

Publications RF Systems & Concepts Group

2025

Wang Y., May M.W., Gratz M., Ladd M.E., **Orzada S.**

Ultimate Intrinsic SNR in the Torso of Realistic Body Models

Magnetic Resonance in Medicine

DOI: 10.1002/mrm.70202

Orzada S., Fiedler T.M., **Kesting J.**, Hubmann M.J., Ladd M.E.

On the measurement errors in SAR supervision introduced by directional couplers

Magnetic Resonance Materials in Physics, Biology and Medicine

DOI: 10.1007/s10334-025-01287-7

López-Martínez I.N., Ladd M.E., Schmidt R., **Orzada S.**

Comparison of B1+ and SAR efficiency for a high-impedance metamaterial shield with different remote RF arrays at 7 T MRI: A simulation study

Magnetic Resonance Materials in Physics, Biology and Medicine

DOI: 10.1007/s10334-025-01295-7

Bulanov P., Menshchikov P., Grimm J.A., Lutz M., **Orzada S.**, Boyd P.S., Bachert P., Ladd M.E., Korzowski A., Schmitter S.

Human liver CEST imaging at 7 T: Impact of B1+ shimming

Magnetic Resonance in Medicine, 94 (4), pp. 1604 – 1615

DOI: 10.1002/mrm.30557

Scheipers A.K., Grimm J.A., Losch J., **Orzada S.**, Fiedler T.M., Nagel A.M., Schmitter S., Ladd M.E., Platt T.

Quantitative abdominal sodium MRI combined with 32-channel proton pTx MRI at 7 Tesla in a large field-of-view

Magnetic Resonance in Medicine, 94 (5), pp. 1930 – 1945

DOI: 10.1002/mrm.30605

Fiedler T.M., **Orzada S.**, Grimm J.A., Batkai B., Dinkelacker S., Kratzer F.J., Klein C., May M.W., Mayer F., Schweins L., Ladd M.E.

Real-time specific absorption rate supervision for a 32-channel RF transmit system with virtual observation points

Magnetic Resonance in Medicine, 94 (6), pp. 2785 – 2793

DOI: 10.1002/mrm.30643

Grimm J., Aigner C., Dietrich S., **Orzada S.**, Fiedler T., Schmidt S., Schorling C., Quick H., Nagel A., Ladd M., Schmitter S.

In Vivo 3D Liver Imaging at 7 T Using kT-Point pTx Pulses and a 32-Tx-Channel Whole-Body Radiofrequency Coil Array

NMR in Biomedicine, 38 (12), art. no. e70170
DOI: 10.1002/nbm.70170

Joris Hubmann M., **Orzada S.**, Kowal R., Anton Grimm J., Speck O., Maune H.
Towards Large Diameter Transmit Coils for 7-T Head Imaging: A Detailed Comparison of a Set of
Transmit Element Design Concepts
NMR in Biomedicine, 38 (5), art. no. e70030
DOI: 10.1002/nbm.70030

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Reproducibility of Electromagnetic Field Simulations of Local Radiofrequency Transmit Elements
Tailored for 7 T MRI
Sensors, 25 (6), art. no. 1867
DOI: 10.3390/s25061867

Fiedler T.M., Ladd M.E., **Orzada S.**
Local and whole-body SAR in UHF body imaging: Implications for SAR matrix compression
Magnetic Resonance in Medicine, 93 (2), pp. 842 – 849
DOI: 10.1002/mrm.30306

2024

Orzada S., Fiedler TM, Ladd ME.
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The Potential of Iron Oxide Nanoparticle-Enhanced MRI at 7 T Compared With 3 T for Detecting Small
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Invest Radiol 2024;59(7):519-525.
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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-
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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.
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(2024) IEEE Reviews in Biomedical Engineering, 17, pp. 351–368.
DOI: 10.1109/RBME.2023.3244132

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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

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DOI: 10.1002/nbm.4515

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