

DOCTORAL SEMINAR

24th May 2022

István Sályi Doctoral School of Mechanical Engineering Sciences

Section of Basic Engineering Sciences;

Section Design of Machines and Structures;

Section Engineering Material Science, Production Systems and Processes

Venue: A/3 206 Institute of Energy Engineering and Chemical Machinery

Chairman of the Section: Prof. Dr. Károly Jármai

- 8⁰⁰ **Dávid Faragó** (supervisor: Dr. Péter Bencs)
Experimental and theoretical study of the effects of anisotropic turbulence
- 8¹² **Mohammed Alktranee** (supervisor: Dr. Péter Bencs)
Enhancing the photovoltaic module performance
- 8²⁴ **Sebastian Cabezas** (supervisor: Dr. Péter Bencs, co-sup: Dr. György Hegedűs)
Temperature Field in a Solid Cylinder applying the Green's Functions Method
- 8³⁶ **István Tüske** (supervisor: Dr. György Hegedűs)
Research of machine tool elements with parallel kinematics
- 8⁴⁸ **Mohammad Alaa Alwafaie** (supervisor: Dr. Béla Kovács)
Harvesting energy for ERS Automotive
- 9⁰⁰ **Alaa Iskandar** (supervisor: Dr. Béla Kovács)
Deep Reinforcement Learning in Swarm Robotic System
- 9¹² **Ammar Saliby** (supervisor: Dr. Béla Kovács)
Minimize annual energy consumption by investigating heat transfer problems in building components
- 9²⁴ **Issa Omle** (supervisor: Dr. Béla Kovács)
New numerical algorithms to solve the heat conduction equation
- 9³⁶ **Ali Habeeb Askar Al-Magsoosi** (supervisor: Dr. Endre Kovács, co-sup.: Dr. Betti Bolló)
Aggregated Relative Error of Explicit Positivity Preserving Algorithms for Heat Equation
- 9⁴⁸ **Humam Kareem Jalghaf Al-Janabi** (supervisor: Dr. Endre Kovács, co-sup.: Dr. Betti Bolló)
A comparative study of explicit and stable numerical methods for heat conduction

BREAK

- 10¹⁰ **Mahmoud Saleh** (supervisor: Dr. Endre Kovács)
A new explicit numerical method for solving linear and nonlinear heat equation
- 10²² **Hla Gharib** (supervisor: Dr. György Kovács)
Technical diagnosis and maintenance of machines supported by expert systems
- 10³⁴ **Baibhaw Kumar** (supervisor: Dr. Zoltán Szamosi, co-sup.: Dr. Gábor Szepesi)
Optimization of solar drying techniques
- 10⁴⁶ **Antal Nagy** (supervisor: Prof. Dr. János Kundrák)
Analysis of the Change in Roughness on Face-milled Surface
Considering Test Directions and Kinematics
- 10⁵⁸ **Illés Sas** (supervisor: Prof. Dr. János Lukács)
Possibilities of post-treatment on critical joints of welded structures made of high strength steels
- 11¹⁰ **Judit Kovács** (supervisor: Prof. Dr. János Lukács, co-sup.: Prof. Dr. –Ing. Gerald Wilhelm)
Gas metal arc welding of S1300 high strength structural steel
- 11²² **Ahmad Yasser Dakhel** (supervisor: Prof. Dr. János Lukács)
Full-scale tests of girth welds: overview, methods, and model design
- 11³⁴ **László Kovács** (supervisor: Prof. Dr. Szilárd Szabó)
Numerical simulation of in cylinder flow in a running engine equipped with swinging valve (ONLINE presentation)
- 11⁴⁶ **Afterword**