

2nd International Conference on Railway and Transportation (ICORT 2023)

Advances in Engineering Research Volume 231

Madiun, Indonesia and Online
2 November 2023

ISBN: 978-1-7138-9244-1

Printed from e-media with permission by:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571



Some format issues inherent in the e-media version may also appear in this print version.

Print copyright© (2024) by Atlantis Press (part of Springer Nature)
All rights reserved.
Copyright for individual electronic papers remains with the authors.

For permission requests, please contact the publisher:

Atlantis Press
Van Godewijckstraat 30
3311GX Dordrecht
The Netherlands

contact@atlantis-press.com

Printed with permission by Curran Associates, Inc. (2025)

Additional copies of this publication are available from:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571 USA
Phone: 845-758-0400
Fax: 845-758-2633
Email: curran@proceedings.com
Web: www.proceedings.com

TABLE OF CONTENTS

BER Analysis on Precoded MIMO-GFDM as Preliminary Study of Waveform Candidates in the Railway Environment.....	1
<i>Dara Aulia Feryando, Agustinus Prasetyo Edy Wibowo, Santi Triwijaya</i>	
Analysis of Service Quality on Train Customer Loyalty of KAI Access Users	12
<i>Ririn Agus Triani, Sri Purwanto</i>	
Detection of Railways Through Axle Detection Patterns Using Inductive Proximity Sensors	24
<i>Lusi Ariani, Fathurrozi Winjaya, Natriya Faisal Rachman</i>	
Ability to Pay (ATP) and Willingness to Pay (WTP) Jakarta Mass Rapid Transit	33
<i>Nur Nayla Rahma, Atik Roro Siti Kuswati, Safrudin Kurniawan</i>	
Comparative Study of Life Cycle Between New Bearings and Overhaul Bearings on Train Wheels at Balai Yasa Manggarai	42
<i>Dimas Adi Perwira, Akbar Zulkarnain, Henry Widya Prasetya</i>	
Optimizing Customer Satisfaction Through Measuring the Actual Servqual Score (ASC) and Importance - Performance Analysis (IPA) of the Integrated Cross Rail (LRT) of South Sumatra	52
<i>Mariana Diah Puspitasari, Ary Putra Iswanto, Adi Wicaksono</i>	
Simulation of Grooved Wear on Mass Rapid Transit Train Wheels by Finite Element Method	64
<i>Ilham Satrio Utomo, Dadang Sanjaya Atmaja, Akbar Zulkarnain, Moh. Dheo Firmansyah</i>	
The Effect of Cooling Media Variation and Wet Process Turning Feed Speed on the Roughness of St 60 Steel on Locomotive Wheel Axle.....	73
<i>Akbar Zulkarnain, Ilham Satrio Utomo, Satria Bayu Adhitya, Aris Budi Sulisty</i>	
Feasibility Analysis of Excavator Vaia Car (Special Equipment) Engine Oil at the Ngrombo Railway Maintenance Center.....	79
<i>Hari Boedi Wahjono, Fadli Rozaq, Dimas Adi Perwira, Naufal Wirawan</i>	
Accuration of Measurement Snake Motion Based on Kalman Filter Sensor Fusion.....	86
<i>Fathurozi Winjaya, Dara Aulia Feryando, Nur Annisa Azizah</i>	
Design of Microcontroller-Based Secondary Surveillance Radar as a Learning Media.....	99
<i>Yitro Marchel Mintu, Ahmad Rossydi, M. Akbar</i>	
Automatic Transfer Switching System Base Arduino Nano for Solar Photovoltaic on Railroad Crossing.....	115
<i>Akhwan Akhwan, Sunardi Sunardi, Edi Nyoto Setyo Marsusiadi, Dedik Tri Istiantara, Erna Utami</i>	
Controlling Air Side Birds to Maintain Safe Flight Operations at Yogyakarta International Airport	129
<i>Fadhil Ahmad Farrasy, Direstu Amalia, Bambang Wijaya Putra, Setiyo Setiyo, Sunardi Sunardi, Dwi Candra Yuniar</i>	
Maintenance Strategy for Jakarta LRT Platform Screen Door Components Based on Failure Risk Using FMEA Method	150
<i>Regina Nesti Aprilia, Mariana Diah Puspitasari, Arief Darmawan</i>	
The Need for Integrated Intermodal Facilities at Rangkasbitung Station.....	169
<i>Titania Dewi Samudra, Sapto Priyanto, Atik Roro Siti Kuswati</i>	

Assessment of Wooden Sleepers Replacement with Synthetic Sleepers Case Study on a Railway Bridge Using Analytical Hierarchy Process (Ahp).....	178
<i>Nova Ernanda, Wahyu Tamtomo Adi, David Malaiholo</i>	
Analysis of the Effect of Antenna Type on RTL-SDR Radio Transmit Power	188
<i>Bayu Purbo Wartoyo, Syahrir Rasyid, Muhammad Rizky Ramadhan, Ahmad Rossydi</i>	
Investigation of the Application of Water Injection to the Performance of Commonrail Diesel Engine.....	198
<i>Fadli Rozaq, Willy Artha Wirawan, Natriya Faisal Rachman, Arif Darmawan</i>	
The Ability to Pay and Willingness to Pay for LRT Bandung Raya Planning Babakansiliwangi Leuwipanjang	205
<i>Ifa Sefti Nugraeni, Arinda Leliana, Safrudin Kurniawan, Nanda Ahda Imron</i>	
Risk Management of Box Culvert Construction Work at Bh 1149 Cross Cirebon - Kroya with Failure Mode and Effect Analysis and Fault Tree Analysis Method	213
<i>Puspita Dewi, Septiana Widi Astuti, Elvina Royani Tiana Putri</i>	
Design of Testing E-Form and Reminder of Calibration Schedule for Operation Facility Testing Equipment	228
<i>Belqis Priya Nanda Dewi, Agustinus Edy Wibowo, Teguh Arifianto</i>	
Empirical Assessment of Strategies to Enhance Energy Efficiency Through Regenerative Braking: A Case Study of the Pegangsaan Dua-Velodrome Line in Jakarta's Light Rail Transit.....	246
<i>Arief Darmawan, Yunanda Raharjanto</i>	
Accuracy Assessment of GIS-Based Map for Landslide Susceptibility for a Railway Track	260
<i>Wahyu Tamtomo Adi, Adya Aghastya, Rusman Prihatanto, Nanda Ahda Imron, Artanto Rizky Cahyono</i>	
Inspection of Clamping Force for E-Clip and DE Clip Fastening Systems.....	273
<i>Muhammad Iqbal, Rusman Prihatanto, Adya Aghastya, Wahyu Tamtomo Adi, Wawan Riyanta</i>	
Comparative Analysis of DMR (Digital Mobile Radio) Tier 3 Performance Based on RSSI Parameters at the Rammang-Rammang Site	282
<i>Muhammad Arfan Safarul Firmansyah, Dara Aulia Feryando, Agustinus Prasetyo Edy Wibowo</i>	
Financial Feasibility Study Batara Kresna Pioneer Train	291
<i>Genny Kusuma Dewi, Sapto Priyanto, Nanda Ahda Imron</i>	
The Intersection of Machine Learning, Zakat, and Transportation for a Healthy Society	300
<i>Moch Yusuf Asyhari, Pratiwi Susanti, Juwari, Khairul Adilah Ahmad, Norin Rahayu Shamsuddin, Taniza Tajuddin</i>	
Transport Safety Improvement: Evaluation of Berthing Facilities and Mooring Patterns at the 16 Ilir River Port in Palembang City	312
<i>Yeti Komalasari, Monica Amanda, Febriansyah Febriansyah, Sudarwan Danim</i>	
Evaluation of Calculating Railroad Components on Maintenance Patterns at Level Crossings Using Concrete Level Crossings.....	324
<i>Hana Wardani Puruhita, Irfan Maskur, Septiana Widi Astuti</i>	

Anxiety Levels of the Cibitung Station Platform Users as Experience of Waiting for an Urban Rail Service (Based on the Noise Level and Passing Train Speed).....	341
<i>Ocky Soelistyo Pribadi, Muhammad Nurhadi, Ika Setyorini Pradjojowaty, Bobby Agung Hermawan, Yustia Ika Wardhani</i>	
Variation of Friction Stir Welding Chisel Radius Pin on Tensile Strength of Aluminum 6061	354
<i>Henry Widya Prasetya, Damar Isti Pratiwi, Dimas Adi Perwira, Saddam Miftahudin</i>	
Double Track Railway Planning of Terminal Petikemas Surabaya-Surabaya Pasar Turi.....	362
<i>Muhammad Rahman Iman, Adya Aghastya, Muhammad Adib Kurniawan, Armyta Puspitasari</i>	
Prediction of Stress, Strain, and Deformation in AC Frame of Shunting Locomotive with Exceptional Load.....	382
<i>Anung Dwi Prasetyo, Dadang Sanjaya Atmaja, Ilham Satrio Utomo, Willy Artha Wirawan</i>	
Analysis of the Effect of Service Quality and Promotion on Passenger Buying Interest in South Sumatra LRT	392
<i>Shinta Puspitasari, Sapto Priyanto, Handoko Handoko</i>	
Analysis of Energy Storage Systems Using Lithium-Ion and Lead-Acid Batteries with Supercapacitors as Buffers	404
<i>M. Afif Amalul Arifidin, Wahyudi Wicaksono, Mariana Diah Puspitasari, Teguh Arifianto, Rafi Hafizh Hawari, Ilham Khafid Zarkasi</i>	
Study of DC Railway Traction Substation on Rectifier Loading Variations	417
<i>Andri Pradipta, Santi Triwijaya, Rizal Andreansyah, Sunardi Sunardi</i>	
The Reliability Analysis of Railroad Switch Machine	425
<i>Natriya Faisal Rachman, Ahmad Ependi, Ahkwan, Muhammad Zainul Arifin</i>	
Drainage Channel Planning Between Gadobangkong Station to Padalarang Station.....	437
<i>Rifki Andrian Ade Maulana, Adya Aghastya, Armyta Puspitasari</i>	
Comparison of Piezoelectric and Electromagnetic Technologies in Harnessing the Vibration Or Sound of Trains as a Rail Contact Battery Charger	447
<i>Herlambang Satriyo Utomo, Arief Darmawan, Mariana Diah Puspitasari</i>	
Design AFSI APPS (Airport Flight Service Information) as an Android-Based Air Transport Information Application	458
<i>Evandri Paulus Silitonga, Viktor Suryan, Siti Salbiah Ristumanda, Adha Febriansyah, Yeti Komalasari, Minulya Eska Nugraha</i>	
Aerodynamic Impact Analysis of “Noise Housing” Installation for Railway Wheels.....	470
<i>Sugiono Sugiono, Bayu Rahayudi, Astuteryanti Tri Lustyana, Salim Subarkah, Lucia Wulandari</i>	
Examining Trans Banyumas’ Passenger Accessibilities Against Smart Mobility Initiatives.....	481
<i>Khikmatul Aliyah, Fauzan Romadlon, Famila Dwi Winati, Abdul Hamid</i>	
Innovation in the Development of Rail Elevation Inspection Tools Using a Combination of Binoculars Precisions Optic and Laser Sight.....	492
<i>Wawan Riyanta, Rusman Prihanto, Ricky Agus Prayoga</i>	
Design and Simulation of On-Grid Solar Power Plant for the Power Needs of PPI Madiun Crossing Gate	503
<i>Asep Dwi Pandurisnawan, Natriya Faisal Rachman, Santi Tri Wijaya, Sunardi Sunardi</i>	

The Corrosion Effect of Gusset Plates on the Steel Joint Structure of Bridges: A Literature Review Based on VOS Viewer	515
<i>Andri Irfan Rifai, Dimas Endriansah, Joewono Prasetyo, Muhammad Isradi</i>	
Circuit Design of Energy Storage System with Supercapacitor as Buffer in Electric Vehicle Application	528
<i>Wahyudi Wicaksono, M. Afif Amalul Arifidin, Mariana Diah Puspitasari, Rafi Hafizh Hawari, Ilham Khafid Zarkasi, Sunardi Sunardi</i>	
Buckling Load and Performance Assessment of Train Roof Stiffened Panels: A Numerical Study	536
<i>Ridwan Ridwan, Nur Candra Dana Agusti, Sudarno Sudarno, Sutrisno Sutrisno, Elia Larasati, Aditya Rio Prabowo</i>	
Analyzing Hybrid Systems for Railway Crossing Energy Generation	551
<i>Santi Triwijaya, Natria Faisal</i>	
Analysis of Urban Waste Management Transportation Networks	561
<i>Saifulloh Saifulloh, Nasrul Rofiah Hidayati, Aan Zainal Muttaqin, Suhardi Hamid, Salehuddin Shuib, Siti Nurbaya Ismail</i>	

Author Index