

AEÜ

International Journal of Electronics and Communications

Contents

Special Papers

Mini Special Issue on the 2004 International Symposium on Signals, Systems, and Electronics (ISSSE'04) in Linz, Austria

A. Springer, M. Huemer _____ 267

Novel logarithmically periodic planar antennas for broadband polarization diversity reception

O. Klemp, M. Schultz, H. Eul _____ 268

Highly predictable execution support for critical applications with HARETICK kernel

M. V. Micea, V. I. Cretu _____ 278

Modeling of time-interleaved ADCs with nonlinear hybrid filter banks

C. Vogel, G. Kubin _____ 288

Combined Galileo/GPS architecture for enhanced sensitivity reception

A. Schmid, A. Neubauer, H. Ehm, R. Weigel, N. Lemke, G. Heinrichs, J. Winkel,

J. A. Ávila-Rodríguez, R. Kaniuth, T. Pany, B. Eissfeller, G. Rohmer, M. Overbeck _____ 297

Regular Papers

Time jitter analysis of 1-bit sigma-delta synthesizer

A. Avi, L. Israel _____ 307

A 22.5 MHz current-mode KHN-biquad using differential voltage current conveyor and grounded passive elements

M. A. Ibrahim, S. Minaei, H. Kuntman _____ 311

Letters

Effect of dormant registration on performance of mobility management based on IP paging in wireless data networks

J. Lee, H. Lee, D.-H. Cho _____ 319

A decision aided channel estimation scheme

A. Rizaner, H. Amca, K. Hacıoğlu, A. H. Ulusoy _____ 324

◆ www.elsevier.de/aeue

ISSN 1434-8411
Int. J. Electron. Commun. (AEÜ)
59(2005)5 · pp. 267-328

5/2005
Volume 59



International Journal of Electronics and Communications

Founded in 1947 as **Archiv der Elektrischen Übertragung (A.E.Ü.)**

In affiliation with **ITG** INFORMATIONSTECHNISCHE
GESELLSCHAFT IM VDE

Aims & Scope

AEÜ is an international scientific journal which publishes both original works and invited tutorials. The journal's scope covers all aspects of theory and design of circuits, systems and devices for electronics, signal processing, and communication, including:

- signal and system theory, digital signal processing
- network theory and circuit design
- information theory, communication theory and techniques, modulation, source and channel coding
- switching theory and techniques, communication protocols
- optical communications
- microwave theory and techniques, radar, sonar
- antennas, wave propagation

AEÜ publishes full papers and letters with very short turn around time but a high standard review process. Review cycles are typically finished within eight weeks by application of modern electronic communication facilities.

Editor-in-Chief:

Prof. Dr.-Ing. Ralf Lehnert
Department of Electrical Engineering and Information Techniques,
Chair for Telecommunications, Technische Universität Dresden
01062 Dresden, Germany
Phone: +49 351 463-33942, Fax: +49 351 463-37163,
e-mail: aeue@ifn.et.tu-dresden.de

Editorial Board:

Johann F. Böhme, Bochum, Germany
Wolfgang Granzow, Nürnberg, Germany
Rolf Johannesson, Lund, Schweden
Akhlesh Lakhtakia, University Park, PA, USA
Wolfgang Mecklenbräuer, Wien, Austria
R. D. van der Mei, Amsterdam, The Netherlands
Ulrich Nickel, Wachtberg-Werthhoven, Germany
Tetsuo Nishi, Fukuoka, Japan
Josef A. Nossek, München, Germany
Roland Raschke, Darmstadt, Germany
Masoud Salehi, Boston, MA, USA
Wolfgang Schwarz, Dresden, Germany
Jurij Tasic, Ljubljana, Slovenia
Lothar Thiele, Zürich, Switzerland
Edgar Voges, Dortmund, Germany
Robert Weigel, Erlangen, Germany

Honorary members:

Wolfgang Harth, München, Germany
H. Marko, München, Germany
F. Rühmann, Karlsruhe, Germany
R. Schehrer, Dortmund, Germany
H.-G. Unger, Braunschweig, Germany

IMPRESSUM

Publisher: Elsevier GmbH, Office Jena, P.O. Box 100537,
07705 Jena, Germany.

Phone: +49(0)3641/62 63, Fax: +49(0)3641/62 65 00,
E-mail: journals@elsevier.com

Advertisement Department: Elsevier GmbH, Office Jena, Attn.:
Cora Grotzke, Löbdergraben 14a, 07743 Jena, Germany.
Phone: +49(0)3641/62 64 45, Fax: +49(0)3641/62 64 21;
E-mail: c.grotzke@elsevier.com

Advertising rates: At present the price list of January 1, 2005
is effective.

Terms of delivery (2005): Volume 59 (1 volume consisting of
8 issues)

Subscription rate* (2005):

Region	Institutional	Single issue
D, A, CH, FL ¹	665.00 EUR	100.00 EUR
Rest of Europe	736.00 EUR	100.00 EUR
Japan	98,000.00 YEN	14,700.00 YEN
USA/Rest of the world	789.00 USD	119.00 USD

¹ Germany, Austria, Switzerland, Liechtenstein

*All prices are suggested list prices and may be subject to change without notice. Prices include postage by surface mail and exclude VAT. VAT is effective according to international tax regulations as valid on the day of invoicing. Special airmail rates are available on request. Customers in EU countries are requested to state their VAT identification number if applicable. Subscription orders at a personal rate must be addressed directly to the publisher and must include the recipient's name and residential address. An institutional or business address is only acceptable, if the institute or company has a subscription as well. Payment of personal subscribers has to be made by personal cheque or by credit card (Eurocard/Mastercard, VISA or American Express; please note card-No. and expiry date).

Reduced rates for members of Deutsche Physikalische Gesellschaft, Gesellschaft für angewandte Mathematik und Mechanik, Verband Deutscher Elektrotechniker (VDE; incl. Informationstechnische Gesellschaft (ITG) im VDE) are available on request.

The publisher reserves the right to issue additional volumes during the course of the year.

Supplements and/or cumulative indexes are included in the subscription rates.

Termination of subscriptions: Subscriptions not entered specifically for one year only will be renewed automatically unless cancelled by October 31.

Subscriptions: Please send your order to Elsevier GmbH, Office Jena, Subscription Service, P.O. Box 100537, D-07705 Jena, Germany.
Phone: +49(0)3641/62 64 47,
Fax: +49(0)3641/62 64 43, E-mail: k.ernst@elsevier.com

Bank Accounts:

Deutsche Bank Jena,
Account No. 390 7656 00 (BLZ 820 700 00);
IBAN: DE76 8207 0000 0390 7656 00;
BIC/SWIFT: DEUTDE8E
or
Postbank Leipzig,
Account No. 0 149 249 903 (BLZ 860 100 90);
IBAN: DE48 8601 0090 0149 2499 03;
BIC/SWIFT: PBNKDEFF
Full details must accompany the payment.

Copyright: Please refer to the Copyright Notice in this issue.

Typesetting: Macmillan India Ltd., Bangalore-25.

Printing and binding: Krips.

Ⓢ As of vol. 52, number 1 (1998) the paper used in this publication meets the requirements of ANSI/NISO Z39.48-1992 (Permanence of Paper).

For detailed journal information see our home page:
<http://www.elsevier.de/aeue>

© 2005 Elsevier GmbH. All rights reserved.

This journal and the individual contributions contained in it are protected under copyright by Elsevier GmbH and the following terms and conditions apply to their use:

Photocopying

Single photocopies of single articles may be made for personal use as allowed by national copyright laws. Permission of the Publisher and payment of a fee is required for all other photocopying, including multiple or systematic copying, copying for advertising or promotional purposes, resale, and all forms of document delivery. Special rates are available for educational institutions that wish to make photocopies for non-profit educational classroom use.

Permissions may be sought directly from Elsevier's Rights Department in Oxford, UK: phone: (+44) 1865 843830, fax: (+44) 1865 853333, e-mail: permissions@elsevier.com. Requests may also be completed on-line via the Elsevier homepage (<http://www.elsevier.com/locate/permissions>).

In the USA, users may clear permissions and make payments through the Copyright Clearance Center, Inc., 222 Rosewood Drive, Danvers, MA 01923, USA; phone: (+1) (978) 7508400, fax: (+1) (978) 7504744, and in the UK through the Copyright Licensing Agency Rapid Clearance Service (CLARCS), 90 Tottenham Court Road, London W1P 0LP, UK; phone: (+44) 20 7631 5555; fax: (+44) 20 7631 5500. Other countries may have a local reprographic rights agency for payments.

Derivative Works

Subscribers may reproduce tables of contents or prepare lists of articles including abstracts for internal circulation within their institutions. Permission of the Publisher is required for resale or distribution outside the institution.

Permission of the Publisher is required for all other derivative works, including compilations and translations.

Electronic Storage or Usage

Permission of the Publisher is required to store or use electronically any material contained in this journal, including any article or part of an article.

Except as outlined above, no part of this publication may be reproduced, stored in a retrieval system or transmitted in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, without prior written permission of the publisher.

Address permissions requests to: Elsevier Rights Department, at the fax and e-mail addresses noted above.

Notice

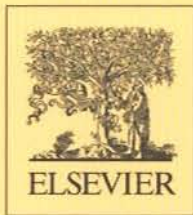
No responsibility is assumed by the Publisher for any injury and/or damage to persons or property as a matter of products liability, negligence or otherwise, or from any use or operation of any methods, products, instructions or ideas contained in the material herein. Because of rapid advances in the medical sciences, in particular, independent verification of diagnoses and drug dosages should be made.

Although all advertising material is expected to conform to ethical (medical) standards, inclusion in this publication does not constitute a guarantee or endorsement of the quality or value of such product or of the claims made of it by its manufacturer.

Papers may be sent to the Editor-in-Chief or to the Associate Editors.

Instructions for Authors - see: www.elsevier.de/aeue

Ⓢ As of vol. 52, number 1 (1998) the paper used in this publication meets the requirements of ANSI/NISO Z39.48-1992 (Permanence of Paper).



Announcement:

Papers to be published in issue 6 (excerpt of the table of contents):

Linear tomographic inversion of stepped-frequency GPR data: experimental results on two test-sites

F. Soldovieri, G. Leone, A. Liseno, F. Tartaglione, R. Pierri

Characterization of building materials for propagation modelling: frequency and time responses

F. Sagnard, G. El Zein

Size-dependent Bruggeman approach for dielectric–magnetic composite materials

A. Lakhtakia, T. G. Mackay

Elimination of rotation axes offset error in antenna radiation pattern measurements using spherical wave expansion

P. K. Koivisto

Table of Contents also available via e-mail by free-of-charge **ToC Alert Service**.

Register now: <http://www.elsevier.de/aeue>

The journal is abstracted/indexed in:

Cambridge Scientific Abstracts/Electronics and Communications Abstracts; Cambridge Scientific Abstracts/Electronics and Communications Compendex Plus; Current Contents/Engineering, Computing & Technology; Current Contents/Physical, Chemical & Earth Sciences; Electrical & Electronics Abstracts (INSPEC); Research Alert; Science Citation Index (SCI); SciExpanded; SciSearch; Scopus; TEMA – Technik und Management; ZDEE – Elektrotechnik, Elektronik, Informationstechnik