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Monday, November 14, 08:00 - 09:00

Participant Registration

Room: Putrajaya Ballroom

Monday, November 14, 09:00 - 10:45

Opening Ceremony

Room: Putrajaya Ballroom

Monday, November 14, 10:45 - 11:30

KS-1: Keynote Speech 1: Super-Kamiokande Neutrino Experiment

Prof. Dr. Takaaki Kajita

Room: Putrajaya Ballroom

The discovery and studies of neutrino oscillations in Super-Kamiokande will be discussed. In addition, some key technologies used in Super-Kamiokande will also be discussed.

Biodata: Takaaki Kajita was born in Higashimatsuyama, Saitama, Japan. He studied at Saitama University and at the University of Tokyo where he received his doctorate in 1983. His doctoral advisor was the future Nobel Laureate Masatoshi Koshiba. Since 1988 he is affiliated with the Institute for Cosmic Radiation Research, University of Tokyo, and in 2015 he became its director. He is also a professor at the University of Tokyo.In the Super-Kamiokande detector, an experimental facility in a mine in Japan in 1998, Takaaki Kajita detected neutrinos created in reactions between cosmic rays and the Earth's atmosphere. Measurements showed deviations, which were explained by the neutrinos switching between the different types. This means that they must have mass. The Standard Model, however, is based on neutrinos lacking mass and the model must be revised.

Monday, November 14, 11:30 - 12:15

KS-2: Keynote Speech 2

Dato' Seri Ivan Teh

Room: Putrajaya Ballroom

Monday, November 14, 12:15 - 13:00

KS-3: Keynote Speech 3: ICTP and the Importance of Fundamental Science for Development

Prof. Dr. Fernando Quevado

Room: Putrajaya Ballroom

For more than 50 years, the Abdus Salam International Centre for Theoretical Physics (ICTP) has been a driving force behind global efforts to advance scientific expertise in the developing world. Founded in 1964 by the late Nobel Laureate Abdus Salam, ICTP seeks to accomplish its mandate by providing scientists from developing countries with the continuing education and skills that they need to enjoy long and productive careers. ICTP has been a major force in stemming the scientific brain drain from the developing world.

Biodata: Dr. Fernando Quevedo, a Guatemalan national, was appointed director of ICTP in October 2009. Dr. Quevedo is a well-known theoretical particle physicist with wide-ranging research interests in string theory, phenomenology and cosmology. He was awarded the 1998 ICTP Prize in recognition of his important contributions to superstring theory. He was born in 1956 in Costa Rica and obtained early education in Guatemala. He obtained his PhD from the University of Texas at Austin in 1986 under the supervision of Nobel Laureate Steven Weinberg. Following a string of research appointments at CERN, Switzerland, McGill University in Canada, Institut de Physique in Neuchatel, Switzerland, and the Los Alamos National Laboratory, USA, as well as a brief term as professor of physics at the UNAM (Mexican National Autonomous University), Mexico, Dr. Quevedo joined the Department of Applied Mathematics and Theoretical Physics at the University of Cambridge, UK, in 1998, where he is currently Professor of Theoretical Physics and Fellow of Gonville and Caius College.

Monday, November 14, 14:30 - 16:30

S1.1: Advanced Reconfigurable Instrumentation for Scientific Applications

Room: Putrajaya Ballroom

2:30 ***Meeting the World's Scientific Challenges with FPGA Technologies*** ***N/A***
Nizar Abdallah

3:00 ***Integrating FPGAs: A dynamically reconfigurable FPGA-based grid for High Performance Computing*** ***1***
Julio Dondo Gazzano

3:30 ***Measuring UV LEDs Radiation Dose using EBT3 Film*** ***5***
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3:45 ***HiCCE-128: An Open Hardware FMC Module for High-Channel Count Electrophysiology*** ***11***
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4:00 ***FPGA based performance analysis of multiplier policies for FIR filter*** ***17***
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4:15 ***HyperFPGA: A possible general purpose reconfigurable hardware for custom supercomputing*** ***21***
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S1.2: Technology and Innovation for Society's Well-being - 1

Room: Pahang
Chair: Aini Hussain

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3:00 ***GPS/GSM Based Low Altitude Rotary Wing Aircraft Tracking System*** ***27***
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3:15 ***A Feasible QRS Detection Algorithm for Arrhythmia Diagnosis*** ***32***
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3:30 ***Solar Powered Ferry Boat for the Rural Area of Bangladesh*** ***38***
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3:45 ***A comprehensive solution to road traffic accident detection and ambulance management*** ***43***
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4:00 ***Challenges for technology innovation in health care*** ***48***
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Room: Perak
Chair: Iskandar Yahya

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2:45 ***A Comparative Study of NC and PP-SRAM Cells with 6T SRAM Cell Using 45nm CMOS Technology 58***
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3:00 ***Challenges and Prospects of Multi-Dye based Dye-Sensitized Solar cells N/A***
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3:30 ***Self-seeded four-wave mixing cascades utilizing Fiber Bragg Grating 63***
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3:45 ***A gm/ID Method Based 0.5V-Subthreshold Operational Amplifier with Current Subtractor Adaptive Biasing Circuit for Ultra-Low Power Application 66***
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4:00 ***Low Power High-Speed Current Comparator Using 130nm CMOS Technology 72***
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4:15 ***Low Cost MEMS Gyroscope and Accelerometer Implementation Without Kalman Filter For Angle Estimation 77***
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S1.4: Communication, Computer Engineering and Informatics -1

Room: Kelantan
Chair: Norbahiah Misran

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2:45 ***A Comparative Study of Energy Detector Performance under AWGN and Fading Channels 89***
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3:00 ***Variational image processing N/A***
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3:30 ***Ensemble SVM classifiers based on PCA and LDA for IDS 95***
Abdulla Aburomman and Mamun Bin Ibne Reaz

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4:00 ***Data Transfer Using MCM Code 105***
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4:15 ***An Experimental Study of Feature Reduction Using PCA in Multi-Biometric Systems Based on Feature Level Fusion 109***
P. Aruna Kumari and G. Jaya Suma

4:30 ***Design of Membership Functions for Fuzzy Power System Stabilizer Using Self Organized Mapping N/A***
V. S. Vakula

Tuesday, November 15, 09:00 - 09:45

KS-4: Keynote Speech 4: MEMS and Microfluidics: Interfacing Macro and Nano World

Prof. Dato' Dr. Burhanuddin Yeop Majlis

Room: Putrajaya Ballroom

Rapid development of microelectronic technology in past four decade is closely related to remarkable progress of technological tools. These new tools may be used for fabrication of MEMS (Micro-Electro-Mechanical-System) which integrate microelectronic and micromechanical structures in one system enabling interdisciplinary application. Although MEMS have grown from microelectronics, they are different in technological approach. Using MEMS approach, called microfluidic, small volume of fluid down to less than pico liters can be handled. The scaling of single or multiple lab process down to chip-format known as Lab-on-a-Chip(LOC). Micro and nanoparticles handling can be done using LOC which combines several laboratory functions on a single chip that is only a few millimeters to a few square centimeters in size. MEMS is used to perform chemical analysis by combining laboratory processes on a single chip. The basis for most LOC fabrication processes is photolithography directly derived from microelectronic fabrication. For specific optical characteristics, bio-or chemical compatibility, lower production costs and faster prototyping, new processes have been developed such as glass, ceramics and metal etching, deposition and bonding, PDMS process or soft lithography, as well as fast replication methods via electroplating, injection molding and embossing. This talk also discusses several research activities related to the development of LOC conducted at IMEN, UKM Malaysia to handle biological process for medical applications.

Biodata: Prof Dato' Dr. Burhanuddin Yeop Majlis is a professor of microelectronics at the Insitute of Microengineering and Nanoelectronics. He received his Ph.D. in microelectronics from University of Durham, United Kingdom in 1988, MSc in microelectronics from University of Wales, UK in 1980, and BSc(Hons.) in Physics from UKM in 1979. He was a Deputy Dean of Engineering Faculty from 1995 until 1997. He is also a Research Fellow of Telekom Malaysia Research & Development Division, and he was the director of UKM-TM Microelectronics Research Centre at the Faculty of Engineering, UKM. He was responsible in developing and planning the setting up of the clean room for research at UKM. He had attended intensive industrial training in GaAs MMIC design and manufacture at GEC-Marconi Material Technology Ltd. United Kingdom. He is a senior member of the Institution of Electrical and Electronics Engineer (IEEE) and the Chairman of IEEE Electron Devices Malaysia Chapter from 1994 to 2006. He also Fellow of Malaysian Solid State Science and Technology (FMSSS), Fellow of Institute of Enginering and Technology(FIET), Fellow Malaysia Academy of Sciences(FASc) He is the founder president of Malaysia Nantechnology Association(MNA). He initiated research in microfabrication and microsensors at UKM in 1995 and has also initiated research in GaAs technology with Telekom Malaysia. In 2001 he initiated research in MEMS with substantial research funding of US$10 million from Ministry of Science, Technology and Innovation. His current interest are design and fabrication of MEMS sensor, RFMEMS, BiOMEMS. Lab on Chip and microenergy and now is the program leader for MEMS research, a National Strategic Research Program. Now he is the director of Institute of Microengineering and Nanoelectronics(IMEN).

Tuesday, November 15, 09:45 - 10:30

KS-5: Keynote Speech 5: Silicon Photovoltaic Technology: Moving Up The Value Chain And A Sustainable Solution To Future Energy Generation

Prof. Dato' Dr. Kamaruzzaman Sopian

Room: Putrajaya Ballroom

Silicon is one of the ten most abundant element in the earth's crust. At present, almost 90 % of PV technology is based on crystalline silicon in its mono and poly forms. Polycrystalline Silicon is slightly cheaper than mono albeit at the cost of lower efficiency; its applicability is limited to solar cells only. Crystalline silicon photovoltaic (PV) or solar cell technology represents the most economically and environmentally sustainable solution to burgeoning energy demands. Malaysian government has recognized this through significant investments in several segments of this industry and it is reflected in emergence of strong domestic industry in solar cell manufacturing companies. At present, critical PV related technologies are almost entirely owned by multi-national companies focused on the nation competitive labor market and raw materials (quartz, sand) with the goal of serving international markets without any interest in indigenous technology development. This has led to fully-automated solar cell manufacturing industries with extremely high capital investment, low labor utilization, and worse no technology sharing. The contents of presentation are as follows (a) the solar resources (b) status of world photovoltaic panel production and applications, (c) issues in moving up the value change in the silicon industry and (d) the R&D aspects.

Biodata He obtained his BSc in Mechanical Engineering from the University of Wisconsin-Madison in 1985, MSc in Energy Resources from the University of Pittsburgh in 1989 and PhD. in Mechanical Engineering from the Dorgan Solar Laboratory, University of Miami in 1997. He is presently the Professor in Renewable Energy at the Department of Mechanical and Material Engineering, Universiti Kebangsaan Malaysia and the Director of the Solar Energy Research Institute. His main contributions are solar cooling, solar assisted drying systems, grid-connected photovoltaic system, thin film silicon solar cells, and photovoltaic thermal collectors. He has published in journals and conferences and delivered keynotes speeches at national and international conferences on renewable energy. His

innovation in renewable technology has won many international awards including the ASEAN Energy Awards, and special awards in international invention and innovation competitions in Geneva, Brussels, Seoul, and Pittsburgh. He is an associate editor of the Renewable and Sustainable Energy Reviews published by Elsevier Ltd. He is also fellow of the Academy of Science Malaysia.

Tuesday, November 15, 10:45 - 12:45

S2.1: Information Processing and Automation - 1

Room: Putrajaya Ballroom
Chair: Anuar Mikdad Muad

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11:00 ***Semi-automated Vertebral Segmentation of Human Spine in MRI Images 120***
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11:15 ***The Analysis for Gait Energy Image based on Statistical Methods 125***
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11:30 ***Complex Event Detection in an Intelligent Surveillance System using CAISER Platform 129***
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11:45 ***Detection Mechanism of an Autonomous Vehicle: Self Recognising Obstructions 134***
Chung Wye Kit, Po Jiang Ling and Adib Kabir Chowdhury

12:00 ***An enhanced model of Biometric Authentication in E-Learning Using a combination of Biometric features to access E-Learning environments 138***
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S2.2: Applied Electronics & System Engineering - 1

Room: Pahang
Chair: W Mimi Diyana W Zaki

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Azura Che Soh and Asnor Juraiza Ishak

11:15 ***A Study on Low Power Phase Frequency Detectors for Delay Locked Loop 147***
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11:30 ***The Evolution of Digital to Analog Converter 151***
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11:45 ***Design of a Row Decoder for RFID Transponder EEPROM 155***
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12:00 ***Modeling and Behavioral Simulation of a New Fast Fourth Order Phase-Locked Loop 159***
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12:15 ***Capacitive Electromyography Biosensor with Wearable Material as an Insulator 165***
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12:30 ***Android Application based monitoring and controlling of movement of a remotely controlled Robotic car mounted with various sensors via Bluetooth 170***
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S2.3: Micro and Nano Electronics - 2

Room: Perak

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11:00 ***Low Power D Flip-Flop Serial in/Parallel out Based Shift Register*** ***180***
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11:15 ***Low Power Design to Better Energy Consumption for Achieve an Energy Efficient Society*** ***N/A***
Weng Fook Lee

11:45 ***Evaluation of Threshold Current Density of Electromigration Damage Considering Passivation Thickness*** ***185***
Hiroki Kikuchi, Kazuhiko Sasagawa and Kazuhiro Fujisaki

12:00 ***Medium Doped Non-Suspended Silicon Nanowire Piezoresistor using SIMOX substrate*** ***189***
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12:15 ***Design of Low Power Crystal Oscillator in 0.13µm CMOS Technology*** ***194***
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12:30 ***Design of a low power static frequency divider*** ***199***
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S2.4: Communication, Computer Engineering and Informatics - 2

Room: Kelantan
Chair: Nasharuddin Zainal

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11:00 ***Development of the Wireless Cisco Networking Laboratory Pod*** ***208***
Anim Shakya, P. W.C. Prasad, Abeer Alsadoon and Amr Elchouemi

11:15 ***Design of Wireless Sensor Networks Using Embedded Programmable System-on-Chip (PSoC) as Applied to Community-Based Flood Early Warning Systems (CBFEWS)*** ***214***
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11:30 ***Performance Analysis On Spectrum Coexistennce Between Wi-Fi Networks And Ground Based Radar Using Database Assisted Spectrum Sensing Scheme*** ***224***
Mohamoud Mohamoud, Elsheikh M A Elsheikh and Mohamed Hadi Habaebi

11:45 ***Islay - An Educational Programming Tool Based on State Diagrams*** ***230***
Masaru Kamada

12:15 ***Wheel Alignment Parameters Based on Laser Angle of Reflection with TCP/IP Protocol*** ***233***
Mohammad Hadi Sulaiman, Azilah Saparon and Suhana Sulaiman

12:30 ***Upgrading Internet Service Provider (ISP) Network in Multiprotocol Label Switching (MPLS) and Border Gateway Protocol (BGP) environment*** ***237***
Zhenxing Song, P. W.C. Prasad, Abeer Alsadoon, Linh Pham and Amr Elchouemi

Tuesday, November 15, 14:00 - 16:15

S3.1: Technology and Innovation for Society's Well-being - 2

Room: Putrajaya Ballroom
Chair: Norbahiah Misran

2:00 ***Surface Electromyography: A New Indicator of Fatigue Level*** ***N/A***
Siti Anom Ahmad, Wan Zuha Wan Hasan and Samsul Bahari Mohd Noor

2:30 ***Technology, Innovation and the Engineering of Personalised Learning Space towards Social Wellbeing*** ***N/A***
Raihanah Mohd Mydin

3:00 ***Psycho-Social Well-Being in Relation to the Psycho-acoustic Factors Identified by Autocorrelation Functions*** ***242***
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3:15 ***Geometrical vs Spatial Features Analysis of Overlap Red Blood Cell Algorithm*** ***246***
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3:30 ***Solar Ultraviolet Measurement: A Mini Review*** ***252***
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Tuesday, November 15, 14:00 - 16:00

S3.2: Power and Energy - 1

Room: Pahang
Chair: Ramizi Mohamed

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2:15 ***Electrical Discharge Phenomena of Environmental Friendly Gas Insulation Media in High Voltage Apparatus*** ***N/A***
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2:45 ***Tangent Delta Extraction of Cable Joints for Aged 11kv Underground Cable System*** ***265***
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3:00 ***Nonintrusive Load Identification Using Extreme Learning Machine and TT-transform*** ***271***
Khairuddin Khalid, Azah Mohamed, Ramizi Mohamed and Hussain Shareef

3:15 ***Design and Analysis of Single Phase Voltage Source Inverter Using Unipolar and Bipolar Pulse Width Modulation Techniques*** ***277***
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3:30 ***A Mechanical Design of Power Generator Using Door Openings for Household Use*** ***283***
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Room: Perak
Chair: M. Mofazzal Hossain

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2:15 ***Simple Synthesis of Large-area Multilayer Graphene Films on Dielectric Substrate via Chemical Vapor Deposition Route*** ***293***
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2:30 ***Optical Interconnect Performances in Two Stage CMOS Buffer 297***
Siti Sarah Md Sallah, Sawal Hamid Md Ali, P. Susthitha Menon, Md. Shabiul Islam and Nurjuliana Juhari

2:45 ***Analysis and Simulation of Time Domain Multiplexed (TDM) Fiber Bragg Grating Sensing Array Using OptiSystem and OptiGrating 301***
Mohamed Elgaud, Saiful Dzulkefly Zan, Abdulfatah Abushagur Ghaith Abushagur, Ahmad Ashrif A. Bakar and Ahmed Mohamed Elshirkasi

3:00 ***Design of a high efficiency ultrathin CdTe/CdS p-i-n solar cell with optimized thickness and doping density of different layers 305***
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3:15 ***Resistorless self-biased curvature compensated sub- 1V CMOS bandgap reference 309***
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3:30 ***From biological fish cupula to artificial micro fluidic based flow sensors: One side electrode type micro fluidic flow sensor with high robustness performance N/A***
Asrulnizam Abd Manaf

Tuesday, November 15, 14:00 - 16:15

S3.4: Communication, Computer Engineering and Informatics - 3

Room: Kelantan
Chair: Maria Liz Crespo

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2:15 ***Rectenna for RF Energy Harvesting 318***
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2:30 ***Harmonic Suppression using Rectangular Defected Ground Structure 322***
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2:45 ***Unequally Spaced Linear Microstrip Array Antenna for 5G Aplications N/A***
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3:15 ***Accurate Radio-Based Moving Object Tracking and Its Application to Sports Analysis 328***
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3:30 ***Sum and Difference Composite Co-Array: An Extended Array Configuration toward Higher Degree of Freedom 333***
Sho Iwazaki and Koichi Ichige

3:45 ***A Study of Authentication Protocols for Security of Mobile RFID (M-RFID) System 339***
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Wednesday, November 16

Wednesday, November 16, 08:30 - 10:30

S4.1: Technology and Innovation for Society's Well-being - 3

Room: Putrajaya Ballroom
Chair: Siti Rozaimah Sheikh Abdullah

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8:45 ***The Sunny Future of Solar Photovoltaic Energy Over Conventional Resources for Global Electricity Generation N/A***
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9:15 ***Green, clean, economical and scalable method to obtain high quality Graphene for Solar and other applications 348***
Ranjeet Kumar Brajpuriya

9:30 ***Improving ionospheric forecasting using statistical method for accurate GPS positioning over Malaysia 352***
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9:45 ***Integrated Project (IP) and Integrated Laboratory (iLAB): Platforms for Soft Skills Enhancement among Students N/A***
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9:00 ***Survey of learning methods in intrusion detection systems 362***
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9:15 ***Aggregate of HMAXs for Image Classification 366***
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9:30 ***Human Emotion Classifications for Automotive Driver using Skin Conductance Response Signal 371***
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9:45 ***A Study of Scattered Particles Removal based on Contrast Recovery 376***
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10:00 ***Analysis of Success Factors of Technology Transfer Process of the Information and Communication Technology 382***
Ali Hassan and Yusof Jamaluddin

S4.3: Micro and Nano Electronics - 4

Room: Perak
Chair: Saiful Dzulkefly Zan

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9:15 ***Design of Cascoded Switch for DC/DC Buck Converter Using 0.13µm Low Power CMOS 393***
Eric Chew Choon Yean and Norlaili Mohd. Noh

9:30 ***Porous Silicon: A Material of Choice in Solar Energy Harvesting 400***
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S4.4: Communication, Computer Engineering and Informatics - 4

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Chair: Mahamod Ismail

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8:45 ***A Scheduling Scheme for Smart Grid and Mobile Users over LTE Networks 421***
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9:00 ***Atmospheric Attenuation - Effect Towards Communication Links N/A***
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9:30 ***Locally Supported Bivariate Splines in Piecewise Constant Tension 427***
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9:45 ***Design of Planar Slot-Loaded Antenna for Energy Harvesting 433***
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10:00 ***Improve the Decoding Process of Rateless Erasure Code and Network Coding with Graphics Processing Unit in IoT 436***
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10:15 ***Enhanced Cellular Systems for Cooperative Communication in 5G Networks 440***
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Wednesday, November 16, 10:45 - 12:45

S5.1: Applied Electronics & System Engineering - 2

Room: Putrajaya Ballroom
Chair: Fazida Hanim Hashim

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Nobuyasu Kanekawa

11:15 ***Effect of different memristor window function with variable random resistance on the performance of memristor-based RO-PUF 445***
Julius Teo, Khairul Anwar Syahmi Che Ismail and Fazrena Hamid

11:30 ***Design and Implementation of Electronic Chess Set 451***
Siti Zarina Binti Mohd. muji, Mohd Helmy Abd Wahab, Radzi Ambar and Kian Loo Wong

11:45 ***Low Power Consumption Techniques of Quartz Crystal Oscillator 457***
Md Torikul Islam Badal, Labonnah F Rahman, Mohammad Abdul Mukit, Mamun Bin Ibne Reaz and Mohammad Marufuzzaman

12:00 ***New Small-Signal Amplifying System with Sziklai Pairs in Triple-Transistor Topology 463***
Sachchida Nand Shukla

12:15 ***Design and Implementation of Electromagnetic Diagnostics Electronics in SST-1 Tokamak 469***
Praveenlal Edappala, Chandresh Hansalia, Rachana Rajpal, Hitesh Mandaliya, Vismay Raulji, Sameer Kumar and Raju Daniel

12:30 ***Influence of PCA Components on Glucose Prediction using Non-invasive Technique 473***
Jivan Parab, Rajendra Soiru Gad and Gaurish Naik

Wednesday, November 16, 10:45 - 12:30

S5.2: Power and Energy - 2

Room: Pahang
Chair: Mahmoud A. M. Albreem

10:45 ***Location Of Multi-Type Facts Devices Under Contingency: An Intelligent Appproach Using Modified Abc 477***
Archana Naganathan, N and Vidhyapriya R

11:00 ***Dynamic Model of Distribution Network Cell Using Artificial Neural Network Approach 484***
Noor Fazliana Fadzail, Samila Mat Zali, Norfadilah Rosle and Mohd Alif Ismail

11:15 ***Modeling and Dynamics Study of Large Scale PV System Connected Malaysian Grid under Different Fault Conditions 488***
Ali Q. Al-Shetwi and Muhamad Zahim Sujod

11:30 ***Designing a low voltage energy harvesting interface circuit utilizing piezoelectric vibration transducer 495***
Mahidur Sarker, Ramizi Mohamed and Azah Mohamed

11:45 ***Design of Indirect AC-AC Converter Based on Linear Controller for Power Systems 500***
Mahmoud A. M. Albreem, Hassan Naser and Mustafa Abofares, JR

12:00 ***Artificial Neural Network Based Controller for Home Energy Management Considering Demand Response Events 506***
Maytham S. Ahmed, Azah Mohamed, Hussain Shareef, Raad Z. Homod and Jamal Abd Ali

12:15 ***Simulation of Shielding Failure Flash-over of Transmission Line Based on Leader Progression Model 510***
Wenxiong Mo, Guojun Lu, Zezhong Wang, Rong Zeng and Zhanqing Yu

Wednesday, November 16, 10:45 - 13:00

S5.3: Micro and Nano Electronics - 5

Room: Perak
Chair: Norazreen Abd Aziz

10:45 ***Effect of temperature on the etching rate of nitride and oxide layer using Buffered Oxide Etch 516***
Norhafizah Burham, Gandi Sugandi, Mimiwaty Mohd Noor and Burhanuddin Yeop Majlis

11:00 ***A Programmable System-on-Chip Based Digital Pulse Processing for High Resolution X-Ray Spectroscopy 520***
Maria Liz Crespo, Andres Cicuttin, Kasun Sameera Mannatunga, Victor Villaverde Garcia, Sergio Fabiani, Alexandre Rachevski, Andrea Vacchi, Gianluigi Zampa, Zampa Nicola, Irina Rashevskaya, Mahdi Ahangarianabhari, Giuseppe Bertuccio, Giuseppe Baldazzi, Luigi Pio Rignanese, Pierluigi Bellutti, Antonino Picciotto, Claudio Piemonte and Nicola Zorzi

11:15 ***Materialization of MEMS in a Collaborative AMBIENCE 526***
Yufridin Wahab, Zul Azhar Zahid Jamal and Mazlee Mazalan

11:45 ***New Scalable Digit-Serial Inverter Over GF(2 m) for Embedded Applications 531***
Atef Ibrahim, Turki Al-Somani and Fayez Gebali

12:00 ***Performance Analysis of Wavelength Specific Transmission in Turbulent Medium for Free Space Optical Communication Systems 535***
Adib Kabir Chowdhury and Mamun Bin Ibne Reaz

12:15 ***Single Cell Analysis in Microfluidics Devices N/A***
Mohd Ridzuan Ahmad

12:45 ***Low Power and High Speed CMOS Current Comparators 539***
Wan Irma Idayu Restu Wan Mohd Nasir and Mamun Bin Ibne Reaz

S5.4: Communication, Computer Engineering and Informatics - 5

Room: Kelantan
Chair: Mahamod Ismail

10:45 ***Design of Ultra Wideband Phase Shifter with Improved Scattering Parameter Performances 544***
Dyg Norkhairunnisa Abang Zaidel, Sharul Kamal A. Rahim, Norhudah Seman and Raimi Dewan

11:15 ***Narrow Dual Bandpass Filter Using Microstrip Coupled Line with Bell Shaped Resonator 550***
Azman Ahmad and Abdul Rani Othman

11:30 ***Bandwidth Performance Analysis of Different Glass's Dielectric Permittivity on Reflectarray Radiating Element 555***
Arshad Selamat, Norbahiah Misran, Mohd Fais Mansor, Kamarulzaman Mat and Mohammad Tariqul Islam

11:45 ***Dual band resonance of millimeter-wave frequencies antennas on LTCC 559***
Mohamad Khairani Mohamed Amin, Mohd Fais Mansor, Norbahiah Misran and Mohammad Tariqul Islam

12:00 ***Analysis of EM Absorption Reduction Using Paper Based Negative Indexed Metamaterial Shielding 563***
Touhidul Alam, Mohammed Shamsul Alam, Norbahiah Misran, Mohd Fais Mansor and Mohammad Tariqul Islam

12:15 ***Efficient Routing Algorithm for VANETs based on Distance Factor 567***
Yusor AL-Mayouf, Nor Fadzilah Abdullah, Mahamod Ismail, Ainuddin Wahid Bin Abdul Wahab and Omar Adil Mahdi

12:30 ***Low SAR Planar Inverted-F Antenna for Mobile Phone 572***
Md Ikbal Hossain, MIH, Mohammad Rashed Iqbal Faruque and Mohammad Tariqul Islam

Wednesday, November 16, 14:00 - 16:15

S6.1: Applied Electronics & System Engineering - 3 / Communication, Computer Engineering and Informatics - 6

Room: Putrajaya Ballroom

2:00 ***Taming IoT: The Practical Aspects and Tradeoffs in Implementing IOT Systems N/A***
Royan Ong

2:30 ***Improvisation of Magnetic Resonance Imaging (MRI) with development and feasible evaluation of fiber optic sensors: A survey*** ***577***
Farzana Shabnam, Kazi Lamiyah Daraksha Karim Daraksha, KLDK and S M Fardin Shahrear

2:45 ***Development of Mobile Robot Drive System using Mecanum Wheels*** ***582***
Taha Bin Mohamed, Norsehah Abd Karim, Norazlin Ibrahim, Raja Fazliza Raja Suleiman, Murniwati Anwar, Muhammad Fayyadh Aminul Rashid and Mohamad Idzrul Idris

3:00 ***Characterization of DC Brushless Motor for an Efficient Multicopter Design*** ***586***
Arif Hafifi Zulkipli, Thinal Raj, Fazida Hanim Hashim and Aqilah Baseri Huddin

3:15 ***A Performance Analysis of a New Periodogram for Spectrum Sensing*** ***592***
Emad Hmood Salman, Nor Kamariah Nordin, Shaiful Hashim, Fazirulhisyam Hashim and Chee Kyun Ng

3:30 ***Complexity Reduced SBI Estimation in Iterative MIMO Systems*** ***597***
Saleem Ahmed, Meixiang Zhang, Abdul Waheed Umrani and Sooyoung Kim

3:45 ***A Statistical Vehicular Traffic Model for Microwave Propagation Loss Prediction in an Urban LOS Environment*** ***601***
Junaid M Mughal and khawer Javaid Manzoor

Wednesday, November 16, 14:00 - 16:00

S6.2: Information Processing and Automation - 3 / Power and Energy - 3

Room: Pahang
Chair: Ramizi Mohamed

2:00 ***An Investigation of Passive and Active Noise Reduction using Commercial and Standard TDH-49 Headphones*** ***606***
Abdulkarim Shalool, Nasharuddin Zainal, Kok Beng Gan and Cila Umat

2:15 ***Study of Deep-learning Phenomenon in Multi-Modal Comprehension by A Computational model of Episodic Semantic Network Growth*** ***N/A***
Javed Khan

2:45 ***Optimal CC-CV charging of lithium-ion battery for charge equalization controller*** ***610***
Md. Murshadul Hoque, M Hannan and Azah Mohamed

3:00 ***Power Quality Impacts of Plug-in Hybrid Electric Vehicles on Distribution Network*** ***616***
Ahmad Al-janad and Azah Mohamed

3:15 ***Time Dependent Indoor Power Line Background Noise: Analysis, Simulation and Effect on Communication System*** ***621***
Rubi Baishya, Banty Tiru, Sujit Chatterjee, Utpal Sarma and Kaveri Gogoi

3:30 ***A Comparative Assessment of the LWR-IM Traffic Model using Linear Regression*** ***626***
Kok Mun Ng, Mamun Bin Ibne Reaz, Mam Ali and Na Razak

S6.3: Technology and Innovation for Society's Well-being - 4

Room: Perak
Chair: Kok Beng Gan

2:00 ***Enhancing Small Medium Enterprises Opportunity Through Online Portal System*** ***631***
Norngainy Mohd. Tawil, Alissyazmim Abd Halim, Shamshubaridah Ramlee and Norhana Arsad

2:30 ***A Study of Retinal Vascular Tortuosity in Diabetic Retinopathy*** ***636***
N. Badariah A. Mustafa, W Mimi Diyana W Zaki, Aini Hussain and Jemaima Che Hamzah

2:45 ***Development of Automated Triage System for Emergency Medical Service 642***
Ha Chong and Kok Beng Gan

3:00 ***Evolution of Solar Power Rickshaw Technology vis-à-vis Economic Feasibility 646***
Rajesh Kumar

3:15 ***Determination of ethanol concentration of ethanol/water mixture solutions with open ended coaxial method 652***
Norashikin Khalid, Mohamad Faiz Zainuddin, Zulkifly Abbas, Tity Nazleen Mohamed and Nordin Sabli

3:30 ***Growth of microtissues in microencapsules formed using microextrusion and vibration 657***
Nurul Hamizah Md Sai'aan, Chin Fhong Soon, Mohd Khairul Ahmad, Kian Sek Tee, Mansour Youseffi and Seyed Ali Khaghani

3:45 ***Design and Development of Beam Position Monitoring Electronics for Booster Synchrotron 662***
Bhupendra Shrivastava, Manish Chouhan, Raja Khan and Tushar Puntambekar