

**Sunday, 24th September**

16:00 – 20:00	Registration
19:00	Dinner
19:30	Meeting of IMAPS Poland Chapter Management with Organizing Committee

**Monday, 25th September**

8:00	Breakfast
8:00 – 10:00	Registration
8:45	Conference opening
	Ambroziak C. - History of semiconductor electronics in Poland
	Romenesko B. M., Drehle J. R. - IMAPS and the Evolving Electronics Industry
9:00 – 11:00	Belavič D., Santo-Zarnik M., Hrovat M., Holc J., Kosec M., Maček S., Jerlah M., Bernard J., Pavlin M., Ursič H. - An investigation of thick-film technology for sensors and actuators
	Sedlakova V., Sikula J. - Polymer Based Thick Films - Material Quality and Interface Resistance Evaluation
11:00 – 11:30	Coffee break
11:30 – 13:00	<u>Poster session I</u>
13:00	Lunch
	Collander P. - Trends in Ceramic Modules Industry in Europe and Elsewhere in Last 6 Years
14:00 – 16:00	Golonka L. J. - LTCC microreactors
	Müller J., Perrone R., Hintz M., Stephan R. - Improved RF Performance for Embedded Passives in LTCC by Fine Line Structuring Methods
	Menozzi G. - EURIPIDES program in the EUREKA initiative
16:00- 16:30	Coffee break
16:30 – 18:00	<u>Poster session II</u>
19:00	Dinner

**Tuesday, 26th September**

8:00	Breakfast
	van Caenegem G. - Micro- and Nanosystems: opportunities in Framework Programme 7
9:00 – 11:00	Delrosso G. - Surface Mount Technology in Photonics Packaging: approaching a globally- adopted standard in a never standardized manufacturing process
	Sántha H. - Electrochemical biosensors and a novel structure of interdigitated transducers (IDT) for biosensor applications
	Stopjaková V. - Improvement of IC Reliability using Parametric Test Methods
11:00 – 11:30	Coffee break
11:30 – 13:00	<u>Poster session III</u>
13:00	Lunch
14:00 – 18:00	Sightseeing tour around <a href="#">Cracow</a> (facultative)
18:00 – 19:00	General Meeting of IMAPS Poland Chapter (for members of IMAPS Poland Chapter)
19:30	Banquet

## Wednesday, 27th September

8:00	Breakfast
	Mertens R., Poortmans J. - New business opportunities in solar cell production Pietruszko S. M. - Perspectives of Photovoltaics
9:00 – 11:30	Zerna T., Wolter K.J. - X-ray and Ultrasonic Microscopy – Non-destructive Test Methods for Reliability Relevant Phenomenon in Electronics Packaging Dziurdzia B., Magoński Z., Nowak S. - Processing of ceramic structures for microfluidic devices with photoimageable thick-film compositions Szmidt J., Kisiel R., Szczepański Z., Guziewicz M., Sochacki M., Cholewa B., Ohmic Contacts and Interconnections for High Temperature SiC Devices
11:30 – 11:45	Conference Closing
12:00	Lunch
13:00 – 17:00	Excursion to <a href="#">Wieliczka Salt Mine</a> (facultative)

The sightseeing tour around old town is free. Cost of the excursion to Wieliczka salt mine is about 50 z<sup>3</sup> (13 eur).

**Important note:** Persons who want to participate in the excursions are requested to declare it during registration.

## Poster session I

### Thick and thin films

1. Beensh-Marchwicka G., Prociów E., Stelmasiński T. - The MoSi<sub>2</sub> thin film heaters under loading and thermal tests
2. Berlicki T. M., Prociów E.L., Osadnik S.J., Beensh-Marchwicka G.M. - Conductivity of Si-Ni Layers Deposited by Magnetron Sputtering
3. Błęd G., Kalita W., Klepacki D., Potencki J. - Complex simulation of thick-film microcircuits using electro-thermal analogy
4. Cież M., Witek M., Łukasik A.M., Korpak M., Prochwiecz W. - Technology of thick – film electroluminescent animated advertisings
5. Gollner E., Kita J., Moos R. - Frequency-tripled Nd:YAG-laser in thick-film and LTCC applications
6. Gröger B., Szwagierczak D., Kulawik J. - Properties of ceramics and thick films based on cerium and lanthanum doped SrMnO<sub>3</sub>
7. Johner N., Maeder T., Grimaldi C., Kambli A., Saglini I., Jacq C., Ryser P. - High-Voltage Trimming Studies of Model Thick-Film Resistors
8. Kolek A., Stadler A., Zawiślak Z., - Noise spectroscopy of thick resistive-conductive film interface
9. Kowalik P., Pruszowski Z., Filipczyk M. - Fabrication of Co-P resistive layers by chemical method
10. Kowalik P., Pruszowski Z., Filipczyk M. - Thermoelectric Force in Ni-P Resistive Layers
11. Kulawik J., Gröger B., Szwagierczak D., Skwarek A. - Fabrication and characterization of thick film perovskite NTC thermistors
12. Łukasik A.M. - Exploitation studies of resistive alkyd-carbon layers
13. Łukasik A.M., Cież M. - Polymer layer with Ag-C filler as an activator of chemical metallization of nickel

14. Łukasik A.M., Nowak S. - Relaxation of stresses in polymer-carbon microcomposite resistive layers
15. Łukasik A.M., Pruszowski Z., Filipczyk M. - Preparation of Ni-P layers on the polymer layer with an active phase
16. Maeder T., Saglini I., Corradini G., Ryser P. - Low-cost thick-film force sensors for the 100 N force range
17. Markowski P., Prociów A., Dziedzic A. - Thermoelectric microgenerators made in mixed thick/thin film technology
18. Prociów E.L., Domaradzki J., Borkowska A., Kaczmarek D., Berlicki T. - Evaluation of electrical properties of thin film oxides manufactured by PVD method
19. Santo-Zarnik M., Belavič D., Maček S. - Updating and validation of a finite-element model of a thick-film PZT actuator on LTCC substrate
20. Shishonok E.M., Jakubowska M., Leonchik S.V., Glushonok G.K. - Properties of Cubic Boron Nitride with Different Boron Content for Application in Thick Films with High Thermoconductivity
21. Szwagierczak D., Gröger B., Kulawik J. - Conductive Sr<sub>1-x</sub>Ce<sub>x</sub>CoO<sub>3</sub> ceramics and thick films for electrode applications
22. Wasielewski R., Domaradzki J., Borkowska A., Kaczmarek D., Ciszewski A. - Structural investigations of thin oxide films based on titanium dioxide
23. Wyżkiewicz I., Lewandowska N., Dziurdzia B., Magoński Z., Chudy M., Brzózka Z., Jakubowska M., Dybka A. - Fabrication of ceramic-polymer microstructure for capillary electrophoresis with usage of photosensitive paste and thick film technology
24. Adamowicz B., Izydorczyk W., Klimasek A., Waczyński K., Uljanow J., Jakubik W., Żywicki J. - Studies of chemical composition and response of the SnO<sub>2</sub><sup>2</sup> based sensor structure to dry and humid synthetic air

## **Lead-free materials and processes**

25. Gschohsmann W., Smetana W. - Interdependency of pores and mechanical strength of lead-free solder joints on Ag-thick film metallization
26. Jakubowska M., Kielbasiński K., Kalenik J., Kisiel R. - Mechanical strength of lead-free solder joints in thick film hybrid circuits
27. Sitek J., Drozd Z., Bukat K., Araźna A. - Wettability of Lead-Free PCB Finishes after Long-Term Natural Storage
28. Smetana W., Gschohsmann W. - Aspects of leaching and intermetallic growth by lead-free soldering
29. Szwagierczak D. - Application of lead-free Bi<sub>1/2</sub>Cu<sub>1/2</sub>(Fe<sub>2/3</sub>W<sub>1/3</sub>)O<sub>3</sub> and Bi<sub>1/2</sub>Cu<sub>1/2</sub>(Fe<sub>1/2</sub>Ta<sub>1/2</sub>)O<sub>3</sub> ceramics in thick film capacitors
30. Szwagierczak D., Kulawik J. - Dielectric Behavior of High Permittivity Copper Tantalate Ceramics
31. Witek K., Skwarek A., Cież M. - Analysis of Low Temperature Influence on Pb-Free Solder Joints Quality in Aspect of Tin Pest Occurrence
32. Witek K., Matuszek M., Skwarek A., Grzesiak W. - Practical Aspects of RoHS Regulations in SMEs

## **Poster session II**

### **Packaging, Multilayers, Interconnections**

33. Bielecki Z., Wojtas J. - Detection of Explosive Materials by the Use of Optoelectronic System of Nitrogen Dioxide Detection
34. Borecki J., Kozioł G.- Embedded Resistors in Multilayer Printed Circuit Boards
35. Boroń K., Bratek P., Kos A. - Graphical touch screen of thermal signs for the blind people
36. Boroń K., Bratek P., Kos A.- Reversible Heat Sources as Thermal Signs – Thermal Measurements
37. Bratek P., Boroń K., Kos A. - Thermal Monitoring of Electronic Devices with Using Peltier Modules
38. Dowhań Ł., Wymysłowski A., Dudek R., Auersperg J. - Numerical Approach to Optimisation of Stacked Packages
39. Dziurdzia P. - Current Sensors for CMOS 0.7 $\mu$ m Technology – Comparative Analysis
40. Dziurdzia P. - Model of the SoC Cell Facilitating Testing of Microstructures Operation
41. Dziurdzia P.- A Benchmark Chip for Measurements and Experiments Aiming at Improving Reliability of SoCs
42. Fałat T., Felba J. - Conductivity improvement of electrically conductive adhesives by thermal post-curing processes
43. Hautefeuille M., O'Mahony C., O'Flynn B., Peters F. - A Wireless MEMS Sensor System for Telecommunications Reliability Monitoring
44. Jankowski-Mihułowicz P., Kalita W. - Orientation of passive radio frequency identification tag working in magnetic field of read write device antenna
45. Jasiński G., Jasiński P., Chachulski B., Faleta D. - Stability of polymer humidity sensors deposited directly on PCB laminate substrate
46. Jasiński P., Jasiński G., Petrovsky V., Anderson H.U. - Nanocrystalline doped zirconia and ceria films for fuel cell application
47. Jezior R., Długoń S. - Method of wire bonds quality estimation on the base of picture analysis using trichromatic (RGB), directed lighting
48. Jezior R., Łukasik W.- The Universal Laboratory Stand for In-Process Study of US Wire Bond
49. Kamiński S., Rebenklau L., Uhlemann J., Wolter K. J.- Mixer with microchannels in LTCC technology
50. Kisiel R., Borecki J., Felba J., Mościcki A. - Climatic testing of PCB interconnections made by electrically conductive adhesives
51. Klimiec E., Zaraska W., Zaraska K., Cichocki A., Gąsiorski P., Sadowski T., Pajda M.- Electroactive Polymers – Investigation of Electrical Properties
52. Kramkowska M., Zubel I. - Smooth Micromirrors Inclined at Different Angles Fabricated by Silicon Anisotropic Etching
53. Kulawik J. - Perovskite-type Materials for Intermediate-Temperature Bulk Thermistors
54. Martinez R., O'Flynn B., Barton J., O'Mathuna S.C., Barrett J. - Development and Characterisation of a low cost ISM band RF Multi Chip Module with Embedded Inductors
55. Miś E., Dziedzic A. - Multiterminal thick-film and LTCC microresistors – contact effects simulation and trimming procedure consideration
56. Sedlak P., Majzner J., Grmela L., Hasse L. Noise spectral density computation based on finite element model of piezoceramic sensor
57. Seigneur F., Maeder T., Jacot J. - Laser soldered packaging hermeticity measurement using metallic conductor resistance

## **Sensors, Electrical and Thermal Measurements**

58. Smetana W., Walla T., M. Unger M. - Characterization of the thermal behaviour of flexible multilayer substrates for RFID applications

59. Majchrzak P., Suszyński Z. - Investigation of sensibility of thermal impedance on selected parameters of three-layered structure
60. Suszyński Z., Kosikowski M., Majchrzak P. - Determining of thermal properties of interlayer in copper-corundum bonding using Artificial Neural Net
61. Sutor A., Winkler G., Bischoff G.- Scanning acoustic microscopy for non-destructive tests of electronic components
62. Wałach T. - Errors in Surface-Temperature Measurements on Electronic Devices Due to Limited Spatial Resolution of IR Cameras
63. Wałach T. - Influence of Multiplicative Distortions on Accuracy of IR Thermographic Measurements on Electronic Microcircuits

## **Poster session III**

### **Photovoltaics**

64. Chojnacki J., Teneta J., Circuit for automated analysis of charge/discharge characteristics of accumulators
65. Filipowski W., Olechowska A., Waczyński K., Drabczyk K., Panek P., - Research on the surface of silicon on different stages of photovoltaic structures fabrication with the use of atomic forces from the microscale view
66. Grzesiak W. - Application problems of photovoltaic modules manufactured of CdTe in autonomous PV systems
67. Grzesiak W. - Solar charge controller for 60V CdTe modules
68. Grzesiak W., Cież M., Zaraska W., Koprowski J. - Application of thick film technology in solar charge controllers
69. Grzesiak W., Cież M., Maj T., Nowak S., Witek K. - New economical PV charge controllers family for autonomous PV systems of power not exceeding 100W
70. Grzesiak W., Cież M., Maj T., Zaraska K., Koziół S., Wiejak J. - Automatic floating platform for water pollution monitoring powered by an autonomous PV system
71. Grzesiak W., Żdanowicz.T., Kolodenny W. - Analysis of a new Maximum Power Point tracking (MPPT) algorithm using the UMPP/VOC ratio applied to high-voltage CdTe thin-film photovoltaic (PV) module
72. Kenig T., Schabowska-Osiowska E., Pisarkiewicz T. - The effect of annealing process on the optical and structural properties of CdS thin film
73. Kołodenny W., Sadowski A., Żdanowicz T. - Applicability of different translation procedures used to convert I-V curves of thin-film photovoltaic (PV) modules to Standard Test Condition
74. Kołodziej, A. - Analysis of Dark Current of Amorphous Silicon Solar Cells before and after Light-Soaking
75. Krewniak P., Kołodziej A., Kołodziej P., Nowak S. - Modeling of the Amorphous-Crystalline a-Si:H/μc-Si:H/c-Si Solar Cell Heterojunction Structure
76. Krishnaa R M., Vasu E. S., Gopal E.S.R., Nagaraju J., Pietruszko S.M. - Power Inversion of Photovoltaic array output and Interfacing of Photovoltaic power with Utility Grid using Impedance-Admittance Conversion
77. Panek P., Zięba P., Drabczyk K. - Back Surface Field In Silicon Solar Cells Technology
78. Prorok M., Werner B., Żdanowicz T. - Applicability of equivalent diode models to modeling various thin-film photovoltaic (PV) modules in a wide range of temperature and irradiance conditions
79. Swatowska B., Stapiński T. - Influence of properties of amorphous a-Si:C:H coatings on parameters of silicon solar cells – theoretical simulation

80. Źdanowicz T., Rodziewicz T. - The effect of diffuse component of solar radiation on the performance of PV modules
81. Źdanowicz T., Rodziewicz T., Ziemlicki K., Pietruszko S.M. - Modeling of the effect of solar spectrum distribution on the performance of crystalline silicon PV modules

## **Design and modeling**

82. Andonova A., Mihov G., Kafadarova N., Potencki J. - Design Optimization of Electronic Systems by DoE
83. Filipowski W., Waczyński K., Drabczyk K. - Research on preparation the spin-on glasses solutions enabling the fabrication of highly doped silicon diffusion layers
84. Gołda A., Kos A. - Project of ASIC for investigations into thermal aspects in CMOS integrated circuits
85. Izydorczyk W., Adamowicz B. - A theoretical analysis of the electronic properties of tin dioxide surface
86. Jankowski-Mihułowicz P., Kalita W., Pawłowicz B. - Communication Algorithm in Anticollision RFID Systems with Inductive Coupling
87. Kalita W., Kamuda W. - Selected design aspects in can-bus system connected with signal propagation in real transmission lines
88. Koprowski J., Budzioch P., Mossakowski M.- The system for near field mapping above planar microwave circuits
89. Kowalczyk M., Stonoga J., Matejko R., Licznerski B., Fałat T., Paluszyński J., Urbański K.- NEXO - Universal controlling, data storage and visualization system
90. Matkowski P., Wymysłowski A., Felba J. - Application of molecular modeling as a novel and promising numerical tool in microelectronics
91. O'Flynn B., Buckley J., Laffey D., Barton J., O'Mathuna S.C. - Simulation, Design, Development and Test of Antennas for Wireless Sensor Network Systems
92. Stadler A.W., Kolek A., Zawiślak Z., Mleczko K., Źak D., Ptak P., Szałański P. - Gaussianity evaluation of noise in RuO<sub>2</sub>-glass resistors