

## Table of contents

# Volume 1502

Previous issueNext issue

## International Conference on Telecommunication, Electronic and Computer Engineering 2019 22-24 October 2019, Melaka, Malaysia

Accepted papers received: 12 March 2020 Published online: 17 June 2020

Open all abstracts, in this issue

## Preface

011001

## THE FOLLOWING ARTICLE ISOPEN ACCESS

<u>Preface</u> <u>Open abstract</u>, Preface <u>View article</u>, Preface <u>PDF</u>, Preface

011002

## THE FOLLOWING ARTICLE ISOPEN ACCESS

<u>Peer review statement</u> <u>Open abstract</u>, Peer review statement <u>View article</u>, Peer review statement <u>PDF</u>, Peer review statement

## **Telecommunication Engineering**

012001

## THE FOLLOWING ARTICLE ISOPEN ACCESS

Compact microstrip monopole antenna with Enhanced Gain using Artificial Magnetic Conductor (AMC)

M. Abu, S. A. Md. Ali and H. Asha'ri

<u>Open abstract</u>, Compact microstrip monopole antenna with Enhanced Gain using Artificial Magnetic Conductor (AMC) <u>View article</u>, Compact microstrip monopole antenna with Enhanced Gain using Artificial Magnetic Conductor (AMC) <u>PDF</u>, Compact microstrip monopole antenna with Enhanced Gain using Artificial Magnetic Conductor (AMC)

012002

## THE FOLLOWING ARTICLE ISOPEN ACCESS

Performance analysis of NOMA using different coding techniques

Mohd Syarhan Idris, Darmawaty Mohd Ali, Nur Idora Abdul Razak, Azlina Idris and Hasyimah Ahmad <u>Open abstract</u>, Performance analysis of NOMA using different coding techniques <u>View article</u>, Performance analysis of NOMA using different coding techniques <u>PDF</u>, Performance analysis of NOMA using different coding techniques

012003

## THE FOLLOWING ARTICLE ISOPEN ACCESS

Performance analysis of NOMA in pedestrian and vehicular environments

Hasyimah Ahmad, Darmawaty Mohd Ali, Wan Norsyafizan Wan Muhamad and Mohd Syarhan Idris <u>Open abstract</u>, Performance analysis of NOMA in pedestrian and vehicular environments <u>View</u> <u>article</u>, Performance analysis of NOMA in pedestrian and vehicular environments <u>PDF</u>, Performance analysis of NOMA in pedestrian and vehicular environments

#### 012004

## THE FOLLOWING ARTICLE ISOPEN ACCESS

Qualitative-based QoS performance study using hybrid ACO and PSO algorithm routing in MANET

Adam Wong Yoon Khang, Shamsul J. Elias, Nadiatulhuda Zulkifli, Win Adiyansyah Indra, Jamil Abedalrahim Jamil Alsayaydeh, Zahariah Manap and Johar Akbar Mohamat Gani

<u>Open abstract</u>, Qualitative-based QoS performance study using hybrid ACO and PSO algorithm routing in MANET <u>View article</u>, Qualitative-based QoS performance study using hybrid ACO and PSO algorithm routing in MANET <u>PDF</u>, Qualitative-based QoS performance study using hybrid ACO and PSO algorithm routing in MANET <u>PDF</u>, Qualitative-based QoS performance study using hybrid ACO and PSO algorithm routing in MANET

#### 012005

#### THE FOLLOWING ARTICLE ISOPEN ACCESS

Pulse Position Modulation characterization for indoor visible light communication system

AM Zaiton, CH Eng and F Jasman

<u>Open abstract</u>, Pulse Position Modulation characterization for indoor visible light communication system <u>View</u> <u>article</u>, Pulse Position Modulation characterization for indoor visible light communication system <u>PDF</u>, Pulse Position Modulation characterization for indoor visible light communication system

#### 012006

## THE FOLLOWING ARTICLE ISOPEN ACCESS

Human detection with and without weapon using LTE-based passive Forward Scattering Radar System

Noor Hafizah Abdul Aziz and Muhammad Firdaus Hussain

<u>Open abstract</u>, Human detection with and without weapon using LTE-based passive Forward Scattering Radar System <u>View article</u>, Human detection with and without weapon using LTE-based passive Forward Scattering Radar System <u>PDF</u>, Human detection with and without weapon using LTE-based passive Forward Scattering Radar System

#### 012007

## THE FOLLOWING ARTICLE ISOPEN ACCESS

Phantom development for In-Vitro measurements of MICS band telemetry antenna

N H Sulaiman, N A Samsuri, M K A Rahim, M Inam, F C Seman and N Othman <u>Open abstract</u>, Phantom development for In-Vitro measurements of MICS band telemetry antenna <u>View</u> <u>article</u>, Phantom development for In-Vitro measurements of MICS band telemetry antenna <u>PDF</u>, Phantom development for In-Vitro measurements of MICS band telemetry antenna

#### 012008

## THE FOLLOWING ARTICLE ISOPEN ACCESS

Simulation on wideband antenna based on Polydimethylsiloxane (PDMS) for medical imaging application

Wan Haszerila Wan Hassan, Nga Yan Li, Aziean Mohd Azize, Zahriladha Zakaria, Noor Azwan Shairi and Mohd Hakim Abdul Hamid

<u>Open abstract</u>, Simulation on wideband antenna based on Polydimethylsiloxane (PDMS) for medical imaging application <u>View article</u>, Simulation on wideband antenna based on Polydimethylsiloxane (PDMS) for medical imaging application <u>PDF</u>, Simulation on wideband antenna based on Polydimethylsiloxane (PDMS) for medical imaging application

#### 012009

## THE FOLLOWING ARTICLE ISOPEN ACCESS

Investigation on fiber optic sensor using FBG for various temperature and liquid density

S. K. Idris, H. Haroon, H. Abdul Razak and A. S. Mohd Zain

<u>Open abstract</u>, Investigation on fiber optic sensor using FBG for various temperature and liquid density <u>View</u> <u>article</u>, Investigation on fiber optic sensor using FBG for various temperature and liquid density PDF, Investigation on fiber optic sensor using FBG for various temperature and liquid density

#### 012010

## THE FOLLOWING ARTICLE ISOPEN ACCESS

Mobility analysis of Modified Proportional Fair scheduler in LTE/LTE-Advanced system

M S Johal, M K Ismail and H A Hendra

<u>Open abstract</u>, Mobility analysis of Modified Proportional Fair scheduler in LTE/LTE-Advanced system <u>View</u> <u>article</u>, Mobility analysis of Modified Proportional Fair scheduler in LTE/LTE-Advanced system <u>PDF</u>, Mobility analysis of Modified Proportional Fair scheduler in LTE/LTE-Advanced system

#### 012011

## THE FOLLOWING ARTICLE ISOPEN ACCESS

Water ageing effect on wearable antenna made of medical-friendly and transdermal material at 2.4 GHz

N. Othman, N. A. Samsuri, M. K. A. Rahim and N. H. Sulaiman

<u>Open abstract</u>, Water ageing effect on wearable antenna made of medical-friendly and transdermal material at 2.4 GHz <u>View article</u>, Water ageing effect on wearable antenna made of medical-friendly and transdermal material at 2.4 GHz <u>PDF</u>, Water ageing effect on wearable antenna made of medical-friendly and transdermal material at 2.4 GHz

#### 012012

## THE FOLLOWING ARTICLE ISOPEN ACCESS

A comprehensive study of vehicle communication framework in Malaysia

Sumendra Yogarayan, Siti Fatimah Abdul Razak, Afizan Azman, Mohd Fikri Azli Abdullah, Kirbana Jai Raman, Kalaiarasi Sonai Muthu and Siti Zainab Ibrahim

<u>Open abstract</u>, A comprehensive study of vehicle communication framework in Malaysia <u>View article</u>, A comprehensive study of vehicle communication framework in Malaysia <u>PDF</u>, A comprehensive study of vehicle communication framework in Malaysia

#### 012013

## THE FOLLOWING ARTICLE ISOPEN ACCESS

A multiband antenna for biomedical telemetry and treatments

Zi Xin Oh, Kim Ho Yeap, Chow Shen Voon, Koon Chun Lai and Peh Chiong Teh

<u>Open abstract</u>, A multiband antenna for biomedical telemetry and treatments <u>View article</u>, A multiband antenna for biomedical telemetry and treatments <u>PDF</u>, A multiband antenna for biomedical telemetry and treatments

012014 THE FOLLOWING ARTICLE ISOPEN ACCESS Investigations on europium aluminum incorporated polymer composite optical waveguide amplifier

Nur Najahatul Huda Saris, Azura Hamzah, Sabrina Sabri, Sumiaty Ambran, Osamu Mikami and Takaaki Ishigure

<u>Open abstract</u>, Investigations on europium aluminum incorporated polymer composite optical waveguide amplifier <u>View article</u>, Investigations on europium aluminum incorporated polymer composite optical waveguide amplifier <u>PDF</u>, Investigations on europium aluminum incorporated polymer composite optical waveguide amplifier

#### 012015

## THE FOLLOWING ARTICLE ISOPEN ACCESS

Efficiency ratio optimization on uplink transmission power for Cloud-Based Radio Access Network

Nur Ilyana Anwar Apandi and Kevin Goh Yu Han

<u>Open abstract</u>, Efficiency ratio optimization on uplink transmission power for Cloud-Based Radio Access Network <u>View article</u>, Efficiency ratio optimization on uplink transmission power for Cloud-Based Radio Access Network <u>PDF</u>, Efficiency ratio optimization on uplink transmission power for Cloud-Based Radio Access Network

#### 012016

## THE FOLLOWING ARTICLE ISOPEN ACCESS

Solar panel receiver characterisation for indoor visible light communication system

AM Zaiton, HR Muhammad and F Jasman

<u>Open abstract</u>, Solar panel receiver characterisation for indoor visible light communication system <u>View</u> <u>article</u>, Solar panel receiver characterisation for indoor visible light communication system <u>PDF</u>, Solar panel receiver characterisation for indoor visible light communication system

#### 012017

## THE FOLLOWING ARTICLE ISOPEN ACCESS

New perspectives of a 5G operating model

Muhammad Suryanegara

<u>Open abstract</u>, New perspectives of a 5G operating model <u>View article</u>, New perspectives of a 5G operating model <u>PDF</u>, New perspectives of a 5G operating model

#### 012018

#### THE FOLLOWING ARTICLE ISOPEN ACCESS

Challenges and opportunities for Integrated Broadcast Broadband (IBB) implementation in Indonesia

Sri Ariyanti and Diah Yuniarti

<u>Open abstract</u>, Challenges and opportunities for Integrated Broadcast Broadband (IBB) implementation in Indonesia <u>View article</u>, Challenges and opportunities for Integrated Broadcast Broadband (IBB) implementation in Indonesia <u>PDF</u>, Challenges and opportunities for Integrated Broadcast Broadband (IBB) implementation in Indonesia

## **Electronic Engineering**

012019 THE FOLLOWING ARTICLE ISOPEN ACCESS

Optimized state feedback control of quarter car active suspension system based on LMI algorithm

A Y Babawuro, N M Tahir, M Muhammed and A U Sambo

<u>Open abstract</u>, Optimized state feedback control of quarter car active suspension system based on LMI algorithm <u>View article</u>, Optimized state feedback control of quarter car active suspension system based on LMI algorithm <u>PDF</u>, Optimized state feedback control of quarter car active suspension system based on LMI algorithm

#### 012020

### THE FOLLOWING ARTICLE ISOPEN ACCESS

IoT based water quality monitoring system for aquaponics

Muhamad Farhan Mohd Pu'ad, Khairul Azami Sidek and Maizirwan Mel

<u>Open abstract</u>, IoT based water quality monitoring system for aquaponics <u>View article</u>, IoT based water quality monitoring system for aquaponics <u>PDF</u>, IoT based water quality monitoring system for aquaponics

#### 012021

#### THE FOLLOWING ARTICLE ISOPEN ACCESS

Automated aquaponics maintenance system

Muhamad Farhan Mohd Pu'ad, Khairul Azami Sidek and Maizirwan Mel <u>Open abstract</u>, Automated aquaponics maintenance system <u>View article</u>, Automated aquaponics maintenance system <u>PDF</u>, Automated aquaponics maintenance system

#### 012022

## THE FOLLOWING ARTICLE ISOPEN ACCESS

#### Simulation and analysis of flexible TEG using polymer based and pyroelectric material for

#### microdevice energy harvesting

N A Bakhari, N A Hamid, A R Syafeeza, Y C Wong and M Ibrahim

<u>Open abstract</u>, Simulation and analysis of flexible TEG using polymer based and pyroelectric material for microdevice energy harvesting <u>View article</u>, Simulation and analysis of flexible TEG using polymer based and pyroelectric material for microdevice energy harvesting <u>PDF</u>, Simulation and analysis of flexible TEG using polymer based and pyroelectric material for microdevice energy harvesting <u>PDF</u>, Simulation and analysis of flexible TEG using polymer based and pyroelectric material for microdevice energy harvesting

#### 012023

#### THE FOLLOWING ARTICLE ISOPEN ACCESS

Lab-On-Chip, Internet of Things, Analytics and Health Care 4.0: A synergistic future forward Vigneswaran Narayanamurthy, K.S. Bhuvaneshwari, Z.E. Jeroish and Fahmi Samsuri Open abstract, Lab-On-Chip, Internet of Things, Analytics and Health Care 4.0: A synergistic future

forward <u>View article</u>, Lab-On-Chip, Internet of Things, Analytics and Health Care 4.0: A synergistic future forward <u>PDF</u>, Lab-On-Chip, Internet of Things, Analytics and Health Care 4.0: A synergistic future forward

#### 012024

#### THE FOLLOWING ARTICLE ISOPEN ACCESS

Optimal control of inverted pendulum on cart system

A U Sambo, Faisal S. Bala, Nura M Tahir and A Y Babawuro

<u>Open abstract</u>, Optimal control of inverted pendulum on cart system <u>View article</u>, Optimal control of inverted pendulum on cart system <u>PDF</u>, Optimal control of inverted pendulum on cart system

#### 012025

#### THE FOLLOWING ARTICLE ISOPEN ACCESS

A study of low-cost vehicle collision prevention assistance

Sumendra Yogarayan, Siti Fatimah Abdul Razak, Afizan Azman, Mohd Fikri Azli Abdullah, Kirbana Jai Raman and Siti Zainab Ibrahim

<u>Open abstract</u>, A study of low-cost vehicle collision prevention assistance <u>View article</u>, A study of low-cost vehicle collision prevention assistance <u>PDF</u>, A study of low-cost vehicle collision prevention assistance

#### 012026

## THE FOLLOWING ARTICLE ISOPEN ACCESS

Design and analysis of a dual function of switchable resonator for RF switch

N. A. Shairi, A. M. Zobilah, Z. Zakaria, A. Othman and S. Y. Weng

<u>Open abstract</u>, Design and analysis of a dual function of switchable resonator for RF switch <u>View</u> <u>article</u>, Design and analysis of a dual function of switchable resonator for RF switch <u>PDF</u>, Design and analysis of a dual function of switchable resonator for RF switch

#### 012027

## THE FOLLOWING ARTICLE ISOPEN ACCESS

Low-sampling rate data-based failure diagnosis by using self-powered system

S Okada, S Hashimoto and A A Basari

<u>Open abstract</u>, Low-sampling rate data-based failure diagnosis by using self-powered system <u>View</u> <u>article</u>, Low-sampling rate data-based failure diagnosis by using self-powered system <u>PDF</u>, Low-sampling rate data-based failure diagnosis by using self-powered system

#### 012028

## THE FOLLOWING ARTICLE ISOPEN ACCESS

Development of a PZT device-based power-generating shoes for disaster-affected areas

S Tsukagoshi, K Seto, S Hashimoto and A A Basari

<u>Open abstract</u>, Development of a PZT device-based power-generating shoes for disaster-affected areas <u>View</u> <u>article</u>, Development of a PZT device-based power-generating shoes for disaster-affected

areas <u>PDF</u>, Development of a PZT device-based power-generating shoes for disaster-affected areas

#### 012029

## THE FOLLOWING ARTICLE ISOPEN ACCESS

Design of Sunda Straits automatic water level station network

Sugiarto, S K Wijaya and M S Rosid

<u>Open abstract</u>, Design of Sunda Straits automatic water level station network <u>View article</u>, Design of Sunda Straits automatic water level station network <u>PDF</u>, Design of Sunda Straits automatic water level station network

#### 012030

## THE FOLLOWING ARTICLE ISOPEN ACCESS

Performance improvement of a slotted square patch antenna using FSS superstrate for wireless application

Z. A. Nassr, S.N. Zabri, N. A. Shairi, Z. Zakaria, A. Othman and A. M. Zobilah

<u>Open abstract</u>, Performance improvement of a slotted square patch antenna using FSS superstrate for wireless application <u>View article</u>, Performance improvement of a slotted square patch antenna using FSS superstrate for wireless application <u>PDF</u>, Performance improvement of a slotted square patch antenna using FSS superstrate for wireless application

012031

## THE FOLLOWING ARTICLE ISOPEN ACCESS

Bridge multiple split ring resonator sensor for microwave liquid characterization

Aziean Mohd Azize, Amyrul Azuan Mohd Bahar, Wan Haszerila Wan Hassan, Zahriladha Zakaria, Rammah A. Alahnomi and Mohd Hakim Abdul Hamid

<u>Open abstract</u>, Bridge multiple split ring resonator sensor for microwave liquid characterization <u>View</u> <u>article</u>, Bridge multiple split ring resonator sensor for microwave liquid characterization <u>PDF</u>, Bridge multiple split ring resonator sensor for microwave liquid characterization

## **Computer Engineering**

#### 012032

## THE FOLLOWING ARTICLE ISOPEN ACCESS

Real time mobile based license plate recognition system with neural networks

Connie Liew, Chin Kim On, Rayner Alfred, Tan Tse Guan and Patricia Anthony

<u>Open abstract</u>, Real time mobile based license plate recognition system with neural networks <u>View</u> <u>article</u>, Real time mobile based license plate recognition system with neural networks <u>PDF</u>, Real time mobile based license plate recognition system with neural networks

#### 012033

## THE FOLLOWING ARTICLE ISOPEN ACCESS

<u>Comparison of simple feedforward neural network, recurrent neural network and ensemble</u> neural networks in phishing detection

Gan Kim Soon, Chin Kim On, Nordaliela Mohd Rusli, Tan Soo Fun, Rayner Alfred and Tan Tse Guan <u>Open abstract</u>, Comparison of simple feedforward neural network, recurrent neural network and ensemble neural networks in phishing detection <u>View article</u>, Comparison of simple feedforward neural network, recurrent neural network and ensemble neural networks in phishing detection <u>PDF</u>, Comparison of simple feedforward neural network, recurrent neural network and ensemble neural networks in phishing detection

#### 012034

## THE FOLLOWING ARTICLE ISOPEN ACCESS

The initial socio-technical solution for phishing attack

Abdullah Fajar and Setiadi Yazid

<u>Open abstract</u>, The initial socio-technical solution for phishing attack <u>View article</u>, The initial socio-technical solution for phishing attack <u>PDF</u>, The initial socio-technical solution for phishing attack

#### 012035

## THE FOLLOWING ARTICLE ISOPEN ACCESS

#### Mobile applications in customer relationship management to enhance empowerment of

#### knowledge to customers

Z Gani and W Maung

<u>Open abstract</u>, Mobile applications in customer relationship management to enhance empowerment of knowledge to customers <u>View article</u>, Mobile applications in customer relationship management to enhance empowerment of knowledge to customers <u>PDF</u>, Mobile applications in customer relationship management to enhance empowerment of knowledge to customers

#### 012036

## THE FOLLOWING ARTICLE ISOPEN ACCESS

## Increasing the input data length of RSA cryptosystem by applying a hybrid lossless data compression algorithm

Worapat Siriboonpipattana, Chitsutha Soomlek and Pusadee Seresangtakul

<u>Open abstract</u>, Increasing the input data length of RSA cryptosystem by applying a hybrid lossless data compression algorithm <u>View article</u>, Increasing the input data length of RSA cryptosystem by applying a hybrid lossless data compression algorithm <u>PDF</u>, Increasing the input data length of RSA cryptosystem by applying a hybrid lossless data compression algorithm

#### 012037

## THE FOLLOWING ARTICLE ISOPEN ACCESS

Driver drowsiness detection using different classification algorithms

N. S. Nor Shahrudin and K.A. Sidek

<u>Open abstract</u>, Driver drowsiness detection using different classification algorithms <u>View article</u>, Driver drowsiness detection using different classification algorithms <u>PDF</u>, Driver drowsiness detection using different classification algorithms

#### 012038

## THE FOLLOWING ARTICLE ISOPEN ACCESS

Lymphoblast cell morphology identification to detect Acute Lymphoblastic Leukemia (ALL) using various color segmentation

Syadia Nabilah Mohd Safuan, Mohd Razali Md Tomari, Wan Nurshazwani Wan Zakaria and Nurmiza Othman

<u>Open abstract</u>, Lymphoblast cell morphology identification to detect Acute Lymphoblastic Leukemia (ALL) using various color segmentation <u>View article</u>, Lymphoblast cell morphology identification to detect Acute Lymphoblastic Leukemia (ALL) using various color segmentation <u>PDF</u>, Lymphoblast cell morphology identification to detect Acute Lymphoblastic Leukemia (ALL) using various color segmentation

#### 012039

#### THE FOLLOWING ARTICLE ISOPEN ACCESS

Machine learning approach for estimating tree volume

Siti Hajar Mohd Mushar, Sharifah Sakinah Syed Ahmad, Fauziah Kasmin and Nur Hajar Zamah Shari <u>Open abstract</u>, Machine learning approach for estimating tree volume <u>View article</u>, Machine learning approach for estimating tree volume <u>PDF</u>, Machine learning approach for estimating tree volume

#### 012040

#### THE FOLLOWING ARTICLE ISOPEN ACCESS

Garbage monitoring systems based on Internet-of-Things application

N. A. Ali, A.R. Syafeeza, A. S. Ja'afar, Norihan Abdul Hamid and M. Ridzuan

<u>Open abstract</u>, Garbage monitoring systems based on Internet-of-Things application <u>View article</u>, Garbage monitoring systems based on Internet-of-Things application <u>PDF</u>, Garbage monitoring systems based on Internet-of-Things application

#### 012041

#### THE FOLLOWING ARTICLE ISOPEN ACCESS

Home automation monitoring system based on Internet-of-Things application

N. A. Ali, A.R. Syafeeza, A. S. Ja'afar, Norihan Abdul Hamid and Ts Saleha binti Mohamad Saleh <u>Open abstract</u>, Home automation monitoring system based on Internet-of-Things application <u>View</u> <u>article</u>, Home automation monitoring system based on Internet-of-Things application <u>PDF</u>, Home automation monitoring system based on Internet-of-Things application

#### 012042

#### THE FOLLOWING ARTICLE ISOPEN ACCESS

#### Optimization of process parameter variations for 16nm DG-FinFET using Response Surface Methodology-Central Composite Design

Ameer F Roslan, F Salehuddin, A S M Zain, K E Kaharudin, I Ahmad, H Hazura, A R Hanim, S K Idris and Afifah Maheran A Hamid

<u>Open abstract</u>, Optimization of process parameter variations for 16nm DG-FinFET using Response Surface Methodology-Central Composite Design <u>View article</u>, Optimization of process parameter variations for 16nm DG-FinFET using Response Surface Methodology-Central Composite Design <u>PDF</u>, Optimization of process parameter variations for 16nm DG-FinFET using Response Surface Methodology-Central Composite Design

#### 012043

## THE FOLLOWING ARTICLE ISOPEN ACCESS

Analysis of local binary pattern using uniform bins as palm vein pattern descriptor

Nurul Atikah Mohd Hayat, Zarina Mohd Noh, Norhidayah Mohamad Yatim and Syafeeza Ahmad Radzi <u>Open abstract</u>, Analysis of local binary pattern using uniform bins as palm vein pattern descriptor <u>View</u> <u>article</u>, Analysis of local binary pattern using uniform bins as palm vein pattern descriptor <u>PDF</u>, Analysis of local binary pattern using uniform bins as palm vein pattern descriptor

#### 012044

## THE FOLLOWING ARTICLE ISOPEN ACCESS

Materialized view selection problem using genetic algorithm for manufacturing execution system Z I Mohd Yusoh, K B Gan and N A Emran

<u>Open abstract</u>, Materialized view selection problem using genetic algorithm for manufacturing execution system <u>View article</u>, Materialized view selection problem using genetic algorithm for manufacturing execution system <u>PDF</u>, Materialized view selection problem using genetic algorithm for manufacturing execution system

#### 012045

## THE FOLLOWING ARTICLE ISOPEN ACCESS

Impact of strained channel on electrical properties of Junctionless Double Gate MOSFET

K E Kaharudin, F. Salehuddin, A S M Zain, Ameer F Roslan and I Ahmad

<u>Open abstract</u>, Impact of strained channel on electrical properties of Junctionless Double Gate MOSFET <u>View</u> <u>article</u>, Impact of strained channel on electrical properties of Junctionless Double Gate MOSFET <u>PDF</u>, Impact of strained channel on electrical properties of Junctionless Double Gate MOSFET

#### 012046

## THE FOLLOWING ARTICLE ISOPEN ACCESS

Region-based segmentation and classification of Mandibular First Molar Tooth based on

Demirjian's method

N Mohammad, M Y P M Yusof, R Ahmad and A M Muad

<u>Open abstract</u>, Region-based segmentation and classification of Mandibular First Molar Tooth based on Demirjian's method <u>View article</u>, Region-based segmentation and classification of Mandibular First Molar Tooth based on Demirjian's method <u>PDF</u>, Region-based segmentation and classification of Mandibular First Molar Tooth based on Demirjian's method

#### 012047

## THE FOLLOWING ARTICLE ISOPEN ACCESS

Minimum leakage current optimization on 22 nm SOI NMOS device with HfO2/WSix/Graphene gate structure using Taguchi method.

A H Afifah Maheran, E N Firhat, F Salehuddin, A S Mohd Zain, I Ahmad, Z A Noor Faizah, P S Menon, H A Elgomati and Ameer F Roslan

<u>Open abstract</u>, Minimum leakage current optimization on 22 nm SOI NMOS device with HfO2/WSix/Graphene gate structure using Taguchi method. <u>View article</u>, Minimum leakage current optimization on 22 nm SOI NMOS device with HfO2/WSix/Graphene gate structure using Taguchi method. <u>PDF</u>, Minimum leakage current optimization on 22 nm SOI NMOS device with HfO2/WSix/Graphene gate structure using Taguchi method.

#### 012048

## THE FOLLOWING ARTICLE ISOPEN ACCESS

#### Beyond Nernst Sensitivity of Ion Sensitive Field Effect Transistor based on Ultra-Thin Body Box FDSOI

A S M Zain, Ahmed M. Dinar, F Salehuddin, H Hazura, A R Hanim, S K Idris and Afifah Maheran A Hamid <u>Open abstract</u>, Beyond Nernst Sensitivity of Ion Sensitive Field Effect Transistor based on Ultra-Thin Body Box FDSOI <u>View article</u>, Beyond Nernst Sensitivity of Ion Sensitive Field Effect Transistor based on Ultra-Thin Body Box FDSOI <u>PDF</u>, Beyond Nernst Sensitivity of Ion Sensitive Field Effect Transistor based on Ultra-Thin Body Box FDSOI <u>PDF</u>, Beyond Nernst Sensitivity of Ion Sensitive Field Effect Transistor based on Ultra-Thin Body Box FDSOI <u>PDF</u>, Beyond Nernst Sensitivity of Ion Sensitive Field Effect Transistor based on Ultra-Thin Body Box FDSOI

#### 012049

## THE FOLLOWING ARTICLE ISOPEN ACCESS

Comparison of global and local features for author's identification by using geometrical and zoning methods

I E A Jalil, S M Shamsuddin, A K Muda, M S Azmi, S Hasan and S Ahmad

<u>Open abstract</u>, Comparison of global and local features for author's identification by using geometrical and zoning methods <u>View article</u>, Comparison of global and local features for author's identification by using geometrical and zoning methods <u>PDF</u>, Comparison of global and local features for author's identification by using geometrical and zoning methods

#### 012050

### THE FOLLOWING ARTICLE ISOPEN ACCESS

Cardioid graph based ECG biometric in varying physiological conditions using compressed QRS

Siti Nurfarah Ain Mohd Azam, Fateema-tuz Zohra, Khairul Azami Sidek and Magdalena Smoleń <u>Open abstract</u>, Cardioid graph based ECG biometric in varying physiological conditions using compressed QRS <u>View article</u>, Cardioid graph based ECG biometric in varying physiological conditions using compressed QRS <u>PDF</u>, Cardioid graph based ECG biometric in varying physiological conditions using compressed QRS

#### 012051

## THE FOLLOWING ARTICLE ISOPEN ACCESS

Gait recognition using histograms of temporal gradients

Jashila Nair Mogan, Chin Poo Lee and Kian Ming Lim

<u>Open abstract</u>, Gait recognition using histograms of temporal gradients <u>View article</u>, Gait recognition using histograms of temporal gradients <u>PDF</u>, Gait recognition using histograms of temporal gradients

#### 012052

## THE FOLLOWING ARTICLE ISOPEN ACCESS

Stress recognition using Electroencephalogram (EEG) signal

TuerxunWaili, Yousif Sa'ad Alshebly, Khairul Azami Sidek and Md Gapar Md Johar <u>Open abstract</u>, Stress recognition using Electroencephalogram (EEG) signal <u>View article</u>, Stress recognition using Electroencephalogram (EEG) signal <u>PDF</u>, Stress recognition using Electroencephalogram (EEG) signal

#### 012053

## THE FOLLOWING ARTICLE ISOPEN ACCESS

Occupancy grid map algorithm with neural network using array of infrared sensors

N A Yatim, N Buniyamin, Z M Noh and N A Othman

<u>Open abstract</u>, Occupancy grid map algorithm with neural network using array of infrared sensors <u>View</u> <u>article</u>, Occupancy grid map algorithm with neural network using array of infrared sensors <u>PDF</u>, Occupancy grid map algorithm with neural network using array of infrared sensors

012054

## THE FOLLOWING ARTICLE ISOPEN ACCESS

Stop hunt detection using indicators and expert advisors in the forex market

A Noertjahyana, A Christopher, Z A Abas, Z I M Yusoh and A Setiawan

<u>Open abstract</u>, Stop hunt detection using indicators and expert advisors in the forex market <u>View article</u>, Stop hunt detection using indicators and expert advisors in the forex market <u>PDF</u>, Stop hunt detection using indicators and expert advisors in the forex market

#### 012055

## THE FOLLOWING ARTICLE ISOPEN ACCESS

Classification and detection of chili and its flower using deep learning approach

W H M Saad, S A A Karim, M S J A Razak, S A Radzi and Z M Yussof <u>Open abstract</u>, Classification and detection of chili and its flower using deep learning approach <u>View</u> article, Classification and detection of chili and its flower using deep learning approach PDF, Classification

and detection of chili and its flower using deep learning approach

#### 012056

### THE FOLLOWING ARTICLE ISOPEN ACCESS

<u>Unhealthy skin analyzer for mobile platform using Canny Edge Detection and Similarity Score</u> Z Zulhelmi, Z Zulfikar, T Y Arif, A Afdhal and P N Syawaldi

<u>Open abstract</u>, Unhealthy skin analyzer for mobile platform using Canny Edge Detection and Similarity Score <u>View article</u>, Unhealthy skin analyzer for mobile platform using Canny Edge Detection and Similarity Score <u>PDF</u>, Unhealthy skin analyzer for mobile platform using Canny Edge Detection and Similarity Score

#### 012057

#### THE FOLLOWING ARTICLE ISOPEN ACCESS

Virtual application technology of citizen journalism based on mobile user experience

Alexander Setiawan, Ido Prijana Hadi, Desi Yoanita and Agusly I. Aritonang <u>Open abstract</u>, Virtual application technology of citizen journalism based on mobile user experience <u>View</u> <u>article</u>, Virtual application technology of citizen journalism based on mobile user experience <u>PDF</u>, Virtual application technology of citizen journalism based on mobile user experience

#### PAPER • OPEN ACCESS

# Virtual application technology of citizen journalism based on mobile user experience

To cite this article: Alexander Setiawan et al 2020 J. Phys.: Conf. Ser. 1502 012057

View the article online for updates and enhancements.



## IOP ebooks<sup>™</sup>

Bringing together innovative digital publishing with leading authors from the global scientific community.

Start exploring the collection-download the first chapter of every title for free.

# Virtual application technology of citizen journalism based on mobile user experience

#### Alexander Setiawan<sup>1</sup>, Ido Prijana Hadi<sup>2</sup>, Desi Yoanita<sup>2</sup>, Agusly I. Aritonang<sup>2</sup>

<sup>1</sup> Petra Christian University, Faculty of Industrial Technology, Informatics Department

<sup>2</sup> Petra Christian University, Faculty of Communication Science, Communication Science Department Siwalankerto Street 121 – 131 Surabaya 60236 Indonesia

Abstract. At present, the development of citizen journalism in the era of globalization and information technology is increasingly developing because of the presence of the internet and application technology that are in demand by readers and writers to develop their potential. The technology that is developing at this time is to use an Android technology mobile application that is very supportive of its operation. However, Citizen Journalism must be careful in using and filtering information from irresponsible blogs so that they can deceive the informant and easily incite an information that has not been proven by the truth of the news. Therefore, this research will make a citizen journalism application based on mobile technology in the platform of an Android and AJAX programming mobile. The results of the research show that the Mobile Technology Citizen Journalism application can be tested by sending or accessing news or information content on the server using a GPRS connection. Tests carried out include features, reliability, suitability, easy to use, and perception of the quality of this Mobile application.

#### 1. Introduction

The development of technology has now developed and is inherent in modern human life. Internet and social media are one of them which is very influential for the development of this technology, and also the development of information technology now it is also very utilized by media companies even to the public which as one of the tools to attract readers and disseminate important information around them is through Citizen Journalism.

Online citizen journalism is also increasingly attached to human life, along with the development of the internet and information technology. The development of citizen journalism makes people have alternative news and perspectives about a fact from various parties and groups. So now we no longer need to localize a view with only one particular profession. Anyone or ordinary citizen can become a journalist by writing a blog, writing news or posting pictures on a social media account which can contain events that are not tracked by conventional journalists, there are many facets to each story or news, which can be appointed to be the coolest topic. Citizen journalism is an activity in which the role of journalists or journalistic activities can be carried out by people who are formally not journalists. The activities that he does are the same as those of journalists in general, namely gathering information, writing news, editing and broadcasting it. A general finding is that novel evidence of the social impact

Content from this work may be used under the terms of the Creative Commons Attribution 3.0 licence. Any further distribution of this work must maintain attribution to the author(s) and the title of the work, journal citation and DOI. Published under licence by IOP Publishing Ltd 1

of research can be found in social media, becoming relevant platforms for scientists to spread quantitative and qualitative evidence of social impact in social media to capture the interest of citizens [1].

Freedom in terms of access or delivery of information owned by citizen journalism which is in line with the development of online journalism that continues to increase, causing the existence of citizen journalism will continue to exist in the world of technology.

In addition to the strength of citizen journalism, where citizen journalism allows the public to exchange information about things that can make the public more open-minded, citizen journalism also has obstacles that are difficult to avoid which can automatically become challenges for the existence of citizen journalism in the future.

#### 2. Citizen journalism and technology

One of the most accepted and inclusive definitions of citizen journalism has been put forward in New Media [2]. They define citizen journalism as the act of non-professionals, playing an active role in the process of collecting, reporting, analysing and disseminating news and information. This definition covers all the possible activities of citizen journalists in existence [3]. Citizen journalism can be interpreted as the involvement of citizens in preaching something. Without exception, every citizen can become a reporter on social media online networks.

#### 2.1. Social media

Social media is a bridge for journalists that refers to new media that uses technology in creating open interaction, participation and collaboration where everyone has the opportunity to voice their ideas, opinions and experiences through online media in the form of words or visual material [4].

#### 2.2. User experience and user satisfaction

The user experience is central to interaction design. By this, it is meant how a product behaves and is used by people in the real world. It is important to point out that one cannot design a user experience, only design for a user experience [5]. Where User Experience can understand feelings, motivations and value values more than a product, so users get more value than subjective efficiency, effectiveness and satisfaction. A User Experience designer does not design the same thing as a designer User Interface. User Experience designer creates a strategy that brings a solution [6]. There are many aspects of the user experience that can be considered and ways of taking them into account when designing interactive products. Of central importance are the usability, the functionality, the aesthetics, the content, the look and feel, and the sensual and emotional appeal. Extending the findings of previous research on the use of citizen journalism websites, this model connects usability with user satisfaction, trust, and loyalty of citizen journalism to use technology in the regulation of cellular services on social media [7].

#### 3. Analysis and design system

The user experience is very important for the success of this citizen journalism application. Therefore, cell phone applications targeted at citizens must be designed and developed so that they can be used, usability, and attitudes and intentions to use that will help ensure a high level of acceptance. Testing must be done, and the purpose of the test is to receive feedback from participants so that the level of usefulness of this application can be determined. An overview of the citizen journalism application can be seen in Figure 1.

1502 (2020) 012057 doi:10.1088/1742-6596/1502/1/012057

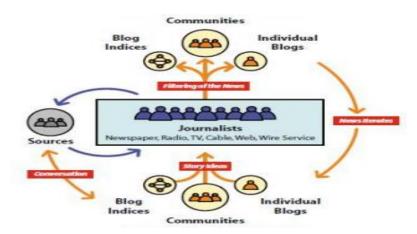


Figure 1. The Overview Citizen Journalism Application.

The results show that adding some features to the design will be useful and will increase the overall usability of the application. The process of application citizen journalism can be seen in Figure 2.

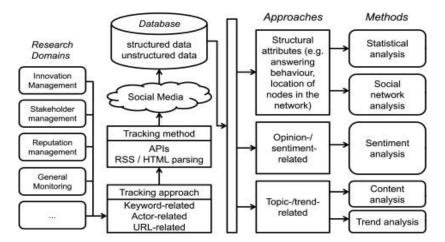


Figure 2. The Process Citizen Journalism Application

The creation of the Entity-Relationship Diagram (ERD) for citizen journalism databases requires 12 tables that are interconnected between one another. The Entity-Relationship Diagram (ERD) citizen journalism can be seen in Figure 3.

1502 (2020) 012057 doi:10.1088/1742-6596/1502/1/012057

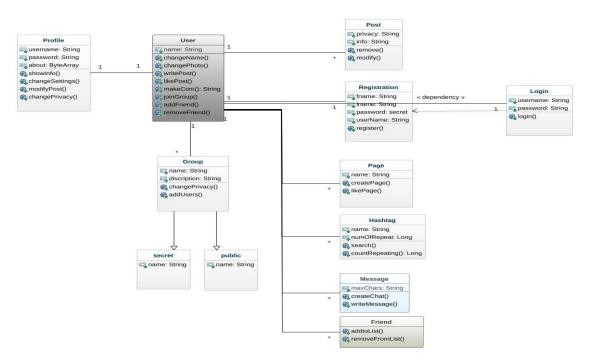


Figure 3. The Entity Relationship Diagram Citizen Journalism Application

#### 4. Implementation system

This testing process is carried out on Android devices that have been designed. The Interface testing will be done by testing the Samsung Type A8 mobile application on Citizen Journalism Application. As for testing the interface login sign in can be seen in Figure 4 for sign in, for testing the interface sign up can be seen in Figure 5.

0:27   0.8KB/s 🌀	JII 🔶 92	0:27   0	.0KB/s 🗇	al 🗧 🥶
← Login / Signup		←	Login / Signu	ıp
LOGIN	SIGNUP		LOGIN	SIGNUP
Officials				Officials
Email:		Email:		
Password:		Userna	ime:	
		Birthda	iy:	
SIGN IN	1	Passw	ord:	
		Confirm	n Password:	
			I accept the Te	erms and Conditions
			sic	GN UP
• • • •			•	•••

Figure 4. The Interface Login Sign In.

Figure 5. The Interface Sign Up

#### **1502** (2020) 012057 doi:10.1088/1742-6596/1502/1/012057

**IOP** Publishing

After the user has successfully logged in, the users can post news that will be displayed on the home page of the citizen journalism application. Certainly, they have to wait for approval from the administrator. On the administrator interface can be seen Figure 6, the administrator can see the number of news posts that have been added, and the administrator can do his approval and can even add comments to articles can be seen Figure 7.

0:42   0.0KE/s ⊗ ≡ Administrator'	जा। 🗢 🚥 s Profile	0:43⊺0.0KB/s⊚ ☰ Administrator's	ه Profile
Admini		Adminis	
PROFILE	POST	PROFILE	POST
Display Name	Administrator	PNS yang Ta	k Upacara Panca₅
Username	admin	01 Jun 2019 ● 11   ♥ 0	VIEW
Email adm	nin@jurnalistikwarga.com	Politics	NO - Akhirnya Ter
Total Post	5	01 Jun 2019	
Total Point	500	Perang Daga Economy	ng Berkobar, Aktiv VIEW
Home Sea		Home Sear	•
	• •		• • •

Figure 6. The Interface Administrator Profile

Figure 7. The Interface Post News

On this page is the exchange of rewards for active users, by exchanging various items or gifts using points that are already owned can be seen in Figure 8. Details of merchandise can be seen in Figure 9.

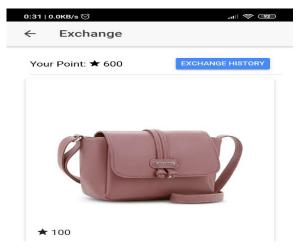


Figure 8. The Interface Redeem Merchandise

0:31   6.8KB/s ්ට 🕫 🤧			
← Exchange	History		
Item	Tas		
Deliver To	Jsjsjs, Iqiq, Uwuw, 6161		
Recipient	Tes		
Status	PENDING		
Exchange At	2019-09-05 00:31:41		

Figure 9. The Interface Detail Redeem

#### 5. Conclusion

The design and development of citizen journalism applications, according to the experience of the user, has several conclusions that can be drawn, including the interest in users and citizens of online journalism who use this mobile-based application, and strived to encourage users to be more transparent with ease and openness in reporting news in other social media. Professional journalists must start creating blogs creatively so that they will get informative feedback from readers.

#### Acknowledgments

This Research Project was funded by a Basic Product Research Grant, received in 2018, from Ministry of Research, Technology, and Higher Education of The Republic of Indonesia. We thank the Centre of Research Petra Christian University for the supports and guidance.

#### References

- [1] Pulido C M, Redondo Sama G, Sordé-Martí, T, and Flecha, R. 2018. Social impact in social media: A new method to evaluate the social impact of research. *PloS one*, *13*(8), e0203117.
- [2] Bowman S and Willis C 2003 We Media: How Audiences are Shaping the Future of News and Information. A Seminal Report. Reston: The Media Centre at the American Press Institute. Retrieved from goo.gl/WSjaZc. [Accessed: 26th August 2019]
- [3] Noor Rabia 2017 Citizen journalism vs mainstream journalism: a study on challenges posed by amateurs. *Athens Journal of Mass Media and Communication* 3.1 (2017): 55-76.
- [4] Lattimore Dan. et.al. 2010 Public Relations Profesi dan Praktik (3rd ed). Jakarta: Salemba Humanika.
- [5] Yvonne Rogers, Helen Sharp and Jenny Preece 2015 Interaction Design ; Beyond Human Computer Interaction 4<sup>th</sup> John Wiley & Sons Ltd Publisher.
- [6] Flowers, E. (2012). UX is not UI. Retrieved October 22, 2017, from http://www.helloerik.com/ux-is-not-ui
- [7] Lee D, Moon J, Kim Y. J, and Mun, Y. Y. 2015. Antecedents and consequences of mobile phone usability: Linking simplicity and interactivity to satisfaction, trust, and brand oyalty. *Information & Management*, 52(3), 295-304.



Presentation Certificate of

This certificate is awarded to Alexander Setiawan, Ido Prijana Hadi, Desi Yoanita, Agusly Aritonang

**Paper Title** 

Virtual Application Technology of Citizen Journalism Based on Mobile User Experience

for successfully presenting their paper at the

3<sup>rd</sup> INTERNATIONAL CONFERENCE ON TELECOMMUNICATION, ELECTRONIC AND COMPUTER ENGINEERING

> held at Holiday Inn Hotel, Melaka, Malaysia during October 22 – 24, 2019.

...... .....

Professor Dr. Zahriladha Zakaria General Chair

Organized by:







Supported by:





