

## MIDEM 2003 Conference Program (Final)

### WEDNESDAY, OCTOBER 1

#### 09:00 WELCOME AND OPENING CEREMONY

#### 09:15 SESSION ON SENSORS CHAIRPERSON : S.Amon

#### 09:15 INVITED PAPER J. Sikula, V. Sedlakova, P. Dobis Noise and Non-Linearity as Reliability Indicators of Electronic Devices

#### 10:00 COFFEE BREAK

- 10:15 **M.Mozek, D.Vrtacnik, D.Resnik, U.Aljancic, S.Amon**  
Fast Algorithm for Calculation of Measured Quantity in Smart Measurement Systems
- 10:30 **U.Aljancic, D.Resnik, D.Vrtacnik, M.Mozek, S.Amon**  
Parameters Evaluation in Model for Temperature Dependence of Piezoresistive Pressure Sensor
- 10:45 **J.Trontelj Jr.**  
Development of the Automatic Test and Trimming Procedure for 3D Strain Gauge Probe ASIC IC
- 11:00 **M.Pavlin, J.Gramc, M.Mozek**  
Miniature Smart Sensor with the Embedded Internet Server
- 11:15 **A.Suhadolnik, J.Petrisic**  
Displacement Measurement Using Macrobend Fiber Optic Sensor
- 11:30 **J.Stepanic, D.Korosak, B.Cviki, D.Markucic**  
Piezoelectrically-based Sensing Configuration Optimised for Restricted Characterization of Materials
- 11:45 **D.Resnik, D.Vrtacnik, U.Aljancic, M.Mozek, S.Amon**  
Residual Stress in Thin Films Deposited on Silicon Membrane

#### 12:00 GUIDED VISIT TO THE CASTLE

#### 12:50 LUNCH

#### 14:30 SESSION ON INTEGRATED CIRCUITS CHAIRPERSON : J.Trontelj

- 14:30 **J.Trontelj, A.Sesek**  
Push-pull Excitation Current to Measurement Current Converter with Programmable Ratio
- 14:45 **A.Pletersek**  
Photodiode Current Monitoring with Operational Amplifiers
- 15:00 **D.Strle**  
CMOS ASIC for Precision Measurements of Very Small DC Voltages/Currents
- 15:15 **V.Kunc, M.Atanasijevic Kunc**  
Intelligent Supply Regulation System
- 15:30 **D.Raic**  
Reconstruction of CMOS Switching Currents from Timing Parameters
- 15:45 **A.Stern**  
Analysis of Possible Receiver Topologies Used for a Fully Integrated Mouse and Keyboard Receiver
- 16:00 **S.Starasinic**  
Direct Conversion Technique for FSK Modulated Signals
- 16:15 **V.Jovanovic, M.Peric, P.Biljanovic**  
Inductive Influence on Propagation Delay of IC Interconnect

#### 16:30 COFFEE BREAK

#### 16:45 INVITED PAPER M.Mozetic Reactive Plasma Technologies in Electronic Industry

#### 17:30 SESSION ON DEVICE PHYSICS AND MODELLING CHAIRPERSON : G.U.Pignatel

- 17:30 **M.Koricic, T.Suligoj, P.Biljanovic**  
Investigation of the Extrinsic Base Effect on High Frequency Performance of Lateral Bipolar Transistors ( LBT ) with Laterally Contacted Base
- 17:45 **U.Merc, F.Smole, M.Topic**  
Coherent Current Density Versus Voltage Characteristics of DBRT and TBRT Diodes

- 18:00 B.Cviki, D.Korosak, M.Kozelj**  
Effect of Interface Dipole Density on Capacitance of Poly ( 3-hexylthiophene )/Al Schottky Junctions
- 18:15 D.Korosak, B.Cviki**  
On Possible Spin Injection at Non-ideal Schottky Contacts
- 18:30 M.Pinteric, T.Vuletic, S.Tomic**  
Properties of Mott-Peierls Insulating Phase in Deuterated Copper-DCNQI Systems
- 18:45 A.Vesel, M.Mozetic**  
Discharge in a Cold Cathode Magnetron Gauge
- 19:00 D.Vrtacnik, D.Resnik, U.Aljancic, M.Mozek, S.Amon**  
Optimization of Silicon Nitride Plasma Etching in CHF<sub>3</sub>/O<sub>2</sub> Chemistry

**19:45 VISIT TO PTUJ WINE CELLAR**

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## **MIDEM 2003 Conference Program (Final)**

### **THURSDAY, OCTOBER 2**

**09:00 WORKSHOP ON EMBEDDED SYSTEMS**  
**CHAIRPERSON : A.Zemva**

**09:00 INVITED PAPER**  
**R.Hartenstein**  
Data-stream-based Computing : Models and Architectural Resources

**09:45 INVITED PAPER**  
**J.Becker**  
Configurability for Systems on Silicon : Requirement and Perspective for Future VLSI Solutions

**10:30 COFFEE BREAK**

**10:45 WORKSHOP ON EMBEDDED SYSTEMS**  
**CHAIRPERSON : A.Zemva**

**10:45 INVITED PAPER**  
**M.Ley, C.Madritsch**  
Distributed Embedded Safety Critical Real-time Systems, Design and Verification Aspects on the Example of the Time Triggered Architecture

**11:30 INVITED PAPER**  
**F.Novak**  
Current Trends in Embedded System Test

**12:15 INVITED PAPER**  
**S.Gruđen**  
Efficient Development of High Quality Software for Embedded Systems

**13:00 LUNCH**

**14:45 WORKSHOP ON EMBEDDED SYSTEMS**  
**CHAIRPERSON : A.Zemva**

**14:45 INVITED PAPER**  
**M.Akil**  
High-level Synthesis based upon Dependence Graph for Multi-FPGA

**15:30 INVITED PAPER**  
**M.Glesner, T.Morgan, L.Soares Indrusiak, M.Petrov, S.Pandey**  
System Design and Integration in Pervasive Appliances

**16:15 COFFEE BREAK**

**16:30 WORKSHOP ON EMBEDDED SYSTEMS**  
**CHAIRPERSON : S.Gruđen**

**16:30 J.Dedic, A.Trost, A.Zemva**  
PC Based HW/SW Codesign Support for Embedded System Target

**16:45 A.Trost, B.Likar**  
Embedded Development Platform and Applications

**17:00 Z.Krsnik**  
Ensuring Robustness for Microcontroller System in the Environment of Electronic Watt-hour Meter

**17:15 J.Articek**  
Modular Software for Electronic Watt-hour Meter

**17:30 M.Fetih**

- Modeling of Electronic Watt-hour Meter Using Unified Modeling Language – UML  
**17:45 R.Sernec**  
Embedded Design Issues in Symmetrical DSL Telecom Products
- 18:00 B.Cadez, G.Polansek, S.Zupancic**  
Accelerating Packet Processing
- 18:15 I.Stemberger, R.Vrhovsek, M.Konjar, D.Furlan**  
A 40 MHz Clock and Data Recovery Circuit with VCO
- 18:30 B.Glazar, M.Topic**  
GPIO – USB Controller

**20:00 CONFERENCE DINNER - HOTEL TERME PTUJ**

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## **MIDEM 2003 Conference Program (Final)**

### **FRIDAY, OCTOBER 3**

#### **09:00 SESSION ON OPTOELECTRONICS**

**CHAIRPERSON : M.Topic**

- 09:00 D.Passeri, P.Placidi, L.Verducci, M.Petasecca, G.U.Pignatell, P.Ciampolini, G.Matrella, A.Marras, G.M.Bilei**  
Active Pixel Detectors in CMOS Technology
- 09:15 V.Gradisnik, M.Pavlovic, B.Pivac, I.Zulim**  
The a-Si:H p-i-n Photodiode Transient Response on Simultaneous Light and Voltage Pulse
- 09:30 A.Zunic, M.Jankovec, D.Strle, M.Topic**  
Characterization of Read-out Electronics for OptoASIC
- 09:45 J.Krc, K.Brecl, M.Zeman, F.Smole, M.Topic**  
Optical Model for Analysis of Thin-film Solar Cells
- 10:00 M.Vukadinovic, G.Agostinelli, H.D.Goldbach, Ruud E.I.Schropp, J.Krc, F.Smole, M.Topic**  
Simulation and Optimisation of  $\lambda$  c-Si:H/a-Si:H/mc-Si HIT Solar Cells
- 10:15 K.Brecl, F.Smole, M.Topic**  
Tandem Solar Cell Simulator
- 10:30 M.Jankovec, F.Smole, M.Topic**  
1/f Noise Characterization System for Optoelectronic Devices

#### **10:45 COFFEE BREAK**

#### **11:00 SESSION ON THICK AND THIN FILMS**

**CHAIRPERSON : M.Hrovat**

- 11:00 M.Santo Zarnik, D.Belavic, S.Macek, J.Kita**  
Modelling of a Piezoresistive Ceramic Pressure Sensor
- 11:15 M.Hrovat, S.Drnovsek, J.Holc, D.Belavic, J.Bernard, M.Kosec, L.Golonka, A.Dziedzic, J.Kita**  
Study of PZT Thick Films on LTCC Substrates
- 11:30 M.Hrovat, J.Kita, A.Dziedzic, D.Belavic, J.Cilensek, M.Kosec, L.Golonka**  
Thick-film Resistors on LTCC Substrates
- 11:45 D.Belavic, M.Santo Zarnik, M.Pavlin, J.Gramc, M.Hrovat, S.Macek, J.Kita**  
Temperature Behaviour of Thick-film Resistors in Gauge Applications
- 12:00 J.Sitek, K.Bukat**  
Meniscographic Assessment of Lead-free Alloys Solderability in Presence of VOC-free Fluxes for “ Green Electronics“

#### **12:15 SESSION ON CERAMICS, METALS AND COMPOSITES**

**CHAIRPERSON : M.Kosec**

- 12:15 S.Bernik, A.Tavcar, Z.Samardzija, M.Cergolj**  
The Influence of Composition on the Presence of the Pyrochlore-type Phase in ZnO-based Varistor Ceramics
- 12:30 W.Mielcarek, S.Bernik, K.Prociow, M.Ceh**  
The Characteristics of ZnO-based Varistor Ceramics Doped with BaBiO<sub>2.77</sub> as a Precursor for Bi<sub>2</sub>O<sub>3</sub>
- 12:45 G.Drazic, S.Kobe, E.Sarantopoulou, A.C.Cefalas**  
Analytical Electron Microscopy of Tm Clusters in Optical Grade CaF<sub>2</sub>
- 13:00 L.Cakare-Samardzija, B.Malic, M.Kosec**  
Acceptor ( Fe) and Donor (La) Doped Lead Zirconate Titanate Thin Films
- 13:15 T.Rojac, M.Kosec, B.Malic, J.Holc**  
Study of Alkaline Niobates Prepared by Mechanochemical Synthesis
- 13:30 J.Kramer, D.Korosak, B.Cvikl, M.Pintaric**  
Low Frequency Dielectric Properties of Selected Moist Clays

#### **13:45 CLOSING OF THE CONFERENCE**