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**Prof. Dr. Bambang Sujanarko** for his/her worthy Oral Presentation titled  
**“Monitoring System and Control of Electric Vehicle of Jember University Based on Radio**

**Frequency”**

at International Conference on Smart Green Technology  
on 27<sup>th</sup> – 28<sup>th</sup> August 2018 at The Santika Premiere Hotel, Malang, Indonesia



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**CONFERENCE PROCEEDINGS**  
**ABSTRACTS**  
**ICSGT 2018**  
**STATE POLYTECHNIC OF MALANG**  
Malang, 27 August, 2018

Organized by:



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**PREFACE**  
**CONFERENCE CHAIR OF ICSGT 2018**  
**STATE POLYTECHNIC OF MALANG**

It is a big pleasure to me on behalf of the Organizing Committee of a two-day International Conference of Smart Green Technology (ICSGT) to welcome all the delegates and participants of this conference held in Malang city – the flower city.

As stated in the title, the scope of the conference covers about developing technologies for the smart living, which in fact, requires many disciplines that constitute engineering as a whole and united field.

We are whole-heartedly knowledgeable that differs from academic fields and industry professionals, this conference may also give opportunities to undergraduate and post graduate students and research scholars alike to take an active part and present research papers.

By doing so, they will not only gain greater insight into their discipline, but also contribute to the existing body of knowledge in that domain.

I am certain that the conference will prove to be a healthy point of academic interaction and so the students and faculty members as well will not only give but also benefit and draw inspiration from the talks and presentations from the distinguished guests.

Malang, August 27, 2018

Bambang Sugiyono Agus Purwono



## **FOREWORD** **DIRECTOR OF STATE POLYTECHNIC OF MALANG**

It is our great pleasure to welcome all participants, guests, keynote speakers, and presenters at this conference which is organized by the State Polytechnic of Malang.

The International Conference of Smart Green Technology 2018 (ICSGT 2018) provides a setting for discussing recent developments in a wide variety of topics of green technologies.

The conference particularly encouraged the interaction of research students and scholars with the more established academic community to present and to discuss new and current works. I believe that this conference will be a momentum to stimulate further study and research in all topics related to the green technology developments.

I would like to express my deep appreciation to keynote speakers for the efforts to present the ideas and methods in a lively and accessible way.

I would like to thank those who have responded to our call to take part and to contribute to this conference. We have a big hope that all of you enjoy, and get more knowledge and fruitful experience through the conference.

Finally, but not least, support and efforts from the conference organizing committee were absolutely essential to this conference. Therefore, I would like to acknowledge my sincere thanks to the conference organizing committee.

Malang, August 27, 2018

Awan Setiawan

**TABLE OF CONTENT**

<b>Title</b>	<b>Page</b>
<b>Cover</b>	<b>i</b>
<b>Organizing committee</b>	<b>ii</b>
<b>Preface</b>	<b>iii</b>
<b>Foreword</b>	<b>iv</b>
<b>Table of Content</b>	<b>v</b>
<b>Appendix</b>	<b>100</b>

### Keynote speakers

Title	Page
<b>[ABS-4] Welding Characteristics of Titanium Alloys</b> <i>Tim Pasang, Mana Aziziderouei, Yuan Tao</i>	1.
<b>[ABS-11] Innovative Approaches to Marine Antifouling</b> <i>Vesna Lavtizara, Hideo Okamurab</i>	2.
<b>[ABS-53] Zinc Ferrite-Based Nanocomposites and Their Photocatalytic Applications</b> <i>Marjorie Lara Baynosa, Amr Hussein Mady, and Jae-Jin Shim</i>	3.
<b>[ABS-47] Nano-enabled Membranes Technology: The Way Forward for Sustainable Water Treatment Solution</b> <i>Ahmad Fauzi Ismail</i>	4.
<b>[ABS-99] Elastic WLAN System - Challenge for Energy-Saving and High-Performance Wireless Networks</b> <i>Nobuo Funabiki</i>	5.



## Invited Speakers

Title	Page
<b>[ABS-2] Effect of Heat Treatment on Drillability of Titanium Alloy 6Al-2Sn-4Zr-6Mo</b> <i>Mahros Darsin, Timotius Pasang, Zhan Chen</i>	6.
<b>[ABS-7] Analysis Stress and Displacement Cement Composites of 3-Axial Force Effect on Turning Process Alumunium 6061</b> <i>Santoso Mulyadi, Triwahju Hardianto, Yuni Hermawan, Dwi Djumhariyanto, Robertus Sidartawan</i>	7.
<b>[ABS-9] Development of Slope Handling Guidelines in Arjasa, Jember Regency</b> <i>Rahman Anda, Farid Makruf</i>	8.
<b>[ABS-16] Maintenance of Centrifugal Pump with Reliability, Availabilty, Maintainability and Safety (RAMS) Method and Simulating Operating Characteristic Curve</b> <i>Tri Suharno, Bambang Sugiyono Agus Purwono</i>	9.
<b>[ABS-22] Optimization of Hybrid Powered Refrigerator System (Solar Cell Plus Diesel Engine) for Traditional Fishing Vessels in Makassar.</b> <i>Soetyono Iskandar, Moch. Bruri Triyono, Nurlaela Latief, A. Muh. Idkhan</i>	10.
<b>[ABS-28] Effect Frequency Ultrasonic Vibration on Double Pipe Heat Exchanger at Cooling Process</b> <i>Sudarmadji, Bambang Sugiyono Agus Purwono, Santoso</i>	11.
<b>ABS-29] Analysis and Design of Bus Chair for Economic Class Using Ergonomic Function Deployment (EFD) Method</b> <i>Robertoes Koekoeh Koentjoro Wibowo, Siswoyo Soekarno, Ahmad Syuhri, Dwi Devi Vayendra</i>	12.
<b>[ABS-32] Monitoring System and Control of Electric Vehicle of Jember University Based on Radio Frequency</b> <i>Bambang Sujanarko, Fajar Kurniawan, Moch. Hasan, Widyono Hadi, Samsul Arifin, Devita Ayu Larasati, Nita Kuswardhani</i>	13.
<b>[ABS-36] Object Tracking on Semi-Automatic Surveillance Camera Using Image Processing Based on Mean-Shift Method</b> <i>Catur Suko Sarwono , Faiq Aprilian Romzi, Khairul Anam, Bambang Sujanarko</i>	14.
<b>[ABS-37] Analysis of Power Transformer Conditions Using Adaptive Neuro Fuzzy Inference System Based on Dissolved Gas Analysis Method</b> <i>R. B. Moch. Gozali, Bambang Sujanarko</i>	15.

Title	Page
<b>[ABS-41] Boost Converter as Voltage Regulator for The DC Electric Motor Permanent</b> <i>Suprihadi Prasetyono, Nofan Dwi Mulyanto, Triwahju Hardianto, Bambang Sujanarko</i>	16.
<b>[ABS-49] Metal Additive Manufacturing: A General Review</b> <i>Timotius Pasang</i>	17.
<b>[ABS-50] Utilization of Cylindrical Concrete Wastes as a Gravity Retaining Wall</b> <i>Gerard Aponno</i>	18.
<b>[ABS-52] The Impact of Stratified Shade Trees Arrangement Along The Toll Road in Micro Climate</b> <i>Utami Retno Pudjowati, Ratih Indri Hapsari, Burhamtoro</i>	19.
<b>[ABS-56] A Deep Learning Approach for Business Process Prediction</b> <i>Aryo Nugroho, Moh Noor Al Azam, Ubed Ardianto, Adri Gabriel Sooi, Novi Nugrahani</i>	20.
<b>[ABS-61] Measurement Potential Value of Reinforced Concrete Protection Using Cu/Cuso4 Reference Electrode</b> <i>Imah Luluk K, Nafi, Maula</i>	21.
<b>[ABS-64] EEG Pattern Recognition for Hand Movement: A Review</b> <i>Cries Avian, Khairul Anam, Mohammad Nuh</i>	22.
<b>[ABS-67] Analisis Absorben from Fly Ash to Absorb Exhaust Emissions of Motorcycle</b> <i>Rizky Hendra P., Beauty Suestining Diyah Dewanti, Bambang Irawan</i>	23.
<b>[ABS-68] Analisis of Absorbent Made from Charcoal Sawdust to Absorb Emissions Motor Vehicle</b> <i>Husnul Khotimah, Beauty Suestining Diyah Dewanti, Bambang Irawan</i>	24.
<b>[ABS-69] The Use of The Semanding Tuban Limestone as a Partial Replacement of Coarse Aggregate in Concrete Mixes</b> <i>Ferry Setiawan, Gede Sarya, Nurul Rochmah</i>	25.
<b>[ABS-72] Manufacturing Spar I Beam of UAV Wing Structure Made of Composite Material</b> <i>Lenny Iryani, Fithri N. P., Andi M. Kadir, Bambang Irawan</i>	26.
<b>[ABS-73] Udiebot: Design, Analysis and Fabrication of A Quadruped as Observer Robot</b> <i>Nuril Esti Khomariah, Samsul Huda</i>	27.

Title	Page
<b>[ABS-74] The Effect of Addition Copper Fins to The Performance of Cooling Vehicle</b> <i>Abdul Latif K., Bambang Irawan</i>	28.
<b>[ABS-80] Audio Steganography Using Lifting Wavelet Transform and Dynamic Key</b> <i>Mohamad Anwar</i>	29.
<b>[ABS-81] Simulation by Mathematical Model of CO<sub>2</sub> Gas Stripping in Promoted MDEA Solution Using Packed Column</b> <i>Ariani, Abdul Chalim, Anang, Indra, Rachmat</i>	30.
<b>[ABS-82] Study on Effect of Heat Treatment on Chips Formation and Forces in Drilling Titanium Alloy 6Al-2Sn-4Zr-6Mo</b> <i>M Darsin, T Pasang, and Z Chen</i>	31.
<b>[ABS-97] Effect of Feed-rate and Chisel Shape of SCM440 Material Surface Hardness in CNC Milling Machine</b> <i>M. Khoirul Umam, Heryanto Budiono Soemardi, Rahbini</i>	32.
<b>[ABS-96] Influence Variation of The Cooling Water Flow System to The Cooling Water Temperature and The Machine Temperature on Farfly Fwe30 Machine</b> <i>R. Edy Purwanto, Aditya Himawan, Vinan Viyus</i>	33.
<b>[ABS-23] Utilization of Wireless Sensor Networks and Real-Time Remote Monitoring Stations in Protecting Marine Ecosystem</b> <i>Ahmed N Bdour</i>	34.
<b>[ABS-71] Management Study of Disaster Mitigation for Potential of Big Earthquake that Threatening Jakarta in Matraman District, East Jakarta</b> <i>Khairunnisa Nazhifah, Cattleya Randi, Zidny Ilma Andromeda, Reza Syahputra, Iskandarsyah, Muhammad Rizqy Septyandy</i>	35.
<b>[ABS-89] Design of Fiber Optic Project Management Using PERT</b> <i>Agung Widodo, Lukman Djunaedi, Aryo Nugroho, Adri Gabriel</i>	36.
<b>[ABS-1] Strategy of Simulation of Vertical Axis Wind Turbine (VAWT) using Turbine Blades NACA 4412 Type</b> <i>Bambang Sugiyono Agus Purwono, Bambang Irawan, Sudarmadji</i>	37.
<b>[ABS-3] Analysis of Liquid Fuel from Plastic Waste Using Refinery Distillation Bubble Cap Plate Column with Integrated Thermal Cracking Method</b> <i>Ramli Thahir, Sri Rachmania Juliastuti, Ali Altway, Susianto</i>	38.
<b>[ABS-8] Experimental Study of Combined Two-Blade Darrieus and Two-Bucket Savonius Wind Turbine at Low Wind Speed</b> <i>Luthfi Hakim, Achmad Rijanto</i>	39.

Title	Page
<b>[ABS-15] The Simulation of The Effect of The Variation Micro Hydro Power Turbine and Variation of The Water Flow Rate to The Power Generated by Micro Hydro Power Turbine</b> <i>Awan Setiawan, Masrur Mahfudhi Mahfudhi, Masroni, Bambang Sugiyono Agus Purwono</i>	40.
<b>[ABS-18] The Simulation of The Effect of Shape of Blade and Water Discharge to The Generated Power by Water Turbine</b> <i>Alfan Sasongko Gumilang, Bambang Sugiyono Agus Purwono</i>	41.
<b>[ABS-19] Simulation of The Effect of Variation of The Water Discharge and Variation of The Nozzle Dimension to The Power Generated by Crossflow Micro Hydro Power Turbine</b> <i>Imam Agus Fatoni, Bambang Sugiyono Agus Purwono</i>	42.
<b>[ABS-20] Utilization of Traditional Stove as a Power Generator Using Thermoelectric Generator for Electrification Solution of The Pre Prosperous Region People in Indonesia</b> <i>Hasan Basri Maulana Firmansyah, Idiar Eko Pradito, Febriansyah Kumaraning Akbar, Ardhanarisvari Panduwinata, Bambang Sulistiyono</i>	43.
<b>[ABS-30] Design of Solar Thermal Power Plant Using Open Loop Parabolic Trough</b> <i>Bambang Sri Kaloko, Edy Supriyanto, Teo Aska Prabawa, Abdur Rohman, Bambang Sujanarko</i>	44.
<b>[ABS-38] Wind Power Generation Performance Based on Potential of Wind in Puger Beach Area of Jember</b> <i>Bayu Sovan P., Triwahju Hardianto, Bambang Sujanarko</i>	45.
<b>[ABS-39] Performance Wind Turbine Stabilizer using MPPT System</b> <i>Novie Lukman Hamsa, Triwahju Hardianto, Bambang Sujanarko</i>	46.
<b>[ABS-40] Analisis Performance of Hybrid Savonius-Darrieus Wind Turbine</b> <i>Muhammad Zainal Roisul Amin, Azmi Shaleh, Bambang Sri Kaloko, Bambang Sujanarko</i>	47.
<b>[ABS-46] The Analysis of Use Of Mixed Premium with Bioethanol from Banana Peel Waste to Increase Engine Power Of Four-Stroke, and one Cylinder</b> <i>Welly Prasetyo, Nurhadi</i>	48.
<b>[ABS-54] Modelling of Solar Assisted Heat Pump</b> <i>Djuanda, Soetyono Iskandar</i>	49.
<b>[ABS-57] Recovery Bitumen from Asbuton in Laboratory-Scale Mixing Tank Using Sodium Tripolyphospate and SDBS Surfactant</b> <i>Zakijah Irfin, Susianto, Suprpto, Ali Altway, Yosita Dyah Anindita</i>	50.

Title	Page
<b>[ABS-66] The Influence of Bioethanol and Gasoline Mixture to Exhaust Emission and Power on Motor Vehicles</b> <i>Aldino Kurnia Farizky, Beauty Suestining Diyah Dewanti, Bambang Irawan</i>	51.
<b>[ABS-77] Design Generator for Horizontal Axis Wind Turbine using Permanent Magnet</b> <i>Basuki Winarno, Yosi Afandi, Hanum Arrosida, Eko Prastio Budiono</i>	52.
<b>[ABS-79] Still Nadir Focus For Concentrated Solar Power</b> <i>Budhy Setiawan, Annisa Maulidia Damayanti, Anggit Murdani, Gus Dwi Ganjar Subangkit, Riska Nur Wakidah</i>	53.
<b>[ABS-5] Identifying Pneumonia Disease Based on Rontgen Images through Power-Law Trans Method</b> <i>Kadek Suarjuna BB, Rosa Andrie, Satrio Binusa Suryadi, Ane Fany Novitasari</i>	54.
<b>[ABS-21] Waste of Mangosteen Peel Extract as Antitoxoplasmosis on Biochemical of Blood and Hystopatological Tissue in Mice</b> <i>Miranti Candrarisna Sunarso, Lucia Trisuwanti, Sri Agus Sujarwo, Febtarini</i>	55.
<b>[ABS-24] Ecological Vulnerability Assessment of Afram Headwaters Forest Reserve in Ghana</b> <i>Richard Asante</i>	56.
<b>[ABS-33] Technology-Based Fish Cultivation to Produce Healthy Water Pond Conditions</b> <i>R Edy Purwanto, Eka Mandayatma, Totok Winarno</i>	57.
<b>[ABS-34] South Africa Heatwave Trends and Underlying Physical Processes in the Looming Climate Change</b> <i>Tibangayuka Kabanda</i>	58.
<b>[ABS-43] Combined Methods of Filtration and Absorption to Clarify Glycerol from Waste Frying Oil</b> <i>Luchis Rubianto, Sandra Santosa, S. Sigit Udjiana</i>	59.
<b>[ABS-59] Design of Automatic Speedy Composter Machine</b> <i>Nicky Andre Prabatama</i>	60.
<b>[ABS-62] Braille Characters Recognition System Using Naive Bayes Method</b> <i>Elsen Ronando, Aris Sudaryanto, Ilham Zaky Dhiya Ulhaq, Nurul Fadilah</i>	61.
<b>[ABS-63] Expert System for Predicting of Stress Levels in Diabetes Millitus Patients Using Mobile Application</b> <i>Enny Indasyah, Alifia Ananta, Kristhoferis Kosim</i>	62.
<b>[ABS-65] The Application Recommendation of Policy Distribution and Supervision of Subsidized Fertilizer with Model V Method</b> <i>Tri Lestariningsih, Yosi Afandi, Hendrik Kusbandono</i>	63.

Title	Page
<b>[ABS-76] Modelling Water Flow Hydraulic in Open Channels with Green Drainage Facility</b> <i>Roikhatul Jannah, Ratih Indri Hapsari, Moh. Charits, Agus Suhardono</i>	64.
<b>[ABS-85] Wireless Monitoring System for Body Temperature and Heartbeat</b> <i>Alamsyah, Tan Suryani Sollu, Muhammad Bachtiar, Ardi Amir, Adri G Sooi, Benyamin Bontong</i>	65.
<b>[ABS-91] Analysis of the Effect of Variation Temperature of Drying and Time to the Water Content of Soursop Leaves on Rotary Drying Process</b> <i>Mukhammad Salman Farisy, Muhammad Cahya Abidin, Rahbini, Abdul Muqit, Moh. Hartono</i>	66.
<b>[ABS-102] The Impacts of Timber Harvesting Scenarios on Tree Biomass and Bioenergy Potential in a Dry Forest Ecosystem</b> <i>Aah Ahmad Almulqu, Noulkamol Arpornpong, Jaruntorn Boonyanuphap</i>	67.
<b>[ABS-103] Thermal Characterization of Mixing Extracted Fe<sub>2</sub>O<sub>3</sub>.H<sub>2</sub>O from Iron Sand and Limestone Precipitated - CaCO<sub>3</sub> by DTA-TGA</b> <i>Mastuki, Sugeng Priyandokohadi</i>	68.
<b>[ABS-105] Multi-Door Lock System Using Arduino R3</b> <i>I Putu Bagus Eka Permadi, Agustinus Bimo Gumelar, Agung Widodo</i>	69.
<b>[ABS-55] Developing Vernacular Architecture Learning Tools using 3D Virtual Reality</b> <i>Adri Gabriel Sooi, Aryo Nugroho, Moh Noor Al-Azam, P. A. Nani, N. M. R. Mamulak, E. M. Meolbatak, I. P. A. N. Samane, Reginaldo Christophori Lake</i>	70.
<b>[ABS-108] APATIK (Pneumatic Flip Flops)</b> <i>Moch. Zaenal Fanani, Muhammad Arif Nur Huda, Muchlis Dwi Ardiansyah, Aditya Wahyu Satria Yulianto, Kurnia Tri Cahyani</i>	71.
<b>[ABS-110] The KUKA Robotic Technology and Robot Future Trends</b> <i>Sandhi Kristanto, Bambang Sugiyono Agus Purwono</i>	72.
<b>[ABS-112] Analysis of Data Delivery from Speech Recognition System through Web Server Technology</b> <i>Mochammad Viky Aditya Bayhaky, Dwi Arman Prasetya, Puput Dani Prasetyo Adi, Rahman Arifuddin</i>	73.
<b>[ABS-113] Cooperative Control System to Move Objects with Multiple Mobile Robots Using Particle Swarm Optimization</b> <i>Dwi Arman Prasetya, Takashi Yasuno, Puput Dani Prasetyo Adi, Anggraini Puspita Sari</i>	74.

Title	Page
<b>[ABS-114] Chlorophyll Photosensitizer of Pterocarpus Indicus for Photodynamic Inactivation</b> <i>Basitha Febrinda Hidayatulail, Rahman Arifuddin, Dwi Arman Prasetya, Anggraini Puspita Sari</i>	75.
<b>[ABS-115] Open Source Network Site Elgg Based Learning Innovation at the Community College Semen Indonesian</b> <i>Kholid, Totok Mulyono</i>	76.
<b>[ABS-13] Implementation of The Entrepreneurship Learning Model Based on Business Projects for the Development of the Technopreneurship Spirit Among Students of the State Polytechnic of Malang</b> <i>Mohammad Maskan, Ita Rifiani Permatasari</i>	77.
<b>[ABS-100] The Green Marketing Strategy and Its Impact on Customers Satisfaction</b> <i>Ludfi Djajanto, Awan Setiawan, Tundung Subali Patma, Surpriatna Adhisuwignjo, Hanif Mauludin</i>	78.
<b>[ABS-25] Implementation Green Technology for Water Treatment Plant in Paper Small Scale Industry</b> <i>Rendi Rainardi, Bambang Sugiyono Agus Purwono, Ida Bagus Suardika</i>	79.
<b>[ABS-27] Pilot Plant of Water Treatment Unit for Flood Water becomes Clean Water with Pneumatic Flash Mix</b> <i>Fahir Hassan, Yeny Dhokhikah, Rusdiana Setyaningtyas</i>	80.
<b>[ABS-95] System Design and Analysis of Nozzle Aerator Effect On Water Treatment Plant Water-Based Industry</b> <i>Supriatna Adhisuwignjo, Masroni, Bambang Sugiyono Agus Purwono, Rendi Rainardi</i>	81.
<b>[ABS-87] The Effect of Organizational Support Toward Organizational Pride Along with the Implications on Organizational Citizenship Behavior</b> <i>Nilawati Fiernaningsih, Pudji Herijanto</i>	82.
<b>[ABS-93] The Impact of Organizational Culture on Organizational Learning and Organizational Performance</b> <i>Halid Hasan, Farika Nikmah, Erlangga Andi Sukma, Rizky Kurniawan Murtiyanto</i>	83.
<b>[ABS-107] Web-Based Accounting: Learning in Making Financial Statements for Students</b> <i>Chitra Santi</i>	84.

Title	Page
<b>[ABS-111] The Influence of Selling Behavior on Customer Trust and Customer Retention: An Empirical Study of the Financial Industries in Indonesia</b> <i>Tundung Subali Patma, Hanif Mauludin, Farida Akbarina, Mohammad Maskan</i>	85.
<b>[ABS-45] Energy Management Practice for Profitable Small Broiler Poultry Farming Based on Green Technology in Malang Regency Indonesia</b> <i>Andriani Parastiwi, Mila Fauziyah, Dwi Puspitasari, Anugrah Nur Rahmanto</i>	86.
<b>[ABS-51] Monitoring System Design Using Real Time Electrical Energy in Building of Scada-Based Office</b> <i>Deta Brian Prayogi, Azmi Saleh</i>	87.
<b>[ABS-78] Study of Management Energy Consumption Intensity Value in Politeknik Negeri Madiun Building as Effort to Increase Productivity of Work Environment</b> <i>Yosi Afandi, M. Fajar Subkhan, Imam Basuki</i>	88.
<b>[ABS-70] Variability of Climatic Conditions during The Last Three Millennia at Sebkhah Mhabeul in South-Eastern Tunisia</b> <i>Amal Gammoudi, Essefi Elhousine, Hafedh Rigane</i>	89.
<b>[ABS-75] The Evaluation of Implementation in Developing Earthquake Resistant House of The Subsidized Housings in Serang, Banten (Case Study Typical of Masonry)</b> <i>Meassa Monikha Sari, Dessy Triana</i>	90.
<b>[ABS-83] Effects of Settlement Development and Green Drainage Facility to Surface Runoff in Bodo River Basin Malang</b> <i>Syahrul Muhamad Ilham, Ratih Indri Hapsari, Utami Retno Pudjowati, Suhartono</i>	91.
<b>[ABS-84] The Effect of Marketing, Ease of Access and Household Income Towards The Domestic Tourist Visit to Object of Attractions in Sidoarjo Regency</b> <i>Mashudi, Luluk Fauziah, Zuhdiati Ermy Putri</i>	92.
<b>[ABS-88] Comparison of Roberts and Prewitt Edge Detection Method for Malaria Parasite Detection on Thick Blood Film</b> <i>Dwi Harini Sulistyawati, Luvia Friska Narulita</i>	93.
<b>[ABS-26] Design Smart Green City and the Right to the Healthy Environment</b> <i>Budiarsih, Slamet Suhartono</i>	94.
<b>[ABS-12] Multiple Role Conflict and Work Stress: The Evidence to Achievement and Affective Commitment of Career Women on Islamic University</b> <i>Alifiulahtin Utaminingsih, Mohammad Maskan</i>	95.



Title	Page
<p><b>[ABS-92] Referential and Attributive Using Found in English-Indonesian Technological Terms of Urban Living</b>  <i>Elsha Astika Ayu</i></p>	96.
<p><b>[ABS-106] Integration of Character Education in Developing English Syllabus and Lesson Plan of Vocational Education</b>  <i>Jozua F. Palandi, Zusana E. Pudyastuti</i></p>	97.
<p><b>[ABS-48] A Conceptual Design of Water Conservation System for Residential Housing</b>  <i>Yeny Dhokhikah, Yuliana Sukarmawati, Haris Faturrahman, Rizqy Dhinia, Al Adilah</i></p>	98.
<p><b>[ABS-109] Innovation of Visual and Simulation Based-Teaching Technology to Increase The Effectiveness and Efficiency of Financial Accounting Learning Processes</b>  <i>Endah Suwarni, Bambang Budiprayitno, Ahmad Jarnusi</i></p>	99.
<p><b>Comparison of Zeolite, Alginate, Polyurethane Foam as Carries For Lipase Mucor miehei Immobilization to Bio-Ester Production</b>  <i>Dwina Moentamaria, H Nurmahdi, C Sindhuwati, H Dewajani and A Chumaidi</i></p>	100.

[ABS-32]

**Monitoring System and Control of Electric Vehicle of Jember University  
Based on Radio Frequency**

Bambang Sujanarko, Fajar Kurniawan, Moch. Hasan, Widyono Hadi, Samsul  
Arifin, Devita Ayu Larasati, Nita Kuswardhani

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Abstract

Electric vehicle is one choice to develop clean pollution in countries. In this research a electric vehicle monitors and controls to get best performance of electric vehicle. The voltage sensor, current sensor, speed sensor, and dynamic characteristic testing with control mode and driver mode. In the control mode test, there are four road condition namely straight road, turn road, down road, and ramp. In these test, the high current value happen in 7.93 A. In the speed control mode, the electric vehicle runs well on the road condition straight value reference at speed of 250 RPM. In the condition of the turning road with the speed of reference 250 RPM, the average velocity value is of 245.79 RPM, and in the decrease elevation of road, the velocity value is 206.55 rpm, and finally for increase elevation of road, the speed is 99.63 rpm. All of this numerical can be shown on master control, because all of parameter are sent by radio frequency of the system. These results have low error and have high accuracy

Keywords: electric vehicle, monitoring, control, radio frequency

Topic: Engineering