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*Ir. Ikhsan Siregar, S.T., M.Eng, was born in Medan on June 10, 1980. He currently serves as the Director of the Directorate of Education Development at Universitas Sumatera Utara (USU). Ikhsan is a permanent civil servant lecturer in the Department of Industrial Engineering at USU, specializing in Product Design, Manufacturing, and Machining.*

*He obtained his Bachelor's degree in Industrial Engineering from USU and continued his Master's degree at the University of Malaya. Ikhsan has a strong interest in cutting-edge research and is currently engaged in collaborative research on Additive Manufacturing with the Smart Manufacturing Research Institute.*

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## Publications

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2019

Prosiding seminar internasional

### **Contact Phenomena in Micromachining: Modelling and Simulation**

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2019

Prosiding seminar internasional

### **Optimization Consumer Cost of Food Industry with Perishable Characteristic**

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2020

Prosiding seminar internasional

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

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2019

Jurnal internasional

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

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2020

Jurnal internasional

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

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2025

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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2019

Prosiding seminar internasional

### **Identification of Intervention Program Effectiveness at Work Accident**

## revention

IKHSAN SIREGAR , TIGOR HAMONANGAN NASUTION

2026

Jurnal nasional

### **Perancangan Desain Produk Spring Bed Dengan Menggunakan Metode Quality Function Deployment**

IKHSAN SIREGAR

2018

Jurnal internasional

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

IKHSAN SIREGAR

2020

Prosiding seminar internasional

### **Lighting Quality Improving Work Thoroughness of Sorting Operators**

IKHSAN SIREGAR

2020

Jurnal internasional

### **Application of ranked positional weights method in springbed production line balancing**

IKHSAN SIREGAR

2019

Jurnal internasional

### **Modelling and Analysis of Manufacturing Process Layout**

IKHSAN SIREGAR

2019

Jurnal internasional

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

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

2026

Jurnal nasional terakreditasi

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

IKHSAN SIREGAR

2019

Prosiding seminar internasional

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

IKHSAN SIREGAR

2025

Jurnal internasional

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

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

2026

Jurnal nasional

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

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2019

Jurnal internasional

**Application of Fuel Oil Distribution Route Using Ford Algorithm**

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**Lighting Quality Improving Work Thoroughness of Sorting Operators**

IKHSAN SIREGAR , ANIZAR

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2019

Jurnal internasional

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

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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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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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2018

Prosiding seminar internasional

**Design and Optimization of Micromilling Cutting Tools**

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Jurnal nasional

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

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2019

Jurnal internasional

**Application of Theory of Constraints in Bottleneck Work Stations Optimization**

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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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**Measurement of Supply Chain Performance in Manufacturing**

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**Optimal Production Quantity in Rubber Industry**

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**Multifiring endoclip conceptual design using cad approach**

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

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**Production scheduling using ant colony optimization in furniture industry**

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Jurnal nasional

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

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

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Jurnal nasional

**Penentuan Rute Transportasi Bahan Baku Tebu dan Penjadwalan Tebang Angkut Menggunakan Manajemen Transportasi dan Distribusi Di PTPN II Kwala Madu**

IKHSAN SIREGAR

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2018

Prosiding seminar internasional

**Automatic coffee roaster design using Arduino**

IKHSAN SIREGAR

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2020

Jurnal internasional

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

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2019

Prosiding seminar internasional

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

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Poster seminar internasional

**Optimization Quantity of Perishable Products Delivery Considering Total Cost Producer**

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Jurnal internasional

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

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Jurnal internasional

## **Musculoskeletal Disorders at a Plastic Bag Manufacturing Company**

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2019

Jurnal internasional

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

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Jurnal internasional

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

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## **Traffic flow prediction in urban area using inverse approach of chaos theory**

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Jurnal internasional

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

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## **DRP: Joint Requirement Planning in Distribution Centre and Manufacturing**

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Jurnal internasional bereputasi

## **5S Implementation in Welding Workshop&#8211;a Lean Tool in Waste Minimization**

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2018

Prosiding seminar internasional

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

IKHSAN SIREGAR

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2019

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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Jurnal internasional

## **Implementation of first come first served in door leaf production scheduling**

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2018

Jurnal internasional

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

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2022

Prosiding seminar internasional

## **Application of work system engineering analysis**

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Jurnal nasional

## **Penentuan Rute Distribusi Produk Menggunakan Algoritma Heuristik Pada PT Neo National**

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Jurnal internasional

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

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

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## **Inventory optimization in the cigarette industry**

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## **Lean Manufacturing Applications in the Manufacturing Industry**

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## **Determination of component categories using logic tree analysis**

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## **PERBAIKAN FASILITAS PRODUKSI MENINGKATKAN PENDAPATAN PERAJIN TAPE MANIS**

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## **Characteristics of Process Parameters in Fused Deposition Modelling Process**

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## **Fabrication and Characterization of Adding Coconut Shell Activated Nanocarbon to Lightweight Concrete**

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

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## **Preface**

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## **Design tools multifunction equipment**

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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**

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

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2026

Jurnal nasional terakreditasi

### **Studi Aplikasi Distribution Resource Planning Dalam Pendistribusian Produk Mi Instan Pada PT.X DI Tanjung Morawa**

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2026

Jurnal nasional terakreditasi

### **Usulan Perawatan Mesin Berdasarkan Keandalan Spare Part sebagai Solusi Penurunan Biaya Perawatan pada PT. Xyz**

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

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

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

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### **Analysis of website service quality with webqual 4.0 integration method**

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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

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2019

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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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Jurnal internasional

### **Design, Develop and Simulate Microdrilling Cutting Tool**

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### **Micro fertilizer test in Deli tobacco: a method for soil fertility evaluation [Sumatra, Indonesia]**

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Jurnal internasional

## **Increasing Self-Confidence of Indonesian Low Ability Student with Greens Motivational Strategies**

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Jurnal internasional

## **PENGARUH MODAL, PENGALAMAN DAN LUAS LAHAN TERHADAP PENDAPATAN PETANI IKAN MAS DI DESA MANCUK KECAMATAN HUTA BAYU RAJA KABUPATEN SIMALUNGUN**

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## **Tool wear investigation in drilling titanium alloy**

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## **Product Design Komposter Multifungtnional**

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

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

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## **Improving the work system with management engineering methods**

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

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## **Penyusunan Kebutuhan Perancangan Mesin Hemodialisis Menggunakan Kansei Engineering Serta Aplikasi QFD dan TRIZ**

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2018

Prosiding seminar internasional

## **Impact of Air Transport on the Indonesian Economy**

IKHSAN SIREGAR

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2020

Prosiding seminar internasional

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

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2019

Prosiding seminar internasional

## Cutting tools simulation with different parameter

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2019

Jurnal internasional

### Priority of Selection Suppliers with Fuzzy ANP COPRAS-G

IKHSAN SIREGAR

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## Researches

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2018

Penelitian Dana Lokal Perguruan Tinggi

### Interval Preventive Maintenance dengan Reliability Engineering untuk Meningkatkan Efisiensi Mesin

ABDILLAH ARIF NASUTION , IKHSAN SIREGAR

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## Community Services

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2016

Ipteks Bagi Masyarakat

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

IDHAR YAHYA , IKHSAN SIREGAR

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2011

Ipteks

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

POERWANTO , ANIZAR , IKHSAN SIREGAR

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2013

Ipteks Bagi Masyarakat

### Rancangan Teknik Industri UKM Sepatu Kulit

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2013

Penelitian Unggulan Perguruan Tinggi

### Kajian Rancangan Teknik Industri Pada Industri Karet di Kabupaten Langkat

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2012

Penelitian Unggulan Perguruan Tinggi

### Kajian Rancangan Teknik Industri Pada Industri Karet di Kabupaten Langkat

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2014

Penelitian Hibah Bersaing

### Penyusunan Kebutuhan Perancangan Mesin Hemodialisis Menggunakan Kansei Engineeri

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