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Ir. Ikhsan Siregar, S.T., M.Eng., Ph.D. lahir di Medan pada 10 Juni 1980. Beliau menjabat sebagai Sekretaris Universitas Universitas Sumatera Utara (USU) dan merupakan dosen tetap di Departemen Teknik Industri USU. Bidang kepakarannya meliputi perancangan produk, manufaktur, additive manufacturing, dan proses permesinan, dengan fokus penelitian pada pengembangan teknologi manufaktur dan inovasi produk berkelanjutan.

Publications

2026

Jurnal internasional bereputasi

Residual distortion and stress behaviour in laser metal deposition of Inconel 625: a comparative analysis based on experimental, analytical and nonlinear numerical methods

Azri Rahimi , Yupiter HP Manurung , Assoc. Prof. Dr. Mohd Shahrman Adenan , Muhd Faiz Mat , Steven Y. Liang , Sarah Nadiah Mohd Ghazali , IKHSAN SIREGAR

2026

Jurnal internasional bereputasi

OPTIMIZATION OF PROCESS PARAMETERS FOR MILLING OF Ti-6Al-4V ALLOY ADDITIVELY MANUFACTURED

IKHSAN SIREGAR , Assoc. Prof. Dr. Mohd Shahrman Adenan , Juri Saedon

2025

Jurnal internasional bereputasi

(MY)CAT4SLM© - A novel advanced SLM costing analysis tool for small and Medium-Sized Enterprises: Development, Implementation and Validation

Thoufeili Taufek , Aimuni Abd Aziz , Muhammad Syafiq Baharuddin , Muhammad Zulhilmi Izhar , Farazila Yusof , Mohd Fadzil Jamaludin , IKHSAN SIREGAR , Muhammad Alif Azli , Yupiter HP Manurung , Assoc. Prof. Dr. Mohd Shahrman Adenan

2025

Artikel ilmiah

Bioactivity Profiling of Eco-Enzyme from Organic Waste Streams: A Study on Phenolic Content, Enzymatic Functionality and Antimicrobial Efficacy

MAHATIR MUHAMMAD , INDAH RIZKYA TARIGAN , KHALIDA SYAHPUTRI , IKHSAN SIREGAR

2025

Jurnal nasional terakreditasi

Development and Performance Validation of a Prototype Digital pH and Temperature Meter for Consumer Applications

MAHATIR MUHAMMAD , IKHSAN SIREGAR , JOIVERDIA ARIFIYANTO , RULIANDA PURNOMO WIBOWO

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Jurnal nasional terakreditasi

Development and Performance Validation of a Prototype Digital pH and Temperature Meter for Consumer Applications

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Jurnal nasional terakreditasi

Sistem Pendukung Keputusan untuk Tata Letak Warehouse dengan Pendekatan Class Based Storage

INDAH RIZKYA TARIGAN , IKHSAN SIREGAR , KHALIDA SYAHPUTRI , RAHMI MEILINA SARI , TEGUH JUANG SINAGA , IR. UKURTA TARIGAN, MT

2025

Jurnal internasional

Milling Performance of Selective Laser Melted Ti6Al4V: A Taguchi Approach for Surface Roughness Optimization

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Jurnal internasional bereputasi

Mould Design Improvement and Flaw Analysis for Investment Casting Process using Numerical Computation with Experimental Validation

A. R. A. Rahman , Y. H. P. Manurung , K. Kasim , M. S. Adenan , M. F. Mat , Y. O. Busari , T. C. Kung , A. Syafiq , IKHSAN SIREGAR

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Prosiding seminar internasional

Application of work system engineering analysis

IKHSAN SIREGAR , TIGOR HAMONANGAN NASUTION

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Prosiding seminar internasional

Affecting factors of CPO yield: An identification

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Prosiding seminar internasional

Production scheduling using ant colony optimization in furniture industry

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Jurnal internasional

The methodology of aggregate planning on lamp production based on transportation model

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Prosiding seminar internasional

Comparison of first come first served and ant colony algorithm method for door leaf production scheduling

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Minimizing inventory cost of dried food materials availability: An analyzing in teaching hospital

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Analysis of website service quality with webqual 4.0 integration method

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Inventory optimization in the cigarette industry

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Poster seminar internasional

Optimization Quantity of Perishable Products Delivery Considering Total Cost Producer

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Prosiding seminar internasional

Fabrication and Characterization of Adding Coconut Shell Actived Nanocarbon to Lightweight Concrete

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Optimization of Garbage Hauling Route in Medan Kota District using Saving Matrix Method to Minimize Cost

RAHMI MEILINA SARI , MANGARA M TAMBUNAN , IKHSAN SIREGAR , KHALIDA SYAHPUTRI , INDAH RIZKYA TARIGAN

2020

Jurnal internasional

Application of ranked positional weights method in springbed production line balancing

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Prosiding seminar internasional

Clustering the vulnerability of traffic accidents in Medan city with fuzzy c-means algorithm

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Prosiding seminar internasional

Determination of component categories using logic tree analysis

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Clustering the vulnerability of traffic accidents in Medan city with fuzzy c-means algorithm

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Application of Preventive Maintenance in Planning Maintenance of Tablet Printing Machines in Drug Companies

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Digitization of Batak Manuscripts Using Methods Learning Vector Quantization (LVQ)

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Optimal Production Quantity in Rubber Industry

RAHMI MEILINA SARI , IKHSAN SIREGAR , INDAH RIZKYA TARIGAN , KHALIDA SYAHPUTRI

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Optimal Production Quantity in Rubber Industry

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Jurnal internasional

Investigation of Ti-6Al-4V surface integrity from milling process

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Characteristics of Process Parameters in Fused Deposition Modelling Process

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Preface

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Improving the work system with management engineering methods

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Lighting Quality Improving Work Thoroughness of Sorting Operators

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Jurnal internasional

Implementation of first come first served in door leaf production scheduling

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Jurnal internasional

Design tools multifunction equipment

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2019
Prosiding seminar internasional

Minimization of Makespan Using FCFS Method and Genetic Algorithm Method Comparison in Aluminum Industry

IKHSAN SIREGAR , INDAH RIZKYA TARIGAN , RAHMI MEILINA SARI , KHALIDA SYAHPUTRI

2019
Jurnal internasional

Application of Theory of Constraints in Bottleneck Work Stations Optimization

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Jurnal internasional

Supplier Selection by Using Analytical Hierarchy Process (AHP) and Techniques for Order Preference Methods with Similarities to Ideal Solutions (TOPSIS)

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Prosiding seminar internasional

Reliability Centered Maintenance to Determine Priority of Machine Damage Mode

IKHSAN SIREGAR , INDAH RIZKYA TARIGAN , KHAWARITA SIREGAR , A RAHIM MATONDANG

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Prosiding seminar internasional

Minimization of Makespan Using FCFS and Gupta Method Comparison in Machine Spare Part Industry

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2019
Jurnal internasional

Application of Fuel Oil Distribution Route Using Ford Algorithm

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2019
Jurnal internasional

The impact of risk and uncertainty on irrigation decision for paddy production in North Sumatera Indonesia

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Jurnal internasional

Determination of Priority Supply Chain Distribution Using DEMATEL Method in Instant Noodle Company

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SCOR: Business Process Analysis and Supply Chain Performance in Building Materials Industry

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2019
Jurnal internasional

Modelling and Analysis of Manufacturing Process Layout

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Jurnal internasional

Autoregressive Integrated Moving Average (ARIMA) Model of Forecast Demand in Distribution Centre

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Autoregressive Integrated Moving Average (ARIMA) Model of Forecast Demand in Distribution Centre

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Application Quality Function Deployment to Improve Quality of Patient Service in Hemodialysis Installation

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Jurnal internasional

SCOR: Business Process Analysis and Supply Chain Performance in Building Materials Industry

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Optimization Consumer Cost of Food Industry with Perishable Characteristic

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Measurement of Supply Chain Performance in Manufacturing

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Priority of Selection Suppliers with Fuzzy ANP COPRAS-G

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Minimization of Makespan Using FCFS Method and Genetic Algorithm Method Comparison in Aluminum Industry

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Determination of Technical Characteristics in Panel Button and Control Seat Using Quality Function Deployment

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Jurnal internasional

Multi-Span Bridge Work Based On Line Of Balance And Critical Path Methods Integration In Light Rapid Train

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2019

Jurnal internasional

Quality engineering with taguchi loss function method and improvement of work method in anode changing

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2019

Jurnal internasional bereputasi

5S Implementation in Welding Workshop–a Lean Tool in Waste Minimization

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Prosiding seminar internasional

M-PERT and Lean Construction Integration on Steel Construction Works of Warehouse Buildings

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Jurnal nasional terakreditasi

Product Design Komposter Multifungtional

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Prosiding seminar internasional

Monitoring temperature and humidity of server room using Lattepanda and ThingSpeak

SENIMAN , MUHAMMAD ANGGIA MUCHTAR , TIGOR HAMONANGAN NASUTION , IKHSAN SIREGAR

2019

Jurnal internasional

Simulation of Dynamic Traffic Light Setting Using Adaptive Neuro-Fuzzy Inference System (ANFIS)

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2019

Prosiding seminar internasional

Contact Phenomena in Micromachining: Modelling and Simulation

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Identification of Intervention Program Effectiveness at Work Accident revention

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Prosiding seminar internasional

Nawaz, Enscore, Ham (NEH) Algorithm to Minimization of Makespan in Furniture Company

IKHSAN SIREGAR , ANIZAR , INDAH RIZKYA TARIGAN , ISNAINI NURWAHYUNI , RAHMI MEILINA SARI , KHALIDA SYAHPUTRI , MANGARA M TAMBUNAN

2019

Jurnal internasional

Multifiring endoclip conceptual design using cad approach

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5S Implementation in Welding Workshop-A Lean Tool in Waste Minimization

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Prosiding seminar internasional

Nawaz, Enscore, Ham (NEH) Algorithm to Minimization of Makespan in Furniture Company

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Cutting tools simulation with different parameter

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The Use of Kano Model to Find the Satisfaction Assessment on the Attributes of an Infant Incubator Product: A Case Study of APrivate Hospital

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2019

Jurnal internasional

Design, Develop and Simulate Microdrilling Cutting Tool

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2019

Prosiding seminar internasional

Tool wear investigation in drilling titanium alloy

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2018

Prosiding seminar internasional

Thermal characteristics of a flat-plate solar collector of hybrid solar water heater

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2018

Jurnal internasional

Lean Thinking in Banking Industry: Waste Identification on Credit Disbursement Process

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2018

Prosiding seminar internasional

DRP: Joint Requirement Planning in Distribution Centre and Manufacturing

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2018

Prosiding seminar internasional

DRP: Joint Requirement Planning in Distribution Centre and Manufacturing

RAHMI MEILINA SARI , INDAH RIZKYA TARIGAN , IKHSAN SIREGAR , ANIZAR , KHALIDA SYAHPUTRI , MANGARA M
TAMBUNAN

2018

Jurnal internasional

Regional transportation development for development at fertilizer plants in North Sumatra (case stud

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2018

Prosiding seminar internasional

Impact of Air Transport on the Indonesian Economy

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Prosiding seminar internasional

Regional transportation development for development at fertilizer plants in North Sumatra (case study)

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2018

Prosiding seminar internasional

Analysis the effects of temperature and noise level on the work of the operator at the work station

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2018

Tulisan ilmiah

Automatic coffee roaster design using Arduino

SOEHARWINTO , TIGOR HAMONANGAN NASUTION , FAHMI , IKHSAN SIREGAR , AGUSTINUS PUTRAMAS

2018

Prosiding seminar internasional

Automatic coffee roaster design using Arduino

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Design and Optimization of Micromilling Cutting Tools

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Lean Manufacturing Applications in the Manufacturing Industry

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Utilization of Cloud Computing Service for Smart City Development of Medan City

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2018

Determination of Optimal Production Number by Considering the Use of Raw Materials Using Goal Programming Approach

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2018

Prosiding seminar internasional

Analysis of physiological workload approach in packing stations to determine optimal workload

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Analysis of physiological workload approach in packing stations to determine optimal workload

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Jurnal nasional

Perancangan Desain Produk Spring Bed Dengan Menggunakan Metode Quality Function Deployment

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Jurnal nasional terakreditasi

Aplikasi Teknik Simulasi untuk Perencanaan Persediaan dan Pemesanan Bahan Baku di PT. XYZ

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Jurnal nasional

Rancangan Perbaikan Proses Produksi Main Shaft Dengan Lean Manufacturing Untuk Meningkatkan Produktivitas PT. Apindowaja Ampuh Persad

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2026

Jurnal nasional

STRATEGI PENGEMBANGAN USAHATANI PADI ORGANIK DI DESA KARANG ANYAR, KECAMATAN BERINGIN, KABUPATEN DELI SERDANG (Kasus: Kelompok Tani Mekar Pasar Kawat)

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Jurnal nasional

PERANCANGAN PRODUK TEMPAT TISU MULTIFUNGSI DENGAN MENGGUNAKAN QUALITY FUNCTION DEPLOYMENT (QFD)

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Pemanfaatan Ruang Kota untuk Kegiatan Usaha Pedagang Kaki Lima (Studi terhadap Kegiatan Usaha PKL Eks Pasar Bambu Kuning Kota Bandar Lampung)

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Researches

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Penelitian Dana Lokal Perguruan Tinggi

Analisis Kebijakan Sertifikasi Halal Bari UMKM di Kota Medan sebagai Strategi Peningkatan Daya Saing Produkter di Era Globalisasi

FARADILA YULISTARI SITEPU , LESLY SAVIERA , IKHSAN SIREGAR

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Penelitian Dana Lokal Perguruan Tinggi

Analisis Kebijakan Sertifikasi Halal Bari UMKM di Kota Medan sebagai Strategi Peningkatan Daya Saing Produkter di Era Globalisasi

FARADILA YULISTARI SITEPU , LESLY SAVIERA , KHAIRUNA MALIK HASIBUAN , IKHSAN SIREGAR

2025

Penelitian Dana Lokal Perguruan Tinggi

INOVASI PERANCANGAN ALAT FERMENTASI ECOZYNER UNTUK SINTESIS ECO-ENZYME DARI LIMBAH BIOMASSA DALAM APLIKASI DI INDUSTRI MENDUKUNG KETAHANAN PANGAN DAN KESEHATAN

INDAH RIZKYA TARIGAN , KHALIDA SYAHPUTRI , MAHATIR MUHAMMAD , IKHSAN SIREGAR

Community Services

2025

The Role of Air Logistics in Improving the Regional Economy

TUTI SARMA SINAGA , IRWAN BUDIMAN , MEILITA TRYANA SEMBIRING , IKHSAN SIREGAR

2025

Penelitian Dana Lokal Perguruan Tinggi

Pemanfaatan Eco-Enzyme dalam Meningkatkan Kualitas dan Keamanan Pangan untuk Mewujudkan Swasembada Pangan

JOIVERDIA ARIFIYANTO , MAHATIR MUHAMMAD , RULIANDA PURNOMO WIBOWO , IKHSAN SIREGAR

2025

Pemanfaatan Eco-Enzyme dalam Meningkatkan Kualitas dan Keamanan Pangan untuk Mewujudkan Swasembada Pangan

JOIVERDIA ARIFIYANTO , MAHATIR MUHAMMAD , RULIANDA PURNOMO WIBOWO , IKHSAN SIREGAR

2025

Pendampingan Digitalisasi Administrasi dan Edukasi Anak Usia Dini sebagai Upaya Meraih Akreditasi PAUD

INDAH RIZKYA TARIGAN , KHALIDA SYAHPUTRI , RAHMI MEILINA SARI , IR. UKURTA TARIGAN, MT , IKHSAN SIREGAR

2024

Ipteks Bagi Masyarakat

Laporan Akhir Pengabdian kepada Masyarakat Mandiri: Pembinaan UMKM untuk Meningkatkan Kinerja Usaha

IR H NAZARUDDIN MATONDANG MTPHD , ISKANDARINI , MUHAMMAD RIEZKY ANINDHITYA LAKSMANA , RULIANDA PURNOMO WIBOWO , MEILITA TRYANA SEMBIRING , IKHSAN SIREGAR

2016

Ipteks Bagi Masyarakat

Penggunaan Rak Pada Proses Penirisan dan Pendinginan Tape Manis Serta Perbaikan Manajemen Usaha

IDHAR YAHYA , IKHSAN SIREGAR

2014

Penelitian Hibah Bersaing

Penyusunan Kebutuhan Perancangan Mesin Hemodialisis Menggunakan Kansei Engineeri

2013

Rancangan Teknik Industri UKM Sepatu Kulit

2013

Penelitian Unggulan Perguruan Tinggi

Kajian Rancangan Teknik Industri Pada Industri Karet di Kabupaten Langkat

2012

Penelitian Unggulan Perguruan Tinggi

Kajian Rancangan Teknik Industri Pada Industri Karet di Kabupaten Langkat

2011

Ipteks

Rancangan Fasilitas Kerja untuk Mengurangi Kelelahan dan Meningkatkan Produktivitas pada UKM Sapu

POERWANTO , ANIZAR , IKHSAN SIREGAR
