Technical Programme

Tuesday 2nd September 2008

Conference Opening Plenary

Baroness Tessa Blackstone, Chancellor of the University of Greenwich
William Chen, President of IEEE CPMT

Keynote: *Ambient Assisted Living*

Coffee Break

Technical Papers in Parallel Sessions

Session Tu-A-1 Poster Session : Manufacturing and Test Technology

Replacement of vias with polymer thick film pastes (PTF) for the use on flexible substrates
Markus Detert, Michael Zeise, Klaus-Jürgen Wolter, Dresden University of Technology / Center of microtechnical Manufacturing

Chosen electrical and stability properties of laser-shaped thick-film and LTCC inductors
Andrzej DZIEDZIC[1], Maciej BAK[1], Marcin DUDEK[1], Jaroslaw KITA[2], Wroclaw University of Technology, Faculty of Microsystem Electronics and Photonics, [2]University of Bayreuth, Functional Materials Group

An Investigation of Electroless Copper Films Deposited on Glass
Xiaoyun Cui, David Hutt, Paul Conway, Loughborough University

Micro-fabrication on 3-D surface by Electrostatic Induced Lithography
Weixing Yu, Marc Desmulliez, Mark Leonard, Cargill Scott, Heriot-Watt University

Influence of special cleaning compounds on PCBs solderability
Petr Harant[1], Jiri Stary[2], Frantisek Steiner[1], Petr Stejskal[2], University of West Bohemia, [2]Brno University of Technology

VPS Solution for Lead-Free Soldering in EMS Industries
PLOTOG Ioan[1], VARZARU Gaudentiu[2], TURCU Carmen[2], CUCU Traian Cornel[3], SVASTA Paul[1], CODREANU Norocel Dragos[1], [1]UPB-CETTI, [2]INTRAROM SA, [3]BRADY

Automated Optical Inspection Tool Using the LPKF PCB Mechanical Prototyping Machine Manufacturing
Muresan Marius Valentin, Pitica Dan, Chindris Gabriel, Technical University of Cluj-Napoca

Testing of Techniques for Improvement of Conductivity of Electrically Conductive Adhesives
Pavel Mach[1], Lukáš Richter[1], Alena Pietriková[2], Czech Technical University in Prague, Prague, Czech Republic, [2]Technical University in Košice, Košice, Slovakia

Trace faults detection and current density verification on a PCB using digital image processing
Stefan Oprea, Ioan Lita, Ion Bogdan Cioc, Daniel Alexandru Visan, University of Pitesti

Electronic Equipment For Temperature Measuring And Controling With Geothermal Applications
Horia Carstea, Romeo Negrea, Paul Constantinescu, Daniela Samoila-Mihet, University Politehnica of Timisoara

Session Tu-A-2 Advanced Packaging—3D Integration and Assembly

Through Silicon Via Interconnection Technology for ISM Wafer Level Chip Scale Package
Chang-Hyun Lim, Won-Kyu Jeung, Jing-li Yuan, Seung-Wook Park, Seog-Moon Choi, Sung Yi, Samsung Electro-Mechanics

Fabrication and Electrical Characterization of Though Silicon Via Interconnection by Room Temperature Bonding
Tanaka Naotaka[1], Kawashita Michihiro[1], Yoshimura Yosuhiro[1], Uematsu Toshihide[2], Fujisawa Masahiko[2], Naito Takahiro[2], Kikuchi Takafumi[2], Akazawa Takashi[2], Hitachi, Ltd., [2]Renesas Technology

Characterization of interconnects resulting from capillary die-to-substrate self-assembly
Massimo Mastrangeli[1], Jean-Pierre Celis[1], Wouter Ruythooren[2], Chris Van Hoof[2], IMEC/Katholieke Universiteit Leuven, [2]IMEC

Wafer Level Packaging Technology Development For Cmos Image Sensors Using Through Silicon
Jean Charbonnier, David Henry, Fabrice Jacquet, Bernard Aventurier, Cathy Brunet-manquat, Grégory Enyedi, Nicole Bouzaida, Valérie Lapras, Nicolas Sillon, CEA-LETI-MINATEC

Session Tu-A-3 New Materials and Processes : Materials Applications

Laser Processing of Materials for MCM-C Applications

Jaroslaw Kita, Egmont Gollner, Ralf Moos, University of Bayreuth /Functional Materials Lab

Determination of mechanical properties of small test volumes using nanoindentation – a critical review

Wolfgang H. Müller[1], Alexander Haese[1], Jens Sterthaus[1], Jürgen Villain[2], Christina Weippert[2], Ulrike Corradi[2], Usman Saeed[2], [1]Technische Universität Berlin, [2]University of Applied Sciences Augsburg

50-70GHz Microstrip Ultra-wideband Bandpass Filter on Liquid Crystal Polymer Substrate

Xia Zhang[1], Johan Liu[1], Dan Kuylenstierna[2], Herbert Zirath[2], [1]Chalmers University and Technology & Shanghai University, [2]Chalmers University and Technology

Die-Level Integration Of Metal MEMs With CMOS

Anisha Goswami Mukherjee, Michail E Kiziroglou, Andrew S Holmes, Eric M Yeatman, Department of Electrical and Electronic Engineering, Imperial College, London

Session Tu-A-4 Modelling, Simulation and Design : Simulation and DFR

Sn3.0Ag0.5Cu Solder Joints Lifetime Estimation for Electronic Assemblies under Random Vibration

Marc GRIEU, Gregor MASSIOT, Olivier MAIRE, EADS France

A Mobile WiMAX RF Front-end Module with Integrated Passive Components and Novel Material

Wei-Ting Chen, Chang-Sheng Chen, Chang-Lin Wei, Cheng-Hua Tsai, Kuo-Chiang Chin, Industrial Technology Research Institute

Warpage Control of WL-CSP for Memory Application

Jupyo Hong, Gao Shan, Seoungwook Park, Jonghwan Baek, Seogmoon Choi, Sung Yi, Samsung Electro-Mechanics

Modelling and Prototyping the Conceptual Design of 3D CMM Micro-probe

Stoyan Stoyanov[1], Chris Bailey[1], Richard Leach[2], Ben Hughes[2], Alan Wilson[2], William O'Neill[3], Robert Dorey[4], Christopher Shaw[4], Daniel Underhill[4], [1]University of Greenwich, [2]National Physical Laboratory, [3]University of Cambridge, [4]Cranfield University

Session Tu-A-5 Manufacturing and Test Technology : Test I

In-Situ Temperature Monitoring for Process Control in Laser Assisted Polymer Bonding for MEMS Packaging

Yufei Liu, Jun Zeng, Changhai Wang, School of Engineering and Physical Sciences, Heriot Watt University

Contactless measurement of conductivity of doped GaAs using compact microwave instrument

Yang Ju, Nagoya University

Development of an in-situ, non-destructive Ultrasonic Monitoring Technique for Solder Pastes

Anton Seman[1], Ndy N. Ekere[1], Sabuj Mallik[1], Antony E. Marks[1], Rajkumar Durairaj[2], [1]University of Greenwich at Medway/ Electronic Manufacturing Engineering Research Group, [2]Universiti Tunku Abdul Rahman (UTAR)

Improved infra-red (IR) microscope measurements for the micro-electronics industry

C.H. Oxley, R.H. Hopper, G.A. Evans, DeMontfort University

Session Tu-A-6 Power Electronics : Design

A Systematic Design Approach to Thermal-Electrical Power Electronics Integration

Didier Cottet[1], Uwe Drofenik[2], Jean-Marc Meyer[3], [1]ABB Switzerland Ltd., Corporate Research, [2]ETH Zürich, Power Electronic Systems Laboratory, [3]ABB Switzerland Ltd.

Modelling and simulation of simple mechatronic system – position control solution based on linear variable inductor displacement transducer

Andrei Drumea[1], Alexandru Vasile[1], Paul Svasta[1], Ioana Ilie[2], [1]Politehnica University Bucharest, [2]Research Institute for Hydraulics and Pneumatics INOE2000-IHP

Real-Time Life Expectancy Estimation in Power Modules

Mahera Musallam[1], Mark Johnson[1], Chunyan Yin[2], Hua Lu[2], Chris Bailey[2], [1]University of Nottingham, [2]University of Greenwich

Thermal Impact of Randomly Distributed Solder Voids on Rth-JC of MOSFETs

Liu Chen, Mervi Paulasto-Kröckel, Ulrich Fröhler, Dirk Schweitzer, Heinz Pape, Infineon Technologies AG

Session Tu-A-7 Electronics System Integration for Healthcare : Materials

Implantable Packaging Technique Featuring Through Wafer Interconnects and Low Temperature Direct Bond

James Lee, Applied Microengineering

Investigation of thick film electronic packaging materials in dynamic contact with artificial body fluids

Natalia Beshchasna, Eberhard Engelien, Jürgen Uhlemann, Klaus-Jürgen Wolter, Electronic Packaging Laboratory, Technische Universität Dresden

Property Evaluations of Polymers used as Housing Material for Passivation of Electronic Devices

Eberhard Engelien[1], Natascha Beshchasna[1], Markus Braunschweig[2], Jürgen Uhlemann[1], Klaus-Jürgen Wolter[1], [1]Elektronics Packaging Laboratory, Department of Electrical Engineering and Information Technology, Technische Universität Dresden, Germany, [2]Microelectronic Packaging Dresden GmbH, Germany

Biocompatible DC-Microelectrode Array

Jonathan Derix[1], Gerald Gerlach[1], Richard Funk[2], Susanne Wetzel[2], [1]Technische Universität Dresden, Solid State Electronics Lab, Dresden, Germany, [2]Technische Universität Dresden, Department of Anatomy, Dresden, Germany

Lunch Break

Session Tu-P-8 Poster Session : Modelling, Simulation and Design & Reliability and Technology for Micro and Nano Systems

Reliability Modeling & Test For Flip-Chip On Flex Substrates With Ag-Filled Anisotropic Conductive Adhesive
Bernhard Wunderle[1], Christine Kallmayer[1], Hans Walter[3], Tanja Braun[1], Bernd Michel[1], Herbert Reichl[3,] [1]Fraunhofer IZM, [2]Amic Berlin, [3]TU Berlin

Microstrip line parameters causing signal degradation
Tomas Blecha, University of West Bohemia

Accurate 3D modelling and simulation of advanced packages and vertical stacked dice
Norocel Codreanu, Ciprian Ionescu, Paul Svasta, Ioan Plotog, Politehnica University of Bucharest , UPB-CETTI

Multi Physics Modelling of the Electrodeposition Process
Nadia Strusevich, Michael Hughes, Georgi Djambazov, Chris Bailey, University of Greenwich

Challenge in modelling biofluids in microchannels
Xiangdong Xue, Mayur Patel, Chris Bailey, University of Greenwich

Application of genetic algorithm in numerical multi-objective optimization of ceramic capacitors
Lukasz Dowhan[1], Artur Wymyslowski[1], Jan Felba[1], Steffen Wiese[2], Klaus-Jurgen Wolter[2,] [1]Wroclaw University of Technology, [2]Technical University Dresden

Integration Issues in the Development of a Modelling and Simulation Tool for Low Volume High-Complexity Electronics Manufacture
Diana M. Segura Velandia, Andrew A. West, Paul P. Conway, Radmehr Monfared, Lina A. M. Huertas Quintero, Antony R. Wilson, Loughborough University

Degradation Mechanism of Ag-Epoxy Conductive Adhesive Joints by Heat and Humidity Exposure
Sun Sik Kim[1], Keun Soo Kim[1], Katsuaki Suganuma[1], Hirokazu Tanaka[2], [1]Osaka University, [2]ESPEC Corporation

Application of FPGA units in combined temperature cycle and vibration reliability tests of lead-free interconnections
Przemyslaw Matkowski[1], Krzysztof Urbanski[1], Rafal Zawierta[1], Jan Felba[1], Michael Pecht[2], Abhijit Dasgupta[2,] [1]Wroclaw University of Technology, Faculty of Microsystem Electronics and Photonics, [2]CALCE Electronic Products and Systems Center

Coffin Manson Testing of Isotropic Conductive Adhesives
Koteru Rajashekar Reddy, Portland State University

Session Tu-P-9 Advanced Packaging : Embedded Die and Reconstructed Wafer

Assembly of Ultra-Thin Chip Packages (UTCPs) for Enhanced Flexibility of Flexible Displays
Jonathan Govaerts, Jan Vanfleteren, TFCG Microsystems - Ugent/IMEC

Industrial and Technical Aspects of Chip Embedding Technology
Andreas Ostmann[1], Dionysios Manessis[1], Johannes Stahr[2], Maarten Cauwe[3], Johan De Baets[3], [1]Fraunhofer IZM, [2]AT&S, [3]IMEC

"GlassPack" – Photonic Packaging using thin glass foils for Electrical-Optical Circuit Boards (EOCB) and sensor modules
Henning Schröder, Norbert Arndt-Staufenbiel, Lars Brusberg, Fraunhofer IZM

Reliability and Thermal Assessment of Stacked Chip-on-Metal Panel Level Package with Fan-Out Capability
Hsiu-Ping Wei, Ming-Chih Yew, Chung-Jung Wu, Kuo-Ning Chiang, National Tsing Hua University, Taiwan

Session Tu-P-10 New Materials and Processes : Thermal Applications

Nano-scaled functional layer for current and heat transportation in electronics packaging
Matthias Heimann[1], Schoenecker Andreas[2], Ingolf Endler[2], Frank Meissner[2], Klaus-Juergen Wolter[1,] [1]Technische Universität Dresden, Electronics Packaging Laboratory Dresden, Germany, [2]Fraunhofer IKTS Dresden, Germany

An investigation of thick-film materials for temperature and pressure sensors on self-constrained LTCC substrates
Marko Hrovat[1], Darko Belavic[2], Hana Ursic[1], Jaroslaw Kita[3], Janez Holc[1], Silvo Drnovsek[1], Jena Cilensek[1], Marija Kosec[1], Ralf Moos[3,] [1]Jozef Stefan Institute, [2]HIPOT-RR, [3]University of Bayreuth

High-speed Indium Electrodeposition: Efficient, Reliable TIM Technology
Szöcs Edit, Schwager Felix, Toben Michael, Brese Nathaniel, Rohm and Haas Electronic Materials

Overwiew of Recent Progress of Thermal Interface Materials
Johan Liu, Björn Carlberg, Teng Wang, Masahiro Inoue, SMIT Center and BioNano Systems Laboratory, Dept. of Microtechnology and Nanoscience, Chalmers University of Technology, Sweden

Session Tu-P-11 Modelling, Simulation and Design : Simulation and DFR 2

Thermo-Mechanical Pre-Optimisation of Radar Sensor Design by Means of FEA and microDAC Measurements
Johann-Peter Sommer, Bernd Michel, Fraunhofer IZM

Efficient and Accurate Neural Network-Based Macro-models for Spiral Inductors
Abby Ilumoka, Raghuveer Srinivasan, University of Hartford
Design and Performance of Metal Conductors for Stretchable Electronic Circuits
Mario Gonzalez[1], Fabrice Axisa[2], Eva De Leersnyder[2], Dominique Brosteaux[2], Bart Vandevelde[1], Jan Vanfleteren[2], [1]IMEC / IPSI, [2]IMEC/ TFCG Microsystems
Prediction of Junction Temperatures of Electronic Packages with Integrated CTM+CFD Methodology
Rohit Dev Gupta, Vinayak Eswaran, Indian Institute of Technology, Kanpur India

Session Tu-P-12 Manufacturing and Test Technology : Test 2

Modelling and Measurement of Wire Bonding Power Interconnection
Ivan Szendiuch[1], Marek Novotny[1], Jaroslav Jankovsky[1], Zdenek Barton[2], [1]Brno University of Technology, [2]CEDO
Resistors Testing by Noise, Non-Linearity and Electro-Ultrasonic Spectroscopy
Vlasta Sedlakova, Josef Sikula, Pavel Tofel, Milos Chvatal, Brno University of Technology
Test Pattern Generation for Crosstalk Faults in DSM chips using Genetic Algorithm
Kishore Kumar Duganapalli, Ajoy Kumar Palit, Walter Anheier, University of Bremen
X-ray nanoCT of electronic components: Visualizing of internal 3D-Structures with Submicrometer Resolution
André Egbert, phoenix|x-ray Systems + Services

Session Tu-P-13 Power Electronics: Thermal

Al2O3 filled thermoplastics for cooling of power inductors
Sven Egelkraut[1], Christoph Heinle[2], Andreas Schletz[3], Bernd Eckardt[3], Martin März[3], Heiner Ryssel[1], [1]Chair of Electron Devices - University of Erlangen-Nuremberg, [2]Chair of Polymer Technology - University of Erlangen-Nuremberg, [3]Fraunhofer Institute for Integrated Systems and Device Technology
Reliability of die attached AlN-DBC module using Zn-Sn high temperature lead free solders
Seong-Jun Kim, Do-Seop Kim, Keun-Soo Kim, Katsuaki Suganuma, Osaka University
High temperature behaviour and reliability of Al-Ribbon for automotive application
Tobias Mueller, Eugen Milke, W. C. Heraeus GmbH
Characteristics of high-voltage capacitors when operating in high temperature environments
Nam Nguyen-Quang, Martin Foster, David Stone, The University of Sheffield

Session Tu-P-14 Electronics System Integration for Healthcare : Processes and Devices

Embedded Test & Health Monitoring Strategies for Bio-Fluidic Microystems
H. Liu[1], A. Richardson[1], T. Ryan[2], C. Pickering[3], [1]University of Lancaster, [2]EPIGEM Ltd, [3]QinetiQ
Integrated Biomedical Device For Blood Preparation
Maïwenn Kersaudy-Kerhoas[1], Xiangdong Xue[2], Mayur Patel[2], Resham Dhariwal[1], Marc P.Y. Desmulliez[1], [1]MIcroSystems Engineering Centre, Heriot-Watt University, [2]University of Greenwich
Micro Ribbon Cable Bonding for an Implantable Device
Kristin Imenes[1], Knut Aasmuntveit[1], Pablo Moreno[2], J.R. Vázquez de Aldana[2], [1]Vestfold University College, Faculty of Science and Engineering, Horten, Norway, [2]Servicio Láser, Universidad de Salamanca, Salamanca, Spain
Design and fabrication of a miniaturized three-axis accelerometer for measuring heart wall motion
Craig Lowrie[1], Marc Desmulliez[1], Lars Hoff[2], Ole Jakob Elle[3], Erik Fosse[3], [1]Microsystems Engineering Centre (MISEC), Heriot-Watt University, Scotland, [2]Faculty of Science and Engineering, Vestfold University College, Horten, Norway, [3]The Interventional Centre, Rikshospitalet University Hospital, Oslo, Norway

Coffee Break

Session Tu-P-15 Poster Session : Reliability and Technology for Micro and Nano Systems

Ni Underlayer Efficiency for Whisker Mitigation in IC Packaging
Jeffrey C.B. Lee Lee, IST-Integrated Service Technology
A Micro-fabricated Current Sensor for Arc Fault Detection of Aircraft Wiring
Brian G. Moffat[1], Marc P.Y. Desmulliez[1], Alistair Sutherland[2],David Flynn[1], [1]Heriot-Watt University, [2]Ultra electronics BCF
Material Characterization of Organic Packaging Materials to Increase the Accurancy of FEM Based Stress Analysis
Bjoern Boehme, Mike Roellig, Klaus-Juergen Wolter, Technische Universität Dresden, Electronics Packaging Laboratory, Dresden, Germany
Embedded health monitoring Strategies for Aircraft Wiring Systems
Z. Xu[1], S. Saha[1], D. Koltsov[1], A. Richardson[1], B. Honary[1], A. Sutherland[2], J. Hannu[3], M. Desmulliez[4], [1]Lancaster University, [2]University of Oulu, [3]Ultra Electronics -BCF, [4]Heriot-Watt University
Brittle Fracture of Solder Joints
Vladimir Igoshev[1], Bev Christian[2], [1]SENTEC, [2]Research in Motion

Reliability Of Lead Free Solder Sac 305 For Chip Components Depending On Various Factors
Olga Russkikh, JosefŠAndera, Brno University of Technology
Corrosion of lead-free and SnPb solder alloys
Ling Zou, Chris Hunt, National Physical Laboratory
Temperature-dependent behaviour of thin film by microtensile testing
Han Seungwoo[1], Kim Taeok[2], Lee Hakjoo[1], Lee Hyunwoo[2,] [1]Korea Institute of Machinery & Materials, [2]Pusan National University
Data Visualization in a Fast Data Acquisition System for Long-term Reliability Tests of Microelectronic Interconnections
Rafal Zawierta, Krzysztof Urbanski, Przemyslaw Matkowski, Jan Felba, Faculty of Microsystem Electronics and Photonics/Wroclaw University of Technology
Characterization of mechanical-electrical properties of nickel film by plating
Han Seungwoo, Lee Sangjoo, Lee Hakjoo, Korea Institute of Machinery & Materials

Session Tu-P-16 Advanced Packaging : RF Integration and Packaging

Integration Of Precision Passive Components On Silicon For Performance Improvements And Miniturization
Umesh Sharma, Harry Gee, Danny Liou, Philip Holland, Rong Liu, California Micro Devices
Compact RF-Filter-Modules with lumped elements in LTCC for applications up to 10GHz
Rubén Perrone, Jens Müller , TU Ilmenau / BMBF Center for Innovation Competence MacroNano®
Embedded Duplexer Implementation for WiMAX Front-end module with organic package substrate
KyungO Kim, Taeeui Kim, Hongwon Kim, Samsung Electro-Mechanics
RF Performance of ACA Flip Chip Joints for CPW Transmission Lines
Xu Wang[1], Xia Zhang[2], Johan Liu[3], Zhaonian Cheng[2], Yan Zhang[1,] [1]Shanghai University, China, [2]Chalmers University of Technology, Sweden, [3]Shanghai University & Chalmers University of Technology

Session Tu-P-17 New Materials and Processes : Bonding, Plating and Fabrication 1

Fabrication of Ag Micromaterials by Utilizing Stress-induced Migration
Masumi Saka, Makoto Yasuda, H. Tohmyoh, Nobuhiro Settsu, Tohoku University
Laser Transfer Processing and Integration of Ferroelectric Films for System in Package Applications
S. J. Milne[1], C. James[1], R. E. Miles[1], T. Chakraborty[1], H. Harrington[1], A. P. Brown[1], C. James[1], T. Comyn[1], B. Xu[2,] [1]University of Leeds, [2]Palo Alto Research Center
Comparative Performance of Single Layer and Multilayer Microwave Filters including the Influence of the Fabrication Process
Wesam Ali, Chunwei Min, Charles Free, ATI/ University of Surrey
Impact of RoHS/WEEE – On effective recycling- Electronics System Integration
Lafir Ali, Yan-Cheong CHAN, City University of Hong Kong/EPA centre

Session Tu-P-18 Modelling, Simulation and Design : Simulation and DFR 3

A Comprehensive FEM Simulation Study on DDR5 Memory Modules Subjected to Thermo-mechanical and Mechanical Loads
Przemyslaw Gromala, Qimonda Dresden GmbH & Co. OHG
Optimizing coplanar wave guide to microstripline transition with the help of the low pass filter theory in the mm wave domain
Joseph Romen Cubillo, Jean Gaubert, Sylvain Bourdel, IM2NP
Thermal Optimization of 3D Micro-contacts Using DOE and CFD Analysis
Nadezhda Kafadarova[1], Anna Andonova[2], Svetozar Andreev[2], Radosvet Arnaudov[2,] [1]Technical University Sofia, Plovdiv branch, [2]Technical University Sofia
3D Hybrid Capacitance Model for Angular Vertical Comb Drives
Denis Jung, Thomas Klose, Thomas Graßhoff, Thilo Sandner, Harald Schenk, Fraunhofer Institute for Photonic Micro Systems

Session Tu-P-19 Manufacturing and Test Technology : Technology

RF Multi-DUT Testing Technology for RF WLP
Hyunho Kim, Samsung Electro-Mechanics
Advanced microwave oven for rapid curing of encapsulant
K. I. Sinclair[1], T. Tilford[2], G. Goussetis[1], C. Bailey[2], M. P. Y. Desmulliez[1], A. K. Parrott[2], A. J. Sangster[1,] [1]MicroSystems Engineering Centre (MISEC), Heriot-Watt University, Edinburgh, UK, [2]Centre for Numerical Modelling and Process Analysis (CNMPA), University of Greenwich, UK
Global joint effort to solve electronics supply chain technology issues
Ruben Bergman[1], Paul Collander[2], Marshall Andrew[1,] [1]High Density Packaging User Group, [2]Poltronic
Wettability effects of immersion tin surface finishes with lead free solder
Thomas Hetschel[1], Fritz Phillipp[2], Klaus-Jürgen Wolter[3,] [1]Robert Bosch GmbH, Stuttgart, Germany, [2]Max Planck Institute for Metals Research, Germany, [3]Electronic Packaging Laboratory, Dresden University of Technology, Germany

Session Tu-P-20 Power Electronics : Applications

High Power Batteries for Maritime Applications
Marcelo Gutierrez, Delft Technical University
Intelligent Power Control using System-on-Chip Devices
Gabriel Chindris, Dan Pitica, Marius Muresan, Technical University of Cluj-Napoca
The Design, Modeling and Experimental Characterization of a Microinductor for Future DC-DC Power Converters
David Flynn[1], Christopher Bailey[2], Marc Desmulliez[1], Hua Lu[2], [1]Heriot Watt University, [2]University of Greenwich
Flip chip based packaging solution for high current driver chips used in automotive applications
Bart Vandevelde[1], Bjorn Vandecasteele[1], Guy Brizar[2], Daniel Vanderstraeten[2], Eddy Blansaer[2], [1]IMEC, [2]AMIS

Session Tu-P-21 Assembly of Alternative Energy Sources

Novel Thick-Film Piezoceramic Micro-Generators Based on Free-Standing Structures
Neil Maurice White, Nicholas Robert Harris, Swee Leong Kok, Michael John Tudor, University of Southampton
Study of Wire Electrolytic-Spark hybrid machining of Silicon Solar Wafer and surface characteristics
Wei Wang[1], Ndy Ekere[2], Yinhui Huang[1], Zhengxun Liu[1], Zhidong Liu[1], Zongjun Tian[1], [1]Nanjing University of Aeronautics and Astronautics, China, [2]University of Greenwich at Medway, UK
Effect of plasticizers on low molecular weight PVC-Li2SO4 based polymer electrolytes for rechargeable lithium ion polymer batteries.
Ramesh T.Subramaniam, Universiti Tunku Abdul Rahman, Faculty of Engineering and Science, Setapak, Kuala Lumpur, Malaysia
Mixed Thick-/Thin Film Thermoelectric Microgenerators
Piotr Markowski, Andrzej Dziedzic, Eugeniusz Prociow, Wroclaw University of Technology

Plenary Special Session "Greening the Blue Planet"

- "Electronics, Energy, and The Environment", Dr Harry K Charles Jr., Department Head, The Johns Hopkins University, Baltimore, USA
- "Is there a Green Light for our Nuclear Future?". Professor David Williams, Emeritus Professor, University of Cardiff
- "Future Parks in Future Climates - scalable solutions", Paul Sinnadurai, Ecologist of the Brecon Beacons, Wales
- "Interdependence of Marine Ecosystems and Climate Change", Emily Lewis-Brown, Marine Climate Change Officer, WWF

Exhibitors' Reception—Exhibition Hall