TECHNICAL SESSIONS

Technical Session 1
Energy and Power Engineering 1
Thursday, 6 October 2016; 13:00-14:30
Session Chair: I N. S. Kumara

Jimbar Room 1

1. ID 1179 **Frequency Response and Vibration Analysis in Transformer Winding Turn-to-Turn Fault Recognition**
   M. Bagheri, B. T. Phung
   Department of Electrical and Electronic Engineering, School of Engineering, Nazarbayev University, Kazakhstan
   School of Electrical Engineering and Telecommunications, The University of New South Wales, Australia

2. ID 1222 **Modeling and Control of Permanent Magnet Synchronous Generator Variable Speed Wind turbine**
   Ratna Ika Putri, M. Rifa'i, Lie Jasa, Ardyono Priyadi, Margo P, Mauridhi Hery P
   Electrical Engineering Department, Malang State Polytechnic, Malang, Indonesia
   Electrical Engineering Department, Institut Teknologi Sepuluh Nopember, Surabaya, Indonesia
   Electrical Engineering Department, Udayana University, Bali, Indonesia

3. ID 1180 **Penetration Maximisation of Residential Rooftop Photovoltaic using Demand Response**
   Md Moktadir Rahman, Ali Arefi, GM Shafiullah, Sujeewa Hettiwatte
   School of Engineering and Information Technology, Murdoch University, Perth, Australia
   School of Engineering, National School of Business Management, Colombo, Sri Lanka

4. ID 1214 **Voltage Harmonic Effect on Losses in Distribution Transformers**
   Thinh Dao, H. Abdull Halim, Z. Liu and B.T. Phung
   School of Electrical Engineering and Telecommunications, University of New South Wales, Sydney, Australia

5. ID 1230 **Phase Arrangement for 500kV Quadruple Circuit Transmission Line in Indonesia**
   Aristo Adi Kusuma, Putu Agus Aditya Pramana, Buyung S. Munir

Transmission and Distribution Department, PLN Research Institute, Jakarta, Indonesia

6. ID 1215 **Transformer Inrush Transients Using Jiles-Atherton Model in PSCAD/EMTDC**
    H. Abdull Halim, Thinh Dao, B.T. Phung, and J.E. Fletcher
    School of Electrical Engineering and Telecommunications, The University of New South Wales, Australia
    School of Electrical Systems Engineering, Universiti Malaysia Perlis (UniMAP), Malaysia

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Technical Session 2
Multimedia Telecommunication 1
Thursday, 6 October 2016; 13:00-14:30
Session Chair: N. M. A. E. Dewi Wirastuti

Jimbar Room 2

1. ID 1169 **Spatial Multiplexing using Walsh-Hadamard Transform**
    Man Hee Lee, Muhammad Basit Shahab, Md Fazlul Kader and Soo Young Shin
    IT Convergence Engineering, Kumoh National Institute of Technology Gumi, Korea
2. ID 1227 **Performance evaluation of wideband radio communication systems using almost periodic frequency arrangement**
    Isao Nakazawa, Ken Umeno
    Graduate School of Informatics, Kyoto University, Sakyo-ku, Kyoto, 606-8501 Japan
3. ID 1196 **Swapped Huffman Tree coding Application for Low-Power Wide-Area Network (LPWAN)**
    Jang Yun Seong, Muhammad Rehan Usman, Muhammad Arslan Usman and Soo Young Shin
    Department of IT Convergence, Kumoh National Institute of Technology (KIT), Gumi, 39177, South Korea
4. ID 1130 **Performance Comparison of DFT and DWPT based OFDM system using 64 DAPSK**
    Arsla Khan, Muhammad Rehan Usman, Muhammad Basit Shahab, Hye Yeong Lee, Ummi Khaira Latif and Soo Young Shin
    WENS Lab, Department of ICT Convergence, Kumoh National Institute of Technology, Gumi, South Korea
5. ID 1202 **New Expression of SNR Formula for CDMA System**
    Hirofumi Tsuda, Ken Umeno

Department of Applied Mathematics and Physics, Graduate School of Informatics, Kyoto University, Kyoto, Japan

6. ID 1193   **An Approach for Selecting Optimum Number of Base Stations using Harmony Search**
I Made Oka Widyantara, I Kadek Susila Satwika, I Made Oka Widyantara, Nyoman Pramaita
Electrical and Computer Engineering Department, Udayana University, Denpasar-Bali, Indonesia

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Technical Session 3
Software Engineering and Information Systems 1
Thursday, 6 October 2016; 15:00-16:30
Session Chair: Made Sudarma

Jimbar Room 1

1. ID 1197   **From Smart to Smarter Cities: Bridging the Dimensions of Technology and Urban Planning**
Selin Akaraci, Muhammad Arslan Usman, Muhammad Rehan Usman, and Dong Joon Ahn
Department of Architecture Engineering, Department of IT Convergence, Kumoh National Institute of Technology, Gumi, Republic of Korea

2. ID 1210   **OLAP Applications as Knowledge Management Tools on E-Health**
Ida Bagus Gede Dwidasmara, Kadek Cahya Dewi, I Putu Agustina
Computer Science Department, Udayana University, Bali, Indonesia
International Business Management, Bali State Polytechnic, Bali, Indonesia

3. ID 1225   **Environmental Monitoring as an IoT Application in Building Smart Campus of Universitas Udayana**
Nyoman Putra Sastra, Dewa Made Wiharta
Electrical and Computer Engineering Department, Udayana University, Bali, Indonesia

4. ID 1232   **Proposed Model For E-Exam Availability In WLAN Environment**
Gede Sukadarmika, Rukmi Sari Hartati, Linawati, Nyoman Putra Sastra, Dewa Made Wiharta, Made Agus Setiawan
Electrical and Computer Engineering Department, Udayana University, Bali, Indonesia

Department of Computer Science, Udayana University, Bali, Indonesia

5. ID 1239 **Integration Of E-Government Blue Prints Through GIS-Building Data Collection Implementation In Badung Regency**
Jatmiko Wahyu Nugroho Joshua, I Putu Agus Swastika, Komang Wahyu Trisna
STMIK Primakara, Bali, Indonesia

6. ID 1237 **Adaptive Online Learning Design Using Moodle**
Linawati, N.M.A.E.D. Wirastuti, Gede Sukadarmika, I Made Arsa Suyadnya, Duman Care Krishne
Electrical and Computer Engineering Department, Udayana University, Bali, Indonesia

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Technical Session 4
Multimedia Telecommunication 2
Thursday, 6 October 2016; 15:00-16:30
Session Chair: Oka Widyantara / Oka Saputra

Jimbar Room 2

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1. ID 1171 **On the Performance of Perfect and Imperfect SIC in Downlink Non Orthogonal Multiple Access (NOMA)**
Muhammad Rehan Usman, Arsla Khan, Muhammad Arslan Usman, Yun Seong Jang and Soo Young Shin
Department of IT Convergence, Kumoh National Institute of Technology (KIT), Gumi, 39177, South Korea

2. ID 1173 **Simulink Implementation of Non-orthogonal Multiple Access over AWGN and Rayleigh Fading Channels**
Muhammad Basit Shahab, Md Fazlul Kader, Man Hee Lee, Soo Young Shin
Wireless and Emerging Network System (WENS) Lab, Kumoh National Institute of Technology, Gumi, South Korea

3. ID 1217 **Network Performance Framework Analysis Multi Protocol Label Switching (MPLS) in Wireless Network**
Candra Ahmadi, Joko Lianto Buliali, Achmad Affandi
Information System, STMIK STIKOM Bali, Bali, Indonesia
Computer System Department, Institut Tenologi Sepuluh Nopember, Surabaya, Indonesia

4. ID 1218 **Study on Emergency Message Communication System for Ensuring Safety in Antarctica under Extremely Severe Environments**

Kiyoshi Igarashi, Ken Umeno, Masaki Okada, and Masayuki Kikuchi
Applied Mathematics and Physics Department, Graduate School of Informatics, Kyoto University, Kyoto, 606-8501, Japan
National Institute of Polar Research, Research Organization of Information and Systems Tachikawa, Tokyo, 190-8518, Japan

5.   ID 1229   **Performance Comparison of MC-SS MIMO and OFDM MIMO Systems on Selective Fading Channel**

N.M.A.E.D. Wirastuti, I G.A.K.D.D. Hartawan, N.P.E.A. Yuniari
Electrical and Computer Engineering Department, Udayana University, Bali, Indonesia

6.   ID 1195   **On the Proposal of Novel Transmit Scheme with Impedance Switching**

Hye Yeong Lee, Arsla Khan, Soo Young Shin
Department of IT Convergence Engineering, Kumoh National Institute of Technology, Gumi, Korea

Technical Session 5
Energy and Power Engineering 2
Friday, 7 October 2016; 10:15-11:45   **Jimbar Room 1**
Session Chair: I .A. Dwi Giriantari / Wayan Gede Ariastina

1.   ID 1242   **Lesson Learned from Badak LNG Process Plant Trip Due to Sea Cooling Water System Failure**

Iqbal Nusya Perdana
Electrical Section, Maintenance Department, Badak LNG, Bontang, Kalimantan, Indonesia

2.   ID 1113   **New Design Banki's Water Turbine Model for Pico Hydro in Tabanan Bali**

Lie Jasa, Putu Ardana
Electrical Engineering Department, Udayana University, Bali, Indonesia

3.   ID 1228   **Design of a GPS-Based Solar Tracker System for a Vertical Solar Still**

Dian Artanto, A. Prasetyadi, Doddy Purwadianta, Rusdi Sambada
Mechatronic Polytechnic, Sanata Dharma Yogyakarta, Indonesia
Mechanical Engineering Department, Sanata Dharma University, Yogyakarta, Indonesia

4. ID 1172 **Evaluation of Transmission Line Parameter for Non Horizontal Earth Contour**
    Putu Agus Aditya Pramana, Aristo Adi Kusuma, Buyung Sofiarto Munir
    Transmission and Distribution Department, PLN Research Institute, Jakarta, Indonesia
5. ID 1199 **DC/AC Power Converter for Home Scale Electricity Systems Powered by Renewable Energy**
    Faizal Arya Samman, Arie Azhari
    Electrical Engineering Department, University of Hasanuddin at Makassar, Indonesia

Technical Session 6 **Joint Track 1** **Friday, 7 October 2016; 13:00 – 14:30** **Session Chair: Yoga Divayana**	**Jimbar Room 1**

1. ID 1200 **Architecture, On-Chip Network and Programming Interface Concept for Multiprocessor System-on-Chip**
    Faizal Arya Samman, Bj¨orn Dollak, Jonatan Antoni, Thomas Hollstein
    Department of Electrical Engineering, University of Hasanuddin at Makassar, Indonesia
    Fachbereich Elektrotechnik und Informations technik, TU Darmstadt, Germany
    University of Applied Sciences, Frankfurt, Germany
2. ID 1039 **Context Modeling for Intelligent Building Energy Aware**
    Gusti Agung A. Putri, Lukito Edi Nugroho, Widyawan
    Department of Electrical and Information Technology, Universitas Gadjah Mada Yogyakarta, Indonesia
3. ID 1211 **Prototype of Fire Detection System in Wireless Transmission Environment**
    Made Dita Rahayu Putri, Linawati, I Made Oka Widyantara
    Electrical and Computer Engineering Department, Udayana University, Bali, Indonesia
4. ID 1238 **Selection of Mother Wavelet for Medical Image Compression**
    I Made Oka Widyantara, I Gusti Ayu Garnita Darma Putri, Nyoman Putra Sastra, N.M.A.E.D Wirastusti
    Electrical and Computer Engineering Department, Udayana

University, Bali, Indonesia

5. ID 1241 **Smart Microgrid System with Hybrid System Supply: Udayana University Pilot Project Design**
IAD. Giriantari, Rina Irawati
Departement of Electrical and Computer Engineering
Udayana University, Bali, Indonesia
R&D Center for Electricity, New, Renewable Energy and Energy
Conservation Technology, MEMR Republic of Indonesia, Jakarta

Technical Session 7 **Joint Track 2** **Friday, 7 October 2016; 15:00 – 16:00** **Session Chair: Lie Jasa**	**Jimbar Room 1**

1. ID 1236 **Characterization of Titanium Dioxide (TiO2) thin films as materials for Dye Sensitized Solar Cell (DSSC)**
I Nyoman Setiawan, Ida Ayu Dwi Giriantari, W.Gede Ariastina and IB Alit Swamardika
Electrical and Computer Engineering Department, Udayana
University, Bali, Indonesia

2. ID 1177 **Opinion Mining System with Pos Tagging and SVM Method for Data Extraction Services Public Opinion on Bali Mandara Health Insurance**
Luh Ria Atmarani, I.A. Dwi Giriantari, Made Sudarma
Electrical and Computer Engineering Postgraduate Program,
Udayana University, Bali, Indonesia

3. ID 1204 **Design and Balancing Load Current in 3 – Phase System using Microcontroller ATMEGA 2560**
C.G.I. Partha, IGAP Raka Agung, IM Arsa Suyadnya
Electrical and Computer Engineering Department, Udayana
University, Bali, Indonesia

4. ID 1192 **Evaluation of NAS Infrastructure at Centralized Network Architecture**
Made Sudarma, Dandy Pramana Hostiadi
Electrical and Computer Engineering Department, Udayana
University, Bali, Indonesia
Department of Computer System, STMIK STIKOM Bali, Indonesia