

Doctoral Seminar

István Sályi Doctoral School of Mechanical Engineering Sciences

2024 Spring Semester

Section of Mechanics of Solid

Section of Transport Processes and Machines

Section of Energy and Chemical Engineering System Design

Date: 9:00AM, 7th June 2024 **Chairman:** Prof. Dr. László Baranyi

Venue: Building A3, Room 201 **Secretary:** Levente Tugyi

- 09:00 **Marwen Habbachi** (supervisor: Dr. Attila Baksa)
Investigation of the effect of the process parameters in incremental sheet metal forming
- 09:15 **Aimen Tanougast** (supervisor: Dr. Krisztián Hriczó)
CFD modeling of turbulent hybrid nanofluid flow through a corrugated channel using vortex generators
- 09:30 **Humam Kareem Jalghaf Al-Janabi** (s.v.: Dr. Endre Kovács, Dr. Betti Bolló)
Heat transfer analysis in building wall integration with phase change material and Thermal insulation for economic Optimization
- 09:45 **Ammar Saliby** (supervisor: Dr. Béla Kovács)
Influential Parameters on PCM Performance in The Building Envelope
- 10:00 **Husniddin Khayrullaev** (supervisor: Dr. Endre Kovács)
Advancements in Numerical Methods for Partial Differential Equations: A Comprehensive Investigation
- 10:15 **Al-Magsoosi Ali Habeeb Askar** (supervisor: Dr. Endre Kovács, Dr. Betti Bolló)
Prediction and Optimization of Thermal Loads in Buildings with Different Shapes by Neural Networks and Recent Finite Difference Methods
- 10:30 **Mustafa Moayad Hasan** (supervisor: Dr. Krisztián Hriczó)
A Dual Purpose Solar Collector as a Parallel Flow Heat Exchanger: A Novel Mathematical Framework
- 10:45 **Manaf Noofal Taha Ahmed** (supervisor: Dr. Péter Bencs)
Review of Vehicle Heating and Ventilation Systems Development Techniques
- 11:00 **Levente Tugyi** (supervisor: Prof. Dr. Zoltán Siménfalvi)
ANSYS-CFD and FLACS-CFD hydrogen leakage explosion hazard region investigation
- 11:15 **Andicha Zain** (supervisor: Dr. Krisztián Hriczó, Dr. Imre Barna Ferenc)
Design of wall of houses with a layered structure in order to optimize thermal insulation

Doctoral Seminar

István Sályi Doctoral School of Mechanical Engineering Sciences

2024 Spring Semester

Section of Design of Machines and Elements

Section of Product Development and Design

Date: 9:00AM, 7th June 2024 **Chairman:** Vadászné Prof. Dr. Gabriella Bognár

Venue: Building A3, Room 115 **Secretary:** Imre Marada

- 09:00 **Altimmimi Sulaiman** (supervisor: Dr. Szabolcs Szávai)
Tribological Behavior of Hybrid Metal Matrix Composite Based Iron-Al₂O₃-ZrO₂ Reinforced with Nanoparticles of MoS₂ and Gr
- 09:15 **Imre Marada** (supervisor: Dr. János Bihari)
Research of the faults of small plastic gears
- 09:30 **Md Mazedur Rahman** (supervisor: Dr. Szabolcs Szávai)
Numerical and Statistical Analysis on Polymeric Lattice Structures via Taguchi Method
- 09:45 **Alireza Aghakhani** (supervisor: Dr. Ágnes Judit Takács)
Design for Excellence (DfX): Enhancing Product Development with a Focus on Sustainability
- 10:00 **Iyad Fawzi Yousef Al-Najjar** (s.v.: Dr. Károly Jálics, Dr. László Kollár)
Wind Turbine Blades Vibration: Review and Numerical Solution
- 10:15 **István Besenyey** (supervisor: Dr. Zoltán Bihari)
Testing different thread connections for aluminium profiles
- 10:30 **Judit Albert** (supervisor: Dr. Ágnes Judit Takács)
AI Integration in Mechanical Engineering: Unravelling Challenges and Empowering Decision-Making
- 10:45 **Zainab Ali** (supervisor: Prof. Dr. Gabriella Vadászné Bognár)
Experimental study of the effect of riblets on ship drag resistance
- 11:00 **Hla Daoud** (supervisor: Prof. Dr. Gabriella Vadászné Bognár)
Study of the Influence of Riblets on the Ships Drag Resistance Experimental Approach

Doctoral Seminar

István Sályi Doctoral School of Mechanical Engineering Sciences

2024 Spring Semester

Section of Design of Engineering Structures

Section of Design of Machine Tools

Section of Design of Mechatronics Systems

Date: 9:00AM, 7th June 2024 **Chairman:** Dr. György Hegedűs, Dr. Tamás Szabó

Venue: Building A5, Room 302 **Secretary:** Dr. László Rónai

09:00 **Dávid Bodnár** (supervisor: Prof. Dr. Károly Jármai)

Multivariable Optimisation of Mechanical Structure Based on Manufacturing Method and Cost Analysis

09:15 **Pálma Kapitány** (supervisor: Dr. Tamás Szabó, Dr. László Rónai)

Take Measurement with MC USB 205 to model electromagnet

09:30 **Bálint Siktár** (supervisor: Dr. György Hegedűs, Dr. József Kakuk)

Comparing different eccentric disks used in hedge trimmers

09:45 **Sándor Apáti** (supervisor: Dr. György Hegedűs)

Doctoral Seminar

István Sályi Doctoral School of Mechanical Engineering Sciences

2024 Spring Semester

Section of Manufacturing Systems and Processes

Section of Assembly Systems

Date: 10:00AM, 7th June 2024 **Chairman:** Dr. Zsolt Maros

Venue: Building C1, Room 1 **Secretary:** Antal Nagy

- 10:00 **Hla Gharib** (supervisor: Prof. Dr. György Kovács)
The Implementation and Possibilities of Fuzzy Logic for Optimal Operation and Maintenance of Marine Diesel Engines
- 10:15 **Afraa Khattab** (supervisor: Dr. Csaba Felhő)
Robot-assisted additive manufacturing
- 10:30 **Inácio Manuel Junqueira** (supervisor: Dr. Csaba Felhő)
Process monitoring and control of turning processes using Industry 4.0 tools: Measuring surface roughness in thin walls of iron alloy and alloy steel during the turning machine
- 10:45 **Ziya Mehdiyev** (supervisor: Dr. Csaba Felhő)
A Study on Milling Parameters for Enhanced Surface Quality of FDM-Printed PLA Parts
- 11:00 **Jakiya Sultana** (supervisor: Dr. Gyula Varga)
Design and Optimization of Natural Fiber Reinforced Hybrid Composite RVE: A Finite Element Analysis
- 11:15 **Smolnicki Szilárd** (supervisor: Dr. Gyula Varga)
Eco-efficiency analysis of diamond burnishing
- 11:30 **Frezgi Tesfom Kebede** (supervisor: Dr. Csaba Felhő)
Surface integrity responses of 3D printed C45 after grinding and burnishing process

Doctoral Seminar

István Sályi Doctoral School of Mechanical Engineering Sciences

2024 Spring Semester

Section of Materials Engineering and Mechanical Technology

Section of Structural integrity

Date: 10:00AM, 5th June 2024

Chairman: Prof Dr. János Lukács

Venue: Building A4, Basement Room 12

Secretary: Judit Kovács

- 10:00 **Abdulkhik Shukurea Rahmato** (supervisor: Dr. Péter Kovács)
Investigation of the Influence of tool geometry parameters on the strength of Al5754 sheets Joined by Clinching
- 10:15 **Gábor Szabolcs Terdik** (supervisor: Dr. Ákos Meilinger)
The effect of thermal cycles to the heat-affected zone and deposited layers during hardfacing
- 10:30 **László Koroknai** (supervisor: Dr. László Kuzsella)
Advancing Acoustic Emission Testing with Custom Software
- 10:45 **Lucas Alexandre de Carvalho** (supervisor: Dr. Zsolt Lukács)
Usage of enhanced Coulomb and physical friction measurement for accurate definition of friction on simulation
- 11:00 **Ádám Pap** (supervisor: Dr. Marcell Gyula Gáspár, Dr. Ákos Meilinger)
CMT welding of high strength martensitic steel
- 11:15 **Sahm Alden Anis Mohammad Abd Al Al** (supervisor: Dr. Marcell Gyula Gáspár, Dr. Ákos Meilinger)
The influence of sample preparation and geometrical deviation on the destructive testing outcomes of RSW joints in AHSS