

## Publications RF Systems & Concepts Group

### 2024

**Orzada S**, Fiedler TM, Ladd ME.

Hybrid algorithms for SAR matrix compression and the impact of post-processing on SAR calculation complexity.

Magn Reson Med 2024.

doi: 10.1002/mrm.30235

Fiedler TM, Ladd ME, **Orzada S**.

Local and whole-body SAR in UHF body imaging: Implications for SAR matrix compression.

Magn Reson Med 2024.

doi: 10.1002/mrm.30306

Tenbergen CJA, Fortuin AS, van Asten JJA, Veltien A, Philips BWJ, Hambrock T, **Orzada S**, Quick HH, Barentsz JO, Maas MC, Scheenen TWJ.

The Potential of Iron Oxide Nanoparticle-Enhanced MRI at 7 T Compared With 3 T for Detecting Small Suspicious Lymph Nodes in Patients With Prostate Cancer.

Invest Radiol 2024;59(7):519-525.

doi: 10.1097/RLI.0000000000001056

Dietrich KA, Kluter S, Dinkel F, Echner G, Brons S, **Orzada S**, Debus J, Ladd ME, Platt T.

An essentially radiation-transparent body coil integrated with a patient rotation system for MR-guided particle therapy.

Med Phys 2024;51(6):4028-4043.

doi: 10.1002/mp.17065

Choi, C., Webb, A., **Orzada, S.**, Kelenjeridze, M., Shah, N.J., Felder, J.

A Review of Parallel Transmit Arrays for Ultra-High Field MR Imaging (2024) IEEE Reviews in Biomedical Engineering, 17, pp. 351–368.

DOI: 10.1109/RBME.2023.3244132

### 2023

Fortuin, A., van Asten, J., Veltien, A., Philips, B., Hambrock, T., Johst, S., **Orzada, S.**, Hadaschik, B., Quick, H., Barentsz, J., Maas, M., Scheenen, T.

Small Suspicious Lymph Nodes Detected on Ultrahigh-field Magnetic Resonance Imaging (MRI) in Patients with Prostate Cancer with High Risk of Nodal Metastases: The First In-patient Study on Ultrasmall Superparamagnetic Iron Oxide-enhanced 7T MRI

(2023) European Urology, 83 (4), pp. 375-377.

DOI: 10.1016/j.eururo.2023.01.002

**Orzada, S., Akash, S.,** Fiedler, T.M., Kratzer, F.J., Ladd, M.E.

An investigation into the dependence of virtual observation point-based specific absorption rate calculation complexity on number of channels

(2023) *Magnetic Resonance in Medicine*, 89 (1), pp. 469-476.

DOI: 10.1002/mrm.29434

## 2022

Fiedler, T.M., **Orzada, S.,** Flöser, M., Rietsch, S.H.G., Schmidt, S., Stelter, J.K., Wittrich, M., Quick, H.H., Bitz, A.K., Ladd, M.E.

Performance and safety assessment of an integrated transmit array for body imaging at 7 T under consideration of specific absorption rate, tissue temperature, and thermal dose

(2022) *NMR in Biomedicine*, 35 (5), art. no. e4656, .

DOI: 10.1002/nbm.4656

## 2021

**Orzada, S.,** Fiedler, T.M., Quick, H.H., Ladd, M.E.

Post-processing algorithms for specific absorption rate compression

(2021) *Magnetic Resonance in Medicine*, 86 (5), pp. 2853-2861.

DOI: 10.1002/mrm.28909

Fiedler, T.M., **Orzada, S.,** Flöser, M., Rietsch, S.H.G., Quick, H.H., Ladd, M.E., Bitz, A.K.

Performance analysis of integrated RF microstrip transmit antenna arrays with high channel count for body imaging at 7 T

(2021) *NMR in Biomedicine*, 34 (7), art. no. e4515, .

DOI: 10.1002/nbm.4515

**Orzada, S.,** Fiedler, T.M., Quick, H.H., Ladd, M.E.

Local SAR compression algorithm with improved compression, speed, and flexibility

(2021) *Magnetic Resonance in Medicine*, 86 (1), pp. 561-568.

DOI: 10.1002/mrm.28739

**Orzada, S.,** Fiedler, T.M., Bitz, A.K., Ladd, M.E., Quick, H.H.

Local SAR compression with overestimation control to reduce maximum relative SAR overestimation and improve multi-channel RF array performance

(2021) *Magnetic Resonance Materials in Physics, Biology and Medicine*, 34 (1), pp. 153-163.

DOI: 10.1007/s10334-020-00890-0

## 2020

Fortuin, A.S., Philips, B.W.J., van der Leest, M.M.G., Ladd, M.E., **Orzada, S.,** Maas, M.C., Scheenen, T.W.J.

Magnetic resonance imaging at ultra-high magnetic field strength: An in vivo assessment of number,

size and distribution of pelvic lymph nodes  
(2020) PLoS ONE, 15 (7 July), art. no. e0236884.  
DOI: 10.1371/journal.pone.0236884

## 2019

**Orzada, S.**, Solbach, K., Gratz, M., Brunheim, S., Fiedler, T.M., Johst, S., Bitz, A.K., Shooshtary, S., Abuelhaija, A., Voelker, M.N., Rietsch, S.H.G., Kraff, O., Maderwald, S., Flöser, M., Oehmigen, M., Quick, H.H., Ladd, M.E.

A 32-channel parallel transmit system add-on for 7T MRI

(2019) PLoS ONE, 14 (9), art. no. e0222452, .

DOI: 10.1371/journal.pone.0222452