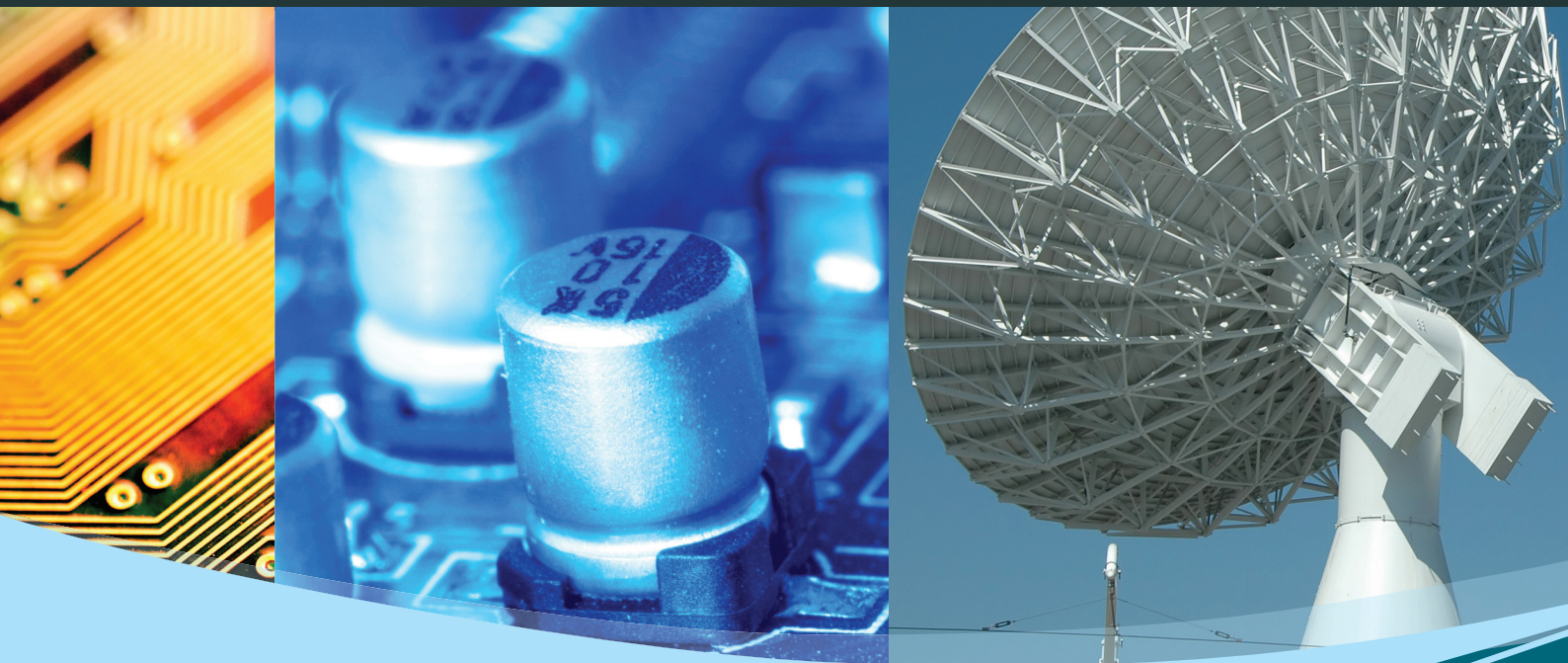


INTERNATIONAL JOURNAL OF
**MICROWAVE
AND WIRELESS
TECHNOLOGIES**

cambridge.org/mrf



EuMA

**CAMBRIDGE
UNIVERSITY PRESS**

INTERNATIONAL JOURNAL OF MICROWAVE AND WIRELESS TECHNOLOGIES

EDITOR-IN-CHIEF

Prof. Francisco Medina-Mena,

Professor of Electromagnetism
Department of Electronics &
Electromagnetism
University of Sevilla
Av. Reina Mercedes s/n
41012-Seville, Spain
medina@us.es

EDITORIAL BOARD

Prof. Luigi Boccia, University of Calabria,
Italy

Prof. Paolo Colantonio, Università di Tor
Vergata Roma, Italy

Prof. Alessandra Costanzo, University of
Bologna, Italy

Prof. Philippe Ferrari, IMEP Grenoble,
France

Prof. Gaspare Galati, Università di Tor
Vergata Roma, Italy

Prof. Alessandro Galli, Sapienza
University of Rome, Italy

Prof. Antonio García-Pino, University of
Vigo, Spain

Prof. Anthony Ghiotto, IMS Laboratory,
Talence, France

Prof. J. Sebastián Gómez-Díaz,
UC Davis, USA

Prof. Shiban K Koul, Indian Institute of
Technology Delhi, India

Prof. Krzysztof S Kulpa, Warsaw
University of Technology, Poland

Prof. Asher Madjar, M2Microwaves LLC,
Philadelphia, USA and Tel Aviv University,
Israel

Prof. Giuseppina Monti, University of
Salento, Italy

Dr. Steve Nightingale, Cobham, UK

Prof. Marco Pasian, University of Pavia,
Italy

Prof. Dimitra Psychogiou, University
College Cork and Tyndall National
Institute, Ireland

Dr. Xianming Qing, Institute for
Infocomm Research, Singapore

Prof. Ruediger Quay, Fraunhofer
Institute Freiburg, Germany

Prof. Raymond Quéré, XLIM-University
of Limoges, France.

Dr. Fred Schindler, RFMD, USA

Prof. Dominique Schreurs, KU Leuven,
Belgium

Prof. Almudena Suárez, Universidad de
Cantabria, Spain

Prof. Luciano Tarricone, University of
Salento, Italy

Prof. Huei Wang, NTU, Taiwan

Prof. Hung-Wei Wu, Feng Chia
University, Taiwan

Prof. Felix Yanovsky, National Aviation
University, Ukraine

Prof. Haoshen Zhu, South China
University of Technology, China

Scope of the journal

International Journal of Microwave and Wireless Technologies is interdisciplinary and application oriented, providing a platform for the microwave industry. Subjects covered include: applied electromagnetic field theory, components, analogue and mixed-signal circuits, systems, optical-microwave interactions, electromagnetic compatibility, industrial applications, biological effects and medical applications.

Submission of Manuscripts

All manuscripts should be submitted online at <http://mc.manuscriptcentral.com/mrf>. Please consult the instructions for authors at <http://cambridge.org/mrf>

Subscriptions

International Journal of Microwave and Wireless Technologies (ISSN 1759-0787) is published ten times a year in February, March, April, May, June, July, September, October, November and December. The subscription price (excluding VAT) of Volume 14 (2022) for institutional subscribers is £880 net (US \$1650 in the USA, Canada and Mexico). Members of the European Microwave Association receive free online access to the Journal. Single parts are £101 (US \$190 in the USA, Canada and Mexico). Orders, which must be accompanied by payment, may be sent to a bookseller, subscription agent or direct to the publisher: Cambridge University Press, Journals Fulfilment Dept, UPH, Shaftesbury Road, Cambridge CB2 8BS, UK; or in the USA, Canada and Mexico: Cambridge University Press, Journals Fulfillment Department, 1 Liberty Plaza, Floor 20, New York, NY, 10006, USA. EU subscribers (outside the UK) who are not registered for VAT should add VAT at their country's rate. VAT registered subscribers should provide their VAT registration number. Japanese prices for institutions are available from Kinokuniya Company Ltd, P.O. Box 55, Chitose, Tokyo 156, Japan.

Advertising

For all parts of the world except USA, Canada and Mexico to Journals Advertising: ad_sales@cambridge.org
Address enquiries in the USA, Mexico and Canada only to: journals_advertising@cup.org

Copying

This journal is registered with the Copyright Clearance Center, 222 Rosewood Drive, Danvers, MA 01923,

USA. Organizations in the USA who are also registered with C.C.C. may therefore copy material (beyond the limits permitted by sections 107 and 108 of U.S. Copyright law) subject to promotional or commercial purposes. Code 0266-4674/2018.

ISI Tear Sheet Service, 3501 Market Street, Philadelphia, PA 19104, USA, is authorized to supply single copies of separate articles for private use only.

Organizations authorized by the Copyright Licensing Agency may also copy material subject to the usual conditions. For all other use, permission should be sought from Cambridge or the American Branch of Cambridge University Press.

Internet Access

This journal is included in Cambridge Core and can be found at cambridge.org/mrf. For further information on other Press titles access <http://www.cambridge.org>

© Cambridge University Press and the European Microwave Association 2022
Cambridge University Press, UPH,
Shaftesbury Road, Cambridge CB2 8BS,
United Kingdom 1 Liberty Plaza, Floor 20,
New York, NY, 10006, USA USA 477
Williamstown Road, Port Melbourne,
VIC 3207, Australia Ruiz de Alarcón 13,
28014 Madrid, Spain Dock House,
The Waterfront, Cape Town 8001,
South Africa