



APSAEM2024

The 10th Asia-Pacific Symposium on Applied Electromagnetics and Mechanics
Melaka, Malaysia, 16th–19th July 2024

www.apsaem2024.com, apsaem@utem.edu.my

SCHEDULE SUMMARY

16 th July 2024, Tuesday	
13.00 – 16.00	Delegation checks in to hotel
15.00 – 17.00	Registration
17 th July 2024, Wednesday (Conference Day 1)	
08.30 – 09.30	Delegation moves to UTeM
09.30-10.00	Registration
10.00-10.30	Opening ceremony
10.30-11.00	Coffee Break/Group photo
11.00-11.40	Keynote Speech 1
11.40-12.20	Keynote Speech 2
12.20-14.00	Lunch Break
14.00-15.40	Session 1
15.40-16.00	Coffee Break
16.00-17.40	Session 2
17.40	Delegation back to hotel
19.30	Delegation goes to dinner place
20.00-22.00	Dinner
18 th July 2024, Thursday (Conference Day 2)	
08.30 – 09.30	Delegation move to UTeM
09.30 – 11.10	Session 3
11.10 – 11.30	Coffee break
11.30 – 12.50	Session 4
12.50-14.00	Lunch Break
14.00-16.00	Session 5
16.00 – 16.20	Coffee Break
16.20-18.40	Session 6





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18.40	Delegation back to hotel
19 th July 2024, Friday (Field Trip)	
07.00-13.00	Field trip

OPENING CEREMONY

Time	Session	Speaker
10.00-10.05	Welcoming remarks	Master of Ceremony
10.05-10.10	Doa recites	M. Zulkifli Ab. Rahman
10.10-10.15	Cultural show	
10.15-10.25	Welcoming speech by conference chairman	Associate Professor Dr Hidayat bin Zainuddin Universiti Teknikal Malaysia Melaka
10.25 – 10.30	Closing remarks	Master of Ceremony

17th JULY 2024 (CONFERENCE DAY 1)

Room : Auditorium Hall, FTKIP		
Session 1		
Time : 14.00 – 15.40 (GMT +8)		
Moderators : Yoshikazu Tanaka (Hiroshima University, Japan)		
TIME (GMT +8)	CODE	PAPER
14.00 – 14.20	PAPER 1	Paper ID : 1571010608 Magnetization of Magnetic Pipe Using Two C-Shaped Permanent Magnets for Monitoring Pipe Wall Thickness <i>Kunihisa Tashiro, Kenta Ishikawa and Hiroyuki Wakiwaka</i>
14.20 – 14.40	PAPER 2	Paper ID : 1571013104 Barkhausen Noise Properties with Applied Biaxial Strain and Quantitative Estimation Method of Strain <i>Hiroaki Kikuchi, Kento Takahashi and Keiichi Matsumura</i>
14.40 – 15.00	PAPER 3	Paper ID : 1571030001 Design Enhancement and Evaluation of Segmented Stator Divided Teeth Outer Rotor Embedded Permanent Magnet Synchronous Motor <i>Hairul Faizi Hairulnizam, Norhisam Misron, Nur Amira Ibrahim, Hafiz Rashidi Ramli, Chockalingam Aravind Vaithilingam and Tsuyoshi Hanamoto</i>





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15.00 – 15.20	PAPER 4	Paper ID : 1571022523 Angle Error Evaluation of Vernier Pattern Angle Sensor with Discrete Fourier Transform <i>Kazekami Yusuke</i>
15.20 – 15.40	PAPER 5	Paper ID : 1571020338 On the Stability of the Barzilai-Borwein Descent Method in Solving the Inverse Electromagnetic Scattering Problem <i>Tareq F A Zanoon</i>

Room : Auditorium Hall, FTKIP		
Session 2		
Time : 16.00 – 17.20 (GMT +8)		
Moderators : Masaya Watada (Tokyo City University, Japan)		
TIME (GMT +8)	CODE	PAPER
16.00 – 16.20	PAPER 6	Paper ID : 1571018039 Prototyping and Evaluation of Piezoelectret Made of Natural Rubber and FEP Film <i>Shunta Sasaki, Yoshikazu Tanaka, Ryo Yotsumoto, Ryuichi Kato and Takayuki Yokobe</i>
16.20 – 16.40	PAPER 7	Paper ID : 1571021884 Modeling of Magnetostriction Curves of Ni Based on Jiles-Atherton Type Differential Hysteresis Model <i>Hairui Ma</i>
16.40 – 17.00	PAPER 8	Paper ID : 1571022465 Effect of Woven Fiber Structure on Electrical Resistivity of Carbon Fiber Dry Cloth for Electromagnetic Induction Heating <i>Rikuto Miyake, Aoi Ishimura, Yoshikazu Tanaka, Tomoyoshi Horie, Daiki Matsuyama, Kiyoka Takagi and Nobuyuki Kamihara</i>
17.00 – 17.20	PAPER 9	Paper ID : 1571023008 Sensitivity Enhancement of Localized Surface Plasmon Resonance (LSPR) Spectra Gold-Silver Nanorod for Ethylen Glicol Sensor Using Boundary Element Method Simulation <i>Dewi Ulul Azmi</i>





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PARALLEL SESSION

18th JULY 2024 (CONFERENCE DAY 2)

Room : Auditorium Hall, FTKIP		
Session 3		
Time : 09.30 – 11.00 (GMT +8)		
Moderators : Raja Nor Firdaus Kashfi bin Raja Othman (Universiti Teknikal Malaysia Melaka, Malaysia)		
TIME (GMT +8)	CODE	PAPER
09.30 – 09.50	PAPER 10	Paper ID : 1571021095 Wireless Environment Information Sharing Method Using Terminal-To-Terminal Communication in LPWA <i>Yudai Koike, Kosei Tsukada and Osamu Takyu</i>
09.50 – 10.10	PAPER 11	Paper ID : 1571022306 Dynamic Transmission Frequency Control Method for Fair Packet Arrival Rate of Terminals in LPWA <i>Taiga Kawaguchi, Shunsuke Shimizu and Osamu Takyu</i>
10.10 – 10.30	PAPER 12	Paper ID : 1571022431 Electrical Characteristics of Deformable Coil Sewn onto Stretchable Fabric <i>Hikari Ryu</i>
10.30 – 10.50	PAPER 13	Paper ID : 1571022689 Low-Temperature Cooking and Pasteurization Effect of Dielectric Heating at 50 Hz AC Voltage <i>Kei Imai, Yuuki Furuyama, Kouji Kuramochi and Takahiko Yamamoto</i>
10.50 - 11.10	PAPER 14	Paper ID : 1571029663 Anti-Theft Motorcycle Parking System Using IOT to Enhance Security Yeap Sheng Zhuang, Mas Haslinda Mohamad and Fairul Azhar Abdul Shukor





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Room: Auditorium Hall, FTKIP		
Session 4		
Time : 11.30 – 12.50 (GMT +8)		
Moderators : Kunihisa Tashiro (Shinshu University, Japan)		
TIME (GMT +8)	CODE	PAPER
11.30 – 11.50	PAPER 15	Paper ID : 1571022118 Improvement of the Magnetic Properties of a Magnetic Composite Material for Motor Cores <i>Takashi Nakamura, Ryoto Takagi, Tsutomu Mizuno and Mitsuhide Sato</i>
11.50 – 12.10	PAPER 16	Paper ID : 1571023903 Operational Parameters of the Segmented Switched Reluctance Linear Synchronous Motor (SSRLSM) <i>Nur Ashikin Mohd Nasir, Fairul Azhar Abdul Shukor, Norrimah Abdullah and Raja Nor Firdaus Kashfi Raja Othman</i>
12.10 – 12.30	PAPER 17	Paper ID : 1571028964 Online Weighting Factor Tuning in Model Predictive Torque Control for Induction Motor <i>Moataz M. A. Alakkad, Zulhani Rasin and Md Hairul Nizam Talib</i>
12.30 – 12.50	PAPER 18	Paper ID : 1571025374 Simulation of BLDC Motor for Residential Elevator Application <i>Nor Aishah Md Zuki, Raja Nor Firdaus Kashfi Raja Othman and Fairul Azhar Abdul Shukor</i>
12.50 – 13.10	PAPER 19	Paper ID: 1571030002 Evaluation of Experimental Permanent-Magnet Synchronous Motor Utilizing New Magnetic Material for Core <i>M.Zulkifli Ab. Rahman, R.N. Firdaus and Fairul Azhar</i>





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Room : Auditorium Hall, FTKIP		
Session 5		
Time : 14.00 – 16.00 (GMT +8)		
Moderators : Wataru Hijikata (Tokyo Institute of Technology, Japan)		
TIME (GMT +8)	CODE	PAPER
14.00 – 14.20	PAPER 20	Paper ID : 1571013862 Development of Static Load Sensor Utilizing Both Direct and Inverse Piezoelectric Effect of Piezoelectric Element <i>Kazuhiko Oshima</i>
14.20 – 14.40	PAPER 21	Paper ID : 1571021964 Improvement of Efficiency of Interior Winding Synchronous Motor with Magnetic Rings <i>Ryoto Takagi, Jun Kitajima, Mitsuhide Sato, Tsutomu Mizuno and M. Nirei</i>
14.40 – 15.00	PAPER 22	Paper ID : 1571022489 Investigation of Composite Material Discrimination Using Coil Impedance Characteristics Based on Machine Learning <i>Kotaro Tsukadaira, K. Tashiro, Hiroyuki Wakiwaka, Shuhei Saito, Kazutoshi Machida and Yoshihiro Nakamura</i>
15.00 – 15.20	PAPER 23	Paper ID : 1571029053 The Effects of Variation in Pole Pitch Ratio on the Permeance of the SSRLSM <i>Norrimah Abdullah, Fairul Azhar Abdul Shukor, Raja Nor Firdaus Kashfi Raja Othman, Nur Ashikin Mohd Nasir and Suhairi Rizuan Che Ahmad</i>
15.20 – 15.40	PAPER 24	Paper ID : 1571030307 Study on Optimal Structures for Bearingless Magnetic-Geared Motors <i>Hori Kaito, Katsuhiro Hirata and Noboru Niguchi</i>
15.40 – 16.00	PAPER 25	Paper ID : 1571021439 Fluid Analysis Using Ansys CFX for the Development of Blades for a Magnetically Levitated Centrifugal Pump in a Pediatric Implantable Cardiac Assist Device <i>Akiho Kobayashi, Taisei Nojima, Akira Nishida, Shohei Arita, Masaya Watada and Genu Takahashi</i>



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Room : Auditorium Hall, FTKIP		
Session 6		
Time : 16.20 – 18.20 (GMT +8)		
Moderators : Fairul Azhar bin Abdul Shukor (Universiti Teknikal Malaysia Melaka, Malaysia)		
TIME (GMT +8)	CODE	PAPER
16.20 – 16.40	PAPER 26	Paper ID : 1571013465 Automatic Measurement of Vessel Diameter for Diagnostic Assistance of Abdominal Aortic Aneurysm on Ultrasound Imaging <i>Akira Nishida, Taisei Nojima, Shohei Arita, Genu Takahashi, Masaya Watada and Akira Mori</i>
16.40 – 17.00	PAPER 27	Paper ID : 1571013466 Functional Evaluation of Bending Forceps for Reducing Manipulation Difficulty in Laparo-Endoscopic Single Site Surgery <i>Taisei Nojima, Akira Nishida, Shohei Arita, Genu Takahashi and Masaya Watada</i>
17.00 – 17.20	PAPER 28	Paper ID : 1571013486 Effect of Saline Administration of Atmospheric Low-Temperature Plasma Irradiation on the Mechanism of Symptom Suppression and Inflammation Inhibition in Pulmonary Arterial Hypertension <i>Shohei Arita, Akira Nishida, Taisei Nojima, Genu Takahashi, Masaya Watada and Akira Mori</i>
17.20 – 17.40	PAPER 29	Paper ID : 1571020495 Development of A Stretchable Electrical Skin with A Contact Position Function Utilizing Electret <i>Satoh Kazuho and Wataru Hijikata</i>
17.40 – 18.00	PAPER 30	Paper ID : 1571022737 Basic Experiments of a Maglev Shear Load Device for Evaluating the Resistance of Hemostatic Factors to Degradation by Shear Stress <i>Aoi Yokoyama and Wataru Hijikata</i>
18.00 – 18.20	PAPER 31	Paper ID : 1571022769 Effect of a Magnetic Field in Mice Elevated Plus Maze Test <i>Yuno Nakada, Shun Kakuta, Tsugumi Yamauchi, Akiyoshi Saitoh, Daisuke Yamada and Takahiko Yamamoto</i>