

Publikationsbericht 2007

**Institut für Grundlagen der Elektrotechnik und
Elektromagnetische Verträglichkeit**



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1. Leitung

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2. Hochschullehrer

Prof. Dr. rer. nat. habil. Jürgen Nitsch
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3. Veröffentlichungen

Originalartikel in begutachteten internationalen Zeitschriften

Gronwald, Frank; Nitsch, Jürgen; Glüge, S.

On network representations of antennas inside resonating environments
In: Advances in radio science. - Katlenburg-Lindau: Copernicus, Bd. 5.2007, S. 157-162; [Link unter URL](#)

Kochetov, Sergey V. ; Wollenberg, Günter

Stable and effective full-wave PEEC models by full-spectrum convolution macromodeling
In: Institute of Electrical and Electronics Engineers: IEEE transactions on electromagnetic compatibility. - New York, NY: Inst., Bd. 49.2007, 1, S. 25-34; [Link unter URL](#)
[Imp.fact.: 0.770]

Leone, Marco

Closed-form expressions for the electromagnetic radiation of microstrip signal traces
In: Institute of Electrical and Electronics Engineers: IEEE transactions on electromagnetic compatibility. - New York, NY: Inst., Bd. 49.2007, 3, S. 322-328; [Link unter URL](#)
[Imp.fact.: 0.770]

Nitsch, Jürgen; Tkachenko, Sergey V.

Propagation of current waves along quasi-periodic thin-wire structures - taking radiation losses into account
In: The Radio science bulletin. - Gent, Bd. 322.2007, S. 19-40

Poljak, Dragon; Rachidi, Farhad; Tkachenko, Sergey V.

Generalized form of telegrapher's equations for the electromagnetic field coupling to finite-length lines above a lossy ground
In: Institute of Electrical and Electronics Engineers: IEEE transactions on electromagnetic compatibility. - New York, NY: Inst., Bd. 49.2007, 3, S. 689-697; [Link unter URL](#)
[Imp.fact.: 0.770]

Válek, Martin; Leone, Marco

Estimation of radiated fields of small horizontal submodules based on a lumped-element model
In: Radioengineering. - Prague, Bd. 15.2007, 4, S. 9-15

Originalartikel in begutachteten nationalen Zeitschriften

Hoffmann, Detlef; Leone, Marco

EMV-gerechtes Board-Design - Entwurf gegen Abstrahlung
In: Design & Elektronik. - Poing: WEKA-Fachmedien, Bd. 6.2007, S. 78-80

Rehbein, Wilhelm; Schulze, Hans-Peter; Storr, Manfred

Influence of organic additives in hydrocarbon based dielectric fluids for spark erosion
In: Nonconventional technologies review. - la,si: Ed. PIM, 2, S. 99-104, 2007

Schulze, Hans-Peter; Leone, Marco; Kröning, Oliver; Schätzing, Wolfgang

Simulation of thermal effects for electrical discharge machining
In: Nonconventional technologies review. - la,si: Ed. PIM, 1, S. 103-108, 2007

Herausgeberschaften

Rachidi, Farhad; Tkachenko, Sergey V.

Electromagnetic field interaction with transmission lines - from classical theory to HF radiation effects. - Advances in electrical and electronic engineering; 5; Southampton: WIT; 1 v.: Ill; 23cm, 2007

Buchbeiträge

Al-Hamid, Moawia; Schulze, Steffen; Garbe, Heyno; Nitsch, Jürgen

The impact of loading on the occurrence of high order modes in TEM waveguides
In: Trudy Simpoziuma // 7-j Mezhdunarodnyj Simpozium po °Elektromagnitnoj Sovmestivosti i °Elektromagnitnoj °Ekologii // VII International Symposium on Electromagnetic Compatibility and Electromagnetic Ecology, insges. 4 S., 2007
[International Symposium on Electromagnetic Compatibility and Electromagnetic Ecology; 7 (Saint-Petersburg): 2007.06.26-29]

Casanueva, Rosario; Schulze, Hans-Peter; Azcondo, F. J. ; Leone, Marco

Fuentes de alimentación de electroerosión - aplicaciones y propuestas
In: Proceedings of the 2nd Manufacturing Engineering Society International Conference. - Madrid, insges. 8 S., 2007
[Manufacturing Engineering Society International Conference; 2(Madrid): 2007.07.09-11]

Döbbelin, Reinhard; Herms, Ronny; Teichert, Christian; Schätzing, Wolfgang; Lindemann, Andreas

Analysis methods and design of transformers with low leakage inductance for pulsed power applications
In: EPE 2007. - Brussels, Belgium: EPE Association, insges. 1 S.
[European Conference on Power Electronics and Applications; 12 (Aalborg): 2007.09.02-05]

Kochetov, Sergey V. ; Wollenberg, Günter

Circuit based full-wave models for nonuniform line structures created with the method of partial elements
In: Ultra-wideband, short-pulse electromagnetics 7. - New York: Springer, S. 89-96, 2007
[UWB-SP Conference; 7 (Magdeburg): 2004.07.12-16]

Kochetov, Sergey V. ; Wollenberg, Günter; Leone, Marco

PEEC-models based on dyadic green's functions for structures in layered media
In: Trudy Simpoziuma // 7-j Mezhdunarodnyj Simpozium po °Elektromagnitnoj Sovmestivosti i °Elektromagnitnoj °Ekologii // VII International Symposium on Electromagnetic Compatibility and Electromagnetic Ecology, S. 179-182,

2007

[International Symposium on Electromagnetic Compatibility and Electromagnetic Ecology; 7 (Saint-Petersburg): 2007.06.26-29]

Nitsch, Jürgen; Korovkin, Nikolay; Bichkov, Yuri; Scherbakov, Sergey; Demkin, Sergey; Haimin, Alexey

Analytical-numerical calculation of transient processes in nonlinear networks

In: Ultra-wideband, short-pulse electromagnetics 7. - New York: Springer, S. 180-187, 2007

[UWB-SP Conference; 7 (Magdeburg): 2004.07.12-16]

Nitsch, Jürgen; Korovkin, Nikolay; Solovyeva, E.

Suppression of two-tone disturbances in nonlinear circuits

In: Ultra-wideband, short-pulse electromagnetics 7. - New York: Springer, S. 188-196, 2007

[UWB-SP Conference; 7 (Magdeburg): 2004.07.12-16]

Nitsch, Jürgen; Solovyeva, Elena; Tkachenko, Sergey; Korovkin, Nikolay; Krauthäuser, Hans-Georg

Macro-modelling of nonlinear effects in the reverberation chamber under high-frequency excitation

In: The proceedings // 7-th International Symposium on Electromagnetic Compatibility and Electromagnetic Ecology, June 26 - 29, 2007, Saint-Petersburg. - S.-Peterburg, S. 92-94

[EMC; 7 (Saint-Petersburg): 2007.06.26-29]

Nitsch, Jürgen; Tkachenko, Sergey

A lumped excitation of a vertical half-circular loop above conducting ground

In: Proceedings of the 2007 International Conference on Electromagnetics in Advanced Applications, ICEAA '07.

- Torino: COREP, insges. 4 S.

[International Conference on Electromagnetics in Advanced Applications; (Torino): 2007.09.17-21]

Nitsch, Jürgen; Tkachenko, Sergey

Newest developments in transmission-line theory and applications

In: Ultra-wideband, short-pulse electromagnetics 7. - New York: Springer, S. 21-32, 2007

[UWB-SP Conference; 7 (Magdeburg): 2004.07.12-16]

Rehbein, Wilhelm; Schulze, Hans-Peter; Storr, Manfred; Wollenberg, Günter

Influence of additives in dielectric fluids for electrical discharge machining

In: Proceedings of the 15th International Symposium on Electromachining. - Lincoln, Neb. : Industrial and Management Systems Engineering, Univ. of Nebraska-Lincoln, S. 99-104, 2007

[International Symposium on Electromachining; 15 (Pittsburgh, Pa.): 2007.04.23-27]

Schulze, Hans-Peter; Burkert, Stephan; Wollenberg, Günter; Leone, Marco

Improvement of the hole and micro hole sinkings using a hybrid machining process

In: International Conference on Computer Aided Production Engineering <20, 2007, Glasgow>: Proceedings of the 20th International Conference on Computer-Aided Production Engineering (CAPE 2007), 6-8 June 2007, Glasgow, Scotland, UK. - Glasgow: Glasgow Caledonian University, S. 162-166

[International Conference on Computer-Aided Production Engineering; 20 (Glasgow, Scotland, UK): 2007.06.06-08]

Schulze, Hans-Peter; Wollenberg, Günter; Matzen, Stefan; Mecke, Katharina

Origins of gas bubbles in a small work during the micro-edm

In: Proceedings of the 15th International Symposium on Electromachining. - Lincoln, Neb. : Industrial and Management Systems Engineering, Univ. of Nebraska-Lincoln, S. 217-220, 2007

[International Symposium on Electromachining; 15 (Pittsburgh, Pa.): 2007.04.23-27]

Thamm, Sven; Kochetov, Sergey V. ; Wollenberg, Günter; Leone, Marco

Alternative peec modeling with partial reluctances and capacitances for power electronics applications

In: Trudy Simpoziuma // 7-j Mezhdunarodnyj Simpozium po °Elektromagnitnoj Sovmestimosti i °Elektromagnitnoj

°Ekologii // VII International Symposium on Electromagnetic Compatibility and Electromagnetic Ecology, S. 56-59,

2007

[International Symposium on Electromagnetic Compatibility and Electromagnetic Ecology; 7 (Saint-Petersburg): 2007.06.26-29]

Thamm, Sven; Kochetov, Sergey V. ; Wollenberg, Günter; Leone, Marco

Alternative peec modeling with partial reluctances and capacitances for power electronics applications

In: The proceedings // 7-th International Symposium on Electromagnetic Compatibility and Electromagnetic Ecology, June 26 - 29, 2007, Saint-Petersburg. - S.-Peterburg, S. 56-59

[EMC; 7 (Saint-Petersburg): 2007.06.26-29]

Thamm, Sven; Kochetov, Sergey V. ; Wollenberg, Günter; Leone, Marco

PEEC modeling for EMC-relevant simulations of power electronics

In: Proceedings of 17th International Conference Radioelektronika 2007. - Piscataway, NJ: IEEE Service Center, insges. 5 S.

[International Conference Radioelektronika; 17 (Brno): 2007.04.24-25]

Tkachenko, Sergey V. ; Rachidi, Farhad; Nitsch, Jürgen

High-frequency electromagnetic coupling to long loaded non-uniform lines - an asymptotic approach

In: Electromagnetic field interaction with transmission lines. - Southampton: WIT, S. 155-182; Advances in electrical and electronic engineering; 5, 2007

Tkachenko, Sergey V. ; Rachidi, Farhad; Nitsch, Jürgen

High-frequency electromagnetic coupling to transmission lines - electrodynamic correction to the TL approximation

In: Electromagnetic field interaction with transmission lines. - Southampton: WIT, S. 119-154; Advances in electrical and electronic engineering; 5, 2007

Wollenberg, Günter; Schulze, Hans-Peter; Trautmann, Hans-Jürgen; Kappmeyer, Gregor

Controlled current rise for pulsed electrochemical machining

In: Proceedings of the 15th International Symposium on Electromachining. - Lincoln, Neb. : Industrial and Management Systems Engineering, Univ. of Nebraska-Lincoln, S. 335-338, 2007

[International Symposium on Electromachining; 15 (Pittsburgh, Pa.): 2007.04.23-27]

Artikel in Kongressbänden

Kochetov, Sergey V. ; Wollenberg, Günter; Leone, Marco

Full-spectrum convolution macromodeling for the full-wave PEEC method

In: 23th Annual Review of Progress in Applied Computational Electromagnetics. - ACES, S. 1413-1418, 2007

[Annual Review of Progress in Applied Computational Electromagnetics; 23 (Verona, Italy): 2007.03.19-23]

Habilitationen

Krauthäuser, Hans Georg

Grundlagen und Anwendungen von Modenverwirbelungskammern. - Magdeburg, Univ., Fak. für Elektrotechnik und Informationstechnik, Habil.-Schr., 2007; [Link unter URL](#); XVIII, 289 S.: Ill., graph. Darst.; 30 cm