

ISSN 1742-6596

Journal of Physics

Conference Series

The 11th Biennial Conference on
Classical and Quantum Relativistic
Dynamics of Particles and Fields

1239

VOLUME 1239 – 2010

4–7 June 2010
Mérida, Yucatán, Mexico

EDITOR
Marie Land

The open access journal for conference proceedings

iopscience.org/jpc

IOP Publishing

Table of contents

[Volume 1502](#)

2020

[Previous issue](#)[Next 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 IS OPEN ACCESS

[Preface](#)

[Open abstract](#), [Preface](#) [View article](#), [Preface](#) [PDF](#), [Preface](#)

011002

THE FOLLOWING ARTICLE IS OPEN ACCESS

[Peer review statement](#)

[Open abstract](#), [Peer review statement](#) [View article](#), [Peer review statement](#) [PDF](#), [Peer review statement](#)

Telecommunication Engineering

012001

THE FOLLOWING ARTICLE IS OPEN ACCESS

[Compact microstrip monopole antenna with Enhanced Gain using Artificial Magnetic Conductor \(AMC\)](#)

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

[Open abstract](#), [Compact microstrip monopole antenna with Enhanced Gain using Artificial Magnetic Conductor \(AMC\)](#) [View article](#), [Compact microstrip monopole antenna with Enhanced Gain using Artificial Magnetic Conductor \(AMC\)](#) [PDF](#), [Compact microstrip monopole antenna with Enhanced Gain using Artificial Magnetic Conductor \(AMC\)](#)

012002

THE FOLLOWING ARTICLE IS OPEN ACCESS

[Performance analysis of NOMA using different coding techniques](#)

Mohd Syarhan Idris, Darmawaty Mohd Ali, Nur Idora Abdul Razak, Azlina Idris and Hasyimah Ahmad

[Open abstract](#), [Performance analysis of NOMA using different coding techniques](#) [View article](#), [Performance analysis of NOMA using different coding techniques](#) [PDF](#), [Performance analysis of NOMA using different coding techniques](#)

012003

THE FOLLOWING ARTICLE IS OPEN ACCESS

[Performance analysis of NOMA in pedestrian and vehicular environments](#)

Hasyimah Ahmad, Darmawaty Mohd Ali, Wan Norsyafizan Wan Muhamad and Mohd Syarhan Idris

[Open abstract](#), [Performance analysis of NOMA in pedestrian and vehicular environments](#) [View](#)

[article](#), [Performance analysis of NOMA in pedestrian and vehicular environments](#) [PDF](#), [Performance analysis of NOMA in pedestrian and vehicular environments](#)

012004

THE FOLLOWING ARTICLE IS OPEN 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

[Open abstract](#), [Qualitative-based QoS performance study using hybrid ACO and PSO algorithm routing in MANET](#) [View article](#), [Qualitative-based QoS performance study using hybrid ACO and PSO algorithm routing in MANET](#) [PDF](#), [Qualitative-based QoS performance study using hybrid ACO and PSO algorithm routing in MANET](#)

[routing in MANET](#)

012005

THE FOLLOWING ARTICLE IS OPEN ACCESS

[Pulse Position Modulation characterization for indoor visible light communication system](#)

AM Zaiton, CH Eng and F Jasman

[Open abstract](#), [Pulse Position Modulation characterization for indoor visible light communication system](#) [View article](#), [Pulse Position Modulation characterization for indoor visible light communication system](#) [PDF](#), [Pulse Position Modulation characterization for indoor visible light communication system](#)

[Pulse Position Modulation characterization for indoor visible light communication system](#)

012006

THE FOLLOWING ARTICLE IS OPEN ACCESS

[Human detection with and without weapon using LTE-based passive Forward Scattering Radar System](#)

Noor Hafizah Abdul Aziz and Muhammad Firdaus Hussain

[Open abstract](#), [Human detection with and without weapon using LTE-based passive Forward Scattering Radar System](#) [View article](#), [Human detection with and without weapon using LTE-based passive Forward Scattering Radar System](#) [PDF](#), [Human detection with and without weapon using LTE-based passive Forward Scattering Radar System](#)

[Human detection with and without weapon using LTE-based passive Forward Scattering Radar System](#)

012007

THE FOLLOWING ARTICLE IS OPEN 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

[Open abstract](#), [Phantom development for In-Vitro measurements of MICS band telemetry antenna](#) [View article](#), [Phantom development for In-Vitro measurements of MICS band telemetry antenna](#) [PDF](#), [Phantom development for In-Vitro measurements of MICS band telemetry antenna](#)

[Phantom development for In-Vitro measurements of MICS band telemetry antenna](#)

012008

THE FOLLOWING ARTICLE IS OPEN 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

[Open abstract](#), Simulation on wideband antenna based on Polydimethylsiloxane (PDMS) for medical imaging application [View article](#), Simulation on wideband antenna based on Polydimethylsiloxane (PDMS) for medical imaging application [PDF](#), Simulation on wideband antenna based on Polydimethylsiloxane (PDMS) for medical imaging application

012009

THE FOLLOWING ARTICLE IS OPEN 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

[Open abstract](#), Investigation on fiber optic sensor using FBG for various temperature and liquid density [View article](#), 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 IS OPEN ACCESS

[Mobility analysis of Modified Proportional Fair scheduler in LTE/LTE-Advanced system](#)

M S Johal, M K Ismail and H A Hendra

[Open abstract](#), Mobility analysis of Modified Proportional Fair scheduler in LTE/LTE-Advanced system [View article](#), Mobility analysis of Modified Proportional Fair scheduler in LTE/LTE-Advanced system [PDF](#), Mobility analysis of Modified Proportional Fair scheduler in LTE/LTE-Advanced system

012011

THE FOLLOWING ARTICLE IS OPEN 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

[Open abstract](#), Water ageing effect on wearable antenna made of medical-friendly and transdermal material at 2.4 GHz [View article](#), Water ageing effect on wearable antenna made of medical-friendly and transdermal material at 2.4 GHz [PDF](#), Water ageing effect on wearable antenna made of medical-friendly and transdermal material at 2.4 GHz

012012

THE FOLLOWING ARTICLE IS OPEN 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

[Open abstract](#), A comprehensive study of vehicle communication framework in Malaysia [View article](#), A comprehensive study of vehicle communication framework in Malaysia [PDF](#), A comprehensive study of vehicle communication framework in Malaysia

012013

THE FOLLOWING ARTICLE IS OPEN 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

[Open abstract](#), A multiband antenna for biomedical telemetry and treatments [View article](#), A multiband antenna for biomedical telemetry and treatments [PDF](#), A multiband antenna for biomedical telemetry and treatments

012014

THE FOLLOWING ARTICLE IS OPEN 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

[Open abstract](#), [Investigations on europium aluminum incorporated polymer composite optical waveguide amplifier](#) [View article](#), [Investigations on europium aluminum incorporated polymer composite optical waveguide amplifier](#) [PDF](#), [Investigations on europium aluminum incorporated polymer composite optical waveguide amplifier](#)

012015

THE FOLLOWING ARTICLE IS OPEN ACCESS

[Efficiency ratio optimization on uplink transmission power for Cloud-Based Radio Access Network](#)

Nur Ilyana Anwar Apandi and Kevin Goh Yu Han

[Open abstract](#), [Efficiency ratio optimization on uplink transmission power for Cloud-Based Radio Access Network](#) [View article](#), [Efficiency ratio optimization on uplink transmission power for Cloud-Based Radio Access Network](#) [PDF](#), [Efficiency ratio optimization on uplink transmission power for Cloud-Based Radio Access Network](#)

012016

THE FOLLOWING ARTICLE IS OPEN ACCESS

[Solar panel receiver characterisation for indoor visible light communication system](#)

AM Zaiton, HR Muhammad and F Jasman

[Open abstract](#), [Solar panel receiver characterisation for indoor visible light communication system](#) [View article](#), [Solar panel receiver characterisation for indoor visible light communication system](#) [PDF](#), [Solar panel receiver characterisation for indoor visible light communication system](#)

012017

THE FOLLOWING ARTICLE IS OPEN ACCESS

[New perspectives of a 5G operating model](#)

Muhammad Suryanegara

[Open abstract](#), [New perspectives of a 5G operating model](#) [View article](#), [New perspectives of a 5G operating model](#) [PDF](#), [New perspectives of a 5G operating model](#)

012018

THE FOLLOWING ARTICLE IS OPEN ACCESS

[Challenges and opportunities for Integrated Broadcast Broadband \(IBB\) implementation in Indonesia](#)

Sri Ariyanti and Diah Yuniarti

[Open abstract](#), [Challenges and opportunities for Integrated Broadcast Broadband \(IBB\) implementation in Indonesia](#) [View article](#), [Challenges and opportunities for Integrated Broadcast Broadband \(IBB\) implementation in Indonesia](#) [PDF](#), [Challenges and opportunities for Integrated Broadcast Broadband \(IBB\) implementation in Indonesia](#)

Electronic Engineering

012019

THE FOLLOWING ARTICLE IS OPEN 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

[Open abstract](#), [Optimized state feedback control of quarter car active suspension system based on LMI algorithm](#) [View article](#), [Optimized state feedback control of quarter car active suspension system based on LMI algorithm](#) [PDF](#), [Optimized state feedback control of quarter car active suspension system based on LMI algorithm](#)

012020

THE FOLLOWING ARTICLE IS OPEN ACCESS

[IoT based water quality monitoring system for aquaponics](#)

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

[Open abstract](#), [IoT based water quality monitoring system for aquaponics](#) [View article](#), [IoT based water quality monitoring system for aquaponics](#) [PDF](#), [IoT based water quality monitoring system for aquaponics](#)

012021

THE FOLLOWING ARTICLE IS OPEN ACCESS

[Automated aquaponics maintenance system](#)

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

[Open abstract](#), [Automated aquaponics maintenance system](#) [View article](#), [Automated aquaponics maintenance system](#) [PDF](#), [Automated aquaponics maintenance system](#)

012022

THE FOLLOWING ARTICLE IS OPEN 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

[Open abstract](#), [Simulation and analysis of flexible TEG using polymer based and pyroelectric material for microdevice energy harvesting](#) [View article](#), [Simulation and analysis of flexible TEG using polymer based and pyroelectric material for microdevice energy harvesting](#) [PDF](#), [Simulation and analysis of flexible TEG using polymer based and pyroelectric material for microdevice energy harvesting](#)

012023

THE FOLLOWING ARTICLE IS OPEN 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](#) [View article](#), [Lab-On-Chip, Internet of Things, Analytics and Health Care 4.0: A synergistic future forward](#) [PDF](#), [Lab-On-Chip, Internet of Things, Analytics and Health Care 4.0: A synergistic future forward](#)

012024

THE FOLLOWING ARTICLE IS OPEN ACCESS

[Optimal control of inverted pendulum on cart system](#)

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

[Open abstract](#), [Optimal control of inverted pendulum on cart system](#) [View article](#), [Optimal control of inverted pendulum on cart system](#) [PDF](#), [Optimal control of inverted pendulum on cart system](#)

012025

THE FOLLOWING ARTICLE IS OPEN 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

[Open abstract](#), A study of low-cost vehicle collision prevention assistance [View article](#), A study of low-cost vehicle collision prevention assistance [PDF](#), A study of low-cost vehicle collision prevention assistance

012026

THE FOLLOWING ARTICLE IS OPEN 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

[Open abstract](#), [Design and analysis of a dual function of switchable resonator for RF switch](#) [View article](#), [Design and analysis of a dual function of switchable resonator for RF switch](#) [PDF](#), [Design and analysis of a dual function of switchable resonator for RF switch](#)

012027

THE FOLLOWING ARTICLE IS OPEN ACCESS

[Low-sampling rate data-based failure diagnosis by using self-powered system](#)

S Okada, S Hashimoto and A A Basari

[Open abstract](#), [Low-sampling rate data-based failure diagnosis by using self-powered system](#) [View article](#), [Low-sampling rate data-based failure diagnosis by using self-powered system](#) [PDF](#), [Low-sampling rate data-based failure diagnosis by using self-powered system](#)

012028

THE FOLLOWING ARTICLE IS OPEN ACCESS

[Development of a PZT device-based power-generating shoes for disaster-affected areas](#)

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

[Open abstract](#), [Development of a PZT device-based power-generating shoes for disaster-affected areas](#) [View article](#), [Development of a PZT device-based power-generating shoes for disaster-affected areas](#) [PDF](#), [Development of a PZT device-based power-generating shoes for disaster-affected areas](#)

012029

THE FOLLOWING ARTICLE IS OPEN ACCESS

[Design of Sunda Straits automatic water level station network](#)

Sugiarto, S K Wijaya and M S Rosid

[Open abstract](#), [Design of Sunda Straits automatic water level station network](#) [View article](#), [Design of Sunda Straits automatic water level station network](#) [PDF](#), [Design of Sunda Straits automatic water level station network](#)

012030

THE FOLLOWING ARTICLE IS OPEN 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

[Open abstract](#), [Performance improvement of a slotted square patch antenna using FSS superstrate for wireless application](#) [View article](#), [Performance improvement of a slotted square patch antenna using FSS superstrate for wireless application](#) [PDF](#), [Performance improvement of a slotted square patch antenna using FSS superstrate for wireless application](#)

012031

THE FOLLOWING ARTICLE IS OPEN 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

[Open abstract](#), [Bridge multiple split ring resonator sensor for microwave liquid characterization](#) [View article](#), [Bridge multiple split ring resonator sensor for microwave liquid characterization](#) [PDF](#), [Bridge multiple split ring resonator sensor for microwave liquid characterization](#)

Computer Engineering

012032

THE FOLLOWING ARTICLE IS OPEN 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

[Open abstract](#), [Real time mobile based license plate recognition system with neural networks](#) [View article](#), [Real time mobile based license plate recognition system with neural networks](#) [PDF](#), [Real time mobile based license plate recognition system with neural networks](#)

012033

THE FOLLOWING ARTICLE IS OPEN ACCESS

[Comparison of simple feedforward neural network, recurrent neural network and ensemble neural networks in phishing detection](#)

Gan Kim Soon, Chin Kim On, Nordaliela Mohd Rusli, Tan Soo Fun, Rayner Alfred and Tan Tse Guan

[Open abstract](#), [Comparison of simple feedforward neural network, recurrent neural network and ensemble neural networks in phishing detection](#) [View article](#), [Comparison of simple feedforward neural network, recurrent neural network and ensemble neural networks in phishing detection](#) [PDF](#), [Comparison of simple feedforward neural network, recurrent neural network and ensemble neural networks in phishing detection](#)

012034

THE FOLLOWING ARTICLE IS OPEN ACCESS

[The initial socio-technical solution for phishing attack](#)

Abdullah Fajar and Setiadi Yazid

[Open abstract](#), [The initial socio-technical solution for phishing attack](#) [View article](#), [The initial socio-technical solution for phishing attack](#) [PDF](#), [The initial socio-technical solution for phishing attack](#)

012035

THE FOLLOWING ARTICLE IS OPEN ACCESS

[Mobile applications in customer relationship management to enhance empowerment of knowledge to customers](#)

Z Gani and W Maung

[Open abstract](#), [Mobile applications in customer relationship management to enhance empowerment of knowledge to customers](#) [View article](#), [Mobile applications in customer relationship management to enhance empowerment of knowledge to customers](#) [PDF](#), [Mobile applications in customer relationship management to enhance empowerment of knowledge to customers](#)

012036

THE FOLLOWING ARTICLE IS OPEN ACCESS

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

Worapat Siriboonpipattana, Chitsutha Soomlek and Pusadee Seresangtakul

[Open abstract](#), [Increasing the input data length of RSA cryptosystem by applying a hybrid lossless data compression algorithm](#) [View article](#), [Increasing the input data length of RSA cryptosystem by applying a hybrid lossless data compression algorithm](#) [PDF](#), [Increasing the input data length of RSA cryptosystem by applying a hybrid lossless data compression algorithm](#)

012037

THE FOLLOWING ARTICLE IS OPEN ACCESS

[Driver drowsiness detection using different classification algorithms](#)

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

[Open abstract](#), [Driver drowsiness detection using different classification algorithms](#) [View article](#), [Driver drowsiness detection using different classification algorithms](#) [PDF](#), [Driver drowsiness detection using different classification algorithms](#)

012038

THE FOLLOWING ARTICLE IS OPEN 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

[Open abstract](#), [Lymphoblast cell morphology identification to detect Acute Lymphoblastic Leukemia \(ALL\) using various color segmentation](#) [View article](#), [Lymphoblast cell morphology identification to detect Acute Lymphoblastic Leukemia \(ALL\) using various color segmentation](#) [PDF](#), [Lymphoblast cell morphology identification to detect Acute Lymphoblastic Leukemia \(ALL\) using various color segmentation](#)

012039

THE FOLLOWING ARTICLE IS OPEN ACCESS

[Machine learning approach for estimating tree volume](#)

Siti Hajar Mohd Mushar, Sharifah Sakinah Syed Ahmad, Fauziah Kasmin and Nur Hajar Zamah Shari

[Open abstract](#), [Machine learning approach for estimating tree volume](#) [View article](#), [Machine learning approach for estimating tree volume](#) [PDF](#), [Machine learning approach for estimating tree volume](#)

012040

THE FOLLOWING ARTICLE IS OPEN 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

[Open abstract](#), [Garbage monitoring systems based on Internet-of-Things application](#) [View article](#), [Garbage monitoring systems based on Internet-of-Things application](#) [PDF](#), [Garbage monitoring systems based on Internet-of-Things application](#)

012041

THE FOLLOWING ARTICLE IS OPEN 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

[Open abstract](#), [Home automation monitoring system based on Internet-of-Things application](#) [View article](#), [Home automation monitoring system based on Internet-of-Things application](#) [PDF](#), [Home automation monitoring system based on Internet-of-Things application](#)

012042

THE FOLLOWING ARTICLE IS OPEN 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

[Open abstract](#), [Optimization of process parameter variations for 16nm DG-FinFET using Response Surface Methodology-Central Composite Design](#) [View article](#), [Optimization of process parameter variations for 16nm](#)

DG-FinFET using Response Surface Methodology-Central Composite Design [PDF](#), Optimization of process parameter variations for 16nm DG-FinFET using Response Surface Methodology-Central Composite Design

012043

THE FOLLOWING ARTICLE IS OPEN 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

[Open abstract](#), [Analysis of local binary pattern using uniform bins as palm vein pattern descriptor](#) [View article](#), [Analysis of local binary pattern using uniform bins as palm vein pattern descriptor](#) [PDF](#), [Analysis of local binary pattern using uniform bins as palm vein pattern descriptor](#)

012044

THE FOLLOWING ARTICLE IS OPEN ACCESS

[Materialized view selection problem using genetic algorithm for manufacturing execution system](#)

Z I Mohd Yusoh, K B Gan and N A Emran

[Open abstract](#), [Materialized view selection problem using genetic algorithm for manufacturing execution system](#) [View article](#), [Materialized view selection problem using genetic algorithm for manufacturing execution system](#) [PDF](#), [Materialized view selection problem using genetic algorithm for manufacturing execution system](#)

012045

THE FOLLOWING ARTICLE IS OPEN 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

[Open abstract](#), [Impact of strained channel on electrical properties of Junctionless Double Gate MOSFET](#) [View article](#), [Impact of strained channel on electrical properties of Junctionless Double Gate MOSFET](#) [PDF](#), [Impact of strained channel on electrical properties of Junctionless Double Gate MOSFET](#)

012046

THE FOLLOWING ARTICLE IS OPEN 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

[Open abstract](#), [Region-based segmentation and classification of Mandibular First Molar Tooth based on Demirjian's method](#) [View article](#), [Region-based segmentation and classification of Mandibular First Molar Tooth based on Demirjian's method](#) [PDF](#), [Region-based segmentation and classification of Mandibular First Molar Tooth based on Demirjian's method](#)

012047

THE FOLLOWING ARTICLE IS OPEN 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

[Open abstract](#), [Minimum leakage current optimization on 22 nm SOI NMOS device with HfO₂/WSix/Graphene gate structure using Taguchi method.](#) [View article](#), [Minimum leakage current optimization on 22 nm SOI NMOS device with HfO₂/WSix/Graphene gate structure using Taguchi method.](#) [PDF](#), [Minimum leakage current optimization on 22 nm SOI NMOS device with HfO₂/WSix/Graphene gate structure using Taguchi method.](#)

012048

THE FOLLOWING ARTICLE IS OPEN 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 Maheeran A Hamid
[Open abstract](#), [Beyond Nernst Sensitivity of Ion Sensitive Field Effect Transistor based on Ultra-Thin Body Box FDSOI](#) [View article](#), [Beyond Nernst Sensitivity of Ion Sensitive Field Effect Transistor based on Ultra-Thin Body Box FDSOI](#) [PDF](#), [Beyond Nernst Sensitivity of Ion Sensitive Field Effect Transistor based on Ultra-Thin Body Box FDSOI](#)

012049

THE FOLLOWING ARTICLE IS OPEN 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
[Open abstract](#), [Comparison of global and local features for author's identification by using geometrical and zoning methods](#) [View article](#), [Comparison of global and local features for author's identification by using geometrical and zoning methods](#) [PDF](#), [Comparison of global and local features for author's identification by using geometrical and zoning methods](#)

012050

THE FOLLOWING ARTICLE IS OPEN 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
[Open abstract](#), [Cardioid graph based ECG biometric in varying physiological conditions using compressed QRS](#) [View article](#), [Cardioid graph based ECG biometric in varying physiological conditions using compressed QRS](#) [PDF](#), [Cardioid graph based ECG biometric in varying physiological conditions using compressed QRS](#)

012051

THE FOLLOWING ARTICLE IS OPEN ACCESS

[Gait recognition using histograms of temporal gradients](#)

Jashila Nair Mogan, Chin Poo Lee and Kian Ming Lim
[Open abstract](#), [Gait recognition using histograms of temporal gradients](#) [View article](#), [Gait recognition using histograms of temporal gradients](#) [PDF](#), [Gait recognition using histograms of temporal gradients](#)

012052

THE FOLLOWING ARTICLE IS OPEN ACCESS

[Stress recognition using Electroencephalogram \(EEG\) signal](#)

TuerxunWaili, Yousif Sa'ad Alshebly, Khairul Azami Sidek and Md Gapar Md Johar
[Open abstract](#), [Stress recognition using Electroencephalogram \(EEG\) signal](#) [View article](#), [Stress recognition using Electroencephalogram \(EEG\) signal](#) [PDF](#), [Stress recognition using Electroencephalogram \(EEG\) signal](#)

012053

THE FOLLOWING ARTICLE IS OPEN 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
[Open abstract](#), [Occupancy grid map algorithm with neural network using array of infrared sensors](#) [View article](#), [Occupancy grid map algorithm with neural network using array of infrared sensors](#) [PDF](#), [Occupancy grid map algorithm with neural network using array of infrared sensors](#)

012054

THE FOLLOWING ARTICLE IS OPEN 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

[Open abstract](#), Stop hunt detection using indicators and expert advisors in the forex market [View article](#), Stop hunt detection using indicators and expert advisors in the forex market [PDF](#), Stop hunt detection using indicators and expert advisors in the forex market

012055

THE FOLLOWING ARTICLE IS OPEN 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

[Open abstract](#), Classification and detection of chili and its flower using deep learning approach [View 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 IS OPEN ACCESS

[Unhealthy skin analyzer for mobile platform using Canny Edge Detection and Similarity Score](#)

Z Zulhelmi, Z Zulfikar, T Y Arif, A Afdhal and P N Syawaldi

[Open abstract](#), Unhealthy skin analyzer for mobile platform using Canny Edge Detection and Similarity Score [View article](#), Unhealthy skin analyzer for mobile platform using Canny Edge Detection and Similarity Score [PDF](#), Unhealthy skin analyzer for mobile platform using Canny Edge Detection and Similarity Score

012057

THE FOLLOWING ARTICLE IS OPEN ACCESS

[Virtual application technology of citizen journalism based on mobile user experience](#)

Alexander Setiawan, Ido Prijana Hadi, Desi Yoanita and Agusly I. Aritonang

[Open abstract](#), Virtual application technology of citizen journalism based on mobile user experience [View article](#), Virtual application technology of citizen journalism based on mobile user experience [PDF](#), 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™

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 Setiawan¹, Ido Prijana Hadi², Desi Yoanita², Agusly I. Aritonang²

¹ Petra Christian University, Faculty of Industrial Technology, Informatics Department

² 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



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.



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.

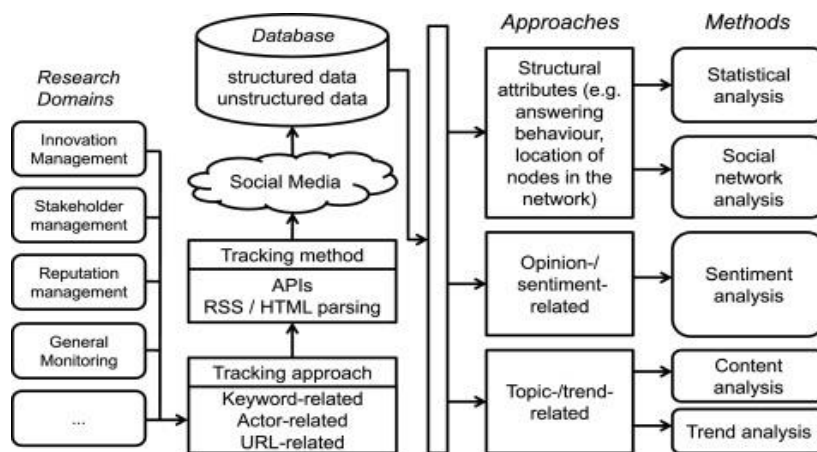


Figure 2. The Process Citizen Journalism Application

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.

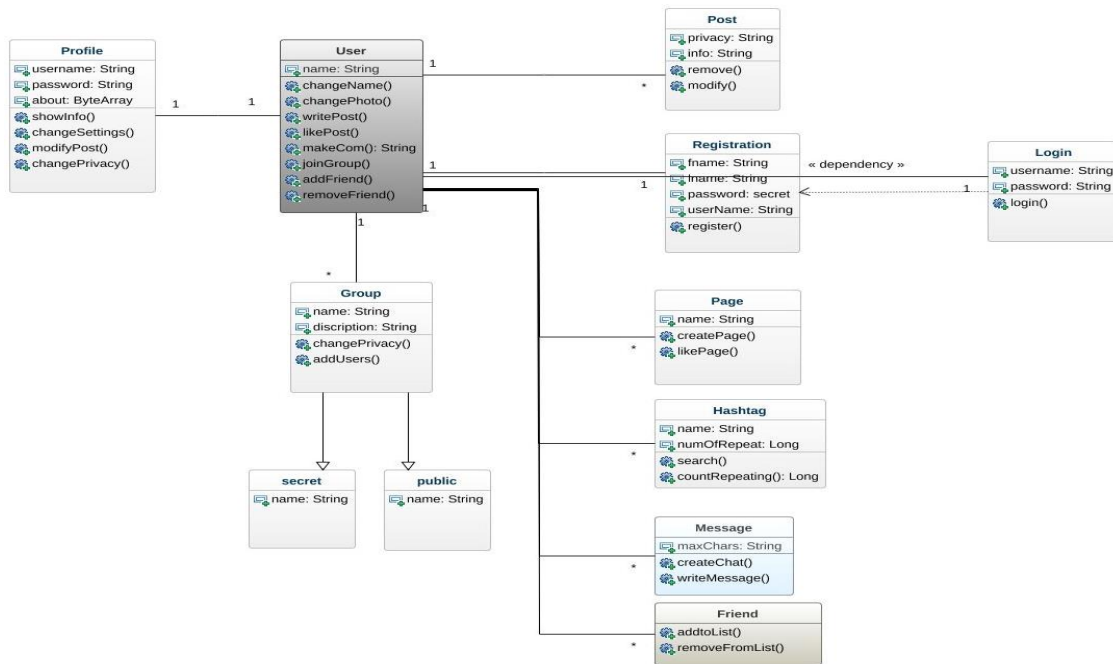


Figure 3. The Entity Relationship Diagram Citizen Journalism Application

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.

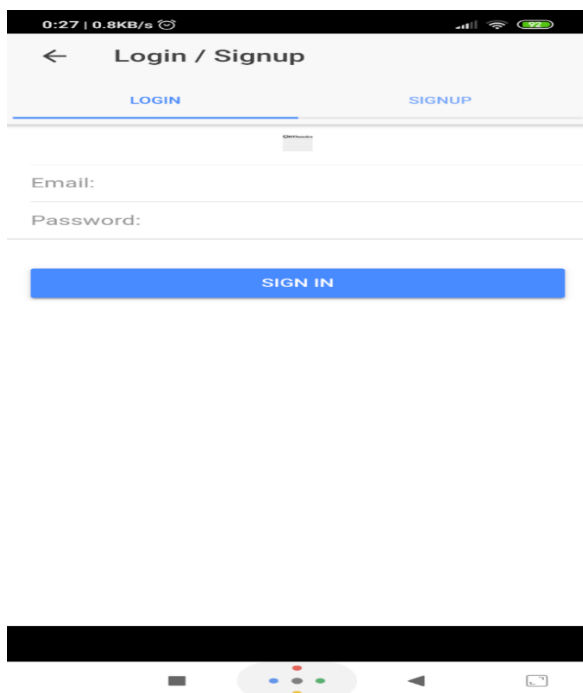


Figure 4. The Interface Login Sign In.

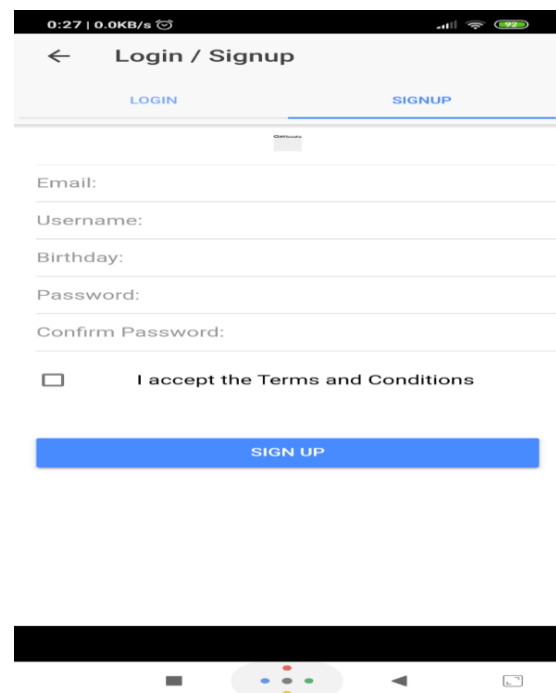


Figure 5. The Interface Sign Up

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.

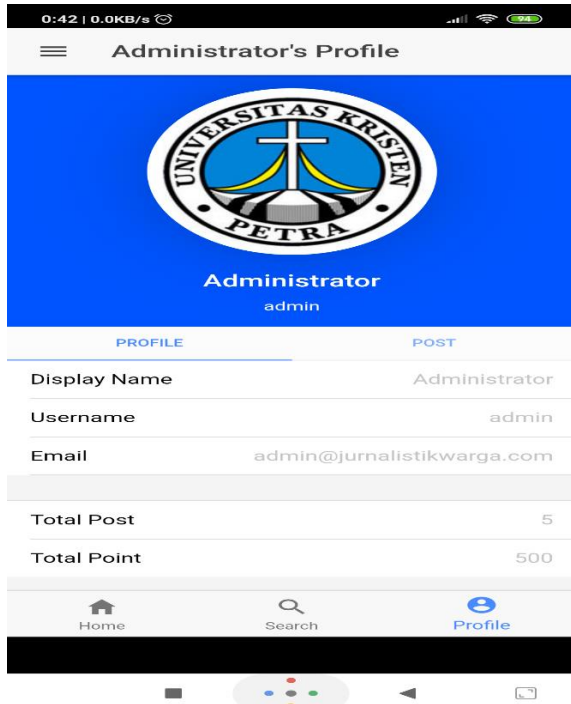


Figure 6. The Interface Administrator Profile

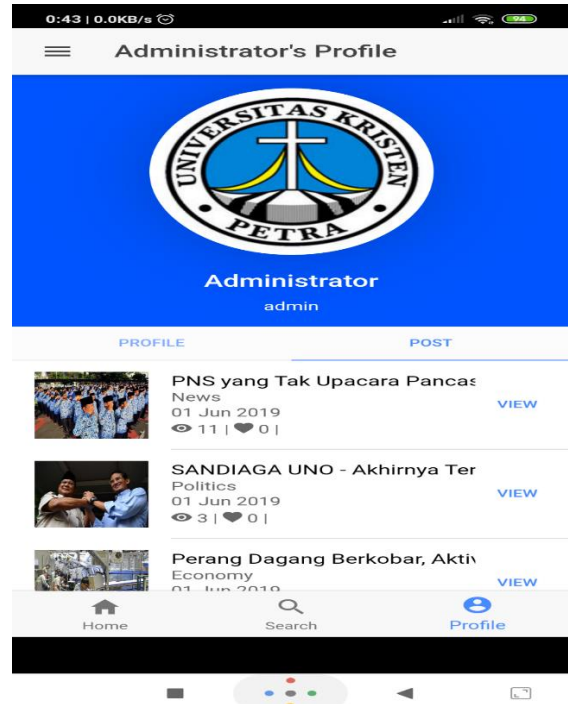


Figure 7. The Interface Post News

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.

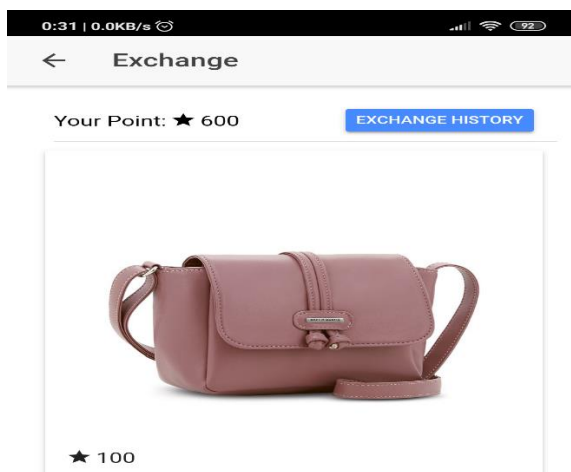


Figure 8. The Interface Redeem Merchandise

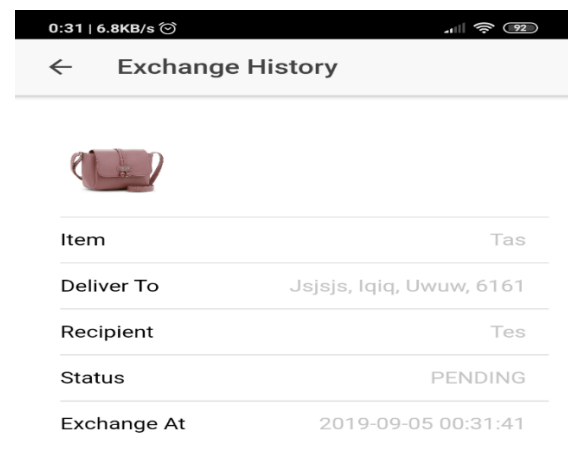


Figure 9. The Interface Detail Redeem

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 4th* 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 loyalty. *Information & Management*, 52(3), 295-304.