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za mikroelektroniko,
elektronske sestavne
in materiale

Society for
Microelectronics,
Electronic Components
and Materials



Strokovno društvo za mikroelektroniko,
elektronske sestavne dele in materiale

Society for Microelectronics,
Electronic Components and Materials

50th International
Conference 2014
on Microelectronics, Devices and Materials
October 8 – 10, 2014, Ljubljana, SLOVENIA



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Annual subscription rate is 100 EUR, separate issue is 25 EUR. MIDEM members and Society sponsors receive current issues for free. Scientific Council for Technical Sciences of Slovenian Research Agency has recognized Informacije MIDEM as scientific Journal for microelectronics, electronic components and materials. Publishing of the Journal is cofinanced by Slovenian Book Agency and by Society sponsors. Scientific and professional papers published in the journal are indexed and abstracted in COBISS and INSPEC databases. The Journal is indexed by ISI® for Sci Search®, Research Alert® and Material Science Citation Index™. | Letna naročnina je 100 EUR, cena posamezne številke pa 25 EUR. Člani in sponzorji MIDEM prejemajo posamezne številke brezplačno. Znanstveni svet za tehnične vede je podal pozitivno mnenje o reviji kot znanstveno-strokovni reviji za mikroelektroniko, elektronske sestavne dele in materiale. Izdajo revije sofinancirajo JAKRS in sponzorji društva. Znanstveno-strokovne prispevke objavljene v Informacijah MIDEM zajemamo v podatkovne baze COBISS in INSPEC. Prispevke iz revije zajema ISI® v naslednje svoje produkte: Sci Search®, Research Alert® in Materials Science Citation Index™. Po mnenju Ministrstva za informiranje št.23/300-92 se šteje glasilo Informacije MIDEM med proizvode informativnega značaja.

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Editorial | Uvodnik

Dear Reader,

This issue brings three invited papers of distinguished lecturers at the 50th International Conference on Microelectronics, Devices and Materials – MIDEM 2014 that took place in Ljubljana, Slovenia in Oct 2014. They provide insights to the state-of-the-art achievements in three important areas of electronics: integrated sensors, embedded and cyber-physical systems and reliability of electron devices. The MIDEM 2014 conference was a big success and we expose the golden (50th) conference on the front cover page and with an opening speech at the Celebration Academy MIDEM-50.

An Editorial of the last issue should reveal some statistics. In 2014 we have received more than 150 manuscripts, out of which 36 have already been accepted for publication (4 review scientific papers, 26 original scientific papers and 6 Professional Articles), whereas more than 90 were rejected and the remaining ones are still under review. Despite a well defined title of our journal and on-line instructions for authors we receive each year a few manuscripts that are out of our journal's scope. The success rate of 30% in 2014 reflects a good foundation for the long-term quality growth of the journal. I would like to sincerely thank all reviewers for their valuable contribution to the journal quality and growing reputation. Commitment of Editorial Board Members to high quality review process paths a way toward a better profiling of our journal.

Institutional support for our journal has been decreasing in the last two years. To cover publishing costs and to secure continuation of quality growth we need to introduce page charges for papers published in the journal. We will continue to provide a free electronic access to all papers published in *Informacije MIDEM* –Journal of Microelectronics, Electronics Components and Materials (since 1986).

Let the last December days bring festive atmosphere, joy and peace in each home, office or research laboratory. It is the time to look back, but also to look ahead ambitiously and make plans for the coming year. This brings me to editorial wishes for 2015. As a part of your success we look forward to receiving your next manuscript(s) in our inbox (editor@midem-drustvo.si).

Merry Christmas and a Happy and Prosperous New Year!

Prof. Marko Topič
Editor-in-Chief

P.S.

All papers published in *Informacije MIDEM* –Journal of Microelectronics, Electronics Components and Materials (since 1986) can be access electronically for free at <http://midem-drustvo.si/journal/home.aspx>. A search engine is provided to use it as a valuable resource for referencing previous published work and to give credit to the results achieved from other groups.

MIDEM 2015

51st INTERNATIONAL CONFERENCE ON MICROELECTRONICS, DEVICES AND MATERIALS WITH THE WORKSHOP ON TERAHERTZ AND MICROWAVE SYSTEMS



Announcement and Call for Papers

September 23rd – 25th, 2015
Brdo pri Kranju (tbc), Slovenia

ORGANIZER: **MIDEM Society** - Society for Microelectronics, Electronic Components and Materials, Ljubljana, Slovenia

CONFERENCE SPONSORS: Slovenian Research Agency; IMAPS, Slovenian Chapter; IEEE, Slovenian Section; Zavod TC SEMTO.

GENERAL INFORMATION

The 51th International Conference on Microelectronics, Electronic Components and Devices with the Workshop on Terahertz and Microwave Systems continues a successful tradition of the annual international conferences organised by the MIDEM Society, the Society for Microelectronics, Electronic Components and Materials. The conference will be held at Brdo pri Kranju, Slovenia, well-known resort and conference centre, from **SEPTEMBER 23rd – 25th, 2015**.

Topics of interest include but are not limited to:

- Novel monolithic and hybrid circuit processing techniques,
- New device and circuit design,
- Process and device modelling,
- Semiconductor physics,
- Sensors and actuators,
- Electromechanical devices, Microsystems and nano-systems,

- Nanoelectronics
- Optoelectronics,
- Photonics,
- Photovoltaic devices,
- New electronic materials and applications,
- Electronic materials science and technology,
- Materials characterization techniques,
- Reliability and failure analysis,
- Education in microelectronics, devices and materials.

ABSTRACT AND PAPER SUBMISSION:

Prospective authors are cordially invited to submit up to 1 page abstract before **May 1st, 2015**. Please, identify the contact author with complete mailing address, phone and fax numbers and e-mail address.

After notification of acceptance (**June 15th, 2015**), the authors are asked to prepare a full paper version of six pages maximum. Papers should be in black and white. Full paper deadline in PDF and DOC electronic format is: **August 31st, 2015**.

IMPORTANT DATES:

- Abstract deadline: **May 1st, 2015** (1 page abstract or full paper)
- Notification of acceptance: **June 15th, 2015**
- Deadline for final version of manuscript: **August 31st, 2015**

Invited and accepted papers will be published in the conference proceedings.

Detailed and updated information about the MIDEM Conferences is available at
<http://www.midem-drustvo.si/> under Conferences.



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