ISBN : 978-1-5386-5721-8

ICECOS 2018

INTERNATIONAL CONFERENCE ON ELECTRICAL ENGINEERING AND COMPUTER SCIENCE

CONFERENCE PROGRAMS AND ABSTARCT

"Future energy brings the quality of human life through applied techniques and ICT Innovations"

October 02-04, 2018

Province of Bangka-Belitung
Indonesia

Organized by :

Co-Organized by :

Partner :

Technical Co-Sponsored by :

ICECOS 2018
INTERNATIONAL CONFERENCE ON ELECTRICAL ENGINEERING AND COMPUTER SCIENCE

FOREWORD FROM GENERAL CHAIR ICECOS 2018

Welcome to ICECOS 2018,

It is with a great pleasure that we extend our warm welcome to all the participants of the 2nd International Conference on Electrical Engineering and Computer Science (ICECOS) 2018. This conference held for second times and organized by Universitas Sriwijaya. The first conference in the series was held in Palembang, South Sumatera, Indonesia August 22-23, 2017. It is a good collaboration between Universitas Sriwijaya, Universiti Teknologi Malaysia, JAIST Japan, Albaha University, Saudi Arabia, University of Technology Sydney, Australia and Universiti Teknikal Malaysia Melaka. The conference in Bangka Island has attracted 66 participants from 7 countries.

The 2nd ICECOS particularly encouraged research students and developing academics to present and to discuss new and current work in the field of communication and vehicular technologies, electronics, circuits, and systems, information technologies, pervasive computing and internet of things, and power systems. 83 selected papers were presented from 133 peer reviewed paper by reviewers drawn from the scientific committee, external reviewers and editorial board.

Finally, as the General Chair of the Conference, I would like to express my deep appreciation to all members of the Steering Committee, Technical Program Committee, Organizing Committee and Reviewers who have devoted their time and energy for the success of the event.

In the end, I hope you have enjoyed the conference and the beauty of Bangka Island.

RUNDOWN

THE 2nd INTERNATIONAL CONFERENCE ON ELECTRICAL ENGINEERING AND COMPUTER SCIENCE (ICECOS)

Bangka Island, Province of Bangka-Belitung, Indonesia

Wednesday, 02 October 2018

Soll Marina Bangka Hotel, Sol Marina 1 Room

No.	Session	Person in Charge	Time Allotment		Liaison Officer
1.	Registration	Event Section Committee	07.30 – 09.30		Sarifah Putri Rafflesia
2	Indonesian National Anthem	Event Section Committee			
3	Chair Person's Report Speech	Event Section Committee			
4	Opening Remarks by Rector of Unsri	Event Section Committee			
5	Do'a, souvenirs for sponsor, group photos, coffee break	Event Section Committee			

PLENARY SESSION

No.	Keynote Speaker	Affiliation	Time Allotment	Moderator	Liaison Officer
1.	Prof. Dr. Zen-ichiro Kawasaki	Osaka University	09.30-10.15	Muhammad Abu Bakar Sidik, Ph.D.	Nyayu Latifah Husni, M.T.
2.	Prof. Dr. Eng. Benyamin Kusumoputro	Universitas Indonesia	10.15 -11.00	Dr. Bhakti Yudho Suprapto	
3	Assoc. Prof. Dr. Razali Ngah,	Universiti Teknologi Malaysia	11.00-11.45	Dr. Reza Firsandaya Malik	
Break, Sholat Dzuhur, Lunch			12.00-12.45		

PARALEL SESSION

No	Theme	Room	Time	Moderator	Articles
1	Communications and Vehicular Technology	Batu Bedaun 1	13.00 – 15.24	Evizal Abdul Kadir, Ph.D	8
2	Electronics, Circuits, and Systems	Batu Bedaun 2	13.00 – 19.00	Munawar Agus Riyadi, Ph.D./	18
3	Information Tehcnology # 1	Batu Bedaun 3	13.00 –18.42	Dr. Reza Firsandaya Malik/	17
4	Information Tehcnology # 2	Soll Marina 2	14.12 – 17.30	Sarifah Putri Raflesia, M.T.	10
5	Pervasive Computing and Internet of Thing	Soll Marina 2	13.00 – 14.12	Firdaus.M.Kom.	4
6	Power Systems #1	Soll Marina 1	13.00 – 19.00	Muhammad Abu Bakar Sidik, Ph.D./	18
7	Power Systems #2	Batu Bedaun 1	15.42 – 18.06	Dr. Bhakti Yudho Suprapto	8
GALA DINNER			20.30 – 22.00		

Smart Parking Using Wireless Sensor Network System 64

Anggi Sahfutri (State Polytechnic of Sriwijaya, Indonesia); Nyayu Latifah Husni (Politeknik Negeri Sriwijaya, Indonesia); Muhammad Nawawi, Iskandar Lutfi and Evelina Ginting (State Polytechnic of Sriwijaya, Indonesia); Ade Handayani, ASH (Politeknik Neger..... 64

Power Transistor 2N3055 as a Solar Cell Device 65

Tresna Dewi, Yohandri Bow, Ahmad Taqwa, Rusdianasari Rusdianasari and Zulkarnain Zulkarnain (Politeknik Negeri Sriwijaya, Indonesia)..... 65

Acoustic Partial Discharge Detection Using Low-cost Pre-amplified Piezoelectric Transducer and Coated Optical Fiber Sensor 66

Mohd Hafizi Ahmad, Izzul Hilmi Arizu and Chaganti Lakshmana Geetha Pavan Kumar, A.I Azmi(Universiti Teknologi Malaysia, Malaysia); Zainuddin Nawawi (Universitas Sriwijaya, Indonesia); Muhammad Abu Bakar Sidik (Faculty of Engineering, Universitas Sriwijaya);Aulia,E.P Waldi (Universitas Andalas)..... 66

Safety Communicational System Using Shifting Cryptography in Smart Parking 67

Wulan Dari (State Polytechnic of Sriwijaya, Indonesia); Nyayu Latifah Husni (Politeknik Negeri Sriwijaya, Indonesia); Evelina Ginting, Iskandar Lutfi, Muhammad Nawawi and Dewi Permata Sari, adella rialita,ade silvia(State Polytechnic of Sriwijaya, Indonesia)..... 67

Analyzing of Different Features Using Haar Cascade Classifier 68

Ratna Yustiawati (State Polytechnic Of Sriwijaya, Indonesia); Nyayu Latifah Husni (Politeknik Negeri Sriwijaya, Indonesia); Evelina Ginting (State Polytechnic of Sriwijaya, Indonesia); Sabilal Rasyad (State Polytechnic Of Sriwijaya, Indonesia); Iskandar L (State Polytechnic of Sriwijaya, Indonesia) 68

Application of WSNs for Detection Land and Forest Fire in Riau Province Indonesia..... 69

Evizal Abdul Kadir, Sri Listia Rosa and Ana Yulianti (Universitas Islam Riau, Indonesia) 69

Power Consumption Optimization in Cooling System Using Knowledge Base Temperature System 70

Andi Adriansyah, Akhmad Wahyu Dani and Krisna Brotoatmodjo (Universitas Mercu Buana, Indonesia) 70

Optimization of Coffee Bean Drying Using Hybrid Solar Systems and Wi-Fi Data Communication..... 71

D. A. Larasati, Ike Fibriani, Dedy Wahyu Herdiyanto, Widyono Hadi, Guido Dias Kalandro, Catur Suko Sarwono (University of Jember, Indonesia)..... 71

Web Scraping Techniques to Collect Weather Data in South Sumatera 72

Fatmasari Asmuni (Universitas Binadarma, Indonesia); Yesi Novaria Kunang (Universitas Sriwijaya, Indonesia); Susan Purnamasari (Universitas Bina Darma, Indonesia) 72

Fabrication of Integrated Power Divider and Filter for X Band Radar Applications..... 73

Folin Oktafiani (Indonesian Institute of Sciences (LIPI), Indonesia) 73

Comparison Double Dielectric Barrier Using Perforated Aluminium for Ozone Generation..... 74

ICECOS 2018
INTERNATIONAL CONFERENCE
ON ELECTRICAL ENGINEERING AND
COMPUTER SCIENCE

Application of WSNs for Detection Land and Forest Fire in Riau Province Indonesia

Paper ID : 1570472431

Evizal Abdul Kadir, Sri Listia Rosa and Ana Yulianti (Universitas Islam Riau, Indonesia)

Abstract - Riau Province is one of the area that high risk to land and forest fires due to the type of land which is peat land and flammable during summer season. Land and forest fires are badly impact not only on the biological ecosystems but on the activities and economy of local communities. This research proposes development intelligent environmental monitoring system to prevent the occurrence of land and forest fires. Wireless Sensor Networks (WSNs) use in development of this system. A monitoring system with a wide screen will install at the centre of monitoring and command centre to monitor environmental information in real time. Using WSNs technology, several smart sensors are install in the location that are very high risk for fire to get environmental data and then send to monitoring centre, because of large area to cover first phase of project 3 locations selected. Sensor base station will install in each location to collect data from WSNs and then communicate to monitoring centre use wireless communication because of the distance very far. Base station collect environmental information from all intelligent sensors deploy in the area such as temperature, humidity, haze (air quality), Carbon (Co2). Additional information for image analyse, every base station will install with High Definition (HD) camera to analyse behaviour of environmental in term of imaging. System detected indication for fire or abnormal environmental condition then an alert signal sent to authority as warning system for further action or precaution action of fire. New technology and method of sensing system and image processing as well as communication between sensor base station to data centre to make intelligent system is novelty in this research. Furthermore, all the information collected be able to share to others institution worldwide for sharing data in case required for global climate change analysis.

Keywords : WSNs; Land and Forest Fire; Sensors

JUNE-JULY

30-2

ICIST CONFERENCE 2018

2018

CERTIFICATE

of

PARTICIPATION

This Certificate of Participation to acknowledge your dedication to this conference

Evizal Abdul Kadir

Paper Title: Intelligent System in Container Terminal for Speed-Up Handling Process (ST0008)

for your excellent oral presentation at the conference and your significant contribution to the success of 2018 International Conference on Intelligent Science and Technology (ICIST), London, United Kingdom, 30 June-2 July, 2018.

Session Chair

FOR THE GREAT APPRECIATION

For and on behalf of ICIST

Prof. Luiz Moutinho

ICIST Conference Excutive

www.icist.org