



OTTO VON GUERICKE  
UNIVERSITÄT  
MAGDEBURG

EIT

FAKULTÄT FÜR  
ELEKTROTECHNIK UND  
INFORMATIONSTECHNIK

# Publikationsbericht 2025

Fakultät für Elektrotechnik und Informationstechnik

# FAKULTÄT FÜR ELEKTROTECHNIK UND INFORMATIONSTECHNIK

## 1. LEITUNG

Prof. Dr.-Ing. Ulrike Steinmann

## 2. VERÖFFENTLICHUNGEN

### DISSERTATIONEN

**Abdelrahman, Ahmed Awadalla Ahmed Soliman; Hamadi, al- Ayoub [AkademischeR BetreuerIn]**

Toward accurate, reliable and efficient gaze estimation

Magdeburg: Universitätsbibliothek, Dissertation Otto-von-Guericke-Universität Magdeburg, Fakultät für Elektrotechnik und Informationstechnik 2025, 1 Online-Ressource (XVIII, 152 Seiten, 2,81 MB) ;

[Literaturverzeichnis: Seite 131-152]

**Gebhardt, Marc; Wolter, Martin [AkademischeR BetreuerIn]**

Erweiterung und Vergleich von Leistungsflusszerlegungsmethoden

Barleben: docupoint GmbH, Dissertation Otto-von-Guericke-Universität Magdeburg, Fakultät für Elektrotechnik und Informationstechnik 2025, 1 Online-Ressource (XVII, 120 Seiten, 3,15 MB) - (Res electricae Magdeburgenses; Band 104) ;

[Literaturverzeichnis: Seite 113-119; Redaktionsschluss: Juni 2025]

**Hempel, Thorsten; Hamadi, al- Ayoub [AkademischeR BetreuerIn]; Nürnberger, Andreas [AkademischeR BetreuerIn]; Enzberg, von Sebastian [AkademischeR BetreuerIn]**

Bildbasierte Situationsanalyse zur intuitiven Mensch-Roboter-Interaktion in dynamischen Umgebungen

Magdeburg: Universitätsbibliothek, Dissertation Otto-von-Guericke-Universität Magdeburg, Fakultät für Elektrotechnik und Informationstechnik 2025, 1 Online-Ressource (xv, 159 Seiten, 43,71 MB) ;

[Literaturverzeichnis: Seite 133-160]

**Izak Ghasemian, Saber; Rose, Georg [AkademischeR BetreuerIn]; Ohl, Claus-Dieter [AkademischeR BetreuerIn]**

Cavitation-induced shear waves in soft solids

Magdeburg: Universitätsbibliothek, Dissertation Otto-von-Guericke-Universität Magdeburg, Fakultät für Elektrotechnik und Informationstechnik 2025, 1 Online-Ressource (xiii, 115 Blätter, 30.36 MB) ;

[Literaturverzeichnis: Blatt 94-109]

**Khalifa, Aly Ahmed Aly; Hamadi, al- Ayoub [AkademischeR BetreuerIn]; Wendemuth, Andreas [AkademischeR BetreuerIn]**

Efficient and robust face recognition in the wild

Magdeburg: Universitätsbibliothek, Dissertation Otto-von-Guericke-Universität Magdeburg, Fakultät für Elektrotechnik und Informationstechnik 2025, 1 Online-Ressource (X, 143 Seiten, 15,72 MB) ;

[Literaturverzeichnis: Seite 123-143]

**Maggi, Andrea; Janiga, Gábor [AkademischeR BetreuerIn]; Sundmacher, Kai [AkademischeR BetreuerIn]; Kienle, Achim [AkademischeR BetreuerIn]**

Computer-aided optimization of resource-efficient and flexible power-to-syngas processes

Magdeburg: Universitätsbibliothek, Dissertation Otto-von-Guericke-Universität Magdeburg, Fakultät für Verfahrens- und Systemtechnik 2025, 1 Online-Ressource (XI, 208 Blätter, 12,95 MB) ;

[Literaturverzeichnis: Blatt 186-200]

**Pishkari, Rojjar; Kienle, Achim [AkademischeR BetreuerIn]**

Efficient simulation and optimization of simulated moving bed chromatography processes

Magdeburg: Universitätsbibliothek, Dissertation Otto-von-Guericke-Universität Magdeburg, Fakultät für Elektrotechnik und Informationstechnik 2025, 1 Online-Ressource (xxiv, 117 Seiten, 1.92 MB) ;  
[Literaturverzeichnis: Seite 107-117]

**Rodrigues Lautert, Renata; Wolter, Martin [AkademischeR BetreuerIn]**

Grid and system-oriented use of flexibility provided by energy communities

Barleben: docupoint GmbH, Dissertation Otto-von-Guericke-Universität Magdeburg, Fakultät für Elektrotechnik und Informationstechnik 2025, 1 Online-Ressource (XVI, 110 Seiten, 7,99 MB) - (Res electricae Magdeburgenses; Band 103) ;  
[Literaturverzeichnis: Seite 99-106; Redaktionsschluss: März 2025]

**Schote, David; Rose, Georg [AkademischeR BetreuerIn]; Speck, Oliver [AkademischeR BetreuerIn]**

Deep learning-based image optimization for low-field MRI

Magdeburg: Universitätsbibliothek, Dissertation Otto-von-Guericke-Universität Magdeburg, Fakultät für Elektrotechnik und Informationstechnik 2025, 1 Online-Ressource (iv, 149 Seiten, 55.92 MB) ;  
[Literaturverzeichnis: Seite 129-143]

**Yan, Xiaolei; Hoeschen, Christoph [AkademischeR BetreuerIn]**

Development of a new dark field imaging concept and investigation of prototype performance

Magdeburg: Universitätsbibliothek, Dissertation Otto-von-Guericke-Universität Magdeburg, Fakultät für Elektrotechnik und Informationstechnik 2025, 1 Online-Ressource (6, 112, 5 ungezählte Blätter, 38.29 MB) ;  
[Literaturverzeichnis: Blatt 82-93]

## 1. LEITUNG

Prof. Dr.-Ing. Achim Kienle (Geschäftsführender Leiter)

Prof. Dr.-Ing. Ulrike Steinmann

Prof. Dr.-Ing. Nicole Gehring

Prof. Dr.-Ing. Lisa Underberg

## 2. VERÖFFENTLICHUNGEN

### BEGUTACHTETE ZEITSCHRIFTENAUFsätze

**Aamer, Emad; Faber, Felix; Bhaskaran, Supriya; Dürr, Robert; Bettenbrock, Katja; Kienle, Achim; Vorhauer-Huget, Nicole**

Pore network model for study of biofilm growth limitations in porous substrata

Transport in porous media - Dordrecht [u.a.]: Springer Science + Business Media B.V, Bd. 153 (2026), Artikel 12, insges. 32 S.

[Imp.fact.: 2.6]

**Dürr, Robert; Otto, Eric; Kok, Rudolph L.; Duvigneau, Stefanie; Kienle, Achim; Bück, Andreas**

Surrogate modeling for control of microbial biopolymer production process

IFAC-PapersOnLine / Internationale Förderung für Automatische Lenkung - Frankfurt : Elsevier, Bd. 59 (2025), Heft 1, S. 169-174

[Imp.fact.: 1.7]

**Dürr, Robert; Otto, Eric; Kok, Rudolph; Hempfling, Stefan; Duvigneau, Stefanie; Kienle, Achim; Bück, Andreas**

Surrogate modeling of microbial PHA-biopolymer synthesis

Industrial & engineering chemistry research - Columbus, Ohio : American Chemical Society, Bd. 64 (2025), Heft 38, S. 18640-18655

[Imp.fact.: 4.0]

**Gehring, Nicole; Deutscher, Joachim; Irscheid, Abdurrahman**

Backstepping design of dynamic observers for hyperbolic systems

IEEE control systems letters - New York, NY : IEEE, Bd. 8 (2024), S. 3452-3457

[Imp.fact.: 2.4]

**Kaps, Lothar; Leipold, Johannes; Plate, Christoph; Martensen, Carl Julius; Kortuz, Wieland; Seidel-Morgenstern, Andreas; Kienle, Achim; Sager, Sebastian**

Optimal experiments for hybrid modeling of methanol synthesis kinetics

Computers & chemical engineering - Amsterdam [u.a.]: Elsevier Science, Bd. 204 (2025), Artikel 109387, insges. 13 S.

[Imp.fact.: 3.9]

**Keßler, Tobias; Plate, Christoph; Behrens, Jessica; Martensen, Carl J.; Leipold, Johannes; Kaps, Lothar; Seidel-Morgenstern, Andreas; Sager, Sebastian; Kienle, Achim**

Two degrees of freedom control of a multistage power-to-methanol reactor

Computers & chemical engineering - Amsterdam [u.a.]: Elsevier Science, Bd. 192 (2025), Artikel 108893, insges. 9 S.

[Imp.fact.: 3.9]

**Kortuz, Wieland; Leipold, Johannes; Kienle, Achim; Seidel-Morgenstern, Andreas**

Kinetic modeling of the methanol-assisted autocatalytic methanol synthesis on Cu/ZnO/Al<sub>2</sub>O<sub>3</sub>

The chemical engineering journal - Amsterdam : Elsevier, Bd. 518 (2025), Artikel 164505, insges. 10 S.

[Imp.fact.: 13.4]

**Kranert, Lena; Kok, Rudolph; Neumann, Anne-Sophie; Kienle, Achim; Duvigneau, Stefanie**

Estimation of PHA concentrations from cell density data in *Cupriavidus necator*

Applied microbiology and biotechnology - Berlin : Springer, Bd. 109 (2025), Artikel 11, insges. 11 S.

[Imp.fact.: 3.9]

**Leipold, Johannes; Kienle, Achim**

Nonlinear behavior of methanol synthesis through CO<sub>2</sub>-hydrogenation

The chemical engineering journal - Amsterdam : Elsevier, Bd. 522 (2025), Artikel 167176, insges. 13 S.

[Imp.fact.: 13.2]

**Leipold, Johannes; Nikolic, Daliborka; Seidel-Morgenstern, Andreas; Kienle, Achim**

Optimization of methanol synthesis under forced periodic operation in isothermal fixed-bed reactors

Computers & chemical engineering - Amsterdam [u.a.]: Elsevier Science, Bd. 196 (2025), Artikel 109040

## **NICHT BEGUTACHTETE ZEITSCHRIFTENAUFsätze**

**Grimm, Felix; Simon, Michael; Steinmann, Ulrike; Adler, Stephan**

Mobile Sensor Concept with Energy Harvesting through Focused Ultrasound Signals

Proceedings of DAS/DAGA 2025 , 2025 - Berlin : Deutsche Gesellschaft für Akustik e.V. (DEGA) ; Dau, Torsten, S. 1427-1430 ;

[Tagung: 51st Annual Meeting on Acoustics, Copenhagen, March 17-20, 2025]

## **BEGUTACHTETE BUCHBEITRäge**

**May, Erik; Bethge, Eric; Köhler, Marcel**

Automatische Programmierung von Industrierobotern

34. Schweißtechnische Fachtagung - Tagungsband zur gleichnamigen Fachtagung am 15. Mai 2025 in Barleben : eine Gemeinschaftsveranstaltung von: Schweißtechnische Lehranstalt Magdeburg, DVS Bezirksverband Magdeburg, Otto-von-Guericke-Universität Magdeburg , 1. Auflage - Magdeburg : Otto-von-Guericke-Universität Magdeburg, Lehrstuhl für Fügetechnik, Institut für Werkstoffe, Technologien und Mechanik (IWTM) ; Zinke, Manuela, S. 54-60 ;

[Tagung: 34. Schweißtechnische Fachtagung, Barleben, 15. Mai 2025]

**Simon, Michael; Grimm, Felix; Steinmann, Ulrike**

A16-a - ultrasonic signal processing and instrumentation

2025 ICU Paderborn: 9th International Congress on Ultrasonics - ICU , 2025 - Wunstorf, Germany : AMA Service GmbH, S. 122-125 ;

[Kongress: 9th International Congress on Ultrasonics, Paderborn, 21. - 25.09.2025]

## 1. LEITUNG

Prof. Dr.-Ing. Nicole Gehring

## 2. VERÖFFENTLICHUNGEN

### BEGUTACHTETE ZEITSCHRIFTENAUFsätze

**Gehring, Nicole; Deutscher, Joachim; Irscheid, Abdurrahman**

Backstepping design of dynamic observers for hyperbolic systems

IEEE control systems letters - New York, NY : IEEE, Bd. 8 (2024), S. 3452-3457

[Imp.fact.: 2.4]

## 1. LEITUNG

Prof. Dr.-Ing. Roberto Leidhold

Prof. Dr.-Ing. Andreas Lindemann (geschäftsführender Leiter)

Prof. Dr.-Ing. habil. Martin Wolter

## 2. VERÖFFENTLICHUNGEN

### BEGUTACHTETE ZEITSCHRIFTENAUFsätze

**Hoerner, Stefan; Leidhold, Roberto; Abbaszadeh, Shokoofeh; Ruiz-Hussmann, Karla; Bennecke, Timo; Zhao, Zhao; Joedecke, Paul; Weber, Christian-Thoralf; Delafin, Pierre-Luc; Bonamy, Cyrille; Delannoy, Yves**

Experimental optimization environment for developing an intracycle pitch control in cross flow turbines

International marine energy journal - Southampton : European Wave and Tidal Energy Conference c/o Sustainable Energy Research Group, Bd. 8 (2025), Heft 1, S. 37-46

**Jayaprakash, Adhithoyan; Hoerner, Stefan; Leidhold, Roberto**

Direct-driven blade-embedded pitch actuator for high dynamic pitching applications

Statistische Berichte. 1HH, Öffentliche Wasserversorgung und Abwasserbeseitigung in Hamburg ... / Statistisches Amt für Hamburg und Schleswig-Holstein - Hamburg : Statistisches Amt für Hamburg und Schleswig-Holstein, Bd. 16 (2025) ;

[Konferenz: European Wave and Tidal Energy Conference, Madeira, 7. - 11. September 2025]

**Klink, Jacob; Helm, Sebastian; Yang, Wenwen; Deblon, Frank; Bengler, Ralf; Hauer, Ines; Lindemann, Andreas**

Instantaneous reserve by battery energy storage systems - a holistic system model to analyze the dynamic power system interactions

Energy reports - Amsterdam [u.a.]: Elsevier, Bd. 13 (2025), S. 3096-3111

[Imp.fact.: 4.7]

**Schäfer, Johannes Maria; Leidhold, Roberto; Bannack, Andreas**

Gleichmäßige Momentenverteilung in einer dualen dreiphasigen Synchronmaschine zur Bestimmung der wirkenden Last

Automatisierungstechnik - Berlin : De Gruyter, Bd. 73 (2025), Heft 7, S. 541-554

[Imp.fact.: 1.0]

### NICHT BEGUTACHTETE ZEITSCHRIFTENAUFsätze

**Kösters, Wolf Iring; Tuhtan, Jeffrey A.; Hoerner, Stefan; Kruusmaa, Maarja; Abbaszadeh, Shokoofeh**

Sensor probes for fish passage safety - evaluating strike severity metrics and data-driven prediction

HAL-CNRS, 2025, 1 Online-Ressource ;

[HAL ID: hal-05314322]

**Lindemann, Andreas**

11th ECPE SiC & GaN user forum - potential of wide bandgap semiconductors in power electronic applications

Bodo's power systems - Laboe : A Media . - 2025, Heft 5, S. 80

## BEGUTACHTETE BUCHBEITRÄGE

### **Andres, Christoph; Fritsch, Martin; Wolter, Martin**

Induktives Energieerntesystem mit sättigungsgesteuerter Leistungsmaximierung

Dresdener Kreis 2024: 24. Dresdener Kreis Elektroenergieversorgung vom 19. bis 20. März 2024 in Duisburg - Hannover : Institutionelles Repositorium der Leibniz Universität Hannover . - 2025, S. 1-7 ;

[Tagung: 24. Dresdener Kreis Elektroenergieversorgung, Duisburg, 19. bis 20. März 2024]

### **Barrera, de la Pablo M.; Bossio, José M.; Mazzeletti, Manuel A.; Bossio, Guillermo R.; Leidhold, Roberto**

Dynamic eccentricity detection in SynRM using stator winding voltage

2025 XXI Workshop on Information Processing and Control (RPIC) - [Piscataway, NJ]: IEEE, insges. 6 S. ;

[Workshop: 2025 XXI Workshop on Information Processing and Control, RPIC, San Francisco, Argentina, 17-19 September 2025]

### **Barrera, de la Pablo M.; Hieke, Sebastian; Bossio, José M.; Mazzeletti, Manuel A.; Bossio, Guillermo R.; Leidhold, Roberto**

Static eccentricity detection in SynRM using stator windings flux

2025 XXI Workshop on Information Processing and Control (RPIC) - [Piscataway, NJ]: IEEE, insges. 6 S. ;

[Workshop: 2025 XXI Workshop on Information Processing and Control, RPIC, San Francisco, Argentina, 17-19 September 2025]

### **Duniev, Oleksii; Yehorov, Andrii; Masliennikov, Andrii; Shylkova, Larysa; Stamann, Mario; Gouws, Rupert; Dobzhanskyi, Oleksandr**

Investigation of novel designs of linear generators based on transverse-flux machines for wave energy conversion systems

Proceedings of the 16th European Wave and Tidal Energy Conference - Southampton, UK : Energy and Climate Change Division ; Carvalho Gato, Luís Manuel . - 2025 ;

[Konferenz: 16th European Wave and Tidal Energy Conference, Funchal, 7-11 September 2025]

### **Kempiak, Carsten; Lindemann, Andreas**

Investigation of the relationship between threshold voltage shift and power cycling lifetime of SiC MOSFETs

2025 17th International Seminar on Power Semiconductors (ISPS) - IEEE ; Lutz, J., S. 123-130 ;

[Seminar: 17th International Seminar on Power Semiconductors (ISPS), Prague, 27 - 29 August 2025]

### **Li, Tianyu; Chen, Minjia; Lindemann, Andreas; Mallwitz, Regine**

Characterization of a high-bandwidth SMD-Based current shunt for GaN HEMT

ResearchGATE - Cambridge, Mass. : ResearchGATE Corp. . - 2025 ;

[Kongress: ECCE Europe 2025, Energy Conversion & EXPO, Birmingham, UK, 31 Aug. - 4 Sept. 2025]

### **Li, Tianyu; Lindemann, Andreas**

Extraction of dynamic threshold voltage and on-state resistance of GaN HEMT in hard-switching operation

International Exhibition and Conference for Power Electronics, Intelligent Motion, Renewable Energy and Energy Management, 6 - 8 May 2025, Nuremberg - Berlin : VDE VERLAG - 2025, Art. PP098, S. 1597-1604

### **Sauer, Christoph; Rinne, Christian; Wolter, Martin**

Development of an instantaneous reserve market and storage park based on inertia safety levels

2024 IEEE PES Innovative Smart Grid Technologies Conference Europe (ISGT-Europe) - [Piscataway, NJ]: IEEE . - 2025, insges. 5 S. ;

[Konferenz: 2024 IEEE PES Innovative Smart Grid Technologies Europe, ISGT EUROPE, Dubrovnik, Croatia, 14-17 October 2024]

### **Teshale, Adisu; Burkhardt, Yves; Leidhold, Roberto**

Analysis of common-mode current in three-phase 4-wire PM synchronous motor with an improved neutral filter topology

Energy Conversion Congress & Expo Europe 2025 (ECCE Europe) - [Piscataway, NJ]: IEEE, insges. 6 S. ;

[Kongress: 2025 Energy Conversion Congress & Expo Europe, ECCE Europe, Birmingham, United Kingdom, 01-04 September 2025]

**Wolter, Martin; Meshkov, Denys; Mischenko, Mykyta**

Studying the energy systems state in modern megacities provided total transition to electric vehicles  
Decarbonization of Transport Energy Installations in the Context of Sustainable Development Strategies , 1st ed.  
2025. - Cham : Springer Nature Switzerland ; Marchenko, Andrii, S. 77-94 - (Studies in systems, decision and control\$volume 635)

**NICHT BEGUTACHTETE BUCHBEITRÄGE**

**Schallschmidt, Thomas; Stamann, Mario; Dolg, Christoph; Leidhold, Roberto**

Development of an ultra low speed direct driven electrical machine  
Elektromechanische Antriebssysteme 2025 - Berlin : VDE VERLAG GMBH, S. 121-127 ;  
[Tagung: 10. Fachtagung (VDE OVE), München, 8. und 9. Oktober 2025]

**Stamann, Mario; Dolgirev, Juri; Hieke, Sebastian; Leidhold, Roberto**

Simple production of micro-drives using plastic bonded rotor magnets and concentrated stator windings  
IKMT 2025 - Berlin : VDE VERLAG GMBH, S. 80-86 ;  
[Tagung: IKMT 2025, 14. GMM/ETG-Fachtagung, Stuttgart, 18.-19. September 2025]

**DISSERTATIONEN**

**Rodrigues Lautert, Renata; Wolter, Martin [AkademischeR BetreuerIn]**

Grid and system-oriented use of flexibility provided by energy communities  
Barleben: docupoint GmbH, Dissertation Otto-von-Guericke-Universität Magdeburg, Fakultät für Elektrotechnik und Informationstechnik 2025, 1 Online-Ressource (XVI, 110 Seiten, 7,99 MB) - (Res electricae Magdeburgenses; Band 103) ;  
[Literaturverzeichnis: Seite 99-106; Redaktionsschluss: März 2025]

## 1. LEITUNG

Prof. Dr.-Ing. Fabian Lurz (Geschäftsführender Leiter)

Prof. Dr.-Ing. Thilo Pionteck

Prof. Dr. rer. nat. Andreas Wendemuth

apl. Prof. Dr.-Ing. habil. Ayoub Al-Hamadi

Dr.-Ing. Martin Wilhelm

## 2. VERÖFFENTLICHUNGEN

### BEGUTACHTETE ZEITSCHRIFTENAUFsätze

**Al-Tawil, Basheer; Candemir, Adem; Jung, Magnus; Hamadi, al- Ayoub**

Mobile robot navigation with enhanced 2D mapping and multi-sensor fusion

Sensors - Basel : MDPI, Bd. 25 (2025), Heft 8, Artikel 2408, insges. 25 S.

[Imp.fact.: 3.5]

**Al-Tawil, Basheer; Jung, Magnus; Hempel, Thorsten; Al-Hamadi, Ayoub**

Multi-head attention-based framework with residual network for human action recognition

Sensors - Basel : MDPI, Bd. 25 (2025), Heft 9, Artikel 2930, insges. 18 S.

[Imp.fact.: 3.5]

**Antonecchia, Emanuele; Pagnani, Giancarlo; Nematpour, Afsaneh; Passaretti, Daniele; D'Ascenzo, Nicola; Pisante, Michele**

Assessing the effects of biostimulants on spinach through a Field-to-Lab approach for PET imaging

Smart agricultural technology - [Amsterdam]: Elsevier B.V., Bd. 12 (2025), Artikel 101298, insges. 10 S.

[Imp.fact.: 5.7]

**Chang, Weike; D'Ascenzo, Nicola; Antonecchia, Emanuele; Passaretti, Daniele; Pagnani, Giancarlo; Pisante, Michele; Xie, Qingguo**

A hybrid predictor-corrector network and spatiotemporal classifier method for noisy plant PET image classification

Physics in medicine and biology - Bristol : IOP Publ., Bd. 70 (2025), Heft 14, Artikel 145001, insges. 17 S.

[Imp.fact.: 3.4]

**Chen, Jingbin; D'Ascenzo, Nicola; Passaretti, Daniele; Lao, Hui; Hua, Yuexuan; Xie, Qingguo**

Experimental study of a large area high PDE SiPM in 0.11-  $\mu$  m CMOS process for PET applications

IEEE transactions on radiation and plasma medical sciences - New York, NY : IEEE, Bd. 9 (2025), Heft 6, S. 747-755

[Imp.fact.: 3.5]

**Düx, Daniel M; Kowal, Robert; Knull, Lucas; Schröer, Simon; Belker, Othmar; Horstmann, Dominik; Gutt, Moritz; Maune, Holger; Speck, Oliver; Wacker, Frank; Hensen, Bennet; Gutberlet, Marcel**

Flexible and wireless metasurface coils for knee and elbow MRI

European radiology experimental - [Cham]: Springer International Publishing, Bd. 9 (2025), Heft 1, Artikel 13, insges. 9 S.

[Imp.fact.: 3.6]

**Felßberg, Anna-Maria; Strazdas, Dominykas**

RELAY - Robotic EyeLink ANALysis of the EyeLink 1000 using an artificial eye

Vision - Basel : MDPI, Bd. 9 (2025), Heft 1, Artikel 18, insges. 24 S.

[Imp.fact.: 1.8]

**Hubmann, Max Joris; Nurzed, Bilguun; Hansen, Sam-Luca; Kowal, Robert; Schön, Natalie; Wenz, Daniel; Saha, Nandita; Lutz, Max; Fiedler, Thomas M; Orzada, Stephan; Winter, Lukas; Keil, Boris; Maune, Holger; Speck, Oliver; Niendorf, Thoralf**

Reproducibility of electromagnetic field simulations of local radiofrequency transmit elements tailored for 7 T MRI

Sensors - Basel : MDPI, Bd. 25 (2025), Heft 6, Artikel 1867, insges. 21 S.

[Imp.fact.: 3.5]

**Hubmann, Max Joris; Orzada, Stephan; Kowal, Robert; Anton Grimm, Johannes; Speck, Oliver; Maune, Holger**

Towards large diameter transmit coils for 7-T head imaging - a detailed comparison of a set of transmit element design concepts

NMR in biomedicine - New York, NY : Wiley, Bd. 38 (2025), Heft 5, Artikel e70030, insges. 19 S.

[Imp.fact.: 2.7]

**Kauschke, Leander; Vogt, Jonas**

Increasing public acceptance of fuel cell vehicles in Germany - a perspective on pioneer users

International journal of hydrogen energy - New York, NY [u.a.]: Elsevier, Bd. 148 (2025)

[Imp.fact.: 8.3]

**Kowal, Robert; Knull, Lucas; Hubmann, Max Joris; Vogt, Ivan; Dux, Daniel; Maier, Florian; Gutberlet, Marcel; Hensen, Bennet; Wacker, Frank; Speck, Oliver; Maune, Holger**

Impact of MRI field strengths on metasurface enhancement

IEEE journal of electromagnetics, RF and microwaves in medicine and biology - New York, NY : IEEE, Bd. 9 (2025), Heft 2, S. 126-132

[Imp.fact.: 3.2]

**Metzner, Susanne; Siegert, Ingo; Busch, Matthias; Krüger, Julia**

Music time-out with digital voice assistant - design of a music intervention to complement psychotherapeutic/psychosomatic treatment

Approaches: An Interdisciplinary Journal of Music Therapy - [Erscheinungsort nicht ermittelbar]: Approaches, Bd. 17 (2025), Heft 4, insges. 13 S.

**Mezzanotte, Paolo; Lurz, Fabian**

Topical conference on wireless sensors and sensor networks at IEEE radio and wireless week 2026 [IEEE radio & wireless week 2026]

IEEE microwave magazine / Institute of Electrical and Electronics Engineers - Piscataway, NJ : IEEE, Bd. 26 (2025), Heft 12, S. 28-29

[Imp.fact.: 2.6]

**Orzada, Stephan; Fiedler, Thomas M.; Kesting, Jan; Hubmann, Max Joris; Ladd, Mark E.**

On the measurement errors in SAR supervision introduced by directional couplers

Magnetic resonance materials in physics, biology and medicine - Heidelberg : Springer - (2025) Early Access, 8 Seiten ;

[Gesehen am 08.12.2025]

[Imp.fact.: 2.5]

**Schulz, Paul; Hempel, Thorsten; Al-Hamadi, Ayoub**

Automated 3D dataset generation for arbitrary objects

IEEE access / Institute of Electrical and Electronics Engineers - New York, NY : IEEE, Bd. 13 (2025), S. 173813 - 173831

[Imp.fact.: 3.6]

**Schulz, Paul; Hempel, Thorsten; Jung, Magnus; Hamadi, al- Ayoub**

Automating synthetic dataset generation for image-based 3D detection - a literature review

Artificial intelligence review - Dordrecht [u.a.]: Springer Science + Business Media B.V., Bd. 59 (2025), Heft 1, Artikel 8, insges. 43 S.

[Imp.fact.: 13.9]

**Simonelli, Italo; Wendemuth, Andreas**

A poisson limit for the number of sub-matrices of random binary matrices satisfying the majority rule  
Discrete applied mathematics - [Erscheinungsort nicht ermittelbar]: Elsevier, Bd. 380 (2026), S. 198-204  
[Imp.fact.: 1.1]

**Strazdas, Dominykas; Busch, Matthias; Shaji, Rijin; Siegert, Ingo; Hamadi, al- Ayoub**

Robot System Assistant (RoSA) - evaluation of touch and speech input modalities for on-site HRI and telerobotics  
Frontiers in robotics and AI - Lausanne : [Verlag nicht ermittelbar], Bd. 12 (2025), Artikel 1561188, insges. 15 S.  
[Imp.fact.: 3.0]

**Teckentrup, Vanessa; Ludwig, Mareike; Seibt, Janis; Hartig, Renée; Preißl, Hubert; Schuppert, Mark; Avdievich, Nikolai I; Scheffler, Klaus; Priovoulos, Nikos; Ehses, Maik; Poser, Benedikt A; Wiggins, Christopher J; Trautner, Peter; Honerbach, Walter; Jacobs, Heidi; Speck, Oliver; Hämmerer, Dorothea; Kroemer, Nils B.**

Assessing a stimulator modification for simultaneous noninvasive auricular vagus nerve stimulation and MRI  
Journal of neuroimaging - Berlin [u.a.]: Wiley-Blackwell, Bd. 35 (2025), Heft 6, Artikel e70098, insges. 17 S.  
[Imp.fact.: 2.3]

**Wang, Huibin; Nienaber, Sören; Dinges, Laslo; Hamadi, al- Ayoub**

AI-based bi-modal fusion system for automated clinical pain monitoring  
Computers in biology and medicine - Amsterdam [u.a.]: Elsevier Science, Bd. 198 (2025), Heft Part B, Artikel 111260, insges. 16 S.  
[Imp.fact.: 6.3]

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## DISSERTATIONEN

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Prof. Dr. rer. nat. Christoph Hoeschen (geschäftsführender Leiter)

Prof. Dr.-Ing. Marco Leone

Prof. Dr. rer. nat. Georg Rose

Prof. Dr.-Ing. Ralf Vick

Prof. Dr. Matthias Wapler

Dr.-Ing. Mathias Magdowski

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