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MIPRO - path to knowledge and innovation

## **MIPRO 2018**

# **Opening ceremony**

# **Business Day**

## Panels - CRO

- RT1 Uvođenje 5G mreža u RH
- RT2 Industrija 4.0 i obrazovanje
- RT3 eOkoliš ICT u funkciji zaštite okoliša
- RT4 Megatrends, Promising Technologies and Raising Questions in the Industrial Field

# **Conferences**

- EE Engineering Education
- SSE Software and Systems Engineering
- MEET Microelectronics, **Electronics and Electronic** Technology
- DS-DC Data and Life Sciences supported by Distributed Computing
- CTI Telecommunications & Information
- CE Computers in Education
- CTS Computers in Technical Systems
- CIS Intelligent Systems
- ISS Information Systems Security
- miproBIS Business Intelligence **Systems**
- DE-GLGPS Digital Economy and Government/Local Government/Public Services
- SP MIPRO Junior Student **Papers**

# Innovative section

**Tutorials - CRO** 

**Company presentation - CRO** 

**Exhibition** 

#### **Event information**

#### MIPRO 2012 - Jubilee 35th International Convention

# MEET - Microelectronics, Electronics and Electronic Technology

Wednesday, 5/23/2012 3:00 PM - 6:30 PM, Nava 2, Hotel Admiral, Opatija Thursday, 5/24/2012 9:00 AM - 1:00 PM, Nava 2, Hotel Admiral, Opatija Thursday, 5/24/2012 3:00 PM - 7:00 PM, Nava 2, Hotel Admiral, Opatija Friday, 5/25/2012 9:00 AM - 1:00 PM, Camelia 1, Grand hotel Adriatic, Opatija

## **Event program**

Wednesday, 5/23/2012 3:00 PM - 6:30 PM, Nava 2, Hotel Admiral, Opatija

Chair: Mile Ivanda (Ruđer Bošković Institute, Zagreb, Croatia)

## **Invited Paper**

D. Ristic (IFN - CNR, Trento, Italy), A. Chiasera (IFN - CNR , Trento, Italy), E. Moser (University of Trento, Trento, Italy), P. Feron (ENSSAT-FOTON, Lannion, France), G. Cibiel (CNES, Toulouse, France), M. Ivanda (Institut Ruđer Bošković, Zagreb, Croatia), G. Righini (IFAC-CNR, Firenze, Italy), M. Ferrari ( IFN - CNR , Trento, Italy) **Erbium Doped Silica Microspheres for Lasing** Applications

# **Papers**

4.

M. Ivanda (Institut Rudjer Boskovic, Zagreb, Croatia), M. Balarin, O. Gamulin (Sveučilište u Zagrebu, Medicinski fakultet, Zagreb, Croatia), V. Đerek (Institut Ruđer Bošković, Zagreb, Croatia), D. Ristić (Consiglio Nazionale delle

Ricerche - Istituto di fotonica e nanotecnologie, Trento (TN), 1. Italy), S. Musić, M. Ristić, K. Furić (Ruđer Bošković Institute, Zagreb, Croatia), Z. Crnjak Orel (National Institute of Chemistry, Ljubljana, Slovenia)

Porous Silicon Prepared by Electrochemical Etching of Silicon Eptaxial Layer

V. Đerek, M. Ivanda (Institut Ruđer Bošković, Zavod za fiziku materijala, Zagreb, Croatia), M. Balarin, O. Gamulin (Medicinski fakultet u Zagrebu, Katedra za fiziku i biofiziku, Zagreb, Croatia), M. Ristić, S. Musić (Institut Ruder Bošković,

Zavod za kemiju materijala, Zagreb, Croatia), K. Furić (Institut Ruder Bošković, Zavod za fiziku materijala, Zagreb, Croatia), Z. Crnjak Orel (National Institute of Chemistry, Ljubljana,

Formation and Luminescence of P-type Porous Polycrystalline Silicon

M. Očko (Institut za Fiziku, Zagreb, Croatia), S. Žonja (Fakultet elektrotehnike i računarstva, Zagreb, Croatia), M. Ivanda (Institut Ruđer Bošković, Zagreb, Croatia)

3. Role of the Substrate and the Temperature of Deposition on the Properties of the TaxN Thin Films

S. Žonja (Fakultet elektrotehnike i računarstva, Zagreb, Croatia), M. Očko (Institut za fiziku, Zagreb, Croatia), M. Ivanda (Institut Ruđer Bošković, Zagreb, Croatia), T. Suligoj, P. Biljanović (Fakultet elektrotehnike i računarstva, Zagreb, Croatia)

On the Application of Boron and Phosphorus Heavily Doped LPCVD Polycrystalline Silicon Thin Films as Thermoelectric Materials

V. Mitsa, R. Holomb, G. Lovas (Uzhgorod National University, 5. Uzhgorod, Ukraine), M. Ivanda (Rudjer Boskovic Institute, Zagreb, Croatia), G. Rudyko, E. Gule, I. Fekeshgazi (Institute Physics of Semiconductors NASU, Kiev, Ukraine)

Instructions for Preparation of Papers.doc

MEET call for papers.pdf

Currently there are no news

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# Room Temperature Visible Luminescence in Wide Band Gap Chalcogenide Glasses

A. Berdinsky, I. Reshetnyak (Novosibirsk State Technical University, Novosibirsk, Russian Federation), J. Yoo (School of Advanced Materials Science, Sungkyunkwan University, Suwon, South Korea), E. Grayfer (Nikolaev Institute of Inorganic Chemistry, Siberian Branch of Russian Academy of Sciences, Novosibirsk, Russian Federation), V. Makotchenko

6. Sciences , Novosibirsk, Russian Federation), V. Makotchenko, V. Fedorov (Nikolaev Institute of Inorganic Chemistry, Siberian Branch of Russian Academy of Sciences, Novosibirsk, Russian Federation)

Preparation and Research in Resistive-Strain Sensor
Based on Transparent Conducting Graphene Sheets

V. Fedorov (Nikolaev Institute of Inorganic Chemistry, Siberian Branch of Russian Academy of Sciences, Novosibirsk, Russian Federation), I. Mirzaeva, S. Kozlova, E. Grayfer (Nikolaev Institute of Inorganic Chemistry, Siberian Branch of Russian Academy of Sciences, Novosibirsk, Russian

7. Federation), M. Medvedev (Samsung Advanced Institute of Technology, Suwon, South Korea)
Study of Electronic Structures of MoX2 (X = S, Se, Te):
Arguments for Interactions of Molybdenum Atoms in
Layers

M. Pejovic, N. Nesic, M. Pejovic (University of Nis, Faculty of Electronic Engineering, Nis, Serbia)

8. Investigation of Memory Effect by Measurement of Time Delay of Electrical Breakdown in Commercial Gas-filled Surge Arresters

M. Pejovic, M. Pejovic, N. Nesic (University of Nis, Faculty of Electronic Engineering, Nis, Serbia)

RADEFTs as a Sensor and Dosimeter of Gamma-Ray

9. RADFETs as a Sensor and Dosimeter of Gamma-Ray Irradiation

Thursday, 5/24/2012 9:00 AM - 1:00 PM, Nava 2, Hotel Admiral, Opatija

Chair: Željko Butković (Faculty of Electrical Engineering and Computing, Zagreb, Croatia)

#### **Papers**

3.

T. Knežević, T. Suligoj (FER, Zagreb, Croatia), A. Šakić, L. Nanver (ECTM-DIMES - TU Delft, Delft, Netherlands)

1. Modelling of Electrical Characteristics of Ultrashallow Pure Amorphous Boron p+n Junctions

V. Tudić, L. Majdandžić, J. Groš (Karlovac University of Applied Sciences, Karlovac, Croatia)

2. Model Optimization of Nanocrystalline Si:H Thin Film Solar Cells

D. Babic, Q. Diduck (Group4 Labs, Inc., Fremont, United States), J. Smart (Group4 Labs, Inc., New York, United States), D. Francis, F. Faili, F. Ejeckam (Group4 Labs, Inc.,

Fremont, United States)

Measurement of Thermal Boundary Resistance on

AlGaN/GaN HEMTs Using Liquid Crystal Thermography

J. Kundrata, A. Barić (UNIZG - FER, Zagreb, Croatia)

4. Design of a Planar Inductor for DC-DC Converter on Flexible Foil Applications

M. Jenko (Faculty of mechanical engineering, University of Ijubljana, Ljubljana, Slovenia)

5. Development of an Analog Simulator for the Transient Analysis of Electric Circuits, with the Aim of Teaching Circuit Phenomena by Simulation of Equations

F. Pepe, A. Bonfanti, A. Lacaita (Politecnico di Milano, Milano, Italy)

6. A Fast and Accurate Simulation Method of Impulse Sensitivity Function in Oscillators

V. Čeperić, A. Barić (Faculty of Electrical Engineering and Computing, Zagreb, Croatia)

7. A Brief Overview of the Black-Box Behavioural Modelling of Electronic Circuits for Transient Simulations

A. Broznić, R. Blečić, A. Barić (Fakultet elektrotehnike i računarstva, Zagreb, Croatia)

8. A 2.5-GHz GaN Power Amplifier Design and Modeling by Circuit-Electromagnetic Co-Simulation

9. C. Popa (Faculty of Electronics, Telecommunications and Information Technology, Bucharest, Romania)
Pseudo-Exponential Computational Circuit With
Improved Accuracy and Frequency Response

B. Mrković (Tehnoalarm d.o.o., Zagreb, Croatia), M. Ašenbrener (Sveučilište u Rijeci, Rijeka, Croatia)

The Simple CMOS Negative Capacitance with Impro-

10. The Simple CMOS Negative Capacitance with Improved Frequency Response

J. Žilak, M. Koričić, T. Suligoj (FER, Zagreb, Croatia)

11. Impact of Bipolar Transistor Parameters on the
Characteristics of the Double-Balanced Mixer

**12.** D. Bundalo (Faculty of Philosophy, Banja Luka, Bosnia and

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Herzegovina), Z. Bundalo, F. Softic (Faculty of Electrical Engineering, Banja Luka, Bosnia and Herzegovina), M. Kostadinovic (Faculty of Traffic and Transportation, Doboj, Bosnia and Herzegovina), D. Pasalic (Telecom of Srpska, Banja Luka, Bosnia and Herzegovina)

Logic Circuits with High-Impedance Output State for Interconnection of Ternary and Binary CMOS Digital Circuits and Systems

D. Vinko, T. Švedek (ELEKTROTEHNIČKI FAKULTET OSIJEK, OSIJEK, Croatia), A. Barić (Fakultet elektrotehnike i računarstva, Zagreb, Croatia)

13. računarstva, Zagreb, Croatia)
Limitations of the CVSL Driver as Voltage Level Booster
for Switching Capacitors in High-Gain Charge Pumps

J. Podržaj (IskraLAB d.o.o., Šempeter pri Gorici, Slovenia), A. Sešek, J. Trontelj (Faculty of Electrical Engineering, Ljubljana, Slovenia)

Intelligent Power MOSFET Driver ASIC

Thursday, 5/24/2012 3:00 PM - 7:00 PM, Nava 2, Hotel Admiral, Opatija

Chair: Dubravko Babić (Faculty of Electrical Engineering and Computing, Zagreb, Croatia)

## **Invited Paper**

B. Malnar (Intel GmbH, Braunschweig, Germany)

Synthesis Flow for Designing a High Performance

Microprocessor

## **Papers**

3.

5.

D. Kirasić, D. Basch (Fakultet elektrotehnike i računarstva, Zagreb, Croatia)

1. Reconfigurable Processor Architectures: Varieties and Representations

V. Dogan, M. Brkić (Faculty of Technical Sciences, Novi Sad, Serbia), N. Vukoje (Novilog, Novi Sad, Serbia), G. Mančić (Hotwell Ges.m.b.H, Klingenbach, Austria), M. Živanov (Faculty of Technical Sciences, Novi Sad, Serbia)

A Novel Solution for Realisation of Data Transfer in Borehole Measurement Systems

M. Glavinić Pecotić (Siemens d.d., Zagreb, Croatia), G. Molnar, M. Vučić (University of Zagreb, Faculty of Electrical Engineering and Computing, Zagreb, Croatia)

Design of CIC Compensators With SPT Coefficients

Design of CIC Compensators With SPT Coefficients
Based on Interval Analysis

I. Mrčela, V. Šunde, Z. Benčić (Fakultet elektrotehnike i računarstva, Zagreb, Croatia)

4. Method for Selection of Switches for Power Electronic Converters

T. Čihak (KONČAR Institut za elektrotehniku, Zagreb, Croatia), Ž. Jakopović (Fakultet elektrotehnike i računarstva, Zagreb, Croatia)

Simple Control System for Power Converter Connecting Electrochemical Dual-Layer Capacitors to DC Link

L. Olvitz, D. Vinko, T. Švedek (ELEKTROTEHNIČKI FAKULTET OSIJEK, OSIJEK, Croatia)

6. Wireless Power Transfer for Mobile Phone Charging
Device

M. Brkić, M. Lukić, J. Bajić, B. Dakić, M. Vukadinović (Faculty of Technical Sciences, Novi Sad, Serbia)

7. Hardware Badization of Autonomous Bobot Localization

Hardware Realization of Autonomous Robot Localization System

(Korea Electric Power Research Institute, Daejeon, South Korea), J. Kwon (University of Seoul, Seoul, South Korea), G. Park, I. Kim (Korea Gas Safety Corporation, Siheung, South Korea), H. Kim (University of Seoul, Seoul, South Korea)

Development of Cost-Effective Redundant Digital

H. Lee (E2S Company Ltd., Seoul, South Korea), H. Ryu

Development of Cost-Effective Redundant Digital

Excitation Control

J. Dong, W. Gaberl (institute of Electrodynamics, Microwave

and Circuit Engineering, Vienna University of Technology, Vienna, Austria), K. Schneider-Hornstein, H. Zimmermann (institute of Electrodynamics, Microwave and Circuit Engineering, Vienna University of Technology, Vienna, Austria)

A Fully Integrated Multicolor Photoreceiver

J. Bajić, B. Dakić, D. Stupar, M. Slankamenac, M. Živanov (Faculty of Tehnical Sciences, Novi Sad, Serbia)

The Frequency-Modulated Reflective Color Sensor

J. Bajić, D. Stupar, J. Tomić, M. Slankamenac, A. Joža, M. Živanov (Faculty of Tehnical Sciences, Novi Sad, Serbia)

11. Implementation of the Optical Beam Profiler System Using LabVIEW Software Package and Low-Cost Web Camera

Friday, 5/25/2012 9:00 AM - 1:00 PM, Camelia 1, Grand hotel Adriatic, Opatija

Chair: Davor Vinko (Faculty of Electrical Engineering, Osijek,

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Croatia)

# **Papers**

R. Resmi, M. R. Baiju (College of Engineering, Trivandrum, Thiruvananthapuram, India)

1. Performance Analysis of a Tunable Piezoelectric Actuator Based MEMS Resonator

S. Preradovic (Nitero Pty Ltd, Melbourne, Australia), A. Menicanin (Institute for Multidisciplinary Research, Belgrade, 2. Serbia)

Chipless Wireless Sensor Node

Ž. Mihajlović, V. Milosavljević, N. Maoduš, V. Rajs, M. Slankamenac, M. Živanov (Fakulty of Technical Sciences,

Novi Sad, Serbia) 3. System for Monitoring Concentration of NO2 and CO Gasses on Landfill Sites 🗏

> G. Park, Y. Kim, I. Kim (Korea Gas Safety Corporation, Siheung-si, South Korea), H. Kim (University of Seoul, Seoul,

South Korea) 4. A Positive Study on Effective Gas Safety Management using Wireless Sensor Network

> Ľ. Ovseník, J. Turán, M. Tatarko (Department of Electronics and Multimedia Communications, Faculty of Electrical

Engineering and Infor, Košice, Slovakia) 5. Availability and Reliability of FSO links Estimation from Measured Fog Parameters

A. Badnjevic, E. Beganovic (New Technology Ltd, Sarajevo, Bosnia and Herzegovina), G. Šehić (New Technology Ltd,

6. Tuzla, Bosnia and Herzegovina) **Disadvantages of Methods for Power Indication During** Treadmill Exercise for Ergospirometry Test

> M. Jordanic, R. Magjarevic (Faculty of Electrical Engineering and Computing, Zagreb, Croatia)

**Estimation of Muscle Fatigue During Dynamic** 7. Contractions Based on Surface Electromyography and Accelerometry 3

> M. Cifrek (FAKULTET ELEKTROTEHNIKE I RAČUNARSTVA, ZAGREB, Croatia), S. Peharec (Poliklinika za fizikalnu medicinu i rehabilitaciju "Peharec", Pula, Croatia), H. Džapo, T. Pribanić (FAKULTET ELEKTROTEHNIKE I

8. RAČUNARSTVA, ZAGREB, Croatia), S. Mrvoš (RIZ-Odašiljači d.d., ZAGREB, Croatia) **Biomechanical Scale for Dynamic Human Body Posture** Analysis 🗏

B. Somek (FER, Zagreb, Croatia), J. Ostojić (Ministarstvo socijalne politike i mladih, Zagreb, Croatia), M. Krhen (FER, 9. Zagreb, Croatia)

High Quality Hearing Aids

D. Šoštarić, D. Vinko, T. Švedek (ELEKTROTEHNIČKI FAKULTET OSIJEK, OSIJEK, Croatia)

10. **USB RF Front-End of the DRM Receiver Under LabView** API Environment

> A. Trost, A. Žemva (FE, University of Ljubljana, Ljubljana, Slovenia)

11. **Verification Structures for Design of Video Processing** Circuits 🗏

D. Sekulić, M. Živanov (Faculty of Technical Sciences, University of Novi Sad, Novi Sad, Serbia)

12. Computational Study on Soliton-like Pulses in the Nonlinear RLC Transmission Line

University of Belgrade, Belgrade, Serbia), L. Zivanov, M. Damnjanovic, A. Maric, N. Samardzic (Faculty of Technical 13. Sciences, University of Novi Sad, Novi Sad, Serbia)

A. Menicanin (Institute for Multidisciplinary Research,

Ink-jet Printed CPW Inductors in Flexible Technology

J. Bajić, V. Milosavljević, V. Rajs, M. Slankamenac, M. Živanov (Faculty of Tehnical Science, Novi Sad, Serbia) 14. Universal Wireless Communication Detector (UD-100) -Preventing of High-Tech Cheating Methods

> M. Škiljo, Z. Blažević (Faculty of Electrical Engineering, Mechanical Engineering and Naval Architecture, University of

15. **Investigation of Electrically Small Monofilar Spherical Helical Antenna Used for Mid-Range Wireless Power** Transfer 📃

# **Basic information:**

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REGISTRATION / FEES	Price in EUR	
	Before May 7, 2012	After May 7, 2012
Members of MIPRO and IEEE	180	200
Students (undergraduate), primary and secondary school teachers	100	110
Others	200	220

## **Contact:**

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For more details please look at www.opatija.hr/ and www.opatija-tourism.hr/.

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