in Biomedicine* 2014; 27:617–620.
7. van der Jagt MA, **Brink WM**, Versluis MJ, Steens SCA, Briaire JJ, Webb AG, Frijns JHM, and Verbist BM. Visualization of human inner ear anatomy with high-resolution MR imaging at 7T: initial clinical assessment. *American Journal of Neuroradiology* 2015; 36:378–383.
8. **Brink WM**, Gulani V, and Webb AG. Clinical applications of dual-channel transmit MRI: A review. *Journal of Magnetic Resonance Imaging* 2015; 42:855–869.
9. **Brink WM**, Remis RE, and Webb AG. A theoretical approach based on electromagnetic scattering for analysing dielectric shimming in high-field MRI. *Magnetic Resonance in Medicine* 2015; *in press*.
10. Oudeman J, Coolen BF, Mazzoli V, Maas M, Verhamme C, **Brink WM**, Webb AG, Strijkers GJ, and Nederveen AJ. Diffusion-prepared neurography of the brachial plexus with a large field-of-view at 3T. *Journal of Magnetic Resonance Imaging* 2015; *in press*.

11. **Brink WM**, van den Brink JS, and Webb AG. The effect of high-permittivity pads on specific absorption rate in radiofrequency-shimmed dual-transmit cardiovascular magnetic resonance at 3T. *Journal of Cardiovascular Magnetic Resonance* 2015; 17:82.
12. **Brink WM**, Versluis MJ, Peeters JM, Börnert P, and Webb AG. Passive radiofrequency shimming in the thighs at 3 Tesla using high permittivity materials and body coil receive uniformity correction. *Magnetic Resonance in Medicine* 2015; *in press*.

CONFERENCE PROCEEDINGS

1. **Brink WM**, and Webb AG. Improvements in Cardiac MRI at 3T using High Permittivity Materials. In: *Proceedings of the 21st Annual Meeting of ISMRM*, Salt Lake City, UT, USA, 2013; p. 1400.
2. **Brink WM**, and Webb AG. Transmit Strategies for Body Imaging at 3T - Comparing Multitransmit and Dielectric Shimming. In: *Proceedings of the 21st Annual Meeting of ISMRM*, Salt Lake City, UT, USA, 2013; p. 2800.
3. **Brink WM**, Börnert P, Nehrke K, and Webb AG. Ventricular B_1 Enhancement - Truth or Fiction? In: *Proceedings of the 21st Annual Meeting of ISMRM*, Salt Lake City, UT, USA, 2013; p. 2592.
4. **Brink WM**, and Webb AG. Electromagnetic Analysis of Dielectric Shimming using High Permittivity Materials. In: *Proceedings of the 21st Annual Meeting of ISMRM*, Salt Lake City, UT, USA, 2013; p. 4375.
5. **Brink WM**, and Webb AG. A forward model analysis of dielectric shimming in magnetic resonance imaging. In: *Proceedings of the 15th Annual Meeting of ICEAA*, Torino, Italy, 2013; pp. 528–531.
6. **Brink WM**, van den Brink JS, and Webb AG. Implications of Dielectric Pads on Dual-Transmit SAR Behaviour. In: *Proceedings of the 23rd Annual Meeting of ISMRM*, Milan, Italy, 2014; p. 321.
7. **Brink WM**, and Webb AG. Apparent B_1^+ Asymmetry in Symmetric Objects at 7T. In: *Proceedings of the 23rd Annual Meeting of ISMRM*, Milan, Italy, 2014; p. 4815.
8. **Brink WM**, and Webb AG. Integral Equations Based Modeling Approach to Dielectric Shimming. In: *Proceedings of the 23rd Annual Meeting of ISMRM*, Milan, Italy, 2014; p. 4831.
9. **Brink WM**, Versluis MJ, Peeters JM, Börnert P, and Webb AG. Considerations for Parallel Imaging when using High Permittivity Pads in the Thighs at 3T. In: *Proceedings of the 23rd Annual Meeting of ISMRM*, Toronto, Canada, 2015; p. 2426.
10. **Brink WM**, Nouredine Y, Kraff O, Bitz AK, and Webb AG. RF Safety Validation of High Permittivity Pads at 7 Tesla. In: *Proceedings of the 23rd Annual Meeting of ISMRM*, Toronto, Canada, 2015; p. 3108.

CURRICULUM VITÆ

Wyger Brink was born in Berghem on May 10, 1987. After graduating from the Titus Brandsma Lyceum in Oss in 2005, he continued his studies in Electrical Engineering at the Delft University of Technology. In 2010, he finished his master degree in Telecommunications with distinction, after writing his master thesis on electromagnetic focused hyperthermia. In 2011, he persued his Ph.D. degree at the Leiden University Medical Center in the field of MRI in the group of prof.dr. Andrew Webb which resulted in this thesis. He is currently appointed as postdoctoral researcher at the same group to persue further developments in dielectric shimming and applied electromagnetic in the context of MRI, in collaboration with the Delft University of Technology.

Wyger Maurits Brink

10-05-1987 Born in Berghem, the Netherlands

EDUCATION

1999–2005 Grammar school, Titus Brandsma Lyceum in Oss

2005–2010 Electrical Engineering at the Delft University of Technology
Major in Telecommunications, with distinction (cum laude)
Thesis: Non-Invasive Electromagnetic Ablation of Female Breast Tumors

2011–2015 PhD researcher at the Leiden University Medical Center
Thesis: Dielectric Shimming – Exploiting Dielectric Interactions in High Field MRI

2015 Postdoctoral researcher at the Leiden University Medical Center

AWARDS

2013 ISMRM Merit Award Magna Cum Laude
Abstract: Improvements in Cardiac MRI at 3T using High Permittivity Materials

2013 ISMRM Merit Award Magna Cum Laude
Abstract: Ventricular B_1 Enhancement - Truth or Fiction?

2014 1st Place Poster Presentation at the ISMRM High Field Systems & Applications Study Group
Abstract: Integral Equations Based Modeling Approach to Dielectric Shimming

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