

ISBN :



# CONFERENCE PROGRAMS AND ABSTRACT

**INTERNATIONAL CONFERENCE  
FORUM IN RESEARCH, SCIENCE, AND TECHNOLOGY 2020**

**NOVEMBER 10-11, 2020**

**Palembang, Province of South Sumatera  
Indonesia**

Organized By :



Collaborate With :



## ORGANIZING COMMITTEE

### International Advisory Committee

Prof. Erry Yulian Triblas Adesta, International Islamic University, Malaysia  
Prof. Yasushi Kiyoki, Keio University, Japan  
Assoc. Prof. Dr. Augustus E. Osseo-Asare University of Sunderland, United Kingdom  
Prof. Eddy Yusuf, Ph.D., Management Science University, Malaysia  
Prof. Win-jet Luo, Ph.D., National Chin-Yi University of Technology, Taiwan  
Yu-Lieh Wu, Ph.D., National Chin-Yi University of Technology, Taiwan  
Prof. Chiaki Ogino, Kobe University, Japan  
Wahyu Caesarendra, S.T., M.Eng., Ph.D., University of Brunei Darussalam, Brunei  
Prof. Yuliansyah, M.S.A., Ph.D., Ak., CA., University of Lampung, Indonesia  
Dr. Muhammad Haikal Satria, IPM, Jakarta Global University, Indonesia  
Assoc. Prof. Dr. Mohammed N Adurazaq, Management and Science University (MSU), Malaysia

### Steering Committee

Dr. Ing. Ahmad Taqwa, M.T, Politeknik Negeri Sriwijaya, Indonesia  
Dr. RD. Kusumanto, MM, Politeknik Negeri Sriwijaya, Indonesia  
Prof. Dr. Ir. Siti Nurmaini, Universitas Sriwijaya, Indonesia  
Prof Aldes Lesbani S.Si,M.Si,Ph.D, Universitas Sriwijaya, Indonesia  
Yu-Lieh Wu, Ph.D., National Chin-Yi University of Technology, Taiwan  
Dr. Zulhadi Zakaria, Politeknik Seberang Perai, Malaysia  
Dr.Ir.Rusdianasari, M.Si, Politeknik Negeri Sriwijaya, Indonesia  
Asst. Prof. Dr. Dodik Siswanto, S.E., M.Sc. Acc., Universitas Indonesia  
Irsyadi Yani, ST., M.Eng. PhD, Universitas Sriwijaya, Indonesia  
Dr. Gancar Candra Premananto SE., M.Si., Universitas Airlangga  
Dr. Yohandri Bow, M.Si, Politeknik Negeri Sriwijaya, Indonesia  
Dr. Yuli Yetri, M.Si, Politeknik Negeri Padang  
Dr. Marieska Verawaty, M.Si., Universitas Sriwijaya, Indonesia  
Dr. Eng. Tresna Dewi, M.Eng., Politeknik Negeri Sriwijaya, Indonesia  
Dr. Maya Fitri Oktarini S.T., M.T., Universitas Sriwijaya, Indonesia  
Ir. Indra Chandra Setiawan, M.T., PT. Toyota Motor Manufacturing, Indonesia

### General Chair

Dr.Rita Martini, SE.,M.Si.,Ak.,CA, Politeknik Negeri Sriwijaya, Indonesia

### General co-Chairs

Dr. Ade Silvia Handayani, S.T, M.T., Politeknik Negeri Sriwijaya, Indonesia  
Carlos R. Sitompul, S.T.,M.T., Politeknik Negeri Sriwijaya, Indonesia  
Ir. Jaksen M. Amin, M.Si, Politeknik Negeri Sriwijaya, Indonesia

### Publication Chairs

Dr. Nyayu Latifah Husni, S.T., M.T, Politeknik Negeri Sriwijaya, Indonesia  
Deris Stiawan, M,Kom, PhD., Universitas Sriwijaya, Indonesia  
Dr. Martha Aznury, M.Si., Politeknik Negeri Sriwijaya, Indonesia

### **Technical Program Chairs**

Fatahul Arifin, ST., Dipl Eng. EPD., M.EngSc, PhD, Politeknik Negeri Sriwijaya, Indonesia

Dr. Herlambang Saputra, S.Pd., M.Kom., Politeknik Negeri Sriwijaya, Indonesia

### **Finance Chairs & Treasurer**

Dr. Marieska Lupikawati, S.E., M.M, Politeknik Negeri Sriwijaya, Indonesia

### **Public Relation Chairs**

Nelly Masnila, S.E, M.Si, Ak, Politeknik Negeri Sriwijaya, Indonesia

Ahmad Zamheri, S.T, M.T, Politeknik Negeri Sriwijaya, Indonesia

Drs Zakaria MPd., Politeknik Negeri Sriwijaya, Indonesia

Desloehal Djumrianti, S.E., MIS., PhD, Politeknik Negeri Sriwijaya, Indonesia

Leni Novianti, M.Kom., Politeknik Negeri Sriwijaya, Indonesia

M. Miftahul Amin, S.Kom., M.Eng., Politeknik Negeri Sriwijaya, Indonesia

Dr. Ir. Abu Hasan, M.Si., Politeknik Negeri Sriwijaya, Indonesia

Ir. Irawan Rusnadi, M.T. , Politeknik Negeri Sriwijaya, Indonesia

Dr. Indrayani, ST., M.T. , Politeknik Negeri Sriwijaya, Indonesia

Dra. Tiur Simanjuntak, M.Ed.M, Politeknik Negeri Sriwijaya, Indonesia

Sukandar S.Si.,M.T,Ph.D., Institut Teknologi Bandung, Indonesia

Dr. GK Marriappen, Politeknik Seberang Perai, Malaysia

Ir. Irwin Bizzy, M.T., Universitas Sriwijaya, Indonesia

Dr. Sari Lestari Zainal Ridho, SE., M.Ec, Politeknik Negeri Sriwijaya, Indonesia

Dr. Ir.Leila Kalsum, M.T, Politeknik Negeri Sriwijaya, Indonesia

Dr. Leily Nurul Komariah, S.T., M.T., Universitas Sriwijaya, Indonesia

Dr, Rosmalinda Permatasari ST MT, Universitas Tridinanti Palembang, Indonesia

Erliza Yuniarti, S.T., M.Eng, Universitas Muhammadiyah Palembang, Indonesia

Firdaus, S.T., M.Kom., Universitas Sriwijaya, Indonesia

Ervi Cofriyanti, S.Si, M.T.I, Politeknik Negeri Sriwijaya, Indonesia

Lindawati, ST., M.Ti., Politeknik Negeri Sriwijaya, Indonesia

Yogi Eka Fernandes, S.Pd., M.T., Politeknik Negeri Sriwijaya, Indonesia

Ozkar Firdausi Homzah, S.T., M.T., Politeknik Negeri Sriwijaya, Indonesia

## Table of Content

FOREWORD FROM GENERAL CHAIR 4 <sup>th</sup> FIRST 2020 INTERNATIONAL CONFERENCE .....	2
FOREWORD FROM DIRECTOR OF STATE POLYTECHNIC OF SRIWIJAYA.....	4
ORGANIZING COMMITTEE.....	5
KEYNOTE SPEAKER .....	7
Prof. Dr. Chiaki Ogino.....	7
KEYNOTE SPEAKER .....	8
Wahyu Caesarendra, PhD .....	8
KEYNOTE SPEAKER .....	9
Prof. Yuliansyah, M.S.A., Ph.D, Akt, CA .....	9
KEYNOTE SPEAKER .....	10
Dr. H. Dodi Reza Alex Lic, Econ, MBA.....	10
KEYNOTE SPEAKER .....	11
Dr. Muhammad Haikal Satria, IPM .....	11
KEYNOTE SPEAKER .....	12
Assoc. Prof. Dr. Mohammed N. Abdulrazaq Alshekhly .....	12
RUNDOWN .....	13
The 4 <sup>th</sup> FIRST 2020 INTERNATIONAL CONFERENCE.....	13
(FORUM IN RESEARCH SCIENCE AND TECHNOLOGY) .....	13
SNAPTEKMAS (Seminar Nasional Aplikasi Teknologi pada Masyarakat) 2020.....	13
RUNDOWN .....	16
TRACK 1.....	16
(Engineering and Science) .....	16
RUNDOWN .....	19
TRACK 1.....	19
(Engineering and Science) .....	19
RUNDOWN .....	22
TRACK 1.....	22
(Engineering and Science) .....	22
RUNDOWN .....	26
TRACK 2.....	26
(Computer Science, , Computer Engineering, Information System, Informatics Management)	26
.....	26
RUNDOWN .....	30
TRACK 2.....	30
(Computer Science, , Computer Engineering, Information System, Informatics Management)	30
.....	30

RUNDOWN .....	33
TRACK 3 (Social Science).....	33
RUNDOWN .....	36
TRACK 3 (Social Science).....	36
CHARACTERIZATION OF BLENDING COMPOSITION VARIATIONS IN FATTY ACID METHYL ESTER (FAME) BIOFUELS WITH DIESEL TO BIODIESEL .....	51
ID : 2079 .....	51
Yusabri <sup>1,2</sup> , Muhammad Yerizam <sup>3</sup> , Aida Syarif <sup>4</sup> .....	51
<sup>1</sup> Applied Master of Renewable Energy Engineering, Politeknik Negeri Sriwijaya, Jalan Srijaya Negara, Palembang, 30139 Indonesia.....	51
<sup>2</sup> Crude Distillation and Gas Plant Production, PT. Pertamina (Persero) Refinery Unit III, Jalan Beringin, Kompleks Pertamina Refinery Unit III Plaju, Palembang, 30268 Indonesia. ....	51
<sup>3</sup> Chemical Engineering Department, Politeknik Negeri Sriwijaya, Jalan Srijaya Negara, Palembang, 30139 Indonesia.....	51
<sup>4</sup> Renewable Energy Engineering Department, Politeknik Negeri Sriwijaya, Jalan Srijaya Negara, Palembang, 30139 Indonesia. ....	51
PROCESSING PLASTIC WASTE HDPE AND PP ON PYROLYSIS TEMPERATURE USING CU-AL2O3 CATALYST INTO AN ALTERNATIVE LIQUID FUEL.....	52
ID : 2082 .....	52
Pamilia Coniwanti <sup>1</sup> , Fitri Hadiah <sup>1</sup> , David Bahrin <sup>1</sup> , Liza Novriani <sup>1</sup> , Gracia Mei Lie Justina <sup>1</sup> , Robinsyah <sup>1</sup> .....	52
<sup>1</sup> Chemical Engineering Department, Sriwijaya of University, Jl. Raya Palembang-Prabumulih KM. 32, Inderalaya, Ogan Ilir 30662, Indonesia .....	52
THE PURIFICATION OF BIOGAS WITH MONOETHANOLAMINE (MEA) SOLUTION BASED ON THE BIOGAS FLOW RATE .....	53
Id : 2749.....	53
Yohandri Bow <sup>1</sup> , Leila Kalsum <sup>2</sup> , Abu Hasan <sup>2</sup> , A. Husaini <sup>3</sup> , Rusdianasari <sup>2</sup> .....	53
<sup>1</sup> Energy Engineering Department, Politeknik Negeri Sriwijaya, Palembang, 30139 Indonesia.....	53
<sup>2</sup> Renewable Energy Engineering Department, Politeknik Negeri Sriwijaya, Jalan .....	53
Srijaya Negara, Palembang, 30139 Indonesia.....	53
<sup>3</sup> Chemical Engineering Department, Politeknik Negeri Sriwijaya, Jalan Srijaya, .....	53
Negara, Palembang, 30139 Indonesia. ....	53
FILTRATION AND ELECTROCOAGULATION AS A COMBINED PROCESS FOR ELECTROPLATING WASTEWATER.....	54
ID : 2758 .....	54
Rusdianasari <sup>1,*</sup> , Yohandri Bow <sup>2</sup> , Adi Syakdani <sup>3</sup> , Muhammad Taufik <sup>3</sup> .....	54
<sup>1</sup> Renewable Energy Engineering Department, PoliteknikNegeri Sriwijaya, Palembang, Indonesia.....	54

2 Energy Engineering Departmen, Politeknik Negeri Sriwijaya, Palembang, Indonesia..	54
3Chemical Engineering Department, Politeknik Negeri Sriwijaya, Palembang, Indonesia .....	54
STUDY OF TEMPERATURE AND USE OF CATALYSTS IN THE PYROLYSIS OF LDPE PLASTIC WASTE ON THE QUANTITY OF OIL FUEL PRODUCTS PRODUCED .....	55
ID : 2415 .....	55
Novarini <sup>1</sup> , Sigit Kurniawan <sup>2</sup> , Rusdianasari <sup>3</sup> , Yohandri Bow <sup>4</sup> .....	55
<sup>1</sup> Mechanical Engineering Department, Politeknik Jambi, Jambi, Indonesia.....	55
<sup>2</sup> Electronic Engineering Department, Politeknik Jambi, Jambi, Indonesia .....	55
<sup>3</sup> Chemical Engineering Department, Politeknik Negeri Sriwijaya, Palembang, Indonesia .....	55
<sup>4</sup> Energy Engineering Department, Politeknik Negeri Sriwijaya, Palembang, Indonesia .	55
TITANIUM DIOXIDE SOAKING TIME EFFECTS ON DSSC POWERS AND EFFICIENCY .....	56
ID : 2077 .....	56
Rika Musiana <sup>1</sup> , Abu Hasan <sup>2</sup> , RD Kusumanto <sup>3</sup> .....	56
<sup>1</sup> Applied Renewable Energy Engineering Study Program, Politeknik Negeri Sriwijaya,...	56
Jalan Srijaya Negara, Palembang, 30139 Indonesia. ....	56
<sup>2</sup> Renewable Energy Engineering Department, Politeknik Negeri Sriwijaya, Jalan .....	56
Srijaya Negara, Palembang, 30139 Indonesia. <sup>3</sup> Renewable Energy Engineering Department, Politeknik Negeri Sriwijaya, Jalan .....	56
Srijaya Negara, Palembang, 30139 Indonesia.....	56
EFFECT OF FEED COMPOSITION AND PRODUCT QUANTITY OF CO-PROCESSING REFINED BLEACHED DEODORIZED PALM OIL (RBDPO).....	57
Id : 2086.....	57
Juarsa <sup>1,2</sup> , Aida Syarif <sup>3</sup> , Leila Kalsum <sup>3</sup> .....	57
<sup>1</sup> Applied Master of Renewable Energy Engineering, Politeknik Negeri Sriwijaya,.....	57
Jalan Srijaya Negara, Bukit Besar, Palembang, 30139, Indonesia.....	57
<sup>2</sup> Crude Distillation and Light End Production, Pertamina Ltd. (Persero) Refinery Unit III, Beringin Road, Complex of Pertamina Refinery Unit III Plaju, Palembang, 30268 Indonesia .....	57
<sup>3</sup> Renewable Energy Engineering Department, Politeknik Negeri Sriwijaya,.....	57
Jalan Srijaya Negara, Bukit Besar, Palembang, 30139, Indonesia.....	57
TOFU INDUSTRIAL LIQUID WASTE TREATMENT BY ELECTROCOAGULATION METHOD .....	58
ID : 2748 .....	58
Ibnu Hajar <sup>1,*</sup> , Fadarina <sup>1</sup> , Mustain Zamhari <sup>1</sup> , Selastia Yuliaty <sup>1</sup> .....	58
<sup>3</sup> Chemical Engineering Department, Politeknik Negeri Sriwijaya, Palembang, Indonesia	58
EFFECT OF TEMPERATURE ON BIOFUELS PRODUCTION WITH CATALYTIC CRACKING PROCESS.....	59
ID : 2626 .....	59

KA Ridwan <sup>1,2</sup> , Aneasari M <sup>1</sup> , Taufik Jauhari <sup>1</sup> , Ida Febriana <sup>1</sup> .....	59
<sup>1</sup> Chemical Engineering Department, State Polytechnic of Sriwijaya, South Sumatra, Indonesia.....	59
EFFECT OF BENTONITE ON THE YIELD AND COMPOSITION OF PRODUCTS FROM THERMOLYSIS OF POLYSTYRENE WASTE .....	60
ID : 2573 .....	60
Lety Trisnaliani <sup>1a</sup> , Aida Syarif <sup>1</sup> , Sahrul Effendy <sup>1</sup> , Tahdid <sup>1</sup> , Rima Daniar <sup>1</sup> .....	60
<sup>1</sup> Energy Department, Politeknik Negeri Sriwijaya .....	60
PRODUCTION OF BIO-PELET BRIQUETTES FROM COCONUT SHELL WASTE AS ALTERNATIVE ENERGY FOR HOUSEHOLD SCALE .....	61
ID : 2665 .....	61
Muhammad Yerizam* <sup>1</sup> , Muhammad Zaman 1, Taufiq Jauhari1 , Nur Yuli 1, Riwen Setiawan1 , Umaidella Afrilla1.....	61
<sup>1</sup> Jurusan Teknik Kimia,Politeknik Negeri Sriwijaya Jl. Srijaya Negara, Bukit Besar, Palembang 30139, Indonesia.....	61
CATALYTIC PYROLYSIS OF STYROFOAM WASTE USING ZEOLITE CATALYST TO PRODUCE LIQUID FUEL .....	62
ID : 2707 .....	62
Zurohaina <sup>1*</sup> , Irawan Rusnadi, Fatria, Arizal Aswan, Rima Daniar .....	62
<sup>1</sup> Department of Chemical Engineering, Polytechnic of Sriwijaya, Palembang, Indonesia .....	62
PRODUCTION OF GREEN DIESEL FROM CRUDE PALM OIL (CPO) THROUGH HYDROTREATING PROCESS BY USING ZEOLITE CATALYST.....	63
ID : 2715 .....	63
Ahmad Zikri* , Indah Puspita, Erlinawati, Sutini PL, Agus M Elbi Zalita P, Andre Krismantoro .....	63
Energy Engineering, Chemical Engineering Department, State Polytechnic of Sriwijaya 63	
Jl. Srijaya Negara Bukit Besar Palembang 30139, Telp +62711353414 / fax +62711355918.....	63
EFFECT OF ADDING PALM OIL MILL EFFLUENT (POME) AND SLURRY ON BIOGAS FROM COW MANURE TO PRODUCED METHANE GAS .....	64
ID : 2723 .....	64
Muhammad Hanif Fatin <sup>1,*</sup> , A. Husaini <sup>2</sup> , Leila Kalsum <sup>3</sup> .....	64
<sup>1</sup> Applied Renewable Energy Engineering Study Program, Politeknik Negeri Sriwijaya, Jalan Srijaya Negara, Palembang, 30139 Indonesia.....	64
<sup>2</sup> Chemical Engineering Department, Politeknik Negeri Sriwijaya, Jalan Srijaya Negara, Palembang, 30139 Indonesia.....	64
<sup>3</sup> Renewable Energy Engineering Department, Politeknik Negeri Sriwijaya, Jalan Srijaya Negara, Palembang, 30139 Indonesia. ....	64
CHARACTERIZATION OF THERMAL ACTIVATED FLY ASH ADSORBENT BY STUDYING THE EFFECT OF TEMPERATURE .....	65

ID : 2796 .....	65
Aida Syarif <sup>1</sup> , Rusdianasari, M.Yerizam,Sayhirmanyusi, .....	65
<sup>1</sup> Jurusan Teknik Kimia Program Studi Magister Terapan Teknik Energi Baru Terbarukan .....	65
Politeknik Negeri Sriwijaya, Jalan Srijaya Negara Bukit Besar Palembang .....	65
DRYING RATE OF SKIM MILK FROM VIRGIN COCONUT OIL REMAINING WATER .....	66
ID : 2516 .....	66
A Hasan <sup>1</sup> , I Purnamasari <sup>1,2</sup> , M Yerizam <sup>1</sup> , A Hasan <sup>1</sup> and R Junaidi <sup>1</sup> .....	66
<sup>1</sup> Chemical Engineering Department, State Polytechnic of Sriwijaya, South Sumatera, Indonesia.....	66
TOFU INDUSTRIAL WASTEWATER TREATMENT BY ELECTROCOAGULATION METHOD .....	67
ID : 2656 .....	67
Ibnu Hajar <sup>1</sup> ,* Fadarina <sup>1</sup> , Mustain Zamhari <sup>1</sup> , Selastia Yuliaty <sup>1</sup> .....	67
<sup>3</sup> Chemical Engineering Department .....	67
BIOCELLULOSE MEMBRANE OF COCONUT WATER.....	68
ID : 2792 .....	68
Elina Margaretty <sup>1</sup> , Erwana Dewi <sup>2</sup> , Leila Kalsum <sup>3</sup> , Aisyah Suci Ningsih <sup>1</sup> .....	68
<sup>1</sup> ). Lecturer D3-Chemical Engineering Sriwijaya State Polytechnic, Palembang, Indonesia .....	68
<sup>2</sup> ).Lecturer D4- Industrial Chemical Technology, Sriwijaya State Polytechnic, Palembang, Indonesia.....	68
<sup>3</sup> ). Lecturer S2- Renewable Energy Engineering, Sriwijaya State Polytechnic, Palembang, Indonesia.....	68
SURFACTANT METHYL ESTER SULFONATE FROM CRUDE PALM OIL (CPO)- BASED METHYL ESTER.....	69
ID : 2794 .....	69
Jaksen <sup>1</sup> , Idha Silviyati <sup>1</sup> , Endang Supraptiah <sup>1</sup> , Rima Daniar <sup>2</sup> .....	69
<sup>1</sup> ).Lecturer of Chemical Engineering Department, Politeknik Negeri Sriwijaya, Palembang, Indonesia.....	69
<sup>2</sup> ).Lecturer of Energy Engineering Department, Politeknik Negeri Sriwijaya, Palembang, Indonesia.....	69
OIL PALM EMPTY BUNCHES AS AN ALTERNATIVE RAW MATERIAL FOR MAKING BIOPLASTICS .....	70
ID : 2250 .....	70
Husaini A <sup>1</sup> , Zaman M <sup>1</sup> , Chodijah S <sup>1</sup> , Hilwatullisan <sup>1</sup> , Ibrahim <sup>2</sup> .....	70
<sup>1</sup> Chemical engineering Department, Politeknik Negeri Sriwijaya, Jalan Srijaya Negara, Palembang, 30139 Indonesia.....	70
<sup>2</sup> Chemical engineering Study Program, Politeknik Negeri Sriwijaya, Jalan Srijaya Negara, Palembang, 30139 Indonesia.....	70
<i>Corresponding author E-mail address :husaini@polsri.ac.id</i> .....	70



THE EFFECT OF THE CATALYST (NaOH) ON THE PROCESSING OF WASTE USED OIL INTO LIQUID FUEL .....	71
ID : 2511 .....	71
Azharuddin <sup>1</sup> , Syafei <sup>1</sup> , Didi Suryana <sup>1</sup> , Indra HB <sup>1</sup> , M R Rahmaddy <sup>1</sup> .....	71
Y Pratomo <sup>1</sup> , M A Ariasya <sup>1</sup> .....	71
<sup>1</sup> ) Mechanical Engineering Department, State Polytechnic of Sriwijaya, Palembang, 30154, Indonesia.....	71
DESIGN AND PROTOTYPE OF PAVING BLOCK MAKING MACHINE .....	72
ID : 2766 .....	72
Ella Sundari <sup>1</sup> , Soegeng Witjahjo <sup>1</sup> , Eka Satria Martomi <sup>1</sup> , Dodi Tafrant <sup>1</sup> .....	72
Lecturer of Mechanical Engineering Departement, Sriwijaya State Polytechnic .....	72
*Jln. Srijayanegara Bukit Lama, Palembang.....	72
WATER QUALITY MONITORING SYSTEM IN GURAME FISH CULTIVATION BASED ON ESP32 .....	73
ID : 2094 .....	73
Sujito <sup>1</sup> , Mokh. Sholihul Hadi <sup>1</sup> ,I Made Wirawan <sup>1</sup> , Faiz Syaikhoni <sup>2</sup> , Abdullah Iskandar Syah <sup>2</sup> , .....	73
Danny Mayrawan <sup>2</sup> .....	73
<sup>1</sup> Dosen Jurusan Teknik Elektro, Fakultas Teknik, Universitas Negeri Malang.....	73
<sup>2</sup> Mahasiswa Jurusan Teknik Elektro, Fakultas Teknik, Universitas Negeri Malang.....	73
OPTIMIZATION OF STROKE REHABILITATION HAND COMPONENT OF 3D PRINTING WITH TAGUCHI METHOD APPROACH.....	74
ID : 2426 .....	74
Fatahul Arifin <sup>1</sup> , Fenoria Putri <sup>1</sup> , Iskandar <sup>1</sup> , Mulyadi <sup>1</sup> , Suparjo <sup>1</sup> , Franando <sup>1</sup> , Yusuf Dewantoro Herlambang <sup>2(*)</sup> .....	74
<sup>1</sup> Mechanical Engineering Department, Politeknik Negeri Sriwijaya, Palembang, 30154, Indonesia.....	74
<sup>2</sup> Mechanical Engineering Department, Politeknik Negeri Semarang, Semarang, 50275, Indonesia.....	74
EXPERIMENTAL RESEARCH OF THE INFLUENCE OF HOT MACHINING METHOD ON AISI 4340 LATHE MACHINE PROCESS TOWARDS SPECIFIC CUTTING ENERGY AND SURFACE ROUGHNESS.....	75
ID : 2457 .....	75
Ismail T <sup>1</sup> , Dyos S <sup>2</sup> , Joni Y <sup>3</sup> , Samuel S <sup>4</sup> ,Abdurahman W <sup>5</sup> , Aldi Y <sup>6</sup> .....	75
<sup>123456</sup> Mechanical Engineering, Engineering Faculty of Sriwijaya University,.....	75
Jln Raya Palembang - Inderalaya Km 32, Indonesia.....	75
STUDY OF CAPACITOR PLACEMENT TO IMPROVE THE VOLTAGE PROFILE IN CONTINGENCY CONDITIONS OF THE 150 KV MADURA ELECTRICITY POWER SYSTEM .....	76
ID : 2487 .....	76
Sujito <sup>1*</sup> , M. Z. Falah <sup>1</sup> , M. R. Faiz <sup>1</sup> .....	76

<sup>1</sup> Electrical Engineering Department, Universitas Negeri Malang, Indonesia .....	76
THE INVESTIGATION OF SEA SALT SOILING ON PV PANEL .....	77
ID : 2488 .....	77
Tresna Dewi <sup>1</sup> , Ahmad Taqwa <sup>2</sup> , Rusdianasari <sup>2</sup> , RD Kusumanto <sup>1</sup> , and Carlos Sitompul <sup>1</sup> ...	77
<sup>1</sup> Electrical Engineering Department, Politeknik Negeri Sriwijaya, Jalan Srijaya Negara, Palembang, 30139 Indonesia.....	77
<sup>2</sup> Renewable Energy Engineering Department, Politeknik Negeri Sriwijaya, Jalan .....	77
Srijaya Negara, Palembang, 30139 Indonesia.....	77
REAL-TIME WIRELESS CONCEPT OF VEHICLE TO VEHICLE CHARGING SYSTEM.....	78
ID: 2490 .....	78
Yurni Oktarina <sup>1</sup> , Tresna Dewi <sup>1</sup> , Pola Risma <sup>1</sup> , and Muhammad Nawawi <sup>1</sup> .....	78
<sup>1</sup> Electrical Engineering Department, Politeknik Negeri Sriwijaya, Jalan Srijaya Negara Palembang, Indonesia 30139.....	78
OPTIMIZATION OF FDM 3D PRINTING PROCESS PARAMETER FOR IMPROVING POROSITY ACCURACY OF PLA SCAFFOLD.....	79
ID : 2522 .....	79
Zainal Abidin <sup>1</sup> , M. Yanis <sup>1</sup> , M. Zahri Kadir <sup>1</sup> , Astuti <sup>1</sup> , Akbar Teguh Prakoso <sup>1</sup> , Edo Syahrizal <sup>1</sup> , Ardiyansyah Syahrom <sup>2,3</sup> , Hasan Basri <sup>1,*</sup> .....	79
Department of Mechanical Engineering, Faculty of Engineering, Universitas Sriwijaya, Indralaya 30662, Ogan Ilir, South Sumatera, Indonesia .....	79
Department of Applied Mechanics and Design, Faculty of Mechanical Engineering, Universiti Teknologi Malaysia, Skudai 81310, Johor, Malaysia .....	79
Medical Device and Technology Center (Meditec), Institute of Human-Centered and Engineering (IHCE), Universiti Teknologi Malaysia, Skudai 81310, Johor, Malaysia.....	79
FATIGUE PREDICTION OF POROUS MAGNESIUM BONE SCAFFOLD USING FINITE ELEMENT METHOD .....	80
ID: 2527 .....	80
Risky Utama Putra <sup>1</sup> , Akbar Teguh Prakoso <sup>1</sup> , Amir Putra Md Saad <sup>2,3</sup> , Ardiyansyah Syahrom <sup>2,3</sup> , Hasan Basri <sup>1,*</sup> .....	80
Mechanical Engineering Master Study Program, Faculty of Engineering, Universitas Sriwijaya, Indralaya 30662, Ogan Ilir, South Sumatera, Indonesia .....	80
Department of Applied Mechanics and Design, Faculty of Mechanical Engineering, Universiti Teknologi Malaysia, Skudai 81310, Johor, Malaysia .....	80
Medical Device and Technology Center (Meditec), Institute of Human-Centered and Engineering (IHCE), Universiti Teknologi Malaysia, Skudai 81310, Johor, Malaysia.....	80
THE GROUNDING SYSTEM IN FEEDER TOMAT PT. PLN (PERSERO) ULP MARIANA .....	81
ID : 2763 .....	81
Bambang Guntoro, Siswandi, Zainuddin Idris, M. Yunus .....	81
Email : bguntoro57@gmail.com .....	81
OPTIMIZATION OF PRODUCTION PROCESS PARAMETERS OF DLP TYPE 3D PRINTER DESIGN	

FOR PRODUCT ROUGHNESS VALUE.....	82
ID : 2510 .....	82
DP Putra <sup>1</sup> , Romli <sup>2</sup> , D Seprianto <sup>2</sup> , Hasan Basri <sup>1,*</sup> .....	82
<sup>1</sup> Mechanical Engineering Master Study Program, Universitas Sriwijaya .....	82
Jalan Srijaya Negara Bukit Besar Palembang, Sumatera Selatan, 30139, Indonesia .....	82
<sup>2</sup> Mechanical Engineering Department, Politeknik Negeri Sriwijaya.....	82
Jalan Srijaya Negara Bukit Besar Palembang, Sumatera Selatan, 30139, Indonesia .....	82
DESIGN OF ELECTRONIC INSTRUMENTS AS TOOLS AIR POLLUTION DETECTION.....	83
ID : 2592 .....	83
Ali Nurdin <sup>1</sup> ( <b>ali_viking_kps@yahoo.com</b> . aalinurdin67@gmail.com), Jon Endri, .....	83
Ibnu Ziad <sup>3</sup> , Ciksadan <sup>4</sup> .....	83
<sup>1,2,3,4</sup> Politeknik Negeri Sriwijaya .....	83
<i>Jl. Srijaya Negara Bukit Besar – Palembang</i> .....	83
Datalogger experimental analysis based on arduino mega 2560 on a 100 wp monocrystalline solar panel using perforated plate.....	84
ID : 2249 .....	84
W Adipradana <sup>1</sup> , A Sofijan <sup>2</sup> , Rahmawati <sup>3</sup> , I Bizzy <sup>4</sup> , R Sipahutar <sup>5</sup> , M A Fajri <sup>6</sup> .....	84
<sup>1,2,3,6</sup> Department of Electrical Engineering, Engineering Faculty, Sriwijaya University, Indonesia.....	84
<sup>4,5</sup> Department of Mechanical Engineering, Engineering Faculty, Sriwijaya University, Indonesia.....	84
A_sofijan@ft.unsri.ac.id.....	84
THE EFFECT OF INDUCTION HEATING ON TENSILE TEST SPECIMENS' CLAMPING PRODUCTS THROUGH THE MEDIUM CARBON STEEL MATERIALS' ENGINEERING TECHNIQUE .....	85
ID : 2722 .....	85
Romli <sup>1,*</sup> , M. Afif Rizkiawan <sup>1</sup> , Karmin <sup>1</sup> , Sairul Effendi <sup>1</sup> , Firdaus <sup>1</sup> .....	85
<sup>1</sup> Mechanical Engineering Department, State Polytechnic of Sriwijaya, Indonesia .....	85
DEVELOPMENT INTERNET OF THINGS FOR WATER QUALITY MONITORING SYSTEM FOR GOURAMY CULTIVATION.....	86
ID: 2484 .....	86
D Mayrawan <sup>2</sup> , Sujito <sup>1,2*</sup> , I M Wirawan <sup>2</sup> , F S Aziz <sup>1,2</sup> , A I Syah <sup>2</sup> , M A A Shidiqi <sup>2</sup> .....	86
<sup>1</sup> Electrical Engineering Postgraduate, Universitas Negeri Malang, Indonesia .....	86
<sup>2</sup> Electrical Engineering Department, Universitas Negeri Malang, Indonesia .....	86
CONTINGENCY ANALYSIS ON 150 KV ELECTRICITY POWER SYSTEM ON THE MADURA ISLAND BASED ON THE 1P1Q METHOD .....	87
ID : 2485 .....	87
M Z Falah <sup>1</sup> , Sujito <sup>1*</sup> , I M Wirawan <sup>1</sup> . .....	87
<sup>1</sup> Electrical Engineering Department, Universitas Negeri Malang, Indonesia .....	87
PROTOTYPE OF SMALL SAVONIUS WIND TURBINE .....	88

ID : 2797 .....	88
Ozkar F. Homzah <sup>1,*</sup> Tri Widagdo <sup>1</sup> Mardiana <sup>1</sup> Ibnu Asrofi <sup>1</sup> Destra A Pratama <sup>2</sup> .....	88
<sup>1</sup> Department of Mechanical Engineering, Politeknik Negeri Sriwijaya, Palembang, Indonesia.....	88
<sup>2</sup> Department of Electrical Engineering, Politeknik Negeri Sriwijaya, Palembang, Indonesia .....	88
THE FORMATION OF MACHINE COMPONENTS USING POWDER METALLURGY METHOD UTILIZING METAL POWDER FROM GRINDING PROCESS .....	89
ID : 2780 .....	89
Yahya, S.T.,M.T <sup>1</sup> , Muhammad Rasid, S.T.,M.T <sup>2</sup> ,.....	89
Dicky Seprianto, S.T.,M.T. <sup>3</sup> , Siproni, S.T.,M.T. <sup>4</sup> .....	89
<i>Departement of Mecahanical Engineering, Politeknik Of Sriwijaya, Palembang, Indonesia</i> .....	89
SIMULATION-BASED ANALYSIS ON VACUUM ACTUATED SOFT ROBOTIC GRIPPER: TRAJECTORY AND STRESS INTENSITY FACTOR .....	90
ID :2736 .....	90
Noer Fadzri Perdana Dinata <sup>1</sup> , Hasan Basri <sup>1,*</sup> .....	90
<sup>1</sup> Mechanical Engineering Master Study Program, Universitas Sriwijaya, Jalan Srijaya Negara Bukit Besar Palembang, Sumatera Selatan, 30139, Indonesia.....	90
*Corresponding author. Email: hasan_basri@unsri.ac.id .....	90
FAILURE ANALYSIS AND PERFORMANCE ASSESSMENT OF TUBULAR AIR HEATER AT PLTU SOUTH SUMATRA V .....	91
ID : 2731 .....	91
Lulu Khoirunnisa <sup>1</sup> , Hasan Basri <sup>2,*</sup> .....	91
<sup>1</sup> Mechanical Engineering Master Study Program, Universitas Sriwijaya.....	91
Jalan Srijaya Negara Bukit Besar Palembang, Sumatera Selatan, 30139, Indonesia .....	91
AUTOMATIC SIMULATION OF MOVING PRODUCTS USING LINE FOLLOWER AND CONVEYOR .....	92
ID : 2787 .....	92
Almadora Anwar Sani <sup>1,*</sup> Rachmat Dwi S <sup>2</sup> , Irawan Malik <sup>3</sup> , Ali Medi <sup>4</sup> , Agus Nugraha <sup>5</sup> .....	92
<sup>1</sup> mechanical engineering, Politeknik Negeri Sriwijaya, .....	92
<sup>2</sup> mechanical engineering, Politeknik Negeri Sriwijaya .....	92
<sup>3</sup> mechanical engineering, Politeknik Negeri Sriwijaya .....	92
<sup>4</sup> mechanical engineering, Politeknik Negeri Sriwijaya .....	92
<sup>5</sup> mechanical engineering, Politeknik Negeri Sriwijaya .....	92
MONITORING DEPTH OF DISCHARGE OF A VALVE REGULATED LEAD ACID BATTERY IN A STANDALONE PV SYSTEM.....	93
ID : 2751 .....	93
Mirdiansyah <sup>1,*</sup> Ahmad Taqwa <sup>2</sup> , Yohandri Bow <sup>3</sup> .....	93

<sup>1</sup> Applied Renewable Energy Engineering Study Program, Politeknik Negeri Sriwijaya, Jalan Srijaya Negara, Palembang, 30139 Indonesia.....	93
<sup>2</sup> Renewable Energy Engineering Department, Politeknik Negeri Sriwijaya, Jalan Srijaya Negara, Palembang, 30139 Indonesia .....	93
<sup>3</sup> Energy Engineering Department, Politeknik Negeri Sriwijaya, Jalan Srijaya Negara, Palembang, 30139 Indonesia.....	93
The Effect of Parameter Process 3D Printer Technology Digital Light Processing to Geometric of Shaft.....	94
ID : 2650 .....	94
A Zamheri <sup>1,*</sup> D Seprianto <sup>2</sup> , Carlos RS <sup>3</sup> , Indri A <sup>4</sup> , TC Persada <sup>5</sup> .....	94
<sup>1</sup> Mechanical Engineering Department, State Polytechnic of Sriwijaya, Indonesia .....	94
<sup>2</sup> Mechanical Engineering Department, State Polytechnic of Sriwijaya, Indonesia .....	94
<sup>3</sup> Electrical Engineering Department, State Polytechnic of Sriwijaya, Indonesia .....	94
<sup>4</sup> Informatics Management Department,, State Polytechnic of Sriwijaya, Indonesia.....	94
<sup>5</sup> Mechanical Engineering Department, State Polytechnic of Sriwijaya, Indonesia.....	94
BENDING TEST GALVALUM COLD FORMED STEEL BEAM WITH VARIATION MORTAR AND REINFORCEMENT BARS. ....	95
ID : 2073 .....	95
Fadhila Firdausa, Sri Rezki Artini, Ahmad Syapawi, Puryanto .....	95
Civil Engineering Polytechnic of Sriwijaya.....	95
INDEX OF RETAINED STRENGTH AND WEIGHT LOSS ON FLEXIBLE PAVEMENT AC-WC AND HRS-WC USING POLYMER PRODUCTS ETHYLENE VINYL ACETATE (EVA) AND STYRENE-BUTADIENE-STYRENE (SBS) .....	95
ID : 2089 .....	95
Pataras M <sup>1</sup> , Kadarsa E <sup>2</sup> , Permata D Y <sup>3</sup> , Khairunnisa S <sup>4</sup> , Akbar M A <sup>5</sup> , Pratama Y <sup>6</sup> .....	96
<sup>1</sup> Civil Engineering Department, Sriwijaya University, Raya Prabumulih Road, Indralaya, Sumatera Selatan .....	96
<sup>2</sup> Civil Engineering Department, Sriwijaya University, Raya Prabumulih Road, Indralaya, Sumatera Selatan .....	96
<sup>3</sup> Civil Engineering Department, Sriwijaya University, Raya Prabumulih Road, Indralaya, Sumatera Selatan .....	96
UTILIZATION OF RESIDUAL SAND MATERIALS FROM THE MINING OF KAOLIN AND TIN IN BANGKA ISLAND ON FLEXIBLE PAVEMENT STRUCTURE .....	97
ID : 2101 .....	97
Adhitya B B <sup>1</sup> , Pataras M <sup>2</sup> , Kurnia A Y <sup>3</sup> , Wiranda N <sup>4</sup> , Wulansari W <sup>5</sup> , Islami B M <sup>6</sup> .....	97
<sup>1</sup> Civil Engineering Department, Sriwijaya University, Indralaya, Sumatera Selatan .....	97
<sup>2</sup> Civil Engineering Department, Sriwijaya University, Indralaya, Sumatera Selatan .....	97
<sup>3</sup> Civil Engineering Department, Sriwijaya University, Indralaya, Sumatera Selatan .....	97
THE INFLUENCE OF ANADARA GRANOSA'S SHELL WASTE AS A SUBSTITUTE OF FINE AGGREGATE IN MIXED ASPHALT CONCRETE WEARING COURSE (AC-WC) .....	98

ID : 2218 .....	98
Ika Sulianti <sup>1</sup> , Ibrahim <sup>1</sup> , Indah Ayu Wiloka <sup>1</sup> , Reta Iftitah Sari <sup>1</sup> .....	98
1. State Polytechnic of Sriwijaya, Jl. Sriwijaya Negara Bukit Besar Palembang 30139, .....	98
South Sumatera – Indonesia.....	98
ANALYSIS OF THE IMPACT OF PALEMBANG- INDRALAYA (PALINDRA) TOLL ROAD TO PALEMBANG – INDRALAYA NATIONAL ROAD SERVICE LEVELS .....	99
ID : 2236 .....	99
S Nisumanti*, N Puspita, and S Mulyaningsih, .....	99
Civil Engineering Department, Universitas Indo Global Mandiri, Jalan Jend. Sudirman KM.4 No.629 Palembang, Indonesia .....	99
THE EFFECT OF FLY ASH AS A PART CEMENT INSTITUTION ON HIGH-QUALITY CONCRETE FC'35 .....	100
ID: 2402 .....	100
<b>Sazili Harnawansyah<sup>1</sup>, Herlinawati<sup>1(*)</sup>, Bastoni Hasasi<sup>1</sup>, Radius Pranoto<sup>1</sup> ....</b>	<b>100</b>
1 Civil Engineering Department, Sriwijaya State Polytechnic, Palembang, 30154, Indonesia .....	100
THE USE OF COLD-FORMED STEEL AS A SUBSTITUTE FOR REINFORCEMENT ON STRUCTURAL OF LIGHTWEIGHT CONCRETE BEAMS.....	101
ID : 2553 .....	101
Mahmuda <sup>1</sup> , Revias <sup>2</sup> , Siswa Indra <sup>3</sup> , Sumiati <sup>4</sup> .....	101
Civil Engineering Departement, State Polytechnic Sriwijaya, Sriwijaya Negara street, Bukit Besar Palembang, 30139, Indonesia.....	101
THE EFFECT OF AIR PRESSURE ON FOAMED MORTAR PRODUCTION.....	102
ID : 2724 .....	102
Ibrahim <sup>1</sup> , Amiruddin <sup>1</sup> , and Ika Sulianti <sup>1</sup> , and Agus Subrianto <sup>1</sup> .....	102
1. State Polytechnic of Sriwijaya, Jl. Sriwijaya Negara Bukit Besar Palembang 30139, ....	102
South Sumatera – Indonesia.....	102
THE CHARACTERISTICS OF FOLDING BICYCLE USERS AGAINST THE SELECTION OF TRANSPORTATION MODES IN PALEMBANG CITY.....	103
ID : 2767 .....	103
Efrilia Rahmadona <sup>1</sup> , Sudarmadji <sup>2</sup> , Norca Praditya <sup>3</sup> , M. Ade Surya Pratama <sup>4</sup> .....	103
<sup>1</sup> Politeknik Negeri Sriwijaya .....	103
<sup>2</sup> Politeknik Negeri Sriwijaya .....	103
<sup>3</sup> Politeknik Negeri Sriwijaya .....	103
<sup>4</sup> Politeknik Negeri Sriwijaya .....	103
EFFECT OF AMOUNT POTASSIUM HYDROXIDE, METHANOL, AND ELECTRICITY CURRENT ON THE PRODUCTION PROCESS OF METHYL ESTERS FROM USED FRYING OIL .....	104
ID : 2081 .....	104
Rosdiana Moeksin.....	104

Teknik Kimia, Universitas Sriwijaya Palembang-Indonesia. ....	104
OPTIMIZATION OF PUBLIC TRASPORT SERVICEBUS RAPID TRANSIT (BRT) TRANS MUSI IN THE CITY OFPALEMBANG .....	105
ID : 2611 .....	105
Moch.Absor,Yusri, A.Latif, A. Fuad Z.Muhammad Yusri R.Civil Engineering, Politeknik Negeri Sriwijaya, Palembang, Indonesia .....	105
absorputrasyam@gmail.com, yusribermawi18@gmail.com,Latiftamim56@yahoo.com,fuadzainin13@yahoo.com, muhammadyusririzki@gmail.com .....	105
LIFE CYCLE ASSESSMENT (LCA) IN PULP & PAPER MILLS: COMPARISON BETWEEN MFO WITH BIOMASS IN LIME KILN .....	106
ID : 2109 .....	106
Yonki Alexander Volta <sup>1</sup> , Rusdianasari <sup>2</sup> , Syahirman Yusi <sup>3</sup> .....	106
<sup>1</sup> Applied Renewable Energy Engineering Study Program, Politeknik Negeri Sriwijaya, Jalan Srijaya Negara, Palembang, 30139 Indonesia. ....	106
<sup>2</sup> Renewable Energy Engineering Department, Politeknik Negeri Sriwijaya, Jalan Srijaya Negara, Palembang, 30139 Indonesia. ....	106
<sup>3</sup> Business Administration Department, Politeknik Negeri Sriwijaya, Jalan Srijaya Negara, Palembang, 30139 Indonesia.....	106
EFFECT OF VARIATIONS CONCENTRATION AND PH OF LIQUID SMOKE IN THE IMMERSION WITH VARIOUS TYPES OF FISH .....	107
ID : 2120 .....	107
by .....	107
Farida Ali, Corresponding author, Lecturer, Faculty of Chemical Engineering, Universitas Sriwijaya.....	107
Lia Cundari, Lecturer, Faculty of Chemical Engineering, Universitas Sriwijaya.....	107
Siti Miskah, Lecturer, Faculty of Chemical Engineering, Universitas Sriwijaya.....	107
Hendri Prasetyo, Student, Faculty of Chemical Engineering, Universitas Sriwijaya.....	107
COMPARISON OF THE USE OF FLY ASH AND RICE HUSK ASH IN THE MAKING OF GEOPOLYMER CONCRETE.....	108
ID : 2154 .....	108
Indrayani <sup>1*</sup> , Andi Herius <sup>1</sup> , Akhmad Mirza <sup>1</sup> , Ricky Ravsyah Alhafez <sup>1</sup> .....	108
<sup>1</sup> Civil Engineering Department, Politeknik Negeri Sriwijaya, Palembang, Indonesia ....	108
FLEXURAL STRENGTH ANALYSIS OF CONCRETE WITH THE ADDITION OF B3 WASTE AS AN ADDITIVE TO ORDINARY PORTLAND CEMENT (OPC).....	109
ID :2235 .....	109
N Puspita*, Y Arti and Febriyandi .....	109
Civil Engineering Department, Universitas Indo Global Mandiri, Jalan Jend. Sudirman KM.4 No.629 Palembang, Indonesia .....	109
SIMULATION OF SILAGE PRODUCTION FROM WATER HYACINTH ( <i>EICHORNIA CRASSIPES</i> )	

AS RUMINANTS FEED BASED ON THE INCREASE OF <i>ASPERGILLUS NIGER</i> .....	110
ID : 2811 .....	110
Agung Budi Santoso <sup>1,*</sup> Martha Aznury <sup>2</sup> Nova Rachmadona <sup>3</sup> Robert Junaidi <sup>2</sup> Fertarina Pratiwi <sup>2</sup> .....	110
<sup>1</sup> Department of Biotechnology, Faculty of Agroindustry, Kasetsart University, Bangkok, Thailand .....	110
<sup>2</sup> Department of Chemical Engineering, Politeknik Negeri Sriwijaya, Palembang, Indonesia .....	110
<sup>3</sup> Department of Chemical Science and Engineering, Graduate School of Engineering, Kobe University, Japan .....	110
THE PLACEMENT POSITION OF HOLLOW CORES IN THE IDEAL LONGITUDINAL DIRECTION ON THE REINFOCED CONCRETE BEAM .....	111
ID : 2645 .....	111
Sumiati <sup>1</sup> , Mahmuda <sup>2</sup> , Ahmad Syapawi <sup>3</sup> .....	111
Civil Engineering Departement, State Polytechnic Sriwijaya, Srijaya Negara street, Bukit Besar Palembang, 30139, Indonesia.....	111
PRODUCTION OF BIODIESEL FROM UNREFINED PLANTS-DERIVED OIL BY IMMOBILIZED <i>ASPERGILLUS ORYZAE</i> EXPRESSING <i>BACILLUS THERMOCATENULATUS</i> LIPASE.....	112
ID : 2741 .....	112
Nova Rachmadona <sup>1,*</sup> Martha Aznury <sup>2</sup> Chiaki Ogino <sup>1</sup> .....	112
<sup>1</sup> Department of Chemical Science and Engineering, Graduate School of Engineering, Kobe University, 1-1 Rokkodai-cho, Nada-ku, Kobe 657-8501, Japan .....	112
<sup>2</sup> Department of Chemical Engineering, State Polytechnic of Sriwijaya, Jl. Srijaya Negara Bukit Besar, Palembang, South Sumatera 30139, Indonesia .....	112
PARTIAL SUBSTITUTION OF CEMENT USING FLY ASH AND CARBITE WASTE IN THE MAKING OF NORMAL CONCRETE .....	113
ID : 2571 .....	113
(Darma Prabudi, Kosim, Zainuddin, Raja Marpaung) Sriwijaya State Polytechnic .....	113
email: darma_prabudi@yahoo.com, kosimmt@gmail.com, zainuddin_muchtar@yahoo.co.id, raja.marpaung@gmail.com.....	113
COMMUNITY ADAPTATION TO TRADITIONAL MARKETS DURING THE PANDEMIC PERIOD IN PALEMBANG CITY .....	114
ID : 2660 .....	114
Hendi Warlika Sedo Putra <sup>1</sup> , Maya Fitri Oktarini <sup>2</sup> , dan Primadella <sup>3</sup> .....	114
<sup>1</sup> Department of Civil Engineering, Politeknik Negeri Sriwijaya, Indonesia .....	114
<sup>2</sup> Department of Architecture, Engineering Faculty, Universitas Sriwijaya, Indonesia .	114
<sup>3</sup> Department of Architecture, Engineering Faculty, Universitas Sriwijaya, Indonesia .	114
EFFECT OF FERMENTATION TIME AND PERCENTAGE OF MORINGA ( <i>MORINGA OLEIFERA</i> ) FLOUR VARIATIONS ON VITAMIN C OF YOGURT .....	115
ID : 2809 .....	115



*Martha Aznury <sup>1</sup> Elina Margerty <sup>1</sup> Melianti <sup>1</sup> Sofiah <sup>1</sup> Yuniar <sup>1</sup> Sufi Awwaliyah <sup>1</sup> .....	115
1Department of Chemical Engineering, Politeknik Negeri Sriwijaya, Palembang, Indonesia .....	115
ROAD DAMAGE CONDITIONS ANALYSIS OF TANJUNG API-API - GASING DISTRICT ROAD BASED ON SURFACE DISTRESS INDEX (SDI) METHOD.....	116
ID : 2744 .....	116
R. Marpen <sup>1</sup> , A. Hasan <sup>2</sup> , AN. Sari <sup>3</sup> , HWS. Putra <sup>4</sup> , R. Pranoto <sup>5</sup> .....	116
<sup>12345</sup> Jurusan Teknik Sipil, Politeknik Negeri Sriwijaya, Palembang Jl. Srijaya Negara Bukit Besar, Palembang, Sumatera Selatan 30139 .....	116
DATA MODEL PATTERN FOR DATA WAREHOUSE WEB APPLICATION OF INFORMATION PORTAL (Case study : Hidyatullah Integrated Islamic Boarding School, Banyuasin Regency) .....	117
ID : 2550 .....	117
M Aris Ganiardi <sup>1</sup> ,Nita Novita <sup>2</sup> , Indri Ariyanti <sup>3</sup> , Delta Khairunnisa <sup>4</sup> .....	117
Informatics Management Department, Politeknik Negeri Sriwijaya, Srijaya Negara Street, Palembang, 30139, Indonesia.....	117
INVENTORY CONTROL AND EOQ FORECASTING TOOLS AS EFFECTIVE DECISION-MAKING MODEL.....	118
ID : 2577 .....	118
Ahmad Rifai <sup>1</sup> , Dedy Kurniawan <sup>2*</sup> , Ariansyah Saputra <sup>3</sup> , .....	118
Dinna Yunika Hardiyanti <sup>4</sup> .....	118
1-4 Faculty of Computer Science, Universitas Sriwijaya, Indonesia .....	118
2*Advanced Programming Laboratory, Faculty of Computer Science, Universitas Sriwijaya, Indonesia.....	118
3 Department of Computer Engineering, Politeknik Negeri Sriwijaya, Indonesia .....	118
INCREASING SENSITIVITY OF PH DETECTION USING COMPUTER VISION BASED BIOSENSORS.....	119
ID : 2096 .....	119
Faiz Syaikhoni Aziz <sup>1,2</sup> , Sujito <sup>1,2</sup> , Aji Prasetya Wibawa <sup>1,2</sup> , I Made Wirawan <sup>2</sup> , Ari Priharta <sup>1,2</sup> , Abdullah Iskandar Syah <sup>2</sup> , Tran Huu Duy <sup>3</sup> .....	119
<sup>1</sup> Electrical Engineering Postgraduate, Universitas Negeri Malang .....	119
<sup>2</sup> Electrical Engineering Department, Universitas Negeri Malang .....	119
<sup>3</sup> Electrical Engineering Department, Dalat University .....	119
ADAPTIVE FUZZY TIME SERIES METHOD TO FORECASTING ENROLLMENTS OF NEW STUDENT (CASE STUDY : DEPARTMENT OF COMPUTER ENGINEERING, STATE POLYTECHNIC OF SRIWIJAYA).....	120
ID : 2603 .....	120
Ica Admirani <sup>1</sup> , Ikhthison Mekongga <sup>2</sup> , Isnaini Azro <sup>3</sup> , Hidayati Ami <sup>4</sup> , Rian Rahmanda Putra <sup>5</sup> .....	120
1Department of Computer Engineering, State Polytechnic of Sriwijaya, JL.Srijaya Negara Bukit Besar, Palembang,30139, Indonesia. ....	120

2Department of Computer Engineering, State Polytechnic of Sriwijaya, JL.Srijaya Negara Bukit Besar, Palembang,30139, Indonesia. ....	120
3Department of Computer Engineering, State Polytechnic of Sriwijaya, JL.Srijaya Negara Bukit Besar, Palembang,30139, Indonesia. ....	120
4Department of Computer Engineering, State Polytechnic of Sriwijaya, JL.Srijaya Negara Bukit Besar, Palembang,30139, Indonesia. ....	120
5Department of Computer Engineering, State Polytechnic of Sriwijaya, JL.Srijaya Negara Bukit Besar, Palembang,30139, Indonesia ....	120
ROOM SAFETY SYSTEM USING FACE RECOGNITION USING TELEGRAM AND RASPBERRY PI BASED HISTOGRAM OF ORIENTED METHOD.....	121
ID : 2613 .....	121
Azwardi, Yulian Mirza, Alan Novi Tomponu, Ariansyah Saputra .....	121
Program Studi Teknik Komputer, Politeknik Negeri Sriwijaya .....	121
Jl. Srijaya Negara Bukit Besar- Palembang 30139 .....	121
Telp. 0711-353414, Fax. 0711- 355918 .....	121
TELEMETRY DESIGN ACCURATION OF PATIENT’S TEMPERATURE WITH IOT APPROACH. 122	
ID : 2618 .....	122
Ahyar Supani <sup>1,*</sup> , Ahmad Bahri Joni Malyan <sup>1</sup> , Herlambang Saputra <sup>1</sup> , Indarto <sup>1</sup> , Yuli Andriani <sup>2</sup> .....	122
<sup>1</sup> <i>Department of Computer Engineering, Polytechnic State of Sriwijaya, Palembang, Indonesia.....</i>	122
<sup>2</sup> <i>Department of Mathematics, Sriwijaya University, Palembang, Indonesia.....</i>	122
Image processing system for pH classification using biosensors .....	123
ID : 2097 .....	123
Sujito <sup>1,2*</sup> , A P Wibawa <sup>1,2</sup> , I M Wirawan <sup>2</sup> , Aripriharta <sup>1,2</sup> , F S Aziz <sup>1</sup> , A I Syah <sup>2</sup> , T H Duy <sup>3</sup> .....	123
<sup>1</sup> Electrical Engineering Postgraduate, Universitas Negeri Malang, Indonesia .....	123
<sup>2</sup> Electrical Engineering Department, Universitas Negeri Malang, Indonesia .....	123
<sup>3</sup> Electrical Engineering Department, Dalat University, Vietnam .....	123
QUALITY MEASUREMENT EVALUATION OF THE POLSRI LEARNING MANAGEMENT SYSTEM WEBSITE USING IMPORTANCE PERFORMANCE ANALYSIS (IPA) METHOD .....	124
ID : 2274 .....	124
Irma Salamah <sup>1</sup> , Lindawati <sup>2</sup> , Asriyadi <sup>3</sup> , M.Fadhli <sup>4</sup> .....	124
<sup>1,2,3,4</sup> Telecommunication Program Studi State Polytechnic of Sriwijaya.....	124
RESTFUL WEB SERVICE AS DATA GENERATOR FOR REPORTING OF ACADEMIC INFORMATION SYSTEM.....	125
ID : 2620 .....	125
M. Miftakul Amin <sup>*1</sup> , Slamet Widodo <sup>2</sup> , Adi Sutrisman <sup>3</sup> , Ervi Cofriyanti <sup>4</sup> , Ali Firdaus <sup>5</sup> 125	
<sup>1,2,3,4,5</sup> Department of Computer Engineering, Politeknik Negeri Sriwijaya, Jl. Srijaya Negara Bukit Besar, Palembang, 30139, Indonesia .....	125

DESIGN AND IMPLEMENTATION OF LEARNING E-SCHEDULING IN SRIWIJAYA STATE POLYTECHNIC - TELECOMMUNICATION ENGINEERING STUDY PROGRAM.....	126
ID : 2666 .....	126
Abdul Rakhman <sup>1</sup> , Irawan Hadi <sup>2</sup> , Nasron <sup>3</sup> , Martinus Mujur Rose <sup>4</sup> .....	126
<sup>1,2,3,4</sup> Politeknik Negeri Sriwijaya .....	126
Jl. Sriwijaya Negara Bukit Besar – Palembang .....	126
PHP PROGRAMMING FOR ACHIEVING STUDENTS IN INFORMATICS MANAGEMENT DEPARTMENT STATE OF POLYTECHNIC SRIWIJAYA.....	127
ID : 2702 .....	127
Yusniarti <sup>1</sup> .....	127
Henny Madora <sup>2</sup> .....	127
Ida Wahyuningrum <sup>3</sup> .....	127
Muhammad Noval <sup>4</sup> .....	127
<sup>1234</sup> .Jurusan Manajemen Informatika Politeknik Negeri Sriwijaya.....	127
MEDICAL SERVICES APPLICATION OF LECTURERS, STAFF AND STUDENTS IN THE SRIWIJAYA STATE POLYTECHNIC POLYCLINIC .....	128
ID : 2704 .....	128
Robinson <sup>1</sup> , Deri Darfin <sup>2</sup> , Zulkarnaini <sup>3</sup> , Ridwan Effendi <sup>4</sup> , .....	128
<sup>1</sup> Polsri Jl. Sriwijaya Negara Bukit Besar Palembang Sumatera Selatan .....	128
<sup>2</sup> Polsri Jl. Sriwijaya Negara Bukit Besar Palembang Sumatera Selatan .....	128
<sup>3</sup> Polsri Jl. Sriwijaya Negara Bukit Besar Palembang Sumatera Selatan .....	128
<sup>4</sup> Polsri Jl. Sriwijaya Negara Bukit Besar Palembang Sumatera Selatan.....	128
PROTOTYPE DEVELOPMENT OF MOTORBIKE TOWING HOOK TOWARD AUTHORIZED MECHANIC PERCEPTION AND INVESTIGATION .....	129
ID : 2768 .....	129
Rahman Hakim <sup>1</sup> , Muhammad Hasan Albana <sup>1</sup> , Widodo <sup>1</sup> , Hanifah Widiastuti <sup>1</sup> and Wahyu Caesarendra <sup>2*</sup> .....	129
<sup>1</sup> Department of Mechanical Engineering, Politeknik Negeri Batam, Jl. A. Yani, Batam Center, Kota Batam 29461, Indonesia .....	129
<sup>2</sup> Faculty of Integrated Technologies, Universiti Brunei Darussalam, Jalan Tungku Link, Gadong BE1410, Brunei Darussalam.....	129
INVESTIGATION STUDY OF PRESSURE DIFFERENT EFFECT AT EVAPORATOR IN ORGANIC RANKINE CYCLE SIMULATOR (ORCS) USING LOW-GRADE WASTE HEAT .....	130
ID : 2770 .....	130
Mochamad Denny Surindra <sup>1</sup> , Wahyu Caesarendra <sup>2*</sup> .....	130
<sup>1</sup> Mechanical Engineering, Politeknik Negeri Semarang, Semarang 50275, Indonesia; Email: dennysurindra@polines.ac.id .....	130
<sup>2</sup> Faculty of Integrated Technologies, Universiti Brunei Darussalam, Jalan Tungku Link, Gadong BE1410, Brunei Darussalam.....	130
APPLICATION OF TRACKING LETTER DISPOSITION AT STATE POLYTECHNIC OF SRIWIJAYA	

BASED ON ANDROID WEBVIEW .....	131
ID : 2644 .....	131
Satriadi, Indra <sup>1,*</sup> Oktapriandi, Sony., Meileni, Hetty., Aprianty, Desy.....	131
<sup>1</sup> State Polytechnic of Sriwijaya .....	131
THE SHORTEST PATH SEARCH APPLICATION FOR BASE TRANSCIEVER STATION (BTS) USING A* ALGORITHM .....	132
ID : 1994 .....	132
Ikhthison Mekongga <sup>1</sup> , Aryanti Aryanti <sup>2,3</sup> .....	132
<sup>1</sup> Computer Engineering, Politeknik Negeri Sriwijaya, Palembang, Indonesia .....	132
<sup>2</sup> Electrical Engineering, Politeknik Negeri Sriwijaya, Palembang, Indonesia.....	132
<sup>3</sup> Electrical Engineering, Southern Taiwan University of science and Technology, Tainan, Taiwan .....	132
COMPATIBILITY OF LINUX ARCHITECTURE FOR DISKLESS TECHNOLOGY SYSTEM.....	133
ID : 2615 .....	133
Aryanti Aryanti <sup>1,2*</sup> , Ade Silvia Handayani <sup>2</sup> , Ibnu ziad <sup>2</sup> , Ikhthison Mekongga <sup>3</sup> , Farid Jatri Abiyyu <sup>2</sup> .....	133
<sup>1</sup> Electrical Engineering, Southern Taiwan University of science and Technology, Tainan, Taiwan .....	133
<sup>2</sup> Electrical Engineering, Politeknik Negeri Sriwijaya, Palembang, Indonesia.....	133
<sup>3</sup> Computer Engineering, Politeknik Negeri Sriwijaya, Palembang, Indonesia .....	133
RESERVOIR IRRIGATION SYSTEM DESIGN BASED WIRELESS SENSOR NETWORK .....	134
ID : 2636 .....	134
M. Zakuan Agung <sup>1</sup> ), Eka Susanti <sup>2</sup> ), R.A Halimatussa'diyah <sup>3</sup> ), Susanzefi <sup>4</sup> ), Amirah Fakhirah <sup>5</sup> ) .....	134
<sup>1,2,3,4,5</sup> Department of Polytechnic Sriwijaya, Jalan Srijaya Negera, Bukit Besar, Palembang - Indonesia .....	134
USING NIGHT VISION CAMERA ROBOT BASED ON INTERNET OF THING .....	135
ID : 2817 .....	135
Sarjana <sup>1</sup> ), Adewasti <sup>2</sup> ), Sholihin <sup>3</sup> ), Emilia Hesti <sup>4</sup> ), Amirah Fakhirah <sup>5</sup> ) .....	135
<sup>1</sup> Department of Polytechnic Sriwijaya, Jalan Srijaya Negera, Bukit Besar, Palembang - Indonesia.....	135
<sup>2</sup> Department of Polytechnic Sriwijaya, Jalan Srijaya Negera, Bukit Besar, Palembang - Indonesia.....	135
<sup>3</sup> Department of Polytechnic Sriwijaya, Jalan Srijaya Negera, Bukit Besar, Palembang - Indonesia.....	135
<sup>4</sup> Department of Polytechnic Sriwijaya, Jalan Srijaya Negera, Bukit Besar, Palembang - Indonesia.....	135
<sup>5</sup> Department of Polytechnic Sriwijaya, Jalan Srijaya Negera, Bukit Besar, Palembang - Indonesia.....	135
Biometric Fingerprint Implementation for Presence Checking and Room Access Control System	

.....	136
ID : 2726 .....	136
Yudi Wijanarko <sup>1</sup> , Selamat Muslimin <sup>2</sup> , *Renny Maulidda <sup>3</sup> , .....	136
Yordan Hasan <sup>4</sup> , Abdurrahman <sup>5</sup> .....	136
<sup>1</sup> Politeknik Negeri Sriwijaya.....	136
<sup>2</sup> Politeknik Negeri Sriwijaya .....	136
<sup>3</sup> Politeknik Negeri Sriwijaya.....	136
<sup>4</sup> Politeknik Negeri Sriwijaya .....	136
Prototype Design of Landslide Early Detection System Using LoRa and IoT .....	137
ID : 2663 .....	137
Ahmad Taqwa <sup>1</sup> , Mohammad Fadhli <sup>2</sup> , Sopian Soim <sup>3</sup> , Ade Silvia <sup>4</sup> , Suroso Suroso <sup>5</sup> .....	137
<sup>1,2,3,4,5</sup> Politeknik Negeri Sriwijaya .....	137
IMPLEMENTATION OF USTADZ SEARCH SOFTWARE FOR MUBALIGH, QORI AND QORIAH CATEGORIES IN PALEMBANG USING AN ANDROID-BASED USABILITY APPROACH.....	138
ID : 2078 .....	138
M. Rudi Sanjaya <sup>1</sup> , Yadi Utama <sup>2</sup> , Dedy Kurniawan <sup>3</sup> , Ariansyah Saputra <sup>4</sup> , Novita Sari <sup>5</sup> , Rahma Destriani <sup>6</sup> , Muhammad Raihan Udda Rahmany <sup>7</sup> .....	138
<sup>1</sup> Internet Programming Laboratory Department of Computer Engineering, Faculty of Computer Science, Universitas Sriwijaya, Indonesia .....	138
<sup>2</sup> Department of Computer Engineering, Faculty of Computer Science, Universitas Sriwijaya, Indonesia.....	138
<sup>3</sup> Department of Computer Engineering, Faculty of Computer Science, Universitas Sriwijaya, Indonesia.....	138
<sup>4</sup> Department of Computer Engineering, Politeknik Negeri Sriwijaya, Indonesia .....	138
<sup>5,6,7</sup> Student Department of Computer Engineering, Faculty of Computer Science, Universitas Sriwijaya, Indonesia.....	138
APPLICATION OF CAMPUS PARKING AREA FOR STATE POLYTECHNIC OF SRIWIJAYA BASED ON SMARTPHONE .....	139
ID: 2619 .....	139
Leni Novianti <sup>1</sup> , Devi Sartika <sup>2</sup> , Dewi Irmawati <sup>3</sup> , Ienda Meiriska <sup>4</sup> .....	139
<sup>1,2,3,4</sup> Study Program of Informatics Management, State Polytechnic of Sriwijaya .....	139
ANDROID-BASE m-VOTING APPLICATION DEVELOPMENT WITH SIMPLE ADDITIVE WEIGHTING METHOD .....	140
ID : 2669.....	140
Devi Sartika <sup>1</sup> , Leni Novianti <sup>2</sup> , Dewi Irmawati <sup>3</sup> , Ienda Meiriska <sup>4</sup> .....	140
<sup>1,2,3,4</sup> Study Program of Informatics Management,State Polytechnic of Sriwijaya.....	140
DESIGN WEB BASED ONLINE TUTORING APPLICATION IN PALEMBANG CITY USING THE SUS (SYSTEM USABILITY SCALE) METHOD.....	141
ID : 2098 .....	141

M. Rudi Sanjaya <sup>1</sup> , Ariansyah Saputra <sup>2</sup> , 3Bayu Wijaya Putra, Novita Sari <sup>4</sup> , Rahma Destriani <sup>5</sup> , Muhammad Raihan Udda Rahmany <sup>6</sup> .....	141
1,3 Program in Informatics Management of Computer Engineering, Faculty of Computer Science, Universitas Sriwijaya, Indonesia .....	141
2 Department of Computer Engineering, Politeknik Negeri Sriwijaya, Indonesia .....	141
3,4,5 Student Department of Computer Engineering, Faculty of Computer Science, Universitas Sriwijaya, Indonesia.....	141
BLACK BOX TESTING USING EQUIVALENCE PARTITION METHOD IN SINTANA APPLICATION .....	142
ID : 2225 .....	142
Yayuk Ike Melani <sup>1</sup> and Mahmud <sup>2</sup> .....	142
<sup>1</sup> S1 Information System, STMIK PalComTech, Palembang .....	142
<sup>2</sup> S1 Informatic, STMIK PalComTech, Palembang.....	142
THE DESIGN OF A TOOL TO MEASURE THE EFFECTIVENESS AND EFFICIENCY OF USERS TOWARDS THE APPLICATION OF POLISIKU APPLICATION.....	143
ID : 2366 .....	143
<sup>1</sup> Eko Setiawan and <sup>2</sup> Wiza Yunifa.....	143
<sup>1,2</sup> Information Systems Study Program, Politeknik PalComTech Palembang.....	143
DATABASE DESIGN FOR CHILD SPECIAL DEVELOPMENT INSTITUTION'S SERVICE PERFORMANCE E-DASHBOARD (CASE STUDY: PALEMBANG CHILD SPECIAL DEVELOPMENT INSTITUTION).....	144
ID : 2432 .....	144
Hendra Hadiwijaya <sup>1</sup> , Febrianty <sup>2</sup> , Rezanía Agramanisti Azdy <sup>3*</sup> .....	144
<sup>1, 2</sup> Accounting Study Program, Palembang Palcomtech Polytechnic, Indonesia .....	144
<sup>3*</sup> Informatics Study Program, STMIK PalComTech, Indonesia .....	144
EXTENDING THE UNDERSTANDING OF BUSINESS INTELLIGENCE AND ITS APPLICATION IN STARTUPS.....	145
ID : 2440 .....	145
Dedy Kurniawan <sup>1</sup> , Ariansyah Saputra <sup>2</sup> , M. Rudi Sanjaya <sup>3</sup> , Zaqqi Yamani <sup>4</sup> .....	145
<sup>1</sup> Advanced Programming Laboratory, Faculty of Computer Science, Universitas Sriwijaya, Indonesia.....	145
<sup>2</sup> Department of Computer Engineering, Politeknik Negeri Sriwijaya, Indonesia .....	145
<sup>3</sup> Internet Programming Laboratory, Faculty of Computer Science, Universitas Sriwijaya, Indonesia.....	145
<sup>4-5</sup> Faculty of Computer Science, Universitas Sriwijaya, Indonesia.....	145
THE APPLICATION OF DIGITAL MARKETING FOR UKM IN FACING THE COVID-19 PANDEMIC .....	146
ID : 2472 .....	146
Hetty Meileni <sup>1</sup> , Sony Oktapriandi <sup>2</sup> , Desi Apriyanti <sup>3</sup> .....	146
<sup>1-3</sup> Informatic Management Department, Politeknik Negeri Sriwijaya .....	146

DESIGNING STUDENT AND LECTURER ATTENDANCE SYSTEM APPLICATION USING PROGRESSIVE WEB APPS (PWA) .....	147
ID : 2586 .....	147
Hartati Deviana <sup>1</sup> .....	147
<sup>1</sup> Department of Computer Engineering, Politeknik Sriwijaya,Jl. Srijaya Negara Bukit Besar,Palembang,30139, Indonesia.....	147
DESIGNING AUGMENTED REALITY-BASED COMPUTER DEVICES LEARNING MEDIA ON ANDROID PLATFORM .....	148
ID : 2760 .....	148
Dony Novaliendry <sup>1,2</sup> , Arif Subagia <sup>1</sup> , Titi Sriwahyuni <sup>1</sup> , Fegie Y Wattimena <sup>3</sup> , Axelon S Renyaan <sup>3</sup> , Ceng-Hong Yang <sup>2</sup> , Muhammad Ariyon <sup>4</sup> .....	148
<sup>1</sup> Departement of Electronics Engineering, Faculty of Engineering, Universitas Negeri Padang, Padang, Indonesia .....	148
<sup>2</sup> Departement of Electronics Engineering, National Kaohsiung University of Science and Technology, Kaohsiung, Taiwan.....	148
<sup>3</sup> Fakultas Sains & Teknologi, Universitas Ottow Geissler Papua, Indonesia .....	148
<sup>4</sup> Teknik Perminyakan, Universitas Islam Riau, Pekanbaru, Indonesia .....	148
PUBLIC SERVICE ANNOUNCEMENT IMPLEMENTATION OF LEARNING AT THE SRIWIJAYA STATE POLYTECHNIC IN MINIMIZING THE RISKS AND IMPACTS CAUSED BY THE COVID-19 PANDEMIC.....	149
ID : 2706 .....	149
Alan Novi Tompunu <sup>1</sup> , Nelly Masnila <sup>2</sup> , Zakaria <sup>3</sup> , Azwardi <sup>1</sup> and Ainun Nabila <sup>1</sup> .....	149
<sup>1</sup> Computer Engineering Department, State Polytechnic of Sriwijaya, Indonesia.....	149
<sup>2</sup> Accounting <i>Department</i> , State Polytechnic of Sriwijaya, Indonesia.....	149
<sup>3</sup> <i>English Department</i> , State Polytechnic of Sriwijaya, Indonesia .....	149
PRINCIPAL COMPONENT ANALYSIS METHOD FOR IMAGE SEGMENTATION OF SMART METER DIGITAL.....	150
ID : 2087 .....	150
Husnawati <sup>1</sup> , Shinta Puspasari <sup>2</sup> , Rian Rahmanda Putra <sup>3</sup> .....	150
<sup>1,2</sup> Department of computer science, Indo Global Mandiri University, Palembang, .....	150
Indonesia.....	150
<sup>3</sup> Department of computer science, Politeknik Negeri Sriwijaya, Palembang, .....	150
Indonesia.....	150
DESIGN OF SOLAR POWERED VACCINE BACKPACK .....	151
ID : 2838 .....	151
Muhammad Haikal Satria <sup>1,*</sup> , Ariep Jaenul <sup>1</sup> , Adhes Gamayel <sup>1</sup> .....	151
<sup>1</sup> Dept. of Electrical Engineering, Faculty of Engineering and Computer Science, Jakarta Global University .....	151
TRAINER MODULE DESIGN OF ITEM SORTING EQUIPMENT BASED ON HEIGHT AND PLC-BASED TRAFFIC LIGHT PROTOTYPE IN THE SYSTEM LABORATORY.....	152

ID : 2798 .....	152
Evelina <sup>1</sup> , Amperawan <sup>2</sup> , Dewi Permata Sari <sup>3</sup> , Sabilal Rasyad <sup>4</sup> .....	152
<sup>1</sup> Electrical Engineering, Department of Electrical Engineering .....	152
<sup>2</sup> Electrical Engineering, Politeknik Negeri Sriwijaya .....	152
PROTOTYPE DEVELOPMENT OF HEARTBEAT AND BODY TEMPERATURE MONITORING SYSTEM BASED ON INTERNET OF THINGS .....	153
ID : 2599 .....	153
Ade Silvia Handayani <sup>1)</sup> , Ahmad Taqwa <sup>2)</sup> , Arsyil Shiddik <sup>3)</sup> Nyayu Latifah Husni <sup>4)</sup> .....	153
<sup>1)-3)</sup> Telecommunication Engineering, Politeknik Negeri Sriwijaya .....	153
<sup>4)</sup> Elektronics Engineering, Politeknik Negeri Sriwijaya .....	153
IMPLEMENTATION OF FUZZY LOGIC TYPE-2 ON MOBILE ROBOT NAVIGATION SYSTEM .	154
ID : 2661 .....	154
Ade Silvia Handayani <sup>1</sup> , Jefri Alkausar <sup>1</sup> , Sarjana <sup>1</sup> , Nyayu Latifah Husni <sup>1</sup> , Siti Nurmaini <sup>2</sup> , Irsyadi Yani <sup>3</sup> .....	154
<sup>1</sup> Electrical Department, Politeknik Sriwijaya, <sup>2</sup> Intelligent System Research Group, Faculty of Computer Science, Universitas Sriwijaya, <sup>3</sup> Mechanical Engineering Department, Faculty of Engineering, Universitas Sriwijaya .....	154
WIRELESS DETECTOR FOR LUNG SOUND DISORDER BASED ON DSP TMS320C6416 MODULE .....	155
ID : 2805 .....	155
Nyayu Latifah Husni <sup>1</sup> , Arganda Meranda <sup>2</sup> , Destra Andika Pratama <sup>3</sup> , Ekawati Prihatini <sup>4</sup> , Selamat Muslimin <sup>5</sup> , Ade Silvia Handayani <sup>6</sup> .....	155
<sup>1-6</sup> Electrical Engineering, State Polytechnic of Sriwijaya .....	155
NEW NAVIGATION STRATEGY FOR G-BOT .....	156
ID : 2806 .....	156
Nyayu Latifah Husni <sup>1</sup> , Qodry Maulana <sup>2</sup> , Ekawati Prihatini <sup>3</sup> , Ade Silvia Handayani <sup>4</sup> , Firdaus <sup>5</sup> .....	156
<sup>1-4</sup> Electrical Engineering, State Polytechnic of Sriwijaya <sup>5</sup> Computer Engineering, Sriwijaya University .....	156
AIR DETECTION ENVIRONMENT SYSTEM (ADEV) USING ANDROID APPLICATION FOR AIR QUALITY IN PARK AREA .....	157
ID : 2824 .....	157
Ade Silvia Handayani <sup>1</sup> , Nyayu Latifah Husni <sup>2</sup> , Al Fatur Sayid <sup>3</sup> , Rosmalinda Permatasari <sup>4</sup> , Carlos R Sitompul <sup>5</sup> , Sopian Soim <sup>6</sup> .....	157
<sup>1,2,3,5,6</sup> Department of Polytechnic Sriwijaya, Jalan Srijaya Negera, Bukit Besar, Palembang - Indonesia .....	157
<sup>4</sup> Universitas Tridnanti Palembang-indonesia .....	157
THE CONDITION OF THE SURFACE SEVERITY OF THE POLLUTED INSULATOR BASED ON HARMONIC MEASUREMENTS OF LEAKAGE CURRENTS .....	158
ID : 2775 .....	158



Carlos R Sitompul, Zainuddin Nawawi, Irfan Jambak, Rumiasih Rumiasih, Anton Firmansyah, Indah Susanti .....	158
THE INFLUENCE OF TRAVEL EXPERIENCE AND DESTINATION QUALITY ON TOURIST SATISFACTION VISITING CULINARY TOURISM DESTINATIONS.....	159
ID : 2575 .....	159
Abd. Hamid* <sup>1</sup> , Ummasyroh* <sup>2</sup> , Jusmawi Bustan * <sup>3</sup> , Heri Setiawan* <sup>4</sup> .....	159
<sup>1,2,3,4</sup> Business Administration Department, State Polytechnic of Sriwijaya, Palembang, Indonesia.....	159
THE EFFECT OF ORGANIZATIONAL SUPPORT AND JOB CHARACTERISTICS ON EMPLOYEE ENGAGEMENT.....	160
ID : 2576 .....	160
A.Jalaludin Sayuti <sup>1</sup> , Munparidi <sup>2</sup> , L.Suhairi Hazizma <sup>3</sup> , Alditia Detmuliati <sup>4</sup> .....	160
<sup>1,2,3,4</sup> Business Administration Department, State Polytechnic of Sriwijaya, Palembang, Indonesia.....	160
THE LINKAGE BETWEEN MARKET ORIENTATION, LEARNING ORIENTATION, AND INNOVATION CAPABILITIES OF SMALL SCALE RESTAURANT.....	162
ID : 2581 .....	162
Purwati <sup>1</sup> , Yusleli Herawati <sup>2</sup> , Elisa <sup>3</sup> , Marieska Lupikawati <sup>4</sup> .....	162
Business Administration Department, State Polytechnic of Sriwijaya, Palembang, Indonesia.....	162
STRENGTHENING STUDENTS' WRITING ON PROJECT REPORT VIA PROJECT BASED LEARNING TO THE ENGLISH DEPARTMENT STUDENTS OF SRIWIJAYA STATE POLYTECHNICS .....	163
ID : 2589 .....	163
Yusri, Sri Gustiani,Tiur Simanjuntak, Evi Agustinasari.....	163
(Lecturers of English Department, Sriwijaya Polytechnics) .....	163
ANALYSIS OF DAILY CONVERSATION FOR ONLINE DRIVERS .....	164
ID: 2596 .....	164
Desloehal Djumrianti <sup>1</sup> , Pridson Mandiangan <sup>2</sup> , Hanifati <sup>3</sup> , Alfitriani <sup>4</sup> .....	164
<sup>1,2,3,4</sup> Business Administration Department, Politeknik Negeri Sriwijaya, Palembang, Indonesia.....	164
THE STUDENTS` PERCEPTIONS OF RELIGIOUS RADICALISM AT STATE POLYTECTNIC OF SRIWIJAYA.....	165
ID : 2711 .....	165
Farida Husin* <sup>1</sup> , Ibnu Maja* <sup>2</sup> , Yulianto Wairan* <sup>3</sup> , Lindawati* <sup>4</sup> .....	165
Lecturer of State Polytechnic of Sriwijaya Palembang.....	165
The Correlation between Students' Listening Comprehension Strategy and Their TOEIC Score at State Polytechnic of Sriwijaya .....	166
ID: 2733 .....	166
Koryati <sup>1,*</sup> , Aisyah Shahab <sup>2,*</sup> , Zulkifli <sup>3,*</sup> , Nian Masna Evawati <sup>4,*</sup> .....	166

<i>1,2,3,4 English Department of Sriwijaya State Polytechnic.....</i>	166
DESCRIPTION OF ANXIETY LEVELS OF PRE SCHOOL CHILDREN WITH THALASEMIA WHO WILL GET BLOOD TRANSFUSE IN THE THALASEMIA POLY AT AL-IHSAN BALEENDAH HOSPITAL, BANDUNG.....	167
ID : 2734 .....	167
Lisbet Octovia Manalu <sup>1</sup> , * Budi Rustandi <sup>2</sup> , Budi Somantri <sup>3</sup> .....	167
<sup>1</sup> Rajawali Health Institute Bandung.....	167
<sup>2</sup> Rajawali Health Institute Bandung .....	167
<sup>3</sup> Rajawali Health Institute Bandung .....	167
A STORY OF A CUP OF COFFEE REVIEW OF GOOGLE LOCAL GUIDE REVIEW.....	168
ID : 2759 .....	168
Setiawan Priatmoko <sup>1, 2*</sup> , Dávid Lóránt <sup>1</sup> .....	168
Szent Istvan University School of Economics and Regional Science Gödöllő, Hungary <sup>1</sup>	168
STIE Pariwisata API Yogyakarta, Indonesia <sup>2</sup> .....	168
ASIAN WOMEN'S ROLES IN FAMILY HOLIDAY: A CASE STUDY OF INDONESIAN FEMALES .....	169
Paper ID 2788 .....	169
Desloehal Djumrianti <sup>1</sup> , Augustus E. Oseso-Asare <sup>2</sup> .....	169
<sup>1</sup> <i>Business Administration Department, Politeknik Negeri Sriwijaya, Palembang, Indonesia</i> .....	169
<sup>2</sup> <i>Faculty Business and Law, University of Sunderland, United Kingdom</i> .....	169
Analysis of Daily Conversation for Online Drivers.....	170
ID 2789 .....	170
Desloehal Djumrianti <sup>1</sup> , Augustus E. Oseso-Asare <sup>2</sup> .....	170
<sup>1</sup> <i>Business Administration Department, Politeknik Negeri Sriwijaya, Palembang, Indonesia</i> .....	170
<sup>2</sup> <i>Faculty Business and Law, University of Sunderland, United Kingdom</i> .....	170
The Customary Philosophy of the Anak Dalam Tribe as part of the soul of the nation's law	171
ID 2791 .....	171
Muhamad Erwin <sup>1</sup> , Ahmad Taqwa <sup>2</sup> , Dicky Seprianto <sup>3</sup> , Ahmad Zamheri <sup>4</sup> .....	171
<sup>1</sup> State Polytechnic of Sriwijaya, Palembang, Indonesia, .....	171
<sup>2</sup> Electrical Engineering Departemet State Polytechnic of Sriwijaya, Palembang, Indonesia, .....	171
<sup>3</sup> Mechanical Engineering Departement State Polytechnic of Sriwijaya Palembang, Indonesia,.....	171
<sup>4</sup> Mechanical Engineering Departement State Polytechnic of Sriwijaya Palembang, Indonesia .....	171
THE INFLUENCE OF LEADERSHIP STYLE, AND MOTIVATION WORK STRUCTURE TO MUARA ENIM COMMUNITY HEALTH CENTER (EQUATION STRUCTURAL METHOD APPROACH) ...	172

Paper ID 2612 .....	172
AlHushori <sup>1</sup> , Yusnizal Firdaus <sup>1</sup> , Markoni Badri <sup>1</sup> , Muhammad Yusuf <sup>1*</sup> .....	172
<sup>1</sup> Department of Business Administration, State Polytechnic of Sriwijaya, Palembang, Indonesia.....	172
alhushori@gmail.com,yusnizalfirdaus@yahoo.co.id,markonibadri@yahoo.com,m.yusuf@polsri.ac.id* .....	172
SETTLEMENT OF CASES OF TERMINATION OF EMPLOYMENT AT THE INDUSTRIAL RELATION COURT IN PALEMBANG CITY .....	173
Paper ID 2713 .....	173
Ayu Puspasari, WasitohMeirani, Muhammad Erwin, Suroso.....	173
Politeknik Negeri Sriwijaya.....	173
Jl. Srijaya Negara, Bukit Lama, Bukit Besar, Kota Palembang, Sumatera Selatan. ....	173
THE EFFECT OF FINANCIAL TECHNOLOGY ON FINANCIAL INCLUSION IN SMES IN PALEMBANG CITY .....	174
ID : 2845 .....	174
Nur Rizka Erlianta <sup>1</sup> , Marieska Lupikawaty <sup>2*</sup> , Titi Andriyani <sup>3</sup> .....	174
<sup>1</sup> Bachelor Program in Business Management.. Department of Business Administration, Sriwijaya State Polytechnic .....	174
<sup>2</sup> Bachelor Program in Business Management.. Department of Business Administration, Sriwijaya State Polytechnic .....	174
<sup>3</sup> Diploma Program in Business Administration, Department of Business Administration, Sriwijaya State Polytechnic .....	174
THE EFFECT OF PATIENT SATISFACTION LEVELS ON COMPETENCY AND FACILITIES AT SITI KHADIJAH ISLAMIC HOSPITAL, PALEMBANG CITY .....	175
ID : 2217 .....	175
Sarikadarwati <sup>1</sup> , Henny Yulsiati <sup>2</sup> , Sandrayati <sup>3</sup> , Susi Ardiani <sup>4</sup> .....	175
Department Accounting Polytechnic of Sriwijaya.....	175
THE ROLE OF SMALL AND MEDIUM ENTERPRISES (SMES) AND ECONOMIC GROWTH IN INDONESIA: THE VECM ANALYSIS .....	176
ID : 2579 .....	176
Aladin <sup>1</sup> , Evada Dewata <sup>2</sup> , Yuliana Sari <sup>3</sup> , Yuli Antina Aryani <sup>4</sup> .....	176
<sup>1,2,3,4</sup> ,Department of Accounting, Politeknik Negeri Sriwijaya, Indonesia .....	176
POVERTY IN SOUTH SUMATRA PROVINCE IS VIEWED FROM VILLAGE FUND AND VILLAGE FUND ALLOCATION.....	177
ID :2583 .....	177
Rita Martini <sup>1*</sup> , Endah Widyastuti <sup>1</sup> , Sukmini Hartati <sup>1</sup> , Zulkifli <sup>1</sup> , Riana Mayasari <sup>1</sup> .....	177
<sup>1</sup> Accounting Department, Polytechnic State of Sriwijaya, Palembang 30139, Indonesia .....	177
IMPACT OF BUMDESA MANAGEMENT ON PADESA IN PENUKAL ABAB LEMATANG ILIR REGENCY .....	178

ID : 2602 .....	178
Rosy Armaini <sup>1*</sup> , Maria Maria <sup>2</sup> , Nurhasanah Nurhasanah <sup>3</sup> , Yevi Dwitayanti <sup>4</sup> .....	178
<i><sup>1-4</sup> Accounting Major, State Polytechnic of Sriwijaya, Palembang, South Sumatera, Indonesia.....</i>	<i>178</i>
FACTORS AFFECTING ECONOMIC GROWTH IN REGENCIES AND CITIES IN THE PROVINCE OF SOUTH SUMATRA IN 2010 – 2018.....	179
ID : 2803 .....	179
Sri Hartaty <sup>1</sup> , Eka Jumarni F <sup>2</sup> , Anggeraini O <sup>2</sup> , L. Vera R.P. <sup>2</sup> .....	179
<b>ABSTRACT</b> .....	179
THE EFFECT OF LOCAL GOVERNMENT CHARACTERISTICS AND BPK AUDIT OPINIONS ON THE FINANCIAL PERFORMANCE OF LOCAL GOVERNMENTS (STUDY ON LOCAL GOVERNMENTS IN SOUTH SUMATRA).....	180
ID : 2621 .....	180
Indra Satriawan, Ardiyan Natoen, Periansya, Sopiyan AR .....	180
1234 Department of Accounting, Sriwijaya State Polytechnic .....	180
DIMENSIONS OF WOMEN’S EMPOWERMENT .....	181
ID :2519 .....	181
Neneng Miskiyah <sup>1*</sup> , Sari Lestari Zainal Ridho <sup>1</sup> , Hadi Jauhari <sup>1</sup> , Keti Purnamasari <sup>1</sup> .....	181
<sup>1</sup> Department of Business Administration, Sriwijaya State Polytechnic, Palembang, Indonesia.....	181
THE EFFECT OF ENTREPRENEURIAL COMPETENCIES ON BUSINESS PERFORMANCE (EMPIRICAL STUDY ON MSMES OF PALEMBANG WOVEN FABRIC) .....	182
ID : 2658 .....	182
Edwin Frywaruwah <sup>1</sup> , Bainil Yulina <sup>2</sup> , Sulaiman <sup>3</sup> , Siska Aprianti <sup>4</sup> .....	182
<sup>1,2,3,4</sup> Politeknik Negeri Sriwijaya.....	182
Analysis Of Marketing Mix Strategy On Consumer Value In Small And Medium Enterprises In Palembang, South Sumatra (Case Study Of Palembang's Traditional Processed Food) .....	183
ID : 2756 .....	183
Riza Wahyudi, M.Thoyib, Firmansyah, Darul Amri .....	183
Accounting Department Politeknik Negeri Sriwijaya, thoyib1958@gmail.com .....	183
THE EFFECT OF PLANNING ON RISK OF LOSS.....	184
IN INVESTING IN THE CAPITAL MARKET .....	184
ID 2804 .....	184
Mariska. Z <sup>1</sup> , Hendra Sastrawinata <sup>2</sup> , Dr. Dewi Fadilah <sup>3</sup> , M. Riska Maulana <sup>4</sup> .....	184
State Polytechnic of Sriwijaya .....	184
The Effect of Bank Credibility and Service Convenience on Bank Customer Attitudes .....	185
ID 2567 .....	185
Esya Alhadi <sup>1</sup> , 2nd Gst Ayu Oka Windarti <sup>2</sup> , Elvia Zahara <sup>3</sup> , Titi Andriani <sup>4</sup> .....	185
<sup>1,2,3,4</sup> Business Administration Department, State Polytechnic of Sriwijaya, Palembang,	

Indonesia.....	185
The Influence of Information Quality and Information System Quality of Regional Assets on User Satisfaction at the Provincial Government of South Sumatera .....	186
ID 2814 .....	186
Kartika Rachma Sari <sup>1,*</sup> Zainal Arifin <sup>2</sup> , Desi Indriasari <sup>3</sup> , Choiruddin <sup>4</sup> .....	186
Politeknik Negeri Sriwijaya.....	186
Looking beyond Students' Writing: Its Relation to Their Academic Achievement .....	187
ID 2822 .....	187
Beni Wijaya, Zakaria, Munaja Rahma, Moehamad Ridhwan .....	187
Politeknik Negeri Sriwijaya.....	187
Determinants of Regional Budget Absorption in the Regional Apparatus Organization of Palembang City.....	188
ID 2830 .....	188
Vega Nabila Putri <sup>1</sup> , Kuo Keo Pisey <sup>2</sup> , Sukmini Hartati <sup>1</sup> , Rita Martini <sup>1*</sup> .....	188
<sup>1</sup> Accounting Department, Polytechnic State of Sriwijaya, Palembang 30139, Indonesia .....	188
<sup>2</sup> Entrepreneurship Development Institute, CIEDI Cambodia-India, Cambodia .....	188
*Corresponding author. Email: ritamartini@polsri.ac.id .....	188
ASPECTS AFFECTING THE ACCOUNTABILITY PERFORMANCE OF GOVERNMENT AGENCIES BANYUASIN DISTRICT.....	189
ID: 2834 .....	189
Rita Martini <sup>*1</sup> , Muhammad Aulia Ramadhan <sup>*1</sup> , Sukmini Hartati <sup>*1</sup> .....	189
<sup>1</sup> Accounting Department, Polytechnic State of Sriwijaya, Palembang 30139, Indonesia .....	189
PERCEPTION OF HUMAN RESOURCES ASPECT ON ABILITY TO MANAGE BUMDES .....	190
Paper ID 2846 .....	190
Nelly Masnila <sup>1</sup> , Faridah <sup>2</sup> , M. Husni Mubarak <sup>3</sup> , Desri Yanto <sup>4</sup> .....	190
Politeknik Negeri Sriwijaya.....	190

# Data Model Pattern for Data Warehouse Web Application of Information Portal (Case Study: Hidayatullah Integrated Islamic Boarding School, Banyuasin Regency)

M Aris Ganiardi<sup>1,\*</sup> Nita Novita<sup>1</sup> Indri Ariyanti<sup>1</sup> Delta Khairunnisa<sup>1</sup>

<sup>1</sup> *Informatics Management Department, Politeknik Negeri Sriwijaya*

\* *Corresponding author. Email: [maris@polsri.ac.id](mailto:maris@polsri.ac.id).*

## ABSTRACT

Data warehouse is a collection of data that is subject-oriented, integrated, timevariant, and non-volatile which can be used to produce useful information for management decision making. In an information system, there are a lot of information that accommodated by both internal and external parties. Over time the amount of information has increased. For that we need a way to accommodate a lot of data in a data warehouse. One way to produce a good data model is to use the data model pattern. In this study, a data model pattern will be applied to the web application of information portal in the Hidayatullah Islamic boarding school in Banyuasin Regency. This software was taken as research material because the business process is quite varied and can describe the activities of all academicians in the Hidayatullah integrated Islamic boarding school, Banyuasin district. With well-structured data, the distribution of information to the general public will be faster and more accurate.

**Keywords:** *Data Model Pattern, Data Warehouse, Information Portal*

## 1. PREFACE

Hidayatullah integrated Islamic boarding school, which is one of the Islamic boarding schools in Banyuasin district, has levels of education of Kindergarten, Elementary School and Junior High School. Hidayatullah integrated Islamic boarding school has the vision and aspiration of becoming a modern Islamic education provider and a fostering place for students who cannot afford to get a better education.

In daily activities, the Hidayatullah integrated Islamic boarding school, Banyuasin district, has many activities besides academic and religious activities such as admission of new students and extra-curricular activities. The need for information related to all activities in the Hidayatullah integrated Islamic boarding school in Banyuasin Regency is urgently needed by the general public. In addition, the boarding school management of the Hidayatullah integrated pesantren in Banyuasin district can convey this information. A media is needed where the media can be used by all parties in the use of information in the Hidayatullah integrated Islamic boarding school, Banyuasin district. The media can take the form of an information portal.

Organizing and archiving information and data from Islamic boarding schools is very important in distributing information to the general public. With the data arranged in an accurate manner, all the activities in the boarding school can be known accurately. The information obtained was in the form of information on student activities at the boarding school, photos of activities, or file distribution. In addition, the public can also know the academic calendar of Islamic boarding schools.

Compiling and organizing good data is needed in the distribution of information by the management of the boarding school, so it requires a data model in its compilation. The data compiled should not be redundant and reusable in certain conditions. In the research assignment, we tried to make a data model pattern for the data warehouse on the information portal web application in the Hidayatullah integrated Islamic boarding school. It is hoped that the results of the research output can add to the knowledge of the Sriwijaya State Polytechnic.

## 2. BASIC THEORY

### 2.1. Data Model Pattern

Data model patterns are part of a data model that is often found and repeating, which describes proven solutions to solve problems in a data modeling environment [3]. Data model patterns are introduced and used to help build high quality conceptual data models. In general, the data model pattern can be divided into two types, namely the specific domain pattern or seed model and the generic data model pattern [3]. Difference in specific domain pattern or seed model and generic data model pattern.

#### Specific Domain Data Model Pattern / Seed Model

A specific domain pattern or seed model is a model that is specific to a particular problem domain [3]. The seed model provides a starting point for the application of the problem domain. Patterns of this type are usually developed with a low level of abstraction and are usually specific to a particular case domain [6].

### 2.2. Data Warehouse Concept

Data warehouse is a collection of data that is subject-oriented, integrated, time-variant, and non-volatile which can be used to produce useful information for management decision making [11]. From this definition it can be said that the data in the data warehouse has the following characteristics [15]:

1. Subject Oriented, the data warehouse is designed to meet the needs of data analysis based on certain business subjects so that it focuses on high-level business entities. In contrast to operational systems that deal directly with applications that handle day-to-day operations. The business subject is a critical subject in a business enterprise and is usually different for each enterprise. For example, for a manufacturing company, the critical subject is sales, delivery and procurement of goods, while for retail stores, sales at individual stores are a critical subject.
2. Integrated, data that comes from various sources in multiple formats must be saved in a consistent format (both in naming conventions, domain constraints, physical attributes, and measurements) so that it can meet the needs of a comprehensive analysis.
3. Time-variant, the data warehouse must be able to store data with the same subject but have different aspects of time (historical data) in other words, it can be said that the data stored can be associated with a certain point in time. Data warehouse allows users to examine changes in factual data based on time to analyze the data in various ways and make decisions based on the results of the analysis.

4. Non-volatile, the data in the data warehouse cannot be changed (read only) and usually lasts longer. The transaction system only stores data until the transaction is completed, while the data warehouse can store it for years.

## 3. RESEARCH METHODOLOGY

### 3.1. Data Model Pattern Making for Data Warehouse

1. **Literature study**, conducted by studying the literature that supports the implementation of the thesis. This literature is related to the concept of patterns, the concept of data warehouse, dimensional modeling, the concept of reusability, reuse driven software development process and other related studies.
2. **Analysis**, carried out by analyzing the needs and characteristics of the data model in the data warehouse, how far the data model patterns are used in the existing data warehouse, data modeling analysis in the data warehouse (with a study of the Kimball case study) to be used in making patterns analysis of pattern development stages, defining pattern format and pattern quality factor based on reusability aspect.
3. **Design and implementation**, carried out by implementing the stages of building a pattern that has been analyzed previously. The development of this pattern must be based on the results of the analysis of the data model requirements in the data warehouse, the use of data model patterns in existing data warehouses, and the analysis of data modeling in the data warehouse (with a study of the Kimball case study). The patterns that are arranged also follow the pattern format that has been analyzed previously.

### 3.2. Web Application Development of Information Portal

The following is an explanation of the stages of web application development using the spiral method

- a. Analysis
  1. *Needs collection*: the data collected are primary and secondary needs. Primary needs come from data taken directly from users and stakeholders of information web portal application users such as administrative staff, teachers, students, leaders and experts in the field of science and secondary needs come from book and internet data. This stage is often referred to as the software requirements acquisition stage. The techniques used to collect needs are interviews, observation, questionnaires, and documentation.

2. *Needs analysis*: the needs that have been collected are interpreted as meaning the needs obtained. The needs that come from users and stakeholders are analyzed to determine priorities for implementation. The interpretation of a requirement can be in the form of data, limitations, rules, scenarios, and software functionality.
  3. *Database analysis*: the collected cases are then formed according to the database format so that they can be entered into the database, such as creating case tables, creating keys, relations between tables and forming queries.
  4. *Application model analysis*: the application model to be used is web-based which can later be distributed via the internet.
  5. *Software analysis*: the software used is the PHP programming language, MySQL DBMS and the Windows 7 (seven) operating system.
  6. *Hardware analysis*: analyze the hardware requirements of the system such as processor speed, main memory capacity and secondary memory.
- b. Design
1. *Database design*: Database design is a continuation of database analysis. Database design is done using the MySQL DBMS as well as making queries that will be used by the system.
  2. *Interface design*: Designing input and output displays based on a GUI (Graphical User Interface).
  3. *Object Design*: Designing program modules in the form of objects that will later be used when coding the system. Module design can take the form of algorithms and pseudo-code.
- c. Coding
1. *Database module code generation*: database module code is made separately from the system code so that it is more reusable. Database module code contains database operations such as making connection to database, insert, update, delete and query. The framework used in making application code uses a code igniter and bootstrap.
  2. *Program component code generation*: program code is generated and modularized into objects based on predetermined specifications from the analysis results. The framework used to create programs uses the Codeigniter framework.
  3. *Interface code creation*: the interface is created using a bootstrap framework that is responsive to hardware changes that access the information portal web application.
- d. Testing
1. *Database testing*: testing database connections and database query accuracy.
  2. *System testing*: testing the overall system from both input, process and system output.

3. *Program testing*: this test is done to determine the quality of the software object.
- e. Maintenance

It is done in two ways, when the development process takes place backing up the program code made when revising the program and after the development process by seeing whether the system performance still produces good accuracy as long as the system is running.

### **3.3. Testing and Evaluation**

The web application of information portal created using the data model pattern is tested based on the functionality that it meets the needs. Tests are made based on various scenarios created. The test scenario is based on user behavior using this information portal web application. There are two forms of test scenarios which are the normal scenario where the user enters the correct data and the second scenario is when the user enters the wrong data.

Evaluation is carried out on test results based on test scenarios by comparing user behavior with the expected results. The evaluation results will be very good when the application can anticipate the behavior of the user when using the web application of information portal. The results of these anticipations are in accordance with the expectations of application developers.

## **4. RESULT AND DISCUSSION**

### **4.1. Web Application Functionality**

The results of the web application requirements analysis obtained from the elicitation process of the boarding school, the functionality obtained is as follows:

1. The system displays information relating to situations and conditions in Islamic boarding schools such as history, organizational structure, vision and mission.
2. The system displays information on teachers in Islamic boarding schools.
3. The system displays information in the form of news relating to activities that occur in Islamic boarding schools.
4. The system displays information in the form of announcements related to activities in Islamic boarding schools aimed at academics and the general public.
5. The system provides files to support the information displayed by web applications.
6. The system has links to other websites related to Islamic boarding school academic activities.
7. The system is able to search for web content based on the entered keywords.



### 4.2. Web Application Design

The design of the information portal is focused only on data design that uses data model patterns and web application interfaces for user convenience. The logic flow of the information portal web application is based on the business processes contained in the Hidayatullah integrated Islamic boarding school. The design is based on the information portal functionality obtained from the analysis of web application requirements.

#### a. Logic Design

The information portal workflow is illustrated with a context diagram (figure 1) and a data flow diagram (Figure 2). From the context diagram it can be seen that only two users use the information portal. First is the admin who is in charge of entering data and second is the user who will take advantage of the information contained in the web application of information portal.

The data flow diagram presents the processes that occur in the information portal web application. Admin will enter news data, announcements, and files. Furthermore, the data will be stored in a database table. The data will automatically be displayed on the web application of information portal interface page. The information displayed is based on the latest date order entered by the admin.

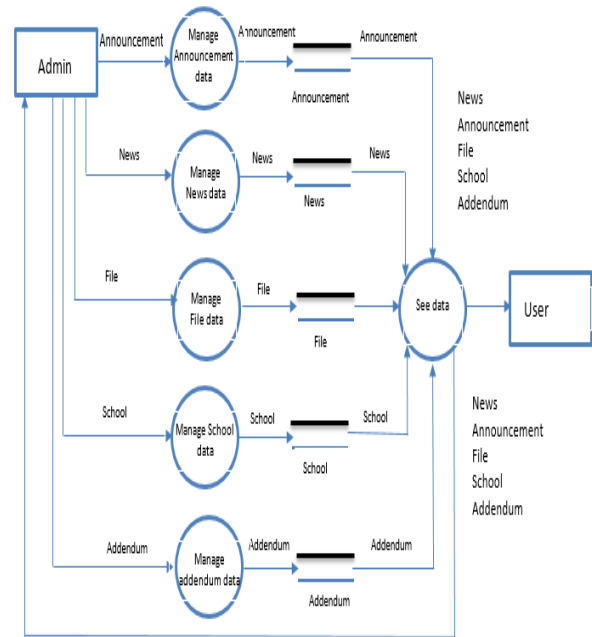


Figure 2 Data flow diagram of information portal

#### b. Data Model Pattern of Data Warehouse

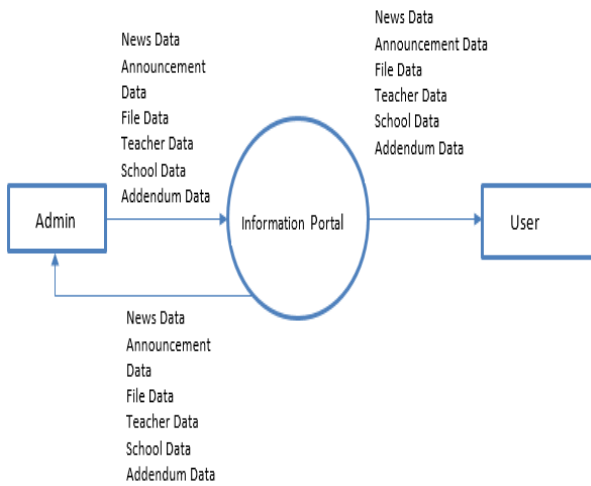


Figure 1 Context diagram of information portal

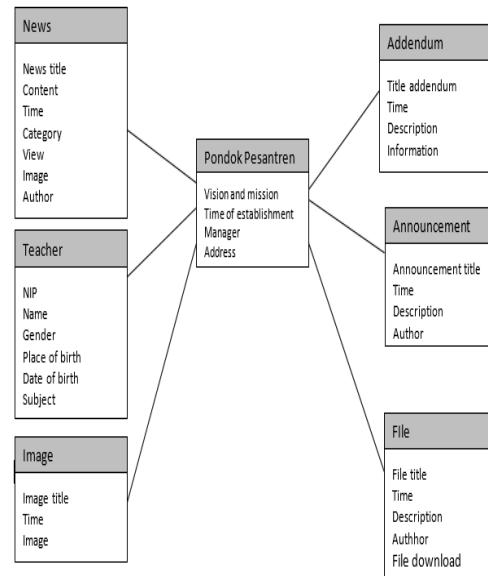


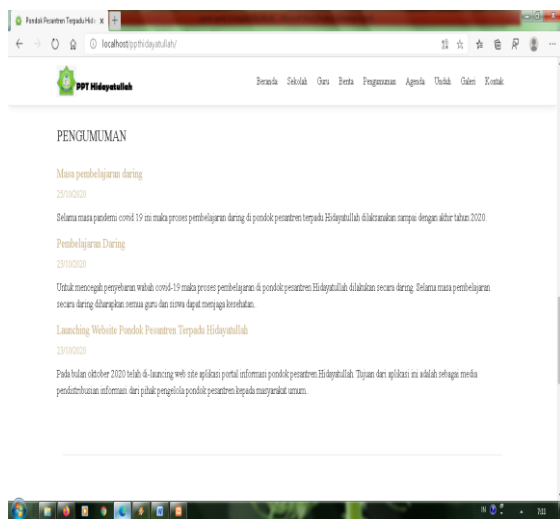
Figure 3 Data model pattern of web application of information portal

The data model pattern that has been created is depicted in Figure 3. From the figure, it can be seen that the fact of the system is the Hidayatullah Islamic boarding school itself. The fact of the Islamic boarding school is the vision and mission of the Islamic boarding

school, the time of the founder and management of the boarding school which consists of the board of the foundation and the leaders of kindergarten, elementary and junior high schools.

Facts will be supported by the dimensions contained in the system. The news dimension contains information on academic activities carried out by the pesantren boarding school. The announcement dimension relates to the academic information of pesantren Pondok pesantren. The agenda dimension contains activities that will be carried out in the future. The teacher dimension contains the profiles of teachers who teach in Islamic boarding schools. Finally, the dimensions of files and images contain files related to academic activities in Islamic boarding schools.

### 4.3. Web Application of Information Portal



**Figure 4** Home page of web application of information portal

The form of the web application interface for the integrated Islamic boarding school information portal Hidayatullah, Banyuasin district that implements the data model pattern for the data warehouse is presented in Figure 4. From the picture, it can be seen that the new information portal page is more attractive, responsive, and comfortable to use. Web application developers can focus more on the architecture and interface of web applications because the data in the application is reusability, which utilizes data model patterns for the data warehouse.

From this interface, it can be seen that information is displayed based on the most recent headline information, while information can be seen in the archive. Each information will be supported by an attractive image so that users do not feel bored with the web application of information portal interface.

## 5. CONCLUSION

The conclusions obtained from this study are as follows:

1. To develop a web application, it is necessary to determine the quality factor that will guarantee the quality of the stages of web application development. Web application developers must pay attention to this quality factor so that the resulting web application is more efficient (quality).
2. Data model pattern for a data warehouse that makes it easy to design databases that are reusability (easy to reuse). This model maps interconnected data and is often used in the web application for the information portal of the Hidayatullah Islamic boarding school, Banyuasin district.
3. Frequently used data is separated into a certain group so that if needed, the application can only access the data. In the process of accessing a similarity in the interaction process is needed.
4. The Bootstrap framework helps web application developers to apply reusability principles to a web application interface. With the bootstrap framework, the web application interface will be more attractive, responsive, and comfortable to use when used on many computer devices.

## 6. RECOMMENDATION

The results of the analysis and design obtained during the research must be verified and validated by users and stakeholders. The purpose of verification and validation is that the results of this analysis and design are in accordance with their wishes.

## REFERENCES

- [1] Azizah, Fazat Nur. “*Generic Data Model Patterns using FullyCommunication Oriented Information Modeling (FCO-IM)*”. Bandung Institute of Technology: 2009.
- [2] Batra, Dinesh. “*Conceptual Data Modeling Patterns: Representation and Validation*”. Florida International University:2005.
- [3] Blaha, Michael. “*Patterns of Data Modeling*”. CRC Press : 2010.
- [4] Bouzeghoub. “*A Logical Model for Data Warehouse Design and Evolution*”. Springer-Verlag Berlin:2000.
- [5] Coad, P. “*Object models: Strategies, patterns and applications*”. Upper Saddle River, NJ: Pentice Hall:1997.

- [6] Martin, Fowler. “*Analysis Patterns. Reusable Object Models*”. Addison Wesley Professional: 1996.
- [7] Francony, Enrico. “*A Data Warehouse Conceptual Data Model*”. Faculty of Computer Science, Free University of Bozen-Bolzano, Italy. IEEE:2004.
- [8] Galin, Daniel. “*Software Quality Assurance from Theory to Implementation*”. Pearson Addison Wesley:2004.
- [9] Gamma, Erich. Helm, Richard. Johnson, Ralph. Vlissides, John. “*Design Patterns : Elements of Reusable Object-Oriented Software*”. Addison-Wesley Professional Computing Series:1997.
- [10] Hay, David C. “*Data Model Patterns, Convention of Thought*”. Dorset House Publishing:1997.
- [11] Inmon. “*Building the Data Warehouse third Edition*”. John Wiley & Sons: 2002.
- [12] Kimball, Ralph. “*The Data Warehouse Life Cycle Toolkit*”. John Wiley & Sons: 1998.
- [13] Kimball, Ralph. “*The Data Warehouse Toolkit 2nd edition*”. John Wiley & Sons: 2002.
- [14] McClure, Karma. “*Software Reuse Techniques: Adding Reuse to the System Development Process*”. Prentice Hall PTR: 1997.
- [15] Ponniah, Paulraj. “*Data Warehousing Fundamental*”. John Wiley & Sons 2001.
- [16] Pressman, Roger. “*Software Engineering Fifth Edition*”. John Wiley & Sons: 2001.
- [17] Riehle, Dirk. “*Understanding and Using Patterns in Software Development*”. Theory and Practice of Object Systems 2, 1: 1996.
- [18] Silverstone, Len. “*The Data Model Resource Book*”. John Wiley & Son: 2001.
- [19] Tryfona, Nectaria. “*starER: A Conceptual Model for Data Warehouse Design*”. Departement of Computer Science, Aalborg University. ACM:1999.
- [20] Winter, R. Strauch, B. “*A Method for Demand-Driven Information Requirements Analysis in Data Warehousing Project*”. Proceedings Hawaii International Conference on System Sciences, pp. 1259-1365 : 2003.
- [21] Zeiss, Benjamin. Vega, D. Schieferdecker, I. “*Applying the ISO 9126 Quality Model to Test Specifications Exemplified for TTCN-3 Test Specifications*”. Gesellschaft für Informatik, Köllen Verlag, Bonn: 2007.



# The 4<sup>th</sup> FIRST 2020

(FORUM IN RESEARCH, SCIENCE, AND TECHNOLOGY)

CERTIFICATE OF APPRECIATION

Present to

**INDRI ARIYANTI**

in recognition & appreciation of contribution as

**Co-Author**

FIRST International Conference

“SYNERGY OF APPLIED TECHNOLOGY FOR SOCIAL-TECHNOPRENEUR BASED ON LOCAL RESOURCE TO GENERATE SUSTAINABILITY DEVELOPMENT”

Held on November, 10-11, 2020



Dr. Ing. Anntad Taqwa, M.T.  
Director of State Polytechnic of Sriwijaya



Dr. Nita Martini, M.Si., Ak., CA.  
FIRST 2020

Organized By :



Collaborate With :

