



Conference on Innovation in Technology and Engineering Science (CITES 2018)

<http://cites.conference.unand.ac.id/>

8-9 November 2018

TOPIC : Sustainable Innovation in Technology, Engineering Sciences and Industrial System

Rapid growth in technology supports the modern live style where the affluent natural resource is exploited for humankind's prosperity. These activities should be guaranteed to be sustainable for the next generation. The innovation proposes new ideas, processes, systems to increase efficiency and products and to decrease the negative effects to the humankind itself and environment.

This conference will be an event to share new ideas in technology, engineering, science and industry. Researchers from various countries with different academic backgrounds and experiences will present their ideas to solve a specific problem. They also will share their innovations that will contribute to solve a related problem in academic and Industrial field.

The conference will be held in Padang, West Sumatera, Indonesia, on November 8-9, 2018 and is organized by the Faculty of Engineering, Universitas Andalas, West Sumatera, Indonesia. The committee will come researchers, practitioners, decision-makers, industrial and business sectors, and students, to share their ideas, innovations, knowledge, finding, experience and concepts.

Mechanical and Thermal Systems

Renewable energy, Energy conversion

Mechanical System Engineering

Machine construction

Vibration and control

Mechatronics

Tribology



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Production system and technology

Production logistics and transportation

Materials Engineering

Nano technology

Industrial and Manufacturing Systems

Production Planning and Inventory Control

Ergonomic and Work Study

Product Design and Development

Supply Chain and Logistics

Optimization and Mathematical Modeling

Information System

Manufacturing Facility Design

Financial and Asset Management

Industrial Policy Study

Maintenance System

Green Manufacturing

Sustainable Manufacturing

Industrial Revolution 4.0

Innovation in Environmental Engineering



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Water and Wastewater Quality

Solid Waste Management

Air Pollution Control

Environmental Health

Environmental Modeling

Environmental Management

Water Resources Management

Occupational Health and Safety

Ecology

Sustainable Civil Engineering Solutions

Material and structure

Transportation

Geotechnical

Water resource engineering

Project management

Disaster management

Sustainable Innovation in Electrical Engineering

Smart grid and control

Business and Renewable energy

High Voltage engineering



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Energy Conversion Systems
Battery and Energy storage
Electrical transportation
Biologically Inspired Robotics
Brain Machine Interface
Control Theory and Applications
Human Machine Interaction
Industrial Applications
Industrial robotics
Measurement
Robotics and Rehabilitation
System and Information
System Integration
Wearable Technologies
Multimedia Signal Processing
Communication Engineering
Internet of Things

Scientific Committee

Prof. Hadi Nur-Universiti Teknologi Malaysia
Scopus Author ID = 6602169746

Prof. Mitsuo Niinomi–Nagoya University, Japan



**Conference on Innovation in Technology and Engineering Science
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Scopus Author ID = 35462522500

Prof. Zulkurnain Abdul Malek-Universiti Teknologi Malaysia

Scopus Author ID = 57195728805

Prof. Dr.-Ing. Bambang Suharno-Universitas Indonesia

Scopus Author ID = 43261682300

Dr. Eng Khoirul Anwar-Universitas Telkom (Indonesia)

Scopus Author ID = 8576231800

Prof. Hairul Abral-Universitas Andalas

Scopus Author ID = 6507567094

Dr. Adjar Pratoto-Universitas Andalas

Scopus Author ID = 6508204240

Prof. Gunawarman-Universitas Andalas

Scopus Author ID = 57200754372

Dr. Eng. Lusi Susanti-Universitas Andalas

Scopus Author ID = 24598207800

Jonrinaldi, Ph.D-Universitas Andalas

Scopus Author ID = 36915229700

Dr. Eng. Fadjar Goembira-Universitas Andalas

Scopus Author ID = 36628234400

Dr. Eng. Slamet S. Raharjo-Universitas Andalas

Scopus Author ID = 36148213900

Dr. Eng. RendyThamrin-Universitas Andalas

Scopus Author ID = 16048432600

Prof. Taufik (California Poly, USA)

Scopus Author ID = 23670809800



**Conference on Innovation in Technology and Engineering Science
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8-9 November 2018

Prof. Ryoko Yamamoto Ikemoto-Kanazawa University
Scopus Author ID = 6602640717

Prof. Refdinal Nazir-Universitas Andalas
Scopus Author ID = 56346959800

Dr. Ariadi Hazmi-Universitas Andalas
Scopus Author ID = 23667493300

Prof. Ir. Dr. Sha'ri Mohd Yusof-Universiti Teknologi Malaysia
Scopus Author ID = 7003315057

Dr.-Eng. Makbul Anwari-King Abdul Aziz University-Arab Saudi
Scopus Author ID = 24723466600

Dr. Hendra Hermawan-Laval Universitie Canada
Scopus Author ID = 56500756700

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Scopus Author ID = 57191893281

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Scopus Author ID = 57191895745

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Scopus Author ID = 57041401400

Prof. Minoru Sasaki-Gifu University
Scopus Author ID = 56664979800



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8-9 November 2018

Prof. Ismail Abustan-Universiti Sains Malaysia
Scopus Author ID = 6507592187

Prof. Mohammad Farooq Wani- National Institute of Technology Srinagar
Scopus Author ID = 56273836300

Prof. Dr. Ir. Dradjad Irianto, M.Eng – Institut Teknologi Bandung
Scopus Author ID = 7801381167

Dr. Harrison ThukuNgetha-Dedan Kimathi University of Technology
Scopus Author ID = 57110379200

Dr. Ir. Trina Fizzanty, MSc-Director Innovation, LIPI
Scopus Author ID = 25930878500

Dr. Ir. Unggul Prianto, M.Sc- BPPT

Ir. Yosviandri, MM-President Director, PT. Semen Padang

Dr. Ir. Hermanto Dardak-President of Institution Engineers, Indonesia

Ir. I Made Dana Tangkas, M.Si., IPM-President of Director, PT Toyota Motor
Manufacturing Indonesia

Dr. Ir. Jumain Appe, MSi, Director Jendral Penguatan Inovasi, Kemenristek
DIKTI

Keynote Speaker

1. Ir. Insannul Kamil, M.Eng., Ph.D.-Universitas Andalas (Indonesia)
Scopus Author ID = 56149407000 (H-index 2)

2. Prof. Hadi Nur-Universiti Teknologi Malaysia
Scopus Author ID = 6602169746 (H-index: 19)

3. Prof. Masaaki Okuma-Tokyo Institute Technology (Jepang)
Scopus Author ID = 7102589447 (H-index 8)



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4. Prof. Andrivo Rusydi-National University of Singapore
Scopus Author ID = 6507708145 (H-index 23)

Organizing Committee

Conference Chair

Prof. Gunawarman-Universitas Andalas
Scopus Author ID = 7409839262

Co-Conference Chair

Aulia, Ph.D-Universitas Andalas
Scopus Author ID = 24278539200

Members

Dr. Oknovia Susanti, ST., M.Eng.-Universitas Andalas
Scopus Author ID 57193803989

Elita Amrina, Ph.D-Universitas Andalas
Scopus Author ID = 49862661700

Dr. Eng. Zulkainaini, M.T -Universitas Andalas
Scopus Author ID = 57164039100

Dr.Eng. Muhammad Ilhamdi Rusydi- Universitas Andalas
Scopus Author ID = 56202284900

Dr. Eng Junaidi- Universitas Andalas
Scopus Author ID = 57189839520

Masrilayanti, PhD- Universitas Andalas
Scopus Author ID = 55315151000



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Benny Hidayat- Universitas Andalas
Scopus Author ID = 55217420800

Heru Dibyo Laksono, MT- Universitas Andalas
Scopus Author ID = 56347895900

Yulhizar, MT- Universitas Andalas

Date : 8-9 November 2018

Tour (Saturday)

Istana Pagaruyuang
Arau
Kelok Sembilan
Puncak Mandeh-Jembatan Akar-
Puncak Manih - Pantai padang
Danai di Ateh dan Danau di Bawah
Singkarak
Puncak Lawang Maninjau

Conference Program

Conference on Innovation in Technology and Engineering Science (CITES)

Grand Inna Padang Hotel Convention & Exhibition, November 8 – 10, 2018

Day-1: November 8, 2018 (Thursday)

| Time | Activity |
|---------------|---|
| 07.30 – 08.30 | Registration |
| 08.30 – 10.00 | Opening Ceremony Room: Ball Room |
| 08.30 – 08.40 | 1. Safety Induction |
| 08.40 – 08.50 | 2. Recital of Holy Qur'an |
| 08.50 – 09.00 | 3. National Anthem: Indonesia Raya |
| 09.00 – 09.15 | 4. Pasambahan Dance |
| 09.15 – 09.25 | 5. Welcome Message: CITES 2018 Chair - Prof. Dr. Eng. Gunawarman |
| 09.25 – 09.40 | 6. Welcome Speech and Conference Opening: Rector of Andalas University - Prof. Dr. Tafdil Husni, SE. MBA |
| 09.40 – 09.50 | 7. Traditional Dance |
| 09.50 – 10.00 | 8. Do'a |
| 10.00 – 10.30 | Coffee Break |
| 10.30 – 12.00 | Keynote Sessions I Moderator: Ismet Hari Mulyadi, Ph.D Room: Ball Room |
| 10.30 – 11.00 | Keynote 1 "Unveiling the Structure-activity Relationship in Material Science: Some Examples in Photocatalyst and Catalyst Materials" Prof. Dr. Hadi Nur <i>Director, Centre for Sustainable Nanomaterials, Ibnu Sina Institute for Scientific and Industrial Research, Universiti Teknologi Malaysia</i> |
| 11.00 – 11.30 | Keynote 2 "More than Moore and Beyond" Prof. Dr. Andrivo Rusydi <i>National University of Singapore NUS Nanoscience & Nanotechnology Initiative</i> |
| 11.30 – 12.00 | Q & A |

| | | | |
|----------------------|---|-----------------|-------------------|
| 12.00 – 13.30 | Lunch Break | | |
| 13.30 – 15.00 | Parallel Sessions I | | |
| | Room-1: SUMPUR | Room-2: SINAMAR | Room-3: OMBILIN 1 |
| | Room-4: KUANTAN 1 | Room-5: TARUSAN | Room-6: ARAU |
| 15.00 – 15.30 | Coffee Break | | |
| 15.30 – 17.00 | Parallel Sessions II | | |
| | Room-1: SUMPUR | Room-2: SINAMAR | Room-3: OMBILIN 1 |
| | Room-4: KUANTAN 1 | Room-5: TARUSAN | Room-6: ARAU |
| 17.00 – 19.00 | Preparing to Conference Dinner | | |
| 19.00 – 21.00 | Gala Dinner PIC: Dr. Oknovia Susanti Room: Ball Room | | |

Day-2: November 9, 2018 (Friday)

| Time | Activity |
|---------------|---|
| 07.00 – 08.00 | Registration |
| 08.00 – 09.30 | Keynote Sessions II Moderator: Feri Afrinaldi, Ph.D Room: Ball Room |
| 08.00 – 08.30 | Keynote 3 “The Roles of Dams on Sustainable Water, Food and Energy Security Issues: A Global Perspective for Indonesia” Ir. Insannul Kamil, M.Eng, Ph.D, IPM <i>Dean, Faculty of Engineering, Universitas Andalas</i> <i>Director, Center for Innovation Studies (CINS) Universitas Andalas</i> |
| 08.30 – 09.00 | Keynote 4 “Metal 3D Printing: New Technology Advances and Future Management Research to Open up its Potential” Prof. Dr. David Zhang <i>University of Exeter, United Kingdom</i> <i>Director, Exeter Manufacturing and Enterprise Centre (XMEC)</i> |
| 09.00 – 09.30 | Keynote 5 “Electrical Insulation Technology in Power Apparatus and Power Electronics” Prof. Dr. Hikita Masayuki <i>Kyushu Institute of Technology, Japan</i> |
| 09.30 – 10.00 | Q & A |
| 10.00 – 10.15 | Coffee Break |
| 10.15 – 11.45 | Parallel Sessions III |
| | Room-1: SUMPUR Room-2: SINAMAR Room-3: OMBILIN 1 |
| | Room-4: KUANTAN 1 Room-5: TARUSAN Room-6: ARAU |
| 11.45 – 13.30 | Lunch Break |
| 13.30 – 15.00 | Parallel Sessions IV |
| | Room-1: SUMPUR Room-2: SINAMAR Room-3: OMBILIN 1 |
| | Room-4: KUANTAN 1 Room-5: TARUSAN Room-6: ARAU |
| 15.00 – 15.30 | Coffee Break |
| 15.30 – 16.30 | Closing Ceremony PIC: Elita Amrina, PhD Room: Ball Room |

Day-3: November 10, 2018 (Saturday)

| Time | Activity |
|---------------|--|
| 08.00 – 18.00 | Conference Tour PIC: Elita Amrina, PhD Picking Point: Grand Inna Padang Hotel |

Parallel Sessions I

Date: November 8, 2018 (Thursday)

Time: 13.30 – 15.00

Room-1: **Sumpur**

Topics: **Industrial Engineering**

Session Chair: **Dr. Eng. Dicky Fatrias**

| Time | Presentation |
|---------------|---|
| 13.30 – 13.45 | ID 440 Setup Time Efficiencies of Quick Die Change System in Metal Stamping Process <i>Rudi Kurniawan Arief, Qomarotun Nurlaila</i> |
| 13.45 – 14.00 | ID 449 Analysis of Production Line Balancing Using Theory of Constraints <i>Rosnani Ginting, Vita Sari Gumay</i> |
| 14.00 – 14.15 | ID 467 A Framework to Improve Equipment Effectiveness of Manufacturing Process - A Case Study of Pressing Station of Crude Palm Oil Production, Indonesia <i>Anita Susilawati, Adek Tasri, Dodi Arief</i> |
| 14.15 – 14.30 | ID 471 Identification Criteria and Indicators of Palm Oil Industrial Solid Waste Processing Technology <i>Aulia Ishak, Amir Yazid Bin Ali</i> |
| 14.30 – 14.45 | ID 189 Formulation of Optimization Model of Raw Material Composition to Achieve Clinker Quality Standards (Case Study PT Semen Padang Plant IV) <i>Syamsurrijal</i> |
| 14.45 – 15.00 | ID 512 Chili Sauce Production Planning Model Considering Raw Material Availability: An application of Mixed Integer Linear Programming <i>Jonrinaldi, Alexie Herryandie Bronto Adi, Resti Novira</i> |

Room-2: **Sinamar**

Topics: **Mechanical Engineering**

Session Chair: **Dr. Oknovia Susanti**

| Time | Presentation |
|---------------|---|
| 13.30 – 13.45 | ID 435 Analysis on Cracks Extension in Welding Zone in Stainless Steel Pipe Used at High Pressure Decomposer Equipment <i>Husaini, Muhammad Najib, Iskandar Hasanuddin</i> |
| 13.45 – 14.00 | ID 482 Thermal Characteristics and Phase Transformation of Iron Ores Containing Varied Crystalline Water with Coal Mixtures <i>Masdipa M F Sinuhaji, Sri Harjanto, , Abdul Hapid</i> |
| 14.00 – 14.15 | ID 507 Effect of Pouring Temperatures on Porosity and Mechanical Properties of Gravity Die Casting Magnesium Alloy <i>Is Prima Nanda, Muhammad Hafiz Jahare, Mohd Hasbullah Idris, S. Bhupal Kumar, Mohd Hazwan Hassim, Andril Arafat</i> |

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|----------------------|--|
| 14.15 – 14.30 | ID 564 Hydroxyapatite Coating on Titanium Alloy TNTZ using Electrophoretic Deposition <i>Gunawarman, Nuzul Ficky Nuswantoro, Arif Budiman, Djong Hon Tjong, Menkher Manjas</i> |
| 14.30 – 14.45 | ID 508 Mechanical and Degradation Properties of Zink Adopted Magnesium Alloys for Biomedical Application <i>Is Prima Nanda, Mohd Hazwan Hassim, Mohd Hasbullah Idris, Muhammad Hafiz Jahare, Samir Sani Abdulmalik, Andril Arafat</i> |
| 14.45 – 15.00 | ID 480 The Effect of Alum Addition on Shrinkage Temperature, Chemical Properties and Morphology in the Manufacture of Vegetable-Tanned Leather <i>Emiliana Kasmudjiastuti, Bidhari Pidhatika, Gresy Griyanitasari, Iwan Fajar Pahlawan</i> |

Room-3: Ombilin 1

Topics: **Civil Engineering**

Session Chair: **Yossyafra, Ph.D**

| Time | Presentation |
|----------------------|---|
| 13.30 – 13.45 | ID 163 Study of Implementation Traffic Control Zone On Road Works <i>Rio Andika, Purnawan, Elsa Eka Putri</i> |
| 13.45 – 14.00 | ID 359 Analytical Network Process (ANP) for Priority Setting of Strategic Roads Handling at Tebo Regency <i>Yosritzal, Jerri Permana, Bambang Istijono, Benny Hidayat, Taufika Ophiyandri, Hendra Gunawan</i> |
| 14.00 – 14.15 | ID 510 Intersection Performance Evaluation and Designing Intersection At Concourse Between Arterial Road and Ramp Of Medan-Kualanamu-Tebing Tinggi Highway <i>Amrizal, Ahmad Hamas Sorimatua Harahap</i> |
| 14.15 – 14.30 | ID 582 Determining the Priority of New Road Development According to the West Sumatera Provincial Government Perception <i>Rahma Dewi Susanti, Purnawan, Yossyafra</i> |
| 14.30 – 14.45 | ID 553 Sensitivity Analysis of Stormpav Composite Pavement <i>Elsa Eka Putri, Florida Jun ak Henry Rewani, Constontine Lee Lim Fah, Md Abdul Mannan, Wan Hashim Wan Ibrahim, Mohamad Raduan Kabit, Larry Silas Tirau, Ron Aldrino Chan @ Ron Buning</i> |
| 14.45 – 15.00 | ID 654 Immersion Marshall Test Of Warm Mix Asphalt Polymer Using Bayat Natural Zeolite <i>Ani Tjitra Handayani, S. N. Peni, H. Pandita</i> |

Room-4: Kuantan 1

Topics: **Electrical Engineering**

Session Chair: **Prof. Dr.Eng. Ariadi Hazmi**

| Time | Presentation |
|----------------------|--|
| 13.30 – 13.45 | ID 428 Design and Implementation of Microstrip Patch Ultra-wide Band Antenna for Detection of UHF Partial Discharge |

| | |
|----------------------|---|
| | <i>Z Nawawi, M A B Sidik, M I Jambak, N Ahmad, M H Ahmad, C L G P Kumar, E P Waldi, Aulia</i> |
| 13.45 – 14.00 | ID 433 Overcurrent Relay Coordination with Grid-Connected and Islanding Capability on Distribution Network with Distributed Generation <i>Adrianti, Sri Wahyuni, Muhammad Nasir</i> |
| 14.00 – 14.15 | ID 660 Modification of Arm Patch of Double Layer Printed Antenna for Partial Discharge Detection <i>Umar Khayam, Yuda Muhammad Hamdani</i> |
| 14.15 – 14.30 | ID 558 Development of HFCT sensor for partial discharge sensors <i>E P Waldi, A Y Frenzi, R Fernandez, Darmawan, Darwison, H D Laksono, Aulia, Novizon, A Hazmi, H Abrol, S Arief, Z Nawawi, M H Ahmad, N Hozumi</i> |
| 14.30 – 14.45 | ID 661 Design and Application of Trapezoid Periodic Log Antenna to Detect Partial Discharge <i>Umar Khayam, Arpan Zaeni, Miftahul Husna</i> |
| 14.45 – 15.00 | ID 534 Partial Discharge Pulses Characteristics of LDPE-NR Bionanopolymer as The Electrical Insulation under AC Voltage <i>Aulia, Eka Putra Waldi, Darwison, Novizon, M Heru Setiawan, Dwi Gustiono, Dody Andi Winarto, Yoggi Nugraha, M A Hafizi, Zainuddin Nawawi, M Abubakar Sidik</i> |

Room-5: Tarusan

Topics: Electrical Engineering

Session Chair: Dr. Eng. Ilhamdi Rusydi

| Time | Presentation |
|----------------------|---|
| 13.30 – 13.45 | ID 514 Real Time Condition Monitoring System of Gapless Arrester Based on ZigBee Protocol and Third Harmonic Leakage Current as Indicator Parameters <i>Novizon, S Aliffianti Ulfiah, Z Abdul Malek, Syafii, N Riska, Aulia, Darwison</i> |
| 13.45 – 14.00 | ID 515 Condition Based Monitoring of Gapless Surge Arrester Using Electrical and Thermal Parameters <i>Novizon, Z Abdul Malek, Syafii, M H Ahmad, Aulia, S Aliffianti Ulfiah</i> |
| 14.00 – 14.15 | ID 535 The Tensile Properties of Alumina dan Silica Bionanocomposite Material for High Voltage Insulation <i>Aulia, Eka Putra Waldi, M Heru Setiawan, Dwi Gustiono, Darwison, Novizon, Yoggi Nugraha, Abdurrahman, M A Hafizi, Zainuddin Nawawi</i> |
| 14.15 – 14.30 | ID 516 Power Loss Estimation of Polymeric Housing Surge Arrester using Leakage Current and Temperature Approach <i>Novizon, Z Abdul Malek, M H Ahmad, E P Waldi, H D Laksono, N Riska</i> |
| 14.30 – 14.45 | ID 580 Morphological Characteristic of Preliminary Breakdown Pulses of Hybrid Intra Cloud - Negative Cloud to Ground Lightning on Low Lattitude Region <i>Primas Emeraldi, Muhammad Imran Hamid, Ariadi Hazmi</i> |
| 14.45 – 15.00 | ID 611 Characteristics of acoustic signals from lightning using a microphone array observation system <i>Ariadi Hazmi</i> |

Room-6: Arau

Topics: **Environmental Engineering**

Session Chair: **Dr. Eng. Slamet Raharjo**

| Time | Presentation |
|---------------|---|
| 13.30 – 13.45 | ID 479 The Use of Protein Binder from Shaving Waste for Leather Finishing: Judging from the Physical, Chemical, and Morphological Properties of Lizard Skin Leather <i>Sri Sutyasmi, Iwan Fajar Pahlawan, Gresy Griyanitasari</i> |
| 13.45 – 14.00 | ID 483 Food Packaging Development of Bioplastic from Basic Waste of Cassava Peel (<i>Manihot utilisima</i>) and Shrimp Shell <i>Dasumiati, N Saridewi, M Malik</i> |
| 14.00 – 14.15 | ID 617 Preliminary Study of Solid Waste Management of Tourist Area in Pariaman City <i>Rizki Aziz, Amira</i> |
| 14.15 – 14.30 | ID 628 The Effect of Additional Vegetables and Fruits Waste on The Quality of Compost of Cassava Chip Industry Solid Waste on Takakura Composter <i>Yommi Dewilda, Rizki Aziz, RA Handayani</i> |
| 14.30 – 14.45 | ID 505 Minimization of Household Hazardous Solid Waste (HHSW) with 4R Concepts (Reduce, Reuse, Recycle and Recovery) in Padang City, Indonesia <i>Yenni Ruslinda, Slamet Raharjo, Yommi Dewilda, Hidayatullah, Rizki Aziz</i> |
| 14.45 – 15.00 | ID 539 Greenhouse Knockdown in Merauke <i>Muchlis Alahudin, Reinyelda D. Latuheru, Ni Luh Sri Suryaningsih</i> |

Parallel Sessions II

Date: November 8, 2018 (Thursday)

Time: 15.30 – 17.00

Room-1: Sumpur

Topics: **Industrial Engineering**

Session Chair: **Jonrinaldi, Ph.D**

| Time | Presentation |
|---------------|--|
| 15.30 – 15.45 | ID 419 A System for Improving Evaluation Suppliers: The Case of Procurement in Education Institution (Case Study: Andalas University) <i>Mohammad Farid, Rika Ampuh Hadiguna, Insannul Kamil</i> |
| 15.45 – 16.00 | ID 465 Investigation of Gender Influence on Behavioral Intention towards the Use Behavior of Mobile Internet Technology <i>Nurdinintya Athari, Nopendri</i> |

| | |
|---------------|---|
| 16.00 – 16.15 | ID 478 The Role of Dams on Water, Food and Energy Security Issues: A Global Review and Resolution for Indonesia <i>Insannul Kamil, Mego Plamonia, Berry Yuliandra, Chitrakala Muthuveerappan, Buang bin Alias</i> |
| 16.15 – 16.30 | ID 645 Waste Assessment Using Lean Approach in Receiving Process of Container Terminal: A Case of Teluk Bayur Port <i>Elita Amrina, Insannul Kamil, Dodi Rahmad</i> |
| 16.30 – 16.45 | ID 426 Bankruptcy Prediction of Listed Cement Company in Indonesian Stock Exchanges Using Altman Z-Score Model <i>Arifia Fitriani, Alizar Hasan, Ahmad Indrapriyatna, Aslim Awaludin Janas</i> |
| 16.45 – 17.00 | ID 498 The Impact of Strategy Planning on Small Medium Enterprise Performance in West Sumatera <i>Alizar Hasan, Prima Fithri, Muhammad Isra</i> |

Room-2: Sinamar

Topics: **Mechanical Engineering**

Session Chair: **Firman Ridwan, Ph.D**

| Time | Presentation |
|---------------|--|
| 15.30 – 15.45 | ID 462 The Determination of Workspace and the Performance Evaluation of PRoM-120 with 3 and 4 Kinematic Constants <i>Adriyan, Sufiyanto</i> |
| 15.45 – 16.00 | ID 550 Natural Frequencies of Twisted Cantilever Beam <i>Jhon Malta, Jefri, Mulyadi Bur, Eka Satria</i> |
| 16.00 – 16.15 | ID 592 The Development of Two Wheel Mobil Robot : Generated path using simulation and Actual Path of Mobile Robot are Compared <i>Teuku Firsya, Muhammad Tadjuddin, Iskandar, Syahriza</i> |
| 16.15 – 16.30 | ID 594 Experimental Evaluation of Tuned Liquid Column Damper and Tuned Mass Damper in a Space Structure Model <i>Lovely Son, Mulyadi Bur, Alhamdi D Andria</i> |
| 16.30 – 16.45 | ID 629 Numerical Analysis of U-Shaped Hysterisis Steel Damper with Energy Absorber for Seismic Areas <i>Eka Satria, Lovely Son, Mulyadi Bur, Sabril Haris, Muhammad Dzul Akbar</i> |
| 16.45 – 17.00 | ID 652 The Potential of Rise Husk Fibre/Native Sago Starch Reinforced Bio Composite for Automotive Interior Component <i>Nusyirwan, Hairul Abral, Misbahul Hakim, Rana Vadia</i> |

Room-3: Ombilin 1

Topics: **Mechanical Engineering**

Session Chair: **Dr. Eng. Eka Satria**

| Time | Presentation |
|---------------|---|
| 15.30 – 15.45 | ID 484 Design Analysis of the Spur Gear of Perpetual Motion Machine <i>Risal Abu, Irmayani, Rozza Linda</i> |

| | |
|---------------|--|
| 15.45 – 16.00 | ID 532 Effect of Garlic Oil as Lubricant Additives in Coconut and Palm Oils on the Physical and Tribological Properties <i>Dedison Gasni, Devi Chandra, A A Putra, R Fajri</i> |
| 16.00 – 16.15 | ID 647 The Effect of Solar Water Heater Performance by Variation of Plate Shaped <i>Darwin Harun, M. Ilham Maulana, Akhyar</i> |
| 16.15 – 16.30 | ID 653 The Effect of Particle Compositions on the Activation Energy of PA6/Bagasse Composite <i>Sulaiman Thalib, Syifaul Huzni, Syarizal Fonna, Che Husna Azhari, Sarani Zakaria</i> |
| 16.30 – 16.45 | ID 648 The Experimental Performance of Semi-Cylindrical Type of Concentrator Solar Collector on the Addition of Heat Storage Material <i>Darwin Harun, Zulfadhli, Akhyar</i> |
| 16.45 – 17.00 | ID 625 Design of Solid Desiccant Air Conditioning System <i>Dendi Adi Saputra M, Nanda Agna Saputra, Lusi Susanti, Prima Fithri, Dody Ichwana Putra</i> |

Room-4: Kuantan 1

Topics: **Electrical Engineering**

Session Chair: **Aulia, Ph.D**

| Time | Presentation |
|---------------|---|
| 15.30 – 15.45 | ID 552 Performance Analysis of Error Control Coding and Diversity in Image Transmission on Wireless Channels <i>Baharuddin, Mumuh Muharam, Henalde Andre, Rina Angraini</i> |
| 15.45 – 16.00 | ID 612 Wireless Monitoring System for Comparison Photovoltaic and Photovoltaic Thermal Characteristics <i>Krismadinata, Remon Lapis, Asnil</i> |
| 16.00 – 16.15 | ID 567 PWM Speed Control of DC Permanent Magnet Motor using PIC18F4550 Mikrocontroller <i>Mira Wellya Fatma, Muhammad Imran Hamid</i> |
| 16.15 – 16.30 | ID 620 Robot Mobile Control Based on Three EMG Signals Using Artificial Neural Network <i>Muhammad Ilhamdi Rusydi, Illa Aryeni, Joefrinaldo, Zhulfan Romadhon, Andrivo Rusydi</i> |
| 16.30 – 16.45 | ID 554 Performance Evaluation Image Transmission using Diversity Selection Combining Technique <i>Baharuddin, Rina Angraini</i> |
| 16.45 – 17.00 | ID 622 Towards Hand Gesture Based Control of Virtual Keyboards for Effective Communication <i>Muhammad Ilhamdi Rusydi, Oktrison, Willy Azhar, Oluwarotimi Williams Samuel, Febdian Rusydi</i> |

Room-5: Tarusan

Topics: **Electrical Engineering**

Session Chair: Dr. Eng. Abdul Rajab

| Time | Presentation |
|---------------|--|
| 15.30 – 15.45 | ID 466 Design of Poka-yoke System Based on Fuzzy Neural Network for Rotary-Machinery Monitoring <i>Mumuh Muharam, Melda Latif</i> |
| 15.45 – 16.00 | ID 542 Multichannel Audio Steganography Based on MPEG Surround using Direct Sequence Spread Spectrum <i>Micko Tomas, Baharuddin, Ikhwana Elfitri</i> |
| 16.00 – 16.15 | ID 621 Recognition of Horizontal Gaze Motion Based on Electrooculography using Tsugeno Fuzzy Logic <i>Muhammad Ilhamdi Rusydi, Mardiah Bahri, Rizky Syahreza Ryaldi, Fauzan Akbar, Kojiro Matsuhita, Minoru Sasaki</i> |
| 16.15 – 16.30 | ID 607 Design of Fuzzy Logic Controller for Temperature Control of Small-scale Food Storage <i>Melda Latif, Mumuh Muharam, Darmawan, Darwison, Reynaldo Revila Costa</i> |
| 16.30 – 16.45 | ID 597 Dipole Planar Bowtie Printed Antenna for ISM Application <i>Hanalde Andre, Rudy Fernandez, Baharuddin</i> |
| 16.45 – 17.00 | ID 662 Comparison of Partial Discharge Signal Denoisation Results using Hard Threshold and Soft Threshold Methods and Wavelet Transformation with Some Levels <i>Arpan Zaeni, Tria Kasnalestari, Umar Khayam</i> |

Room-6: Arau

Topics: Civil Engineering

Session Chair: Taufika Ophyandri, Ph.D

| Time | Presentation |
|---------------|---|
| 15.30 – 15.45 | ID 178 The Effects of the Distance Between Groundsill and Double Cylinder-Piers Against the Scour Patterns <i>Muhammad Thaahaa, Mas Mera</i> |
| 15.45 – 16.00 | ID 450 Identification of Construction Management System (CMS) in Construction Projects In Padang City <i>Benny Hidayat, Akhmad Suraji, Rio Frankly</i> |
| 16.00 – 16.15 | ID 600 Shear Behavior of Fly Ash Reinforced Concrete Beam Without Shear Reinforcement <i>Ari Endra Nasution, Ruddy Kurniawan, Rendy Thamrin</i> |
| 16.15 – 16.30 | ID 456 Analysis of Maintenance Management and Building Care In State University of Padang (Case Study of Educational And Office Building In State University of Padang) <i>Budi A Kombino, Benny Hidayat, Taufika Ophyandri</i> |
| 16.30 – 16.45 | ID 556 Infrastructure Maintenance System for Community Development Projects to Improve the Quality of Infrastructure Services in West Sumatra Province <i>Gusni Vitri, H Herman</i> |
| 16.45 – 17.00 | ID 459 Building Official's Awareness in Term of Building Permit System in Indonesia |

Parallel Sessions III

Date: November 9, 2018 (Friday)

Time: 10.15 – 11.45

Room-1: Sumpur

Topics: Industrial Engineering

Session Chair: Elita Amrina, Ph.D

| Time | Presentation |
|---------------|---|
| 10.15 – 10.30 | ID 427 Analysis of the Application of Quality Management Systems in Rubber Industry Based on ISO 9001:2015 <i>Nofriani Fajrah, Nilda Putri, Elita Amrina</i> |
| 10.30 – 10.45 | ID 575 Optimization of Significant Factors of Cement Compressive Strength at PT Semen Padang <i>Prima Fithri, Difana Meilani, Nilda Tri Putri, Chotimah F H</i> |
| 10.45 – 11.00 | ID 573 Technical Characteristics Determination of Crumb Rubber Product by using Quality Function Deployment (QFD) Phase I <i>Rosnani Ginting, Widodo</i> |
| 11.00 – 11.15 | ID 656 The Analysis of Judgmental Forecasting Based on the Availability of Contextual Information <i>Inna Kholidasari, Lestari Setiawati, Rahmi Selta Opera Endro</i> |
| 11.15 – 11.30 | ID 506 Application of Indoor Foliage Plants in Visual Inspection Activities <i>Desto Jumeno</i> |
| 11.30 – 11.45 | ID 491 Assessing Safety Performance of Tire Retreading Production Employees <i>Prima Fithri, Eri Wirdianto, Astari Yoselina</i> |

Room-2: Sinamar

Topics: Mechanical Engineering

Session Chair: Dedison Gasni, Ph.D

| Time | Presentation |
|---------------|---|
| 10.15 – 10.30 | ID 531 Sound Absorption Characteristics of Natural Fibrous Material from Coconut Coir, Oil Palm Fruit Bunches and Pineapple Leaf <i>Meifal Rusli, Muhammad Irsyad, Hendery Dahlan, Gusriwandi, Mulyadi Bur</i> |
| 10.30 – 10.45 | ID 570 Synthesis and Characterization of Calcium Precursor for Hydroxyapatite Synthesis from Blood Clam Shell (<i>Anadara antiquata</i>) using Planetary Ball Mill Process <i>Gunawarman, Jon Affi, Ilhamdi, Dian Juliadmi, Amalul Ahli</i> |

| | |
|---------------|--|
| 10.45 – 11.00 | ID 583 Production of Pig Iron Nugget from Low-Grade Iron Ore and Pyrolyzed Oil-Palm-Empty-Fruit-Bunch Composites <i>A Setiawan, R P Suratha, S Harjanto, E Kusri</i> |
| 11.00 – 11.15 | ID 646 Characterization on Particle Size Distribution Of Reduced Lateritic Nickel Ore Using Biomass Carbon Reductor <i>Faizinal Abidin, Sri Harjanto, Adji Kawigraha, Nur Vita Permatasari</i> |
| 11.15 – 11.30 | ID 650 Tensile Properties and Transparency of Poly-vinyl Alcohol (PVA) Film Using Ultrasonication Method <i>Hairul Abral, Arief Atmajaya, Fadli Hafizulhaq, Dian Handayani</i> |
| 11.30 – 11.45 | ID 643 Optimization of Maxtrix Compositions of Al ₂ O ₃ , SiO ₂ , Caolin and CaO on the Mechanical Properties of a Geopolimer Composite With Short Carbon Fibre <i>Jamiatul Akmal, Muhammad Badaruddin, Muhamad Kresna Ismoyo, Suropto Dwi Yuwono</i> |

Room-3: Ombilin 1

Topics: **Electrical Engineering**

Session Chair: **Adrianti, Ph.D**

| Time | Presentation |
|---------------|--|
| 10.15 – 10.30 | ID 528 Harmonic Analysis in Electrical System at Andalas University Hospital <i>Nur Afni, Eka Putra Waldi, Refdinal Nazir</i> |
| 10.30 – 10.45 | ID 548 Voltage Stability Evaluation Based on Power Flow Analysis Using Newton Raphson Method (Case Study: Central and South Sumatra Subsystem) <i>Muhammad Abdel Haq, Syafii, Heru Dibyo Laksono</i> |
| 10.45 – 11.00 | ID 566 Study on Static Electrification of PFAE-Mineral Oil Mixture <i>Abdul Rajab, Harry Gumilang, Motoo Tsuchie, M Kozako, M Hikita, Takashi Suzuki</i> |
| 11.00 – 11.15 | ID 572 Analysis of the unbalanced harmonic propagation in three-phase power system using a parallel program <i>Syukri Yunus, Aulia, Refdinal Nazir, Uyung Gatot S Dinata</i> |
| 11.15 – 11.30 | ID 644 Satic VAR Compensator for Improving Voltage Profiles and Transmission Losses: Case Study in Batam <i>Syukri Yunus, Yuni Ika Rahmi, Refdinal N, Aulia, Uyung G. S. D</i> |
| 11.30 – 11.45 | ID 581 The Polymeric Insulator Leakage Current Forecast Using ANFIS the Thermal Image Has Been Pre-processed with LabView <i>Darwison, Syukri Arief, Hairul Abral, Ariadi Hazmi, Novizon, Aulia, Eka Putra Waldi</i> |

Room-4: Kuantan 1

Topics: **Civil Engineering**

Session Chair: **Masrilayanti, Ph.D**

| Time | Presentation |
|---------------|---|
| 10.15 – 10.30 | ID 439 Simulation of The Effect of Floodway on Batang Kandis River Flood Control <i>Junaidi, Seri Marona, Dalrino</i> |

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|---------------|---|
| 10.30 – 10.45 | ID 565 The Study of River-Bed Change and Bed-load Transport in the Middle Segment of the Batang Kuranji River <i>Junaidi, E D E Putra, A Junaidi, Sunaryo, Nurhamidah</i> |
| 10.45 – 11.00 | ID 469 The Implementation of Sustainable Community-Based Environmental Sanitation Development Policy (slbm) in Tebo Regency <i>Benny Hidayat, Taufika Ophiyandri, Andriwan Tudi</i> |
| 11.00 – 11.15 | ID 636 Determining the Priority Criteria and Ranging of Provincial Bridge Maintenance in West Sumatra Using a Combination of the Fuzzy Analytical Hierarchy Process and Vikor-Modification Methods <i>Yossyafra, Nike Angelia, Yosritzal, Meyadtri, D I Mazni</i> |
| 11.15 – 11.30 | ID 671 Relative Displacement Effects of Integral Bridges due to Vertical Earthquake Loads <i>Masrilayanti, Weekes L</i> |
| 11.30 – 11.45 | ID 665 Seismic Retrofitting Analysis Using Concrete Jacketing and Shear Wall on RC Frame Structure <i>Fauzan, Febrin Anas Ismail, Zev Al Jauhari</i> |

Room-5: Tarusan

Topics: Environmental Engineering

Session Chair: Dr. Eng. Zulkarnaini

| Time | Presentation |
|---------------|---|
| 10.15 – 10.30 | ID 496 Effect of Tannery Wastewater Exposure on Chromium Detected in the Gill of <i>Oreochromis niloticus</i> <i>Tivany Edwin, Taufiq Ihsan, Hesti Tiara Tamsin</i> |
| 10.30 – 10.45 | ID 598 Distribution of Organic Contamination based on Depth Stratification in Maninjau Lake, Indonesia <i>Puti Sri Komala, Ansiha Nur, Ikrima Nazhifa</i> |
| 10.45 – 11.00 | ID 474 Geometric Accuracy Improvement of Very High Resolution Optical Data using TerraSAR-X DSM to Support Disaster Management in Indonesia <i>I.L. Sari, S. E. Siwi, R. P. Brahmantara, H.S. Dyatmika, A Suprijanto, K. A. Pradono, M Haidar</i> |
| 11.00 – 11.15 | ID 632 Column Study of Aluminium Adsorption from Groundwater by Natural Pumice <i>Shinta Indah, Denny Helard, Fatilla Hudawaty</i> |
| 11.15 – 11.30 | ID 608 Study of the Effect of Pipe Diameter Changes on the Properties of Fluid in Closed Channels Using Osborne Reynold Apparatus <i>Ansiha Nur, Reri Afrianita, Rhanda Dian Tri Fani Ramli</i> |
| 11.30 – 11.45 | ID 631 Effects of Different Pre-treatment Methods on Anaerobic Mixed Microflora for Hydrogen Production and COD Reduction from Domestic Effluent <i>Budhi Primasari, Muhammad Z A Tamin, Muhammad A H Mustafa</i> |

Room-6: Arau

Topics: Mechanical Engineering

Session Chair: Dr.Eng. Meifal Rusli

| Time | Presentation |
|---------------|---|
| 10.15 – 10.30 | ID 651 Surface Characterization of The Ceramic Coating Process on Aluminum Matrix Composite Reinforced Particulate <i>Hendri Sukma, Dwi Rahmalina, Bambang Sulaksono, Erlanda A. Pane</i> |
| 10.30 – 10.45 | ID 658 Hardness and Impact Energy Absorbed Produced by Q&T Steel and DQ&T Steel <i>Yurianto, Pratikto, Rudy, S., Wahyono, S., Eflita, Y., Agus, S., Yusuf, U.</i> |
| 10.45 – 11.00 | ID 666 The needs to investigate the effect of road surface vibrations to the fatigue life of a coil spring <i>Masri Ali, Husaini, T. E. Putra, Nurdin Ali</i> |
| 11.00 – 11.15 | ID 663 Mechanical Properties of Mild Steel by Adding <i>Theobroma cacao</i> Peels Extract (TCPE) Inhibitor <i>Yuli Yetri, Gunawarman, Rahmi Hidayati, Aidil Zamri</i> |
| 11.15 – 11.30 | ID 670 Effect of Coating Time and Protective Current on Thickness of Paint Layer of Steel ST-37 by Continuous Painting <i>Zuldesmi Mansjur, Arrijani, Moh. Fachruddin Suharto</i> |
| 11.30 – 11.45 | ID 659 In vitro of Mg-1.6 Gd alloys after Hot extruded for Biomaterial Application <i>Oknovia Susanti, Endang W. Bachtiar, Sri Harjanto, Gunawarman</i> |

Parallel Sessions IV

Date: November 9, 2018 (Friday)

Time: 13.30 – 15.00

Room-1: Sumpur

Topics: Industrial Engineering

Session Chair: Hilma Raimona Zadry, Ph.D

| Time | Presentation |
|---------------|---|
| 13.30 – 13.45 | ID 423 An Evaluation on Dr. M. Djamil Hospital Padang Parking Lot Capacity <i>Alfadhlani, Winni Septi Fanny Yasrin, Feri Afrinaldi</i> |
| 13.45 – 14.00 | ID 536 Designing of Welding Jig for Productivity Improvement and Costsavings in Threshers Cover Assembly : A Case Study on CV Citra Dragon Assembly Plant <i>Ismet Hari Mulyadi, Nilda Tri Putri, Fadiel Muhammad</i> |
| 14.00 – 14.15 | ID 472 Design of Ergonomic Grated Coconut Squeezer <i>Diana Chandra Dewi, Novrianti, Corry Handayani, Okta Wulandari, Iis Nurhayati</i> |
| 14.15 – 14.30 | ID 503 The Effect of Regular Physical Activity and Smoking Habit on Bone Mass among Male Industrial Workers in Padang, West Sumatra: A Cross-Sectional Study <i>Rahmi Elviana, Lusi Susanti, Hilma Raimona Zadry</i> |

Room-2: Sinamar

Topics: Mechanical Engineering

Session Chair: Dr. Eng. Jhon Malta

| Time | Presentation |
|---------------|--|
| 13.30 – 13.45 | ID 530 The Influence of Number of Solution Candidate on Performance of Boundary Element Inverse Analysis in Detecting Rebar Corrosion <i>Syarizal Fonna, Gunawarman, Syifaul Huzni, A K Ariffin</i> |
| 13.45 – 14.00 | ID 557 Corrosion Resistance of β type titanium (TNTZ) in NaCl 3% Solution <i>Jon Affi, Yuli Yetri, Nurbaiti, H Fajri, Syafrizal Fonna, Gunawarman</i> |
| 14.00 – 14.15 | ID 599 Atmospheric Corrosion Map of Structural Steel in Industrial Area: A Preliminary Investigation <i>Syifaul Huzni, Affandi, Iqbal Tanjung, Syarizal Fonna</i> |
| 14.15 – 14.30 | ID 624 Corrosion Potential of Reinforced Steel in Reinforced Concrete in Kabupaten Bireun: Analysis of Ground Water Content Used as a Concrete Mixture <i>Kurnia R D I, Suhaimi, Syifaul Huzni, Syarizal Fonna</i> |
| 14.30 – 14.45 | ID 669 Corrosion Behavior of Ti6Al4V ELI Coated Bioceramics in Artificial Saliva at Fluctuating Temperatures <i>Riza Muharni, Gunawarman, Yuli Yetri</i> |
| 14.45 – 15.00 | ID 649 Analysis of Cutting Forces and Surface Roughness of Fibre Reinforced Polimer for End Mill Processes <i>Firman Ridwan, Refki Havendri, Oknovia Susanti, Gusriwandi, Yulhizhar</i> |

Room-3: Ombilin 1

Topics: **Electrical Engineering**

Session Chair: **Dr. Eng. Rahmadi Kurnia**

| Time | Presentation |
|---------------|---|
| 13.30 – 13.45 | ID 497 Performance of Impedance Measurement Algorithm Applied in Line with Compensation Circuit <i>Nanang Rohadi</i> |
| 13.45 – 14.00 | ID 605 Improving the Quality and Quantity of Cinnamon Drying Process Using Art Cave in Lambung Bukit West Sumatra <i>Amimul Ummah Baiqi, Pepi Putri Utami, Dicky Anugrah, Ade Al fauzan, Windi Surya Ningsih, Muhammad Ilhamdi Rusydi</i> |
| 14.00 – 14.15 | ID 500 Parametric Sensitivity Analysis of SEL-421 Distance Relay Algorithms Used in Compensated Line <i>Nanang Rohadi</i> |
| 14.15 – 14.30 | ID 486 Understanding Public Perception of Domestic Solar Water Heating System: Case study in Surabaya, Indonesia <i>Elieser Tarigan, Kenneth Ritter</i> |
| 14.30 – 14.45 | ID 671 Preliminary Results on the Development of Monoester Type Insulating Oil From Coconut Oil <i>A. Rajab, F. E. Putra, J. S. Ramadhani, M. S. I. Silitonga, R. Kurniawan, K. Qibran, Melda L, M. I. Hamid</i> |

Room-4: Kuantan 1

Topics: **Environmental Engineering**

Session Chair: **Dr.Eng. Shinta Indah**

| Time | Presentation |
|---------------|---|
| 13.30 – 13.45 | ID 667 Utilization of Activated Bentonites as Adsorben Phosphor Elements Contained in WWTP Factory Palm Oil <i>Susila Arita, Widi Hartati, Lusi Septiarini, Desfournatalia, Naswir M.</i> |
| 13.45 – 14.00 | ID 468 Fatigue Analysis to Driver of Intercity in Province (AKDP) West Sumatra A Case Study Route of Padang Bukittinggi Payakumbuh <i>Taufiq Ihsan, Yaumal Arbi, Intan Purnama Sari</i> |
| 14.00 – 14.15 | ID 668 Spatial Distribution of Coliform Bacteria in Batang Arau River, Padang, West Sumatera, Indonesia <i>Denny Helard, Shinta Indah, M. Wilandari</i> |
| 14.15 – 14.30 | ID 655 Analysis of Water Balance Maninjau Lake West Sumatera <i>Sunaryo, Yen Dwi Nola, Bambang Istijono, Junaidi</i> |

Room-5: **Tarusan**

Topics: **Industrial Engineering**

Session Chair: **Dr.Eng. Desto Jumeno**

| Time | Presentation |
|---------------|--|
| 13.30 – 13.45 | ID 432 Gap Analysis Between Production and Market Demand of Patchouli Oil in West Pasaman Using System Dynamic <i>Dina Rahmayanti, Santosa, Novizar Nazir, Rika Ampuh Hadiguna</i> |
| 13.45 – 14.00 | ID 657 The Evaluation of Bullwhip Effect on Distribution System of a Supply Chain Using Centralized Demand Information Method <i>Inna Kholidasari, Ayu Bidiawati JR, Melani Eka Sari</i> |
| 14.00 – 14.15 | ID 485 The Location-allocation Decision under the Dynamic Increment of Demand for Selecting the Local Distribution Centers to Face Sumatra Megathrust: Study Case of Padang City <i>Liperda Rahmad Inca, Sirivongpaisal Nikorn</i> |
| 14.15 – 14.30 | ID 477 A System for Improving Evaluation Suppliers: The Case of Procurement in Education Institution <i>M Farid, R A Hadiguna and I Kamil</i> |

Room-6: **Arau**

Topics: **Electrical Engineering**

Session Chair: **Novizon, PhD**

| Time | Presentation |
|---------------|---|
| 13.30 – 13.45 | ID 585 Increasing the Quality and Power Capacity of HERIC PV-Inverter trough Multilevel Topologi Implementation <i>Muhammad Imran Hamid, Dicky Ardiansyah</i> |
| 13.45 – 14.00 | ID 610 Shape Object Selection Using Chi Square Method <i>Rahmadi Kurnia, Fitri Kurnia, Fitrilina</i> |
| 14.00 – 14.15 | ID 571 Partial Discharge Characteristics of Nanosilica Biopolymer under AC Voltage |

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| | <i>Aulia, Eka Putra Waldi, Darwison, Mahendra Anggaravidya, Novizon, M Heru Setiawan, Yoggi Nugraha, Abdurrahman, M A Hafizi, Irfan Jambak</i> |
| 14.15 – 14.30 | ID 623 <i>Development of Rogowski Coil Sensor for Partial Discharge Detection E P Waldi, A Y Frenzi, R Fernandez, Darmawan, Darwison, H D Laksono, Aulia, A Hazmi, H Andre, H Abral, S Arief, Z Nawawi, M H Ahmad, N Hozumi</i> |