

DOKTORANDUSZOK FÓRUMA/Doktorand Forum

2025. Május 09. / 09 May 2025.

GÉPÉSZMÉRNÖKI ÉS INFORMATIKAI KAR/Faculty of Mechanical Engineering
and Informatics

Sályi István Gépészeti Tudományok Doktori Iskola/ István Sályi Doctoral School of
Mechanical Engineering Sciences

Sesction of Design of macine tools

Section of Design of mechatronics systems

Helve/Venue: Building A5, Room 312

A szekció elnöke/ Chairman of the Section: Dr. György Hegedűs, Prof. Dr. Jármái Károly

9⁰⁰ **Apáti Sándor** (supervisor: Dr. György Hegedűs, co-supervisor: Dr. Sándor Hajdu)

Predicting the battery life of jigsaws using a linear cutting force model

9³⁰ **Bálint Siktár** (supervisor: Dr. Hegedűs György; co-supervisor: Dr. József Kakuk)

Electric current measurement in hedge trimmers

DOKTORANDUSZOK FÓRUMA/Doktorand Forum

2025. Május 14. / 14 May 2025.

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Sályi István Gépészeti Tudományok Doktori Iskola/ István Sályi Doctoral School of
Mechanical Engineering Sciences

Section of Mechanics of solids;

Section of Transport processes and machines;

Section of Energy and chemical engineering systems design

Helve/Venue: Building A3, Room 208

A szekció elnöke/ Chairman of the Section: Prof. Dr. László Baranyi

9⁰⁰ **Marwen Habbachi** (supervisor: Dr. Attila Baksa)

*Analysis of the deformation mechansim in single point incremental forming of
pure commercial aluminum alloy AA1050*

9¹⁵ **Zsolt Vadai** (supervisor: Dr. Balázs Tóth)

*hp-version finite element method for solving initial-boundary value problems
in linear elasticity*

9³⁰ **Sándor Tollár** (supervisor: Dr. Betti Bolló; co-supervisor: Dr. László Kollár)

*CFD investigation of icing sensitivity of the NACA6412 airfoil under wind
turbine operating conditions*

9⁴⁵ **Sándor Tollár** (supervisor: Dr. Betti Bolló; co-supervisor: Dr. László Kollár)

*Numerical investigation of the influence of airfoil camber on icing sensitivity in
wind turbine applications*

10⁰⁰ **Mustafa Moayad Hasan** (supervisor: Dr. Krisztián Hriczó)

*Improvement Of A Dual- Purpose Solar Collector Using Different Heat
Transfer Fluids: Numerical Investigation*

10¹⁵ **Aimen Tanougast** (supervisor: Dr. Krisztián Hriczó)

- Comparative Study of Different Vortex Generator Designs in Corrugated Channels for Turbulent Heat Transfer Enhancement*
- 10³⁰ **Dávid Szalánczi** (supervisor: Dr. Péter Bencs)
Hatékonyágjavítás Napelemeknél Infravörös visszaverő fóliák alkalmazásával a PERC technológiában
- 10⁴⁵ **Manaf Noofal Taha Ahmed** (supervisor: Dr. Péter Bencs)
Optical Measurements in Bubble Column Reactors
- 11⁰⁰ **Husniddin Khayrullaev** (supervisor: Dr. Endre Kovács)
Optimal Wall Insulation in Five Cold Cities: A Long-Term Numerical Simulation Study on the Impact of Climate Variability
- 11¹⁵ **Salman Brbhan** (supervisor: Dr. Zoltán Szamosi)
Optical and thermal analysis of dual and single tube of non-vacuum receivers for Liner Fresnel Systems: numerical modelling and experimental validation

DOKTORANDUSZOK FÓRUMA/Doktorand Forum

2025. Május 16. / 16 May 2025.

GÉPÉSZMÉRNÖKI ÉS INFORMATIKAI KAR/Faculty of Mechanical Engineering and Informatics

Sályi István Gépészeti Tudományok Doktori Iskola/ István Sályi Doctoral School of Mechanical Engineering Sciences

Section of Materials engineering and mechanical technology;

Section of Manufacturing systems and processes;

Section of Assembly systems;

Section of Structural integrity;

Helve/Venue: Building A4, Basement Room 12

A szekció elnöke/ Chairman of the Section: Prof. Dr. János Lukács, Dr. Zsolt Maros

- 13⁰⁰ **Abd al al Sahm alden** (supervisor: Dr. Ákos Meilinger ; co-supervisor: Prof. Dr. habil. Marcell Gáspár)
Thermal Simulation and Microstructural Analysis of Resistance Spot Welded Martensitic MS1400 Steel
- 13¹⁵ **Terdik Gábor Szabolcs** (supervisor: Dr. Ákos Meilinger)
Hardfacing on High-Strength Steels: Properties of Multiple Times Heated Heat-Affected Zones
- 13³⁰ **László Koroknai** (supervisor: Dr. László Kuzsella)
Comparison of changes in anisotropy of cold and hot rolled steel sheets
- 13⁴⁵ **Inácio Manuel Junqueira** (supervisor: Dr. Csaba Felhő)
A review on the impact of tool wear on the vibration and surface roughness of the turning process.
- 14⁰⁰ **Szilárd Smolnicki** (supervisor: Dr. Gyula Varga)
Comparative analysis of different Regression Models and the Full Factorial Design of Experiments
- 14¹⁵ **Ádám Pap** (supervisor: Dr. Marcell Gáspár, Dr. Ákos Meilinger)
Heat affected zone physical simulations on P355NH pipeline steel
- 14³⁰ **Muhammad Ali Sadiq** (supervisor: Prof. Dr. György Kovács)
Advanced composite structures: design, development and innovations

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Mechanical Engineering Sciences

Section of Product development and design;
Section of Design of machines and elements;
Section of Design of engineering structures;

Helye/Venue: Building A3, Room 115

A szekció elnöke/ Chairman of the Section: Vadászné Prof. Dr. Gabriella Bognár

- 13⁰⁰ **Al-Timmimi Sulaiman Mustafa** (supervisor: Dr. Szabolcs Szávai)
Tribological Behavior of Hybrid Metal Matrix Composite Based Iron-Al₂O₃-ZrO₂ Reinforced with Nanoparticles of MoS₂ and Gr.
- 13¹⁵ **Katreen Ebrahim** (supervisor: Dr. Szabolcs Szávai)
Integrated design and biomechanical assessment of artificial intervertebral discs (IVD)
- 13³⁰ **Eszter Borsodi** (supervisor: Dr. Ágnes Judit Takács)
Sustainability in drone manufacturing
- 13⁴⁵ **Md Mazedur Rahman** (supervisor: Dr. Szabolcs Szávai)
Advancement in additive manufacturing for 3d and 4d printing in wood composite
- 14⁰⁰ **István Besenyi** (supervisor: Dr. Zoltán Bihari)
Considerations on the load capacity of aluminium profiles
- 14¹⁵ **Tamás Árvai** (supervisor: Dr. Károly Jálics)
Analysis of mechanical wave propagation in vehicle bodies for diagnostic purposes
- 14³⁰ **Karam Shaaya** (supervisor: Dr. Ferenc Sarka)
Shrinkage in 3D printed parts
- 14⁴⁵ **Iyad Al-Najjar** (supervisor: Dr. Károly Jálics, Dr. László Kollár)
Wind Turbine Blade Vibrations Under Load Removal.
- 15⁰⁰ **Alireza Aghakhani** (supervisor: Dr. Ágnes Judit Takács)
Generative Design vs. Topology Optimization: Smarter Paths to Sustainability
- 15¹⁵ **Alaa Alrudhan** (supervisor: Vadászné Prof. Dr. Gabriella Bognár)
Numerical Investigation in Metal Foam Using Darcy–Forchheimer and LTNE Models
- 15³⁰ **Dávid Bodnár** (supervisor: Prof. Dr. Károly Jármai)
Optimization Of Anomaly Detection In An Industrial Robot Arm Movement