

SINERGI

p-ISSN: 1410-2331 e-ISSN: 2460-1217
VOL. 23, NO. 2, JUNE 2019

Accredited **SINTA 2** by KEMENRISTEKDIKTI, Decree No: 10/E/KPT/2019



SINERGI

VOL. 23

NO. 2

PAGES
79-174

JAKARTA
JUNE 2019

p-ISSN: 1410-2331
e-ISSN: 2460-1217

pISSN: 1410-2331 - eISSN: 2460-1217

SINERGI

Vol. 23, No. 2, June 2019

Editor in Chief : Dr. Andi Adriansyah (UMB, Indonesia)

Editorial Board : Prof. Dr. Chenwei Deng (Beijing Institute of Technology, China)
: Prof. Dr. K. Lenin (Prasad V. Potluri Siddharta Institute, India)
: Assoc. Prof. Dr. Ahmad Fithriady (UMT, Malaysia)
: Assoc. Prof. Dr. Ahmed Turan Ozdemir (Erciyes Univ., Turkey)
: Assoc. Prof. Mahadzir Ishak (UMP, Malaysia)
: Dr. -Ing. Darwin Sebayang (UMB, Indonesia)
: Dr. Denny Setiawan (Kementrian Kominfo RI, Indonesia)
: Dr. -Ing. Galih Bangga (Univ. of Stuttgart, Germany)
: Dr. Hatsari Mitsudharmadi (KAUST, Saudi Arabia)
: Dr. Jae Hyun Yun (Sungkyunkwan Univ., Republic of Korea)
: Dr. Reza Firsandaya Malik (Universitas Sriwijaya, Indonesia)
: Dr. Rosyida Permatasari (Universitas Trisakti, Indonesia)
: Dr. Setiyo Budiyanto (UMB, Indonesia)
: Dr. Sugeng Ariyono (Polman Negeri Bangka Belitung, Indonesia)
: Dr. Teguh Prakoso (Universitas Diponegoro, Indonesia)
: Dr. Zulfa Fitri Ikatrinasari (UMB, Indonesia)

Editorial Staff : Edijon Nopian
: Feby Febrianty
: Fatkhi Rakhmidyani Rosanjelin

Editorial Address : Fakultas Teknik Universitas Mercu Buana
Jl. Raya Meruya Selatan, Kembangan, Jakarta 11650
Tlp/Fax: 021-5871335
<http://www.publikasi.mercubuana.ac.id/index.php/sinergi>

SINERGI is a peer-reviewed journal published three times a year in February, June and October. The journal is published by Faculty of Engineering, Universitas Mercu Buana. Each publication contains articles comprising high quality theoretical and empirical original research papers, review papers, and literature reviews that are closely related to the fields of Engineering (Mechanical, Electrical, Industrial, Civil and Architecture). The theme of paper is focused on new industrial applications and energy development that synergized with local, green and sustainable technologies.

Reviewers

- Prof. Dr. Chandrasa Soekardi (Universitas Mercu Buana, Indonesia)
Prof. Dana Santoso, PhD (Universitas Mercu Buana, Indonesia)
Prof. Dr. -Ing. Mudrik Alaydrus (Universitas Mercu Buana, Indonesia)
Prof. Dr. Awaluddin M. Shaharoun (Universitas Islam Madinah, Saudi Arabia)
Assoc. Dr. Zaharuddin Mohamed (Universiti Teknologi Malaysia, Malaysia)
Dr. Abdusy Syarif (Universitas of Haute Alsace, Perancis)
Dr. Ade Asmi (Universitas Bakrie, Indonesia)
Dr. Agung Purniawan (Institut Teknologi Sepuluh November, Indonesia)
Dr. Anton Yudhana (Universitas Ahmad Dahlan)
Dr. Arien Heryansyah (Institut Pertanian Bogor, Indonesia)
Dr. Arif Irwansyah (Electronic Engineering Polytechnic of Surabaya, Indonesia)
Dr. Abdullah Dahlan (Universitas Malikussaleh, Indonesia)
Dr. D. Dahliyusmanto (Universitas Riau, Indonesia)
Dr. Devi Fitriana (Universitas Mercu Buana, Indonesia)
Dr. Dini Rosmalina (Universitas Pancasila, Indonesia)
Dr. Dwi Agustina Kurniawati (Universitas Islam Negeri Sunan Kalijaga, Indonesia)
Dr. Kontan Tarigan (Universitas Mercu Buana, Indonesia)
Dr. Muchamad Oktaviandri (Universitas Malaysia Pahang, Malaysia)
Dr. Munawar Agus Riyadi (Universitas Diponegoro)
Dr. Muhammad Khairuddin (Universitas Negeri Yogyakarta)
Dr. Nunung Widyaningsih (Universitas Mercu Buana, Indonesia)
Dr. Reza Firsandaya Malik (Universitas Sriwijaya)
Dr. Satria Mandala (Telkom University, Indonesia)
Dr. Sally Cahyati (Universita Trisakti, Indonesia)
Dr. Syahril Ardi (Politeknik Manufaktur Astra)
Dr. Yusnita Rahayu (Universitas Riau, Indonesia)
Dr. (C). Herry Agung Prabowo (Universitas Mercu Buana, Indonesia)
Dr. (C). Yudhi Gunardi (Universitas Mercu Buana, Indonesia)

TABLE OF CONTENTS

BUILDING ENVELOPE COMPONENT TO CONTROL THERMAL INDOOR ENVIRONMENT IN SUSTAINABLE BUILDING: A REVIEW	79-98
Abraham Seno Bachrun, Ting Zhen Ming, Anastasia Cinhya School of Civil Engineering and Architecture, Wuhan University of Technology Department of Architecture, Universitas Mercu Buana Department of Interior Design, Universitas Tarumanagara	
ASSESS THE RISK LEVEL OF POWER TRANSFORMER DUE SHORT-CIRCUIT FAULTS BASED ON ANFIS	99-106
Azriyenni Azhari Zakri, Mohd Wazir Mustafa, Hari Firdaus, Ibim Sofimieari Department of Electrical Engineering, Universitas Riau School of Electrical Engineering, Universiti Teknologi Malaysia	
DESIGN WORK STATION OF PIPE WELDING WITH ERGONOMIC APPROACH	107-114
Silvi Ariyanti, Lamto Widodo, Muhammad Zulkarnain, Kevin Timotius Department of Industrial Engineering, University of Mercu Buana Department of Industrial Engineering, University of Tarumanagara Departement of Marine Engineering Technology, Universiti Kuala Lumpur	
EARLY DETECTION OF BREAST CANCER USING ULTRA WIDE BAND SLOT ANTENNA	115-122
Yusnita Rahayu, Immanuel Waruwu Department of Electrical Engineering, Universitas Riau	
IMPROVEMENT BONDING QUALITY OF THE SHOE USING QUALITY CONTROL CIRCLE	123-131
Meike Elsy Beatrix, Novera Elisa Triana Department of Industrial Engineering, Universitas Mercu Buana	
IMPLEMENTATION OF FREQUENCY RESPONSE FUNCTION ON TAPPER BEARING MAINTENANCE	132-138
Ari Susanto, Setyo Qomarudin Yusuf, Abdul Hamid, Haris Wahyudi, Subekti Subekti Mechanical Engineering Vibration Laboratory, Universitas Mercu Buana	
VARIATION OF CUTTING PARAMETERS IN THE PROCESS OF TURNING AISI 4340 STEEL ON SURFACE ROUGHNESS	139-144
M. Sobron Y. Lubis, Erwin Siahaan, Steven Darmawan, Adi Anto, Ronald Department of Mechanical Engineering, Universitas Tarumanagara	
STUDY OF SATISFACTION: OPEN SPACE HOUSING IN THE SOUTH TANGERANG REGION	145-152
Mona Anggiani, Rona Fika Jamila Department of Architecture, Universitas Mercu Buana	
IMPROVING PASSENGERS SATISFACTION OF "TRAVEL" CORRIDOR PADANG-PESISIR SELATAN USING IMPORTANCE - SATISFACTION ANALYSIS (ISA)	153-160
Yosritzal Yosritzal, Seprino Hendra, Bayu Martanto Adji Department of Civil Engineering, Andalas University	
PERCEPTION OF NEIGHBORHOOD AROUND THE REAL ESTATE PHYSICAL BOUDARY	161-168
Tin Budi Utami Department of Architecture, Universitas Mercu Buana	
ROTATED RECTANGULAR SLOTS AND MIRRORRED INVERSED CANTOR-SETS ON ULTRAWIDEBAND ANTIPODAL VIVALDI ANTENNA	169-174
Sabri Alimi, Teguh Prakoso, Munawar Agus Riyadi Department of Electrical Engineering, Universitas Diponegoro	