

**LEMBAR  
HASIL PENILAIAN SEJAWAT SEBIDANG ATAU PEER REVIEW  
KARYA ILMIAH : PROSIDING**

Judul Karya Ilmiah : Evaluation of skew-planar antenna for UAV communication at 2.4 GHz band  
 Jumlah Penulis : 6 Orang  
 Status Pengusul : Penulis ke-5  
 Identitas Prosiding : a. Judul Prosiding : IAES International Conference on Electrical Engineering, Computer Science and Informatics  
 b. ISBN/ISSN : Online ISSN: 1757-899X  
 c. Thn Terbit, Tempat Pelaks. : 2016, Semarang, Indonesia  
 d. Penerbit/Organiser : IOP Publishing Ltd  
 e. Alamat Repository/Web : <https://iopscience.iop.org/article/10.1088/1757-899X/190/1/012020>  
 Alamat Artikel : <https://iopscience.iop.org/article/10.1088/1757-899X/190/1/012020/pdf>  
 f. Terindeks di (jika ada) : Scopus

Kategori Publikasi Makalah :  *Prosiding* Forum Ilmiah Internasional  
 (beri ✓ pada kategori yang tepat)  *Prosiding* Forum Ilmiah Nasional

Hasil Penilaian *Peer Review* :

Komponen Yang Dinilai	Nilai Reviewer		Nilai Rata-rata
	Reviewer I	Reviewer II	
a. Kelengkapan unsur isi prosiding (10%)	2,70	2,50	2,60
b. Ruang lingkup dan kedalaman pembahasan (30%)	8,50	8,50	8,50
c. Kecukupan dan kemutakhiran data/informasi dan metodologi (30%)	8,80	8,80	8,80
d. Kelengkapan unsur dan kualitas terbitan/prosiding(30%)	8,80	8,75	8,77
<b>Total = (100%)</b>	<b>28,80</b>	<b>28,55</b>	<b>28,67</b>
<b>Nilai Pengusul = (40% x 28,67)/5= 2,29</b>			

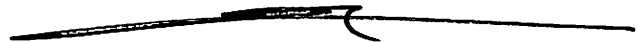
Reviewer 2



Dr. Iwan Setiawan, S.T., M.T.  
 NIP. 197309262000121001  
 Unit Kerja : Teknik Elektro FT UNDIP

Semarang,

Reviewer 1



Dr. Wahyudi, S.T., M.T.  
 NIP. 196906121994031001  
 Unit Kerja : Teknik Elektro FT UNDIP

**LEMBAR  
HASIL PENILAIAN SEJAWAT SEBIDANG ATAU PEER REVIEW  
KARYA ILMIAH : PROSIDING**

Judul Karya Ilmiah : Evaluation of skew-planar antenna for UAV communication at 2.4 GHz band  
 Jumlah Penulis : 6 Orang  
 Status Pengusul : Penulis ke-5  
 Identitas Prosiding : a. Judul Prosiding : IAES International Conference on Electrical Engineering, Computer Science and Informatics  
 b. ISBN/ISSN : Online ISSN: 1757-899X  
 c. Thn Terbit, Tempat Pelaks. : 2016, Semarang, Indonesia  
 d. Penerbit/Organiser : IOP Publishing Ltd  
 e. Alamat Repository/Web : <https://iopscience.iop.org/article/10.1088/1757-899X/190/1/012020>  
 Alamat Artikel : <https://iopscience.iop.org/article/10.1088/1757-899X/190/1/012020/pdf>  
 f. Terindeks di (jika ada) : Scopus

Kategori Publikasi Makalah :  *Prosiding Forum Ilmiah Internasional*  
 (beri ✓ pada kategori yang tepat)  *Prosiding Forum Ilmiah Nasional*

**Hasil Penilaian Peer Review :**

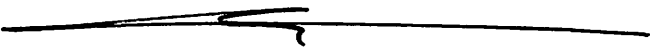
Komponen Yang Dinilai	Nilai Maksimal Prosiding		Nilai Akhir Yang Diperoleh
	Internasional <input type="checkbox"/>	Nasional <input type="checkbox"/>	
a. Kelengkapan unsur isi prosiding (10%)	3,00		2,70
b. Ruang lingkup dan kedalaman pembahasan (30%)	9,00		8,50
c. Kecukupan dan kemutakhiran data/informasi dan metodologi (30%)	9,00		8,80
d. Kelengkapan unsur dan kualitas terbitan/prosiding(30%)	9,00		8,80
<b>Total = (100%)</b>	<b>30,00</b>		<b>28,80</b>
<b>Nilai Pengusul = (40% x 28,80)/5= 2,30</b>			

**Catatan Penilaian Paper oleh Reviewer :**

- Kesesuaian dan kelengkapan unsur isi paper:** *Isi paper cukup baik dan memenuhi standar kualifikasi untuk publikasi internasional.*
- Ruang lingkup dan kedalaman pembahasan:** *Lingkup jurnal luas, pembahasan paper cukup detail.*
- Kecukupan dan kemutakhiran data/informasi dan metodologi:** *Referensi mutakhir, metode bukan novelty, aplikasi pengembangan.*
- Kelengkapan unsur dan kualitas terbitan:** *Kualitas terbitan baik (terindex Scopus Q4).*

Semarang,

Reviewer 1

  
 Dr. Wahyudi, S.T., M.T.  
 NIP. 196906121994031001  
 Unit Kerja : Teknik Elektro FT UNDIP

**LEMBAR  
HASIL PENILAIAN SEJAWAT SEBIDANG ATAU PEER REVIEW  
KARYA ILMIAH : PROSIDING**

Judul Karya Ilmiah : Evaluation of skew-planar antenna for UAV communication at 2.4 GHz band  
 Jumlah Penulis : 6 Orang  
 Status Pengusul : Penulis ke-5  
 Identitas Prosiding : a. Judul Prosiding : IAES International Conference on Electrical Engineering, Computer Science and Informatics  
 b. ISBN/ISSN : Online ISSN: 1757-899X  
 c. Thn Terbit, Tempat Pelaks. : 2016, Semarang, Indonesia  
 d. Penerbit/Organiser : IOP Publishing Ltd  
 e. Alamat Repository/Web : <https://iopscience.iop.org/article/10.1088/1757-899X/190/1/012020>  
 Alamat Artikel : <https://iopscience.iop.org/article/10.1088/1757-899X/190/1/012020/pdf>  
 f. Terindeks di (jika ada) : Scopus

Kategori Publikasi Makalah :  *Prosiding* Forum Ilmiah Internasional  
 (beri ✓ pada kategori yang tepat)  *Prosiding* Forum Ilmiah Nasional

Hasil Penilaian *Peer Review* :

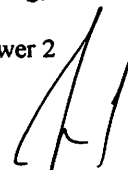
Komponen Yang Dinilai	Nilai Maksimal Prosiding		Nilai Akhir Yang Diperoleh
	Internasional <input type="checkbox"/>	Nasional <input type="checkbox"/>	
a. Kelengkapan unsur isi prosiding (10%)	3,00		2,50
b. Ruang lingkup dan kedalaman pembahasan (30%)	9,00		8,50
c. Kecukupan dan kemutakhiran data/informasi dan metodologi (30%)	9,00		8,80
d. Kelengkapan unsur dan kualitas terbitan/prosiding(30%)	9,00		8,75
<b>Total = (100%)</b>	<b>30,00</b>		<b>28,55</b>
<b>Nilai Pengusul = (40% x 28,55)/5= 2,28</b>			

Catatan Penilaian Paper oleh Reviewer :

- Kesesuaian dan kelengkapan unsur isi paper: *Isi paper cukup baik dan merupakan hasil eksperimen yang lengkap.*
- Ruang lingkup dan kedalaman pembahasan: *Lingkup jurnal cukup luas, pembahasan paper kurang detail.*
- Kecukupan dan kemutakhiran data/informasi dan metodologi: *Referensi mutakhir, metode dan aplikasi bukan novelty.*
- Kelengkapan unsur dan kualitas terbitan: *Kualitas terbitan baik, terindex Scopus tapi tidak ada versi printed.*

Semarang,

Reviewer 2



Dr. Iwan Setiawan, S.T., M.T.  
 NIP. 197309262000121001  
 Unit Kerja : Teknik Elektro FT UNDIP



# Document details

< Back to results | < Previous 10 of 19 Next >

↗ Export ↓ Download 🖨 Print ✉ E-mail 📄 Save to PDF ☆ Add to List More... >

View at Publisher

IOP Conference Series: Materials Science and Engineering

Volume 190, Issue 1, 19 April 2017, Article number 012020

3rd IAES International Conference on Electrical Engineering, Computer Science and Informatics, EECSI 2016; Semarang; Indonesia; 23 November 2016 through 25 November 2016; Code 127356

## Evaluation of skew-planar antenna for UAV communication at 2.4 GHz band (Conference Paper) (Open Access)

Prakoso, T. ✉, Yaqin, A.A., Ibrahim, Santoso, I., Triwiyatno, A. , Riyadi, M.A.

Department of Electrical Engineering, Faculty of Engineering, Universitas Diponegoro, Semarang, 50275, Indonesia

### Abstract

↕ View references (5)

Skew-planar antenna is suitable for unmanned aerial vehicles (UAVs) since it has circular polarization (avoiding polarization-mismatched), omnidirectional radiation pattern (low pointing loss) thus comply with maneuver angles of UAV, and also small size. Investigation with electromagnetic simulations shows that tilt angle and coaxial length are the most sensitive parameters. Modified design with 55° tilt angle (original design: 45°) and 100 mm coaxial length (original: 60 mm) potentially provides wider bandwidth (400 MHz vs. 290 MHz), better impedance-matched ( $|S_{11}|$ : -47.1 dB vs. -13.6 dB), and better gain (1.98 dBi vs 1.61 dBi). The antenna is predicted capable to support service distance of 3 km in 2.4 GHz band if used with communication module with 18 dBm transmit power and -100 dBm receiver sensitivity. Therefore, the modified antenna is suitable to be applied in UAV. © Published under licence by IOP Publishing Ltd.

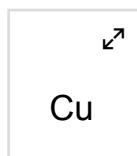
### SciVal Topic Prominence ⓘ

Topic: Microwave antennas | Antennas | Dual-polarized antenna

Prominence percentile: 95.910 ⓘ

### Chemistry database information ⓘ

#### Substances



### Indexed keywords

Engineering controlled terms:

Microwave antennas

Omnidirectional antennas

Polarization

Unmanned aerial vehicles (UAV)

Metrics ⓘ View all metrics >



PlumX Metrics ↕

Usage, Captures, Mentions, Social Media and Citations beyond Scopus.

Cited by 0 documents

Inform me when this document is cited in Scopus:

Set citation alert >

Set citation feed >

### Related documents

Evaluation of skew-planar antenna for UAV communication at 2.4 GHz band

Prakoso, T. , Yaqin, A.A. , Ibrahim (2016) *International Conference on Electrical Engineering, Computer Science and Informatics (EECSI)*

Broadband dual linear antenna with omni directional coverage

Ahirwar, S.D. , Sairam, C. , Singh, S. (2011) *2011 IEEE Applied Electromagnetics Conference, AEMC 2011*

A smart beam-switching multi-antenna system for UAV

Boroujeni, S.R. , Li, Z. , Safavi-Naeini, S. (2017) *2017 IEEE Antennas and Propagation Society International Symposium, Proceedings*

View all related documents based on references

Find more related documents in Scopus based on:



# Source details

## IOP Conference Series: Materials Science and Engineering

Scopus coverage years: from 2009 to Present

ISSN: 1757-8981 E-ISSN: 1757-899X

Subject area: [Engineering: General Engineering](#) [Materials Science: General Materials Science](#)[View all documents >](#)[Set document alert](#)[Save to source list](#) [Journal Homepage](#)

CiteScore 2018

**0.53**

Add CiteScore to your site

SJR 2018

**0.192**

SNIP 2018

**0.531**[CiteScore](#) [CiteScore rank & trend](#) [CiteScore presets](#) [Scopus content coverage](#)

CiteScore 2018

Calculated using data from 30 April, 2019

CiteScore rank

**0.53**

Citation Count 2018

7,820 Citations &gt;

Documents 2015 - 2017\*

14,668 Documents &gt;

\*CiteScore includes all available document types

[View CiteScore methodology >](#)[CiteScore FAQ >](#)

Category

Rank

Percentile

Engineering

General Engineering

#171/275

38th

Materials Science

General Materials Science

#305/438

30th

CiteScoreTracker 2019

Last updated on 08 December, 2019

Updated monthly

**0.43**

Citation Count 2019

12,277 Citations to date &gt;

Documents 2016 - 2018

28,226 Documents to date &gt;

[View CiteScore trends >](#)

Metrics displaying this icon are compiled according to Snowball Metrics ↗, a collaboration between industry and academia.

### About Scopus

[What is Scopus](#)[Content coverage](#)[Scopus blog](#)[Scopus API](#)[Privacy matters](#)

### Language

[日本語に切り替える](#)[切换到简体中文](#)[切换到繁體中文](#)[Русский язык](#)

### Customer Service

[Help](#)[Contact us](#)

## **ORGANIZING COMMITTEE OF EECSSI 2016 CONFERENCE**

### **Steering Committee**

**Adam Skorek, IEEE MGA Awards and Recognition Chair (R7) Trois-Rivières, QC, Canada**

Ary Setijadi Prihatmanto, IEEE Indonesia Chapter Chair (Computer Society)

Fitri Yuli Zulkifli, IEEE Indonesia Section (Technical Activity)

Pekik Argo Dahono, IEEE Indonesia Chapters Chair (EdSoc/EDS/PELS/SPS)

Soegijardjo Soegijoko, IEEE Indonesia Chapters Chair (CAS/EMBS)

Sri Arttini Dwi Prasetyowati, Universitas Islam Sultan Agung, Semarang, Indonesia

Muhammad Haddin, Universitas Islam Sultan Agung, Semarang, Indonesia

Zainudin Nawawi, Universitas Sriwijaya, Palembang, Indonesia

Siti Nurmaini, Universitas Sriwijaya, Palembang, Indonesia

Hermawan, Universitas Diponegoro, Semarang, Indonesia

Ida Ayu Dwi Giriantari, Universitas Udayana, Bali, Indonesia

Rahmat Budiarto, Surya University, Indonesia

Tumiran, Universitas Gadjah Mada, Yogyakarta, Indonesia

### **Chair**

Imam Much Ibnu Subroto, Universitas Islam Sultan Agung, Semarang, Indonesia

### **Co-Chair**

Tole Sutikno, Universitas Ahmad Dahlan, Yogyakarta, Indonesia

### **Finance Chair and Treasurer**

Wiwiek Fatmawati, Universitas Islam Sultan Agung, Semarang, Indonesia

Lina Handayani, Institute of Advanced Engineering and Science

### **Publication Chair**

Mochammad Facta, Universitas, Diponegoro, Semarang, Indonesia

### **Publicity Chair**

Muhammad Qomaruddin, Universitas Islam Sultan Agung, Semarang, Indonesia

Deris Stiawan, Universitas Sriwijaya, Palembang, Indonesia

### **Public Relations Chairs**

Arief Marwanto, Universitas Islam Sultan Agung, Semarang, Indonesia

Aina Musdlolifah, Universitas Gadjah Mada, Yogyakarta, Indonesia

### Technical Program Chair

Munawar A. Riyadi, Universitas Diponegoro,  
Semarang, Indonesia

Mudrik Alaydrus (Senior Member of IEEE),  
Universitas Mercu Buana Jakarta, Indonesia

### Special Session Chairs

Tole Sutikno, Universitas Ahmad Dahlan,  
Yogyakarta, Indonesia

### Local Arrangement Committee

Muhammad Haddin, Universitas Islam Sultan  
Agung, Semarang, Indonesia

Sri Arttini Dwi Prasetyowati, Universitas Islam  
Sultan Agung, Semarang, Indonesia

Suryani Alifah, Universitas Islam Sultan Agung,  
Semarang, Indonesia

Eka Nuryanto Budisusila, Universitas Islam  
Sultan Agung, Semarang, Indonesia

Arief Marwanto, Universitas Islam Sultan  
Agung, Semarang, Indonesia

Muhammad Khosyi'in, Universitas Islam Sultan  
Agung, Semarang, Indonesia

Bustanul Arifin, Universitas Islam Sultan Agung,  
Semarang, Indonesia

Gunawan, Universitas Islam Sultan Agung,  
Semarang, Indonesia

Ida Widiyastuti, Universitas Islam Sultan Agung,  
Semarang, Indonesia

Agus Suprayitno, Universitas Islam Sultan  
Agung, Semarang, Indonesia

Agus Adhinugroho, Universitas Islam Sultan  
Agung, Semarang, Indonesia

### Technical Program Members

Ali Kattan, Ishik University, Iraq

Adya Pramudita, Unika Atma Jaya, Indonesia

Angela Amphawan, Universiti Utara Malaysia,  
Malaysia

Arianna Mencattini, University of Rome "Tor  
Vergata", Italy

Auzani Jidin, Universiti Teknikal Malaysia  
Melaka, Melaka, Malaysia

Dwi H. Widiantoro, Institut Teknologi Bandung,  
Indonesia

Farzin Piltan, Sanatkadehe Sabze Pasargad  
Company, Iran

Faycal Djeflal, University of Batna, Batna,  
Algeria

Florentinus Budi Setiawan, Soegijapranata

Kristin Y. Pettersen, Norwegian University of  
Science and Technology, Norway

M. Sukrisno Mardiyanto, Institut Teknologi  
Bandung, Indonesia

Marcin Kowalczyk, Warsaw University of  
Technology, Warszawa, Poland

Media Anugerah Ayu, Universitas Siswa Bangsa  
Internasional, Indonesia

Mokhtar Beldjehem, University of Ottawa,  
Canada

Muhammad Abu Bakar Sidik, Universiti  
Teknologi Malaysia

Nidhal Bouaynaya, University of Arkansas at  
Little Rock, United States

Shahrin Md. Ayob, Universiti Teknologi

Catholic University, Indonesia

Han Yang, University of Electronic Science and Technology, China

Iwan Kurniawan, Universitas Pasundan, Indonesia

Heroe Wijanto, Telkom University, Bandung, Indonesia

Kartika Firdausy, Universitas Ahmad Dahlan, Yogyakarta

Kridanto Surendro, Institut Teknologi Bandung, Indonesia

Malaysia, Johor, Malaysia

Supavadee Aramvith, Chulalongkorn University, Thailand

Teduh Dirgahayu, Universitas Islam Indonesia, Indonesia

Wudhichai Assawinchaichote, King Mongkut's University of Technology Thonburi, Thailand

Yi-Kuei Lin, National Taiwan University of Science & Technology, Taiwan

#### International Advisory Committee

Lech M. Grzesiak, Warsaw University of Technology, Poland

Leo P. Ligthart, Delft University of Technology, Netherlands

Hamid A. Toliyat, Texas A&M University, USA

Patricia Melin, Tijuana Institute of Technology, Mexico

Tae Jin Park, Samsung Heavy Industries, Korea

Abdul Hanan Abdullah, Universiti Teknologi Malaysia, Malaysia

Ahmad Ashari, Universitas Gadjah Mada, Yogyakarta, Indonesia

Atif Iqbal, Qatar University, Qatar

Nabil Sultan, University Campus Suffolk, United Kingdom

Qiang Li, Bielefeld University, Germany

Sotirios G. Ziavras, University Heights, United States

Surinder Singh, Sant Longowal Inst of Eng & Tech, India

Takashi Obi, Tokyo Institute of Technology, Japan  
Tarek Bouktir, University of Setif 1, Algeria

Vicente Garcia Diaz, University of Oviedo, Spain

Wanquan Liu, Curtin University of Technology, Australia

Yudong Zhang, Columbia University, United States

Cheng-Wu Chen, National Kaohsiung Marine University, Taiwan

Dimitrios Lekkas, University of the Aegean, Greece

Djamel H Sadok, Federal University of Pernambuco, Brazil

Frédéric Cuppens, Sciences Sociales et de l'Information, France

Jaime Lloret Mauri, Polytechnic University of Valencia, Spain

Juan Jose Martinez Castillo, "Gran Mariscal de Ayacucho" University, Venezuela

Lei Zhang, East China Normal University, China



This site uses cookies. By continuing to use this site you agree to our use of cookies. To find out more, see our Privacy and Cookies policy.



# Table of contents

Volume 190

**2017**

◀ Previous issue    Next issue ▶

**IAES International Conference on Electrical Engineering, Computer Science and Informatics  
23–25 November 2016, Semarang, Indonesia**

[View all abstracts](#)

**Accepted papers received: 31 March 2016**

**Published online: 19 April 2017**

## Preface

**OPEN ACCESS** 011001

IAES International Conference on Electrical Engineering, Computer Science and Informatics

Munawar A Riyadi, SAD Prasetyowati, T Sutikno and D Stiawan

[+ View abstract](#)    [View article](#)    [PDF](#)

**OPEN ACCESS** 011002

Foreword from Chair of EECSI 2016

[+ View abstract](#)    [View article](#)    [PDF](#)

**OPEN ACCESS** 011003

Peer review statement

[+ View abstract](#)    [View article](#)    [PDF](#)

## Papers

**OPEN ACCESS** 012001

Differential-Drive Mobile Robot Control Design based-on Linear Feedback Control Law

Siti Nurmaini, Kemala Dewi and Bambang Tutuko

Wijaya Kurniawan, Mochammad Hannats Hanafi Ichsan, Sabriansyah Rizqika Akbar and Issa Arwani

[+ View abstract](#) [View article](#) [PDF](#)

---

**OPEN ACCESS**

012010

**Cooperative Learning for Distributed In-Network Traffic Classification****S.B. Joseph, H.R. Loo, I. Ismail, T. Andromeda and M.N. Marsono**

[+ View abstract](#) [View article](#) [PDF](#)

---

**OPEN ACCESS**

012011

**Monitoring and Identification Packet in Wireless With Deep Packet Inspection Method**

Ahmad Fali Oklilas and Tasmii

[+ View abstract](#) [View article](#) [PDF](#)

---

**OPEN ACCESS**

012012

**Optimizing IT Infrastructure by Virtualization Approach**

Thomas Budiman and Jarot S. Suroso

[+ View abstract](#) [View article](#) [PDF](#)

---

**OPEN ACCESS**

012013

**Comparison of Various Similarity Measures for Average Image Hash in Mobile Phone Application**

Sam Farisa Chaerul Haviana and Muhammad Taufik

[+ View abstract](#) [View article](#) [PDF](#)

---

**OPEN ACCESS**

012014

**Real Time Monitoring System of Pollution Waste on Musi River Using Support Vector Machine (SVM) Method**

Muhammad Fachrurrozi, Saparudin and Erwin

[+ View abstract](#) [View article](#) [PDF](#)

---

**OPEN ACCESS**

012015

**Fast Learning for Big Data Using Dynamic Function****T Alwajeih, A F Alharthi, R F Rahmat and R Budiarto**

[+ View abstract](#) [View article](#) [PDF](#)

---

**OPEN ACCESS**

012016

**Designing Business System Model using System Modeling Approach to the Small and Medium Enterprises (SME) of Furniture in Indonesia**

Irwan Sukendar, Wiwiek Fatmawati, Imam Much Ibnu Subroto and Rizki Arigama

[+ View abstract](#) [View article](#) [PDF](#)

---

**OPEN ACCESS**

**Joule-Thief Circuit Performance for Electricity Energy Saving of Emergency Lamps** 012017

Eka Nuryanto Budisusila and Bustanul Arifin

[+](#) [View abstract](#) [View article](#) [PDF](#)**OPEN ACCESS** 012018**Development of Bio-impedance Analyzer (BIA) for Body Fat Calculation**

Munawar A Riyadi, A Nugraha, M B Santoso, D Septaditya and T Prakoso

[+](#) [View abstract](#) [View article](#) [PDF](#)**OPEN ACCESS** 012019**Investigation of Passive Filter for LED Lamp**

Edi Sarwono, Mochammad Facta and Susatyo Handoko

[+](#) [View abstract](#) [View article](#) [PDF](#)**OPEN ACCESS** 012020**Evaluation of skew-planar antenna for UAV communication at 2.4 GHz band**

T Prakoso, A A Yaqin, Ibrahim, I Santoso, A Triwiyatno and M A Riyadi

[+](#) [View abstract](#) [View article](#) [PDF](#)**OPEN ACCESS** 012021**A Comparisson of Synchronous And Nonsynchronous Boost Converter**

Mohamad Isnaeni Romadhon, Trias Andromeda, Mochammad Facta and Agung Warsito

[+](#) [View abstract](#) [View article](#) [PDF](#)**OPEN ACCESS** 012022**Geometrical Shape Investigation For Electrodes in Silent Discharge Chamber**

Mochammad Facta, Ngurah Ayu Ketut Umiati and Agung Warsito

[+](#) [View abstract](#) [View article](#) [PDF](#)**OPEN ACCESS** 012023**Implementation of Multipattern String Matching Accelerated with GPU for Intrusion Detection System**

Rangga Nehemia, Charles Lim, Maulahikmah Galinium and Ahmad Rinaldi Widiyanto

[+](#) [View abstract](#) [View article](#) [PDF](#)**OPEN ACCESS** 012024**Identification of electrical discharge on electric insulation material using acoustic emission method**

J M Nainggolan, I Garniwa MK and A Raharjo

[+](#) [View abstract](#) [View article](#) [PDF](#)

**Noise Reduction in Breath Sound Files Using Wavelet Transform Based Filter**

012040

**M F Syahputra, S I G Situmeang, R F Rahmat and R Budiarto**[+ View abstract](#) [View article](#) [PDF](#)**OPEN ACCESS**

012041

**Tongue Segmentation Using Active Contour Model**

Saparudin, Erwin and Muhammad Fachrurrozi

[+ View abstract](#) [View article](#) [PDF](#)**OPEN ACCESS**

012042

**A Framework for Remote Monitoring System**

Cahyo Crysdiان

[+ View abstract](#) [View article](#) [PDF](#)**OPEN ACCESS**

012043

**Utilization of Digital Image Processing In Process of Quality Control of The Primary Packaging of Drug Using Color Normalization Method**

Danang Erwanto, Sri Arttini Dwi Prasetyowati and Eka Nuryanto Budi Susila

[+ View abstract](#) [View article](#) [PDF](#)**OPEN ACCESS**

012044

**The Analysis of Alpha Beta Pruning and MTD(f) Algorithm to Determine the Best Algorithm to be Implemented at Connect Four Prototype**

Lukas Tommy, Mardi Hardjianto and Nazori Agani

[+ View abstract](#) [View article](#) [PDF](#)**OPEN ACCESS**

012045

**Optimizing Subgroups Formation for E-MBMS Transmissions in LTE Networks****M Algharem, M H Omar, D Stiawan and R Budiarto**[+ View abstract](#) [View article](#) [PDF](#)**OPEN ACCESS**

012046

**The Performance Of SISO In Wireless Open-Access Research Platform (WARP) Using QAM Modulation**

Jenny Putri Hapsari and Ida Anisah

[+ View abstract](#) [View article](#) [PDF](#)**OPEN ACCESS**

012047

**Quality Test of Flexible Flat Cable (FFC) With Short Open Test Using Law Ohm Approach through Embedded Fuzzy Logic Based On Open Source Arduino Data Logger**

Ajar Rohmanu and Yan Everhard

[+ View abstract](#)[View article](#)[PDF](#)**OPEN ACCESS**

012048

## Automatic Text Summarization for Indonesian Language Using TextTeaser

D Gunawan, A Pasaribu, R F Rahmat and R Budiarto

[+ View abstract](#)[View article](#)[PDF](#)**OPEN ACCESS**

012049

## Organization Readiness and ERP Implementation in Albaha University

K Alaqeel, M S Shakkah, R F Rahmat, A Alfageeh and R Budiarto

[+ View abstract](#)[View article](#)[PDF](#)**OPEN ACCESS**

012050

## Formulation of Policy for Cyber Crime in Criminal Law Revision Concept of Bill Book of Criminal Law (A New Penal Code)

Eko Soponyono and Brav Deva Bernadhi

[+ View abstract](#)[View article](#)[PDF](#)**JOURNAL LINKS**[Journal home](#)[Information for organizers](#)[Information for authors](#)[Search for published proceedings](#)[Contact us](#)[Reprint services from Curran Associates](#)

# Cooperative Learning for Distributed In-Network Traffic Classification

S.B.Joseph<sup>1</sup>, H.R.Loo<sup>1</sup>, I.Ismail<sup>1</sup>, T. Andromeda<sup>2</sup>, M.N.Marsono<sup>1</sup>

<sup>1</sup>Department of Electronics and Computer Engineering, Faculty of Electrical Engineering, Universiti Teknologi Malaysia, 81310 Johor Bahru, Malaysia

<sup>2</sup>Department of Electrical Engineering, Faculty of Engineering, Universitas Diponegoro, Semarang, Indonesia

sjbassi74@gmail.com, loohuiru@gmail.com, ismahani@fke.utm.my,  
trias1972@gmail.com; nadzir@fke.utm.my

**Abstract.** Inspired by the concept of autonomic distributed/decentralized network management schemes, we consider the issue of information exchange among distributed network nodes to network performance and promote scalability for in-network monitoring. In this paper, we propose a cooperative learning algorithm for propagation and synchronization of network information among autonomic distributed network nodes for online traffic classification. The results show that network nodes with sharing capability perform better with a higher average accuracy of 89.21% (sharing data) and 88.37% (sharing clusters) compared to 88.06% for nodes without cooperative learning capability. The overall performance indicates that cooperative learning is promising for distributed in-network traffic classification.

## 1. Introduction

Network traffic classification is a crucial network processing task for network traffic management. Traffic measurement and classification enable network administrators to be aware of the current network state. Data stream mining algorithms [1, 2] have been explored recently for online traffic classification to overcome the shortcoming of conventional data mining algorithms. They are designed to cope with concept drift, adapt to new knowledge and react to changes promptly.

Recently, distributed network management (DNM) strategies such as [3], have been introduced as a solution to the increasing management complexity of communication networks. These strategies are autonomic and decentralized in nature, towards improving network performance, scalability and to reduce human participation. Each DNM entity participates in a distributed management process, which requires cooperation among DNM entities to monitor, analyze and make decision to achieve global network objectives. Cooperative Learning (CL) enables network nodes to discover each other, exchange information, disseminate local decision, enhance self-adaptation of nodes, improve scalability and finally enforce management decision [4].

This paper proposes an analysis for online distributed in-network traffic classification based on our CL framework in [5], using incremental k-means network traffic classification [1]. This paper analyzes the effect of information exchange among nodes on the overall classification accuracy. We tested our proposed method on two schemes: sharing of training labeled data in the form of information and sharing of clusters in the form of knowledge. Our proposed system has been applied



# Noise Reduction in Breath Sound Files Using Wavelet Transform Based Filter

M F Syahputra<sup>1</sup>, S I G Situmeang<sup>2</sup>, R F Rahmat<sup>1</sup>, R Budiarto<sup>3</sup>

<sup>1</sup> Department of Information Technology, Faculty of Computer Science and Information Technology University of Sumatera Utara, Medan, Indonesia

<sup>2</sup> College of Engineering, National Chung Cheng University, Taiwan

<sup>3</sup> Department of Information System College of Computer Science and Information Technology, Albaha University, Saudi Arabia

E-mail: nca.fadly@usu.ac.id, samuel103m@cs.ccu.edu.tw, romi.fadillah@usu.ac.id, rahmat@bu.edu.sa

**Abstract.** The development of science and technology in the field of healthcare increasingly provides convenience in diagnosing respiratory system problem. Recording the breath sounds is one example of these developments. Breath sounds are recorded using a digital stethoscope, and then stored in a file with sound format. This breath sounds will be analyzed by health practitioners to diagnose the symptoms of disease or illness. However, the breath sounds is not free from interference signals. Therefore, noise filter or signal interference reduction system is required so that breath sounds component which contains information signal can be clarified. In this study, we designed a filter called a wavelet transform based filter. The filter that is designed in this study is using Daubechies wavelet with four wavelet transform coefficients. Based on the testing of the ten types of breath sounds data, the data is obtained in the largest SNRdB bronchial for 74.3685 decibels.

## 1. Introduction

To make diagnosis of a human respiratory system, health practitioner or doctor uses a device called a stethoscope. With it, medical practitioners can hear the sound of the lungs to diagnose a person's physical condition and health. Breath sounds heard through the stethoscope, is still mixed with other noises like the sound of the heart, skin friction with the stethoscope, and chest movements. It is difficult for health practitioners to diagnose a person's physical condition and health. In signal processing, other voices or extraneous noise is commonly called signal interference or noise.

The development of science and technology in the field of healthcare increasingly provide convenience in diagnosing respiratory system problem. Breath sounds recording is one example of these developments. Breath Sounds are recorded using a digital stethoscope, and then stored in a file with sound format. As with conventional methods, respiratory sounds are not free from interference signals. Therefore, filter noise or signal interference reduction is required so that breath sounds components that contain information signal can be clarified. Research on reducing signal interference had been done since the last few years, but has not been able to give a satisfying result.

Previous studies related to respiratory noise filter, including the separation of heart and lung sounds from the breath sounds with modified spectro-temporal representation [1], and reduction of heart sounds from lung sounds recordings using adaptive filter [2] have been carried out.



# Fast Learning for Big Data Using Dynamic Function

T Alwajeeh<sup>1</sup>, A F Alharthi<sup>3</sup>, R F Rahmat<sup>2</sup>, R Budiarto<sup>3</sup>

<sup>1</sup>Dept. of Computer Science & Engineering, College of CS&IT, Albaha University, Albaha P.O. Box 1988, Saudi Arabia

<sup>2</sup>Department of Information Technology, Faculty of Computer Science and Information Technology, University of Sumatera Utara, Medan, Indonesia

<sup>3</sup>Dept. of Computer Information System, College of CS&IT, Albaha University, Albaha P.O. Box 1988, Saudi Arabia

taa.2000@hotmail.com, afalharthi@bu.edu.sa, romi.fadillah@usu.ac.id, rahmat@bu.edu.sa

**Abstract.** This paper discusses an approach for fast learning in big data. The proposed approach combines momentum factor and training rate, where the momentum is a dynamic function of the training rate in order to avoid overshoot weight to speed up training time of the back propagation neural network engine. The two factors are adjusted dynamically to assure the fast convergence of the training process. Experiments on 2-bit XOR parity problem were conducted using Matlab and a sigmoid function. Experiments results show that the proposed approach significantly performs better compare to the standard back propagation neural network in terms of training time. Both, the maximum training time and the minimum training time are significantly faster than the standard algorithm at error threshold of  $10^{-5}$ .

## 1. Introduction

Recently, we are entering the era of “big-data”, and as the development of high-speed signal processing, fast and efficient learning and signal representation is becoming an emergent research topic. Extreme learning machine (ELM) [1] is one of the leading trends for fast learning. Unlike the other traditional learning algorithms, for example, Back Propagation-based neural networks, or support vector machine (SVM)], the parameters of hidden layers of ELM are randomly established and need not be tuned, thus the training of hidden nodes can be established before the inputs are acquired.

Feedforward neural networks have been widely used in various areas of machine learning. Hidden nodes in a neural network architecture work as universal approximation provided that all the parameters of the networks are adjustable. The most representative training method for Artificial Neural Networks is back propagation (BP) algorithm. BP calculates the gradient of a loss function with respect to all the weights in the network and updates the weights for minimizing the loss function. Nevertheless, the parameter tuning of BP-based neural networks is usually time consuming and cannot handle the overfitting problem.





# Optimizing Subgroups Formation for E-MBMS Transmissions in LTE Networks

M Algharem<sup>1</sup>, M H Omar<sup>1</sup>, D Stiawan<sup>2</sup>, R Budiarto<sup>3</sup>

<sup>1</sup>InterNetWorks Research Group, School of Computing, College of Arts and Sciences, Universiti Utara Malaysia, Malaysia

<sup>2</sup>Department of Computer Engineering, Faculty of Computer Science, University Sriwijaya, Palembang, Indonesia

<sup>3</sup>Dept. of Computer Information System, College of Computer Science and Information Technology, Albaha University, Albaha P.O Box 1988, Saudi Arabia

{algharem,mhomar}@internetworks.my, deris@unsri.ac.id, rahmat@bu.edu.sa

**Abstract.** Long Term Evolution (LTE) network provides a high throughput with low latency which make it suitable for multicast and broadcast services. In Conventional Multicast Scheme (CMS), data is transmitted according to the user with worst channel condition which results in wasting network resources. To overcome the drawback of CMS, a new subgrouping mechanism is proposed to split the multicast group into several subgroups based on users channel quality. The performance of the proposed mechanism has been evaluated using LTE simulator. The simulation results show that the proposed mechanism increase the multicast performance compared to CMS in term of goodput and spectrum efficiency, while maintain fairness index of users in an acceptable level.

**Keywords:** E-MBMS, Modulation and Coding Schema, multirate, multicast

## 1. Introduction

Long Term Evolution (LTE) network was introduced by the Third-Generation Partnership Project (3GPP) and was considered as the latest step towards the 4<sup>th</sup> generation of radio technologies. LTE offers a high throughput with low latency which make it the best choice for Multimedia Service. LTE network exploits the benefits of Orthogonal Frequency Division Multiple Access (OFDMA), in which various users data is multiplexed in frequency and time domains [1]. In OFDMA, the full frequency bandwidth is divided into orthogonal subcarriers, where each subcarrier is allocated 15 kHz. The LTE frame consists of 12 consecutive subcarriers and 10ms duration. Each frame consists of 10 subframes; each subframe is 1ms, which is equal to the Transmission Time Interval (TTI); and then each subframe is equal to two time slots, where each slot is 0.5ms in the time domain and 12 subcarriers in the frequency domain. However, each slot is composed of a resource block (RB), which is the minimal radio resource allocation unit in the LTE. Each RB consists of seven symbols when the normal Cycle Prefix (CP) is used or six symbols when the extended CP is used, as used in E-MBMS subframe [1].

Recently, mobile devices are equipped with large screen with high resolution which requires high data rate for video and has the ability to transmit and received data with higher bit rate. In addition, the



# Organization Readiness and ERP Implementation in Albaha University

K Alaqeel<sup>1</sup>, M S Shakkah<sup>2</sup>, R F Rahmat<sup>3</sup>, A Alfageeh<sup>4</sup>, R Budiarto<sup>5</sup>

<sup>1</sup>Commercial Observation Division, Ministry of Commerce and Industry, AlKarj Branch, Saudi Arabia.

<sup>2</sup>MIS Department, Faculty of Administrative and Financial Sciences, Albaha University, Saudi Arabia

<sup>3</sup>Department of Information Technology, Faculty of Computer Science and Information Technology, University of Sumatera Utara, Medan, Indonesia

<sup>4</sup>Information Technology Center, Albaha University, Saudi Arabia

<sup>5</sup>Smart Networked Computing Research Group, College of Comp. Sc. & I.T., Albaha University, Saudi Arabia

kaqeel@mci.gov.sa, alshakkah\_11@yahoo.com, romi.fadillah@usu.ac.id, aalfageeh@bu.edu.sa, rahmat@bu.edu.sa

**Abstract.** This work studies the correlation between the organizational readiness in Albaha University and the respective Critical Success Factors with regards to the Enterprise Resource Planning (ERP) implementation. The study also considers some suggestions to improve the ABU's ERP systems and roadmap towards the self-development strategy and to reduce vendor-dependency. A survey regarding ERP to the end-users, experts and developers in Albaha University was conducted. The analysis of the results in this work confirmed with the results of an existing work. The four significance success factors: Project Management, Business Process Re-engineering, System Integration, and Training and Education are recommended to be adopted to assure the smooth adoption of ERP at Albaha University.

**Keywords:** ERP, ORGD, Project Management, BPR System Integration

## 1. Introduction

Weiner [1] defines Organizational readiness (ORGD) for change as “a multi-level, multi-faceted construct. As an organization-level construct, readiness for change refers to organizational members' shared resolve to implement a change (change commitment) and shared belief in their collective capability to do so (change efficacy). The higher the organizational readiness for change, the more organizational members likely to initiate change, exert greater effort, exhibit greater persistence, and display more cooperative behaviour”. Figure 1 illustrates the factors and consequences of ORGD for change.

On the other hand, Enterprise Resource Planning (ERP) is the use of software suites to pull together and systemize data of various organization's levels to provide judgement into key performance indicators (KPIs). The ERP has wide-ranging set of achievements which assists an organization in dealing its business. In general deployment, ERP has to be integrated with other software systems with the aim of optimizing the overall system. Thus, deployment of a new in-house ERP system can involve sizeable business process reengineering and employee retraining.

