

2021  
iMANEE

INNOVATIVE MANUFACTURING  
ENGINEERING & ENERGY  
INTERNATIONAL CONFERENCE



ONLINE  
EDITION

21-23  
OCTOBER  
2021

25<sup>th</sup> edition of

INNOVATIVE MANUFACTURING ENGINEERING & ENERGY  
INTERNATIONAL CONFERENCE

Program



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INNOVATIVE MANUFACTURING  
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## Summary

Thursday, 21th October 2021

- 9:00 – 9:30 Welcome
- 9:30 – 11:00 Plenary sessions
- 11:00 – 13:00 Section sessions
- 13:00 – 15:00 Break
- 15:00 – 19:00 Section sessions

Friday, 22th October 2021

- 9:00 – 10:30 Plenary session
- 10:30 – 13:00 Section sessions
- 13:00 – 15:00 Break
- 15:00 – 19:00 Section sessions





### *Honorary Committee*

- **Octavian PRUTEANU**, PhD, Gheorghe Asachi Technical University of Iasi, Romania
- **Cătălin Gabriel DUMITRAȘ**, PhD, Gheorghe Asachi Technical University of Iasi, Romania
- **Laurențiu SLĂTINEANU**, PhD, Gheorghe Asachi Technical University of Iasi, Romania
- **Angelos P. MARKOPOULOS**, PhD, National Technical University of Athens, Greece
- **Eduard NIȚU**, PhD, University of Pitesti, Romania
- **Gheorghe NAGÎȚ**, PhD, Gheorghe Asachi Technical University of Iasi, Romania
- **Panagiotis KYRATSIS**, PhD, University of Western Macedonia, Greece
- **Oana DODUN**, PhD, Gheorghe Asachi Technical University of Iasi, Romania
- **Sergiu MAZURU**, PhD, Technical University of Moldova, Republic of Moldova
- **Dumitru NEDELCU**, PhD, Gheorghe Asachi Technical University of Iasi, Romania

### *Conference Chair*

- **Gheorghe CREȚU**, PhD, Head of Machine Manufacturing Technology Department, Faculty of Machine Manufacturing and Industrial Management, Gheorghe Asachi Technical University of Iasi, Romania



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21-23  
OCTOBER  
2021

Thursday,  
21 October 2021

“  
Welcome  
”

**Welcome**  
9:00 – 9:30

- *IManEE2021 - Welcome*
- *Thursday, October 21 · 9:00 – 9:30am*
- *Google Meet joining info*
- *Video call link: <https://meet.google.com/fao-bbxe-fsu>*
- *Or dial: (US) +1 260-351-1944 PIN: 631 561 986#*



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EDITION

21-23  
OCTOBER  
2021

Thursday,  
21 October 2021

“ Plenary  
Speakers ”  
Live session

9:00 – 9:10

*Welcome speech*

•PhD. Gheorghe Crețu, Gheorghe Asachi Technical University, Head of Machine Manufacturing Technology Department, Iasi, Romania

9:10 – 9:20

*Welcome speech*

•PhD. Cătălin Dumitraș, Gheorghe Asachi Technical University, Dean of Faculty of Machine Manufacturing Technology and Industrial Management, Iasi, Romania

9:20 – 9:30

*In memoriam PhD, DHC, Octavian Pruteanu*



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21-23  
OCTOBER  
2021

Thursday,  
21 October 2021

“ Plenary  
sessions ”

## Plenary sessions

9:30 – 11:00

- *IManEE2021 - Plenary sessions*
- *Thursday, October 21 · 9:30 – 11:00am*
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OCTOBER  
2021

Thursday,  
21 October 2021

“ Plenary  
Speakers ”  
Live session

9:30 – 10:00

*“Search for novel carbides in transition metal - carbon systems”*

•PhD. Elisabeth Bauer Grosse, University of Lorraine, Institut Jean Lamour, Nancy, France

10:00 – 10:30

*“Measuring Efficiency Using Data Envelopment Analysis DEA: Developing and Manufacturing Cellular Modem”*

•PhD. Arik Sadeh, Industrial Engineering and Technology Management Faculty, HIT Holon Institute of Technology, Israel

10:30 – 11:00

*“Industry 4.0-enabled transformation of conventional production and logistics into cyber physical systems”*

•PhD. Tamás Bányai, Institute of Logistics, University of Miskolc, Hungary



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ONLINE  
EDITION

21-23  
OCTOBER  
2021

Friday,  
22 October 2021

“ Plenary  
Speakers ”  
Live session

9:00 – 9:30

***“Status and development trends of laser processing technology”***

•PhD. Miloš Madić, Faculty of Mechanical Engineering in Niš, University of Niš, Serbia

9:30 – 10:00

***“Boosting the scientific excellence and innovation capacity of 3D printing methods in pandemic period”***

•PhD. Răzvan Păcurar, Technical University of Cluj-Napoca, Faculty of Machine Manufacturing, Cluj-Napoca, Romania

10:00 – 10:30

***“Stakeholder analysis for the development of LNG bunkering facilities”***

- PhD. Evangelos Bellos, National Technical University of Athens, School of Mechanical Engineering, Greece
- PhD. George Chatzistelios, National Technical University of Athens, School of Mechanical Engineering, Greece
- PhD. Angeliki Deligianni, National Technical University of Athens, School of Mechanical Engineering, Greece
- PhD. Konstantinos Kirytopoulos, National Technical University of Athens, School of Mechanical Engineering, Greece



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21-23  
OCTOBER  
2021

Thursday,  
21 October 2021

## Chairs:

- Nikolaos Vaxevanidis
- Andrei Mihalache

“ Additive  
Manufacturing ”

Section 01

**ROOM 01**

11:00 – 13:00

- *IManEE2021 - Section 1\_Additive Manufacturing*
- *Thursday, October 21 · 11:00am – 1:00pm*
- *Google Meet joining info*
- *Video call link: <https://meet.google.com/adc-beez-stn>*
- *Or dial: (US) +1 216-930-0431 PIN: 586 521 861#*



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2021

Thursday,  
21 October 2021

“ Additive  
Manufacturing ”  
Section 01

11:00 – 11:15

### *Study Behaviour of Ratchet Mechanism Manufactured with 3D Printing Technology*

•Ciprian Ion Rizescu, David Eugen Baciu and Dana Rizescu

11:15 – 11:30

### *Experimental characterisation of physical properties of different PLA filaments used in FFF 3D printing technology*

•Anette Lang and Alexandru Sover

11:30 – 11:45

### *Design and physical validation of a non-planar interlocking element for tubular structures*

•Vasile Ermolai, Alexandru Sover and Gheorghe Nagîț

11:45 – 12:00

### *Influence of contact geometry over the filament bond of polylactic acid blends*

•Vasile Ermolai, Alexandru Sover and Gheorghe Nagîț



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21-23  
OCTOBER  
2021

Thursday,  
21 October 2021

“ Additive  
Manufacturing ”  
Section 01

12:00 – 12:15

### *Rapid prototyping method for replacing non-circular gears*

•Rizescu Dana, Besnea Daniel, Rizescu Ciprian Ion, Moraru Edgar and Panait Iolanda

12:15 – 12:30

### *Effect of the infill patterns on the mechanical properties of the carbon fiber 3D printed parts*

•Mihai-Alin Pop, Sebastian-Marian Zaharia, Lucia-Antoneta Chicos, Camil Lancea, Valentin-Marian Stamate, George-Razvan Buican and Ionut-Stelian Pascariu

12:30 – 12:45

### *A study of Fused Filament Fabrication process efficiency: ABS vs PLA materials*

•Nikolaos Fountas, K. Ninikas, John Kechagias and Nikolaos Vaxevanidis

12:45 – 13:00

### *Studies on the influence of FFF parameters on the tensile properties of samples made of ABS*

•Alexandra-Ileana Portoaca, Ion Nae, Dragos Gabriel Zisopol and Ibrahim Ramadan



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21-23  
OCTOBER  
2021

Thursday,  
21 October 2021

## Chairs:

- Mihai Bănică
- Oana Dodun

“ Advanced Processes  
and surface  
engineering

Section 02



**ROOM 02a**  
11:00 – 13:00

- *IManEE2021 - Section 2a\_ Advanced Processes and Surface Engineering*
- *Thursday, October 21 · 11:00am – 1:00pm*
- *Google Meet joining info*
- *Video call link: <https://meet.google.com/fah-rfjf-nkz>*
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21-23  
OCTOBER  
2021

Thursday,  
21 October 2021

“ Advanced Processes  
and surface  
engineering ”  
Section 02

11:00 – 11:15

*Superalloy manufacturing application on CNC machine tools*

•Adrian But

11:15 – 11:30

*Influence of the processing conditions of 6061 aluminium alloy thick plates on the distortion of the machined finished parts*

•Maria Stoicanescu, Marin Petre, Gheorghe Popa and Nicusor Constantin Drăghici

11:30 – 11:45

*Study of joining in solid phase of ALMg3 sheets*

•Anamaria Ioana Feier and Felicia Veronica Banciu

11:45 – 12:00

*Obtaining single-surface revolution hyperboloids by cutting*

•Laurentiu Slatineanu, Adelina Hrituc, Oana Dodun, Gheorghe Nagit and Irina Besliu-Bancescu



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ENGINEERING & ENERGY  
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ONLINE  
EDITION

21-23  
OCTOBER  
2021

Thursday,  
21 October 2021

“ Advanced Processes  
and surface  
engineering

Section 02



12:00 – 12:15

*Influence of cutting parameters on surface topography in high speed milling of slots in Titanium alloy TC4*

•Szymon Kurpiel, Jacek Krupa, Krzysztof Zagórski and Jacek Cieřlik

12:15 – 12:30

*Manufacturing processes of precessional gears with variable non-standard profile*

•Sergiu Mazuru, Ion Bostan, Serghei Scaticailov, Maxim Vaculenco and Adrian But

12:30 – 12:45

*Corrective profiling method for tools that generate by enwrapping*

•Georgiana Alexandra Morosanu, Virgil Gabriel Teodor and Razvan Craciun



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Oana  
DODUN

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21-23  
OCTOBER  
2021

Thursday,  
21 October 2021

### Chairs:

- Angelos Markopoulos
- Laurențiu Slătineanu

“ Advanced Processes  
and surface  
engineering ”

Section 02

**ROOM 02b**

15:00 – 19:00

- *IManEE2021 - Section 2b\_Advanced Processes and Surface Engineering*
- *Thursday, October 21 · 3:00 – 7:00pm*
- *Google Meet joining info*
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ENGINEERING & ENERGY  
INTERNATIONAL CONFERENCE



ONLINE  
EDITION

21-23  
OCTOBER  
2021

Thursday,  
21 October 2021

“ Advanced Processes  
and surface  
engineering

Section 02

”

15:00 – 15:15

*Establishing the machining process for complex aluminum alloy part made from plate raw material*

•Stefan Adrian Moldovan, Mihai Banica and Vasile Nasui

15:15 – 15:30

*Experimental results on the quality of the surface on turning with inclined tangential cutting line*

•Mitrut V Puriciuc, Romeo Cioară and Cristian Pisarciuc

15:30 – 15:45

*Contributions on the influence of the cutting regime on the rough-ness of the flanks when machining screws*

•Gheorghe Cretu and Florin Negoescu

15:45 – 16:00

*Innovative process for material separation of printed circuit boards (PCB) with laser technology*

•Markus Zink, Alexandru Sover and Tobias Vogel



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Laurențiu  
SLĂTINEANU

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Thursday,  
21 October 2021

Advanced Processes  
and surface  
engineering

Section 02

16:00 – 16:15

*Analysis of specific cutting energy in laser fusion cutting of an Aluminum alloy*

•Miloš Madić, Margareta Coteață, Predrag Janković and Milan Trifunović

16:15 – 16:30

*Preliminary approach in the study of the processing process through electrochemical erosion*

•Ciobanu Daniela Gabriela

16:30 – 16:45

*Research of the dependence of geometric parameters of holes on electroerosive grinding modes with a changing polarity of electrodes*

•Roman Strelchuk, Aleksandr Shelkovoy, Yuriy Gutsalenko, Catalin Iancu, Valeria Subbotina, Sergey Knyazev and Oleh Volkov

16:45 – 17:00

*Eigenfrequency simulation for a roller screw used at feed system for ultrasonically aided micro-electrical discharge machining*

•Bogdan-Ionut Cristea, Liviu Daniel Ghiculescu and Cristian Deopale



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INNOVATIVE MANUFACTURING  
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INTERNATIONAL CONFERENCE



ONLINE  
EDITION

21-23  
OCTOBER  
2021

Thursday,  
21 October 2021

“ Advanced Processes  
and surface  
engineering

Section 02



17:00 – 17:15

*Considerations on implementing Industry 4.0 in a manufacturing process*

•Georgian Udvuleanu and Viorel Nicolae

17:15 – 17:30

*On the laser beam absorption efficiency in laser welding of aluminium thin sheet with copper pipe*

•Panagiotis Karmiris Obratański, Emmanouil Papazoglou, Nikolaos Karkalos, Elias Hontzopoulos and Angelos Markopoulos



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21-23  
OCTOBER  
2021

Friday,  
22 October 2021

### Chairs:

- Nicanor Cimpoeșu
- Tihomir Dovramadjiev

“  
Advanced  
Materials  
”

Section 03

**ROOM 03**

15:00 – 19:00

- *IManEE2021 - Section 3\_Advanced Materials*
- *Friday, October 22 · 3:00 – 7:00pm*
- *Google Meet joining info*
- *Video call link: <https://meet.google.com/ktq-mirx-dyh>*
- *Or dial: (US) +1 727-325-2246 PIN: 121 875 660#*





Friday,  
22 October 2021

“  
Advanced  
Materials  
”  
Section 03

15:00 – 15:15

### *Mechanical behaviour and the defects of injection molded plastic parts*

•Sergiu-Gabriel Pal, Viorel Goanta, Diana Petronela Bistriceanu and Ciprian Morăraş

15:15 – 15:30

### *Application of zirconium in dentistry for creating dental crowns*

•Diana Pavlova, Rusko Filchev and Tihomir Dovramadjiev

15:30 – 15:45

### *Study of filtering capacity of some ceramic composites on bentonite base*

•S Butuc, S Matei, M Stoicanescu and A Crisan

15:45 – 16:00

### *Absorbing materials based on magnetically controlled Fe-Al microparticles*

•Ivan Shorstkii and Maxim Sosnin



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Nicanor  
CIMPOEŞU

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Friday,  
22 October 2021

“  
Advanced  
Materials  
”  
Section 03

16:00 – 16:15

***Composite materials with polychromatic effects used in electrical installations***

•Mircea Florin Drăghici and Maria Stoicanescu

16:15 – 16:30

***Cementite, still an advanced materials: a brief overview***

•Elisabeth Bauer Grosse

16:30 – 16:45

***Construction of surface layers with special properties in the hardening of steels***

•Oleh Volkov, Sergey Knyazev, Valeria Subbotina, Catalin Iancu, Yuriy Gutsalenko, Alexander Shelkovoy and Roman Strelchuk

16:45 – 17:00

***3D printed composite materials with antifouling properties – short presentation***

•Mirela Suche, G Kenanakis, M Sevastaki, N Vrithias, E Sfakaki, N Mitrizakis, C Strakantounas, N Papandroulakis, C Romanitan, G Craciun, C Pachiou and Emmanouel Koudoumas



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21-23  
OCTOBER  
2021

Friday,  
22 October 2021

## Chairs:

- Carmen Bujoreanu
- Mihail Țițu

“ Automotive &  
Transport  
Engineering

Section 04 ”

**ROOM 04**

15:00 – 19:00

- *IManEE2021 - Section 4\_Automotive & Transport Engineering*
- *Friday, October 22 · 3:00 – 7:00pm*
- *Google Meet joining info*
- *Video call link: <https://meet.google.com/otr-cpfs-gmx>*
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Friday,  
22 October 2021

“ Automotive &  
Transport  
Engineering ”  
Section 04

15:00 – 15:15

*Analytical crash analysis of heavy truck cabin structure according to regulation ECE-R29*

•Alexandra Ionita, Daniel Iozsa, Cornelia Stan and Ana Maria Manea

15:15 – 15:30

*Modeling and Simulation Automatic Braking Systems for Vehicles*

•Gabriel Badea, Marius Toma, Gheorghe Fratila, Stefan Saragea and Dan Alexandru Micu

15:30 – 15:45

*An aerodynamic theoretical study on exterior accessories of intervention vehicles*

•Laurentiu Ilea, Daniel Iozsa and Gheorghe Fratila

15:45 – 16:00

*Software strategy for internal combustion engine and electric motor control on a hybrid electric vehicle equipped with belt starter generator and automated manual transmission*

•Stefan Saragea, Marius Toma, Gheorghe Fratila, Gabriel Badea and Dan Alexandru Micu



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Friday,  
22 October 2021

“ Automotive &  
Transport  
Engineering ”  
Section 04

16:00 – 16:15

*Theoretical and experimental research of an automotive gasoline engine fuelled with butanol*

•Cristian Sandu

16:15 – 16:30

*Concept development of an independent electronic system for vibroacoustic diagnostics of vehicles*

•Adrian Nicolae Nitu, Vasile Caunii and Carmen Bujoreanu

16:30 – 16:45

*Study regarding the reduction of vibrations and noises generated by the car fan*

•Aida Vranau, Vasile Caunii and Carmen Bujoreanu

16:45 – 17:30

*Research regarding the effects of a diesel engine's control unit retrofitting, focussing on its performance and pollution*

•Cosmin Constantin Suciu, Ioana Ionel, Daniel Ostoia and Sorin Vlad Igret



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ENGINEERING & ENERGY  
INTERNATIONAL CONFERENCE



ONLINE  
EDITION

21-23  
OCTOBER  
2021

Friday,  
22 October 2021

CAD/CAM/CAE/CAX  
& Automation

Section 05

## Chairs:

- Panagiotis Kyratsis
- Vasile Merticaru

**ROOM 05**

15:00 – 19:00

- *IManEE2021 - Section 5\_CAD/CAM/CAE/CAX & Automation*
- *Friday, October 22 · 3:00 – 7:00pm*
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21-23  
OCTOBER  
2021

Friday,  
22 October 2021

CAD/CAM/CAE/CAX  
& Automation

Section 05

15:00 – 15:15

*Computer-aided methods for furniture decoration with traditional motifs of textile heritage*

•Antonela Lungu, Lidia Gurău, Sergiu Georgescu and Camelia Coşereanu

15:15 – 15:30

*CAM optimization in moulds retrofitting*

•Adrian But and Lucian Gal

15:30 – 15:45

*FEM-based investigation on machining forces and temperatures induced during AISI-4140 hard turning*

•Anastasios Tzotzis, Nikolaos Efkolidis, Dimitrios Tzetzis and Panagiotis Kyratsis

15:45 – 16:00

*Nondestructive evaluation of nanostructured components using eddy current microsensors*

•Nicoleta Iftimie, Rozina Steigmann, Dagmar Faktorova and Adriana Savin



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EDITION

21-23  
OCTOBER  
2021

Friday,  
22 October 2021

CAD/CAM/CAE/CAX  
& Automation

Section 05

16:00 – 16:15

*Field robots development in the aspect of achieving the goals of sustainable agriculture*

•Sebastian Sobocki, Jacek Wojciechowski, Stanisław Legutko, Jarosław Mac, Michał Zawada and Sebastian Szymczyk

16:15 – 16:30

*Research on the automation of internal logistics activities in an assembly line*

•Iuliana-Georgiana Pascu, Georgiana Cătălina Neacșu, Eduard Laurențiu Nițu, Robert Beloiu and Ana Cornelia Gavriliuță



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21-23  
OCTOBER  
2021

Thursday,  
21 October 2021

“ Design, Analysis  
and Modelling

Section 06 ”

## Chairs:

- Felicia Banciu
- Andrei Mihalache

**ROOM 06a**

15:00 – 17:00

- *IManEE2021 - Section 6a\_Design, Analysis and Modelling*
- *Thursday, October 21 · 3:00 – 5:00pm*
- *Google Meet joining info*
- *[Video call link: https://meet.google.com/fqs-djuu-zym](https://meet.google.com/fqs-djuu-zym)*
- *Or dial: (US) +1 786-886-2419 PIN: 623 904 351#*





21-23  
OCTOBER  
2021

Thursday,  
21 October 2021

“ Design, Analysis  
and Modelling ”  
Section 06

15:00 – 15:15

***Finite element analysis for testing safety-belt anchorages***

•Ana Maria Manea, Daniel Iozsa, Cornelia Stan and Alexandra Ioniță

15:15 – 15:30

***Numerical Analysis of the Stresses Appeared Around Some Lifting Ears from a Cylinder Used in the Petrochemical Industry***

•Aurelian Iamandei, Razvan Ripeanu, Lavinia Stanciu, Ioan Popa and Serban Vasilescu

15:30 – 15:45

***Experimental Results Regarding the Strains and Stresses Appeared Around Some Lifting Ears from a Cylinder Used in the Petrochemical Industry***

•Aurelian Iamandei, Razvan Ripeanu, Lavinia Stanciu, Ioan Popa and Serban Vasilescu

15:45 – 16:00

***Power planetary precessional transmission research regarding acoustical behaviour***

•Iulian Malcoci, Oleg Ciobanu, Radu Ciobanu and Nicolae Trifan



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Andrei  
MIHALACHE

Host



Thursday,  
21 October 2021

“  
Design, Analysis  
and Modelling  
”  
Section 06

16:00 – 16:15

*Digital service application for the recalibration of a machine tool through Augmented Reality-supported data acquisition*

• Frank Arnold, Gordon Lemme, Martin Hess, Susanne Witt and Steffen Ihlenfeldt

16:15 – 16:30

*New approach in solving derivative causality problems in the bond-graph method*

• Mihaela Ibanescu and Radu Ibanescu

16:30 – 16:45

*How to handle the design preferences with Axiomatic Design*

• António Gonçalves-Coelho, João Fradinho, António Gabriel-Santos, Miguel Cavique and António Mourão

16:45 – 17:00

*A research of new potential vibration cancellation techniques with the use of piezo elements*

• Andrzej Wróbel and Jacek Harazin



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21-23  
OCTOBER  
2021

Thursday,  
21 October 2021

“ Design, Analysis  
and Modelling

Section 06 ”

### Chairs:

- Adriana Munteanu
- Pantelis Nikolakopoulos

**ROOM 06b**  
17:00 – 19:00

- *IManEE2021 - Section 6b\_Design, Analysis and Modelling*
- *Thursday, October 21 · 5:00 – 7:00pm*
- *Google Meet joining info*
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Thursday,  
21 October 2021

“  
Design, Analysis  
and Modelling  
”  
Section 06

17:00 – 17:15

***Adjustable suspension system for lower limb prosthesis***

•Alina Rodica Spanu, Daniel Besnea, Mazen Elfarra, Oana Chiriac and Edgar Moraru

17:15 – 17:30

***Effect of lubricant shear thinning behaviour on major functioning parameters of a pad bearing operating in hydrodynamic lubrication region***

•Christopher Salodimitris and Pantelis Nikolakopoulos

17:30 – 17:45

***Analysis of theoretical and experimental results of circular cross-section tube with different diameter sectors***

•Constantin-Paul Predoiu, Stefan Tabacu, Raluca Florentina Negrea and Dinel Popa

17:45 – 18:00

***New applications for Shape Memory Alloys in angular- contact ball bearings preloading systems***

•Andrei Zamă, Dumitru Olaru and Viorel Paleu



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21-23  
OCTOBER  
2021

Thursday,  
21 October 2021

“  
Design, Analysis  
and Modelling  
”  
Section 06

18:00 – 18:15

***Grease lubrication of miniature ball bearings***

•Gelu Ianus, Denis Cojocaru, Vlad Carlescu, Ana Tufescu and Dumitru N. Olaru



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Adriana  
MUNTEANU

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21-23  
OCTOBER  
2021

Friday,  
22 October 2021

## Chairs:

- Miguel Cavique
- Mihai Boca

“ Green Energy &  
Energy  
Management ”

Section 07

**ROOM 07**

10:30 – 13:00

- *IManEE2021 - Section 7\_Green Energy & Energy Management*
- *Friday, October 22 · 10:30am – 1:00pm*
- *Google Meet joining info*
- *Video call link: <https://meet.google.com/kfd-aejc-wgv>*
- *Or dial: (US) +1 417-553-9268 PIN: 417 135 455#*



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ONLINE  
EDITION

21-23  
OCTOBER  
2021

Friday,  
22 October 2021

“ Green Energy &  
Energy  
Management

Section 07



10:30 – 10:45

*Ground Penetrating Radar for real time surveying of soil as bioremediation precursor*

• Nicoleta Iftimie, Rozina Steigmann and Gabriel Silviu Dobrescu

10:45 – 11:00

*Optimization of Risk Assessment in Renewable Energy of Russia by applying statistical calculations of climatic characteristics and GIS technologies*

• Ludmila Nefedova and Julia Rafikova

11:00 – 11:15

*Desalination by endothermal generators*

• Miguel Cavique and Bambi Monteiro

11:15 – 11:30

*Biogas from poultry waste - a source of energy*

• Ioana-Ancuta Halmaciu, Ioana Ionel, Mihail Reinhold Wächter and Ion Vetres



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ONLINE  
EDITION

21-23  
OCTOBER  
2021

Friday,  
22 October 2021

“ Green Energy &  
Energy  
Management

Section 07



11:30 – 11:45

*The use of modelling and simulation to ensure CO2 emissions regulations*

•Cornel Constantin, Marius Băţăuş, Cristian-Alexandru Renţea and Gheorghe Frăţilă

11:45 – 12:00

*Increasing Energy Efficiency of Counter-rotating Wind Turbines by Experimental Modelling*

•Gabriela Circiumaru, Rares Andrei Chihai, Nicolae Tanase, Andreea Lucia El-Leathey and Andreea Voina



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21-23  
OCTOBER  
2021

Friday,  
22 October 2021

## Chairs:

- Alexandru Sover
- Marius Rîpanu

Mechanical and  
Manufacturing  
Equipment

Section 08

**ROOM 08**

15:00 – 19:00

- *IManEE2021 - Section 8\_Mechanical and Manufacturing Equipment*
- *Friday, October 22 · 3:00 – 7:00pm*
- *Google Meet joining info*
- *[Video call link: https://meet.google.com/jdj-vohi-wpn](https://meet.google.com/jdj-vohi-wpn)*
- *Or dial: (US) +1 413-351-8744 PIN: 362 022 277#*





Friday,  
22 October 2021

Mechanical and  
Manufacturing  
Equipment

Section 08

15:00 – 15:15

*Turning tool with tangential cutting line. Concept and constructive solution*

•Mituț V. Puriciu, Romeo Cioara and Cristian Pisarciu

15:15 – 15:30

*Study of roller-shoe contact during high-pressure injection pump operation*

•Razvan Constantin Iordache, Narcis Daniel Petrea and Carmen Bujoreanu

15:30 – 15:45

*Experimental study of the removable assemblies with screws from high pressure injection pumps*

•Diana Petronela Bistriceanu, Sergiu Pal and Carmen Bujoreanu

15:45 – 16:00

*Theoretical and experimental research on the quality of thermoformed foils using 3D-Printed plastic moulds*

•Marius-Andrei Boca, Alexandru Sover and Laurențiu Slătineanu



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Friday,  
22 October 2021

“  
Mechanical and  
Manufacturing  
Equipment  
”

Section 08

16:00 – 16:15

*A Study of Effect the Supporting Space and tool path in Incremental Forming, Thickness Evaluation, Part D*

•Khalil Ibrahim Abass

16:15 – 16:30

*Using 3D scanning in assessing the dimensional accuracy of mechanically machined parts*

•Cezarina Afteni, Viorel Paunoiu, Mitica Afteni and Virgil Teodor

16:30 – 16:45

*Research to the determined influences on the perforated holes diameters in the long round pipes*

•Dinu Iacob Poiană, Ioana Ionel and George Drăghici



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Marius  
RÎPANU

Host





21-23  
OCTOBER  
2021

Friday,  
22 October 2021

## Chairs:

- Eduard Nițu
- Chitariu Dragoș

“ Process Quality  
and Evaluation ”

Section 09

**ROOM 09a**

10:30 – 11:30

- *IManEE2021 - Section 9a \_Process Quality and Evaluation*
- *Friday, October 22 · 10:30am – 11:30pm*
- *Google Meet joining info*
- *Video call link: <https://meet.google.com/wfc-oozf-rjn>*
- *Or dial: (US) +1 413-561-7681 PIN: 570 788 017#*





21-23  
OCTOBER  
2021

Friday,  
22 October 2021

“ Process Quality  
and Evaluation

Section 09”

10:30 – 10:45

*Digital control of the reliability of reclamation machines using strain gauging of working elements as an example*

• Надежда Севрюгина, Алексей Апатенко, Олег Ступин and Алексей Миронов

10:45 – 11:00

*Self-cleaning filtration with magnetically controlled particles*

• Ivan Shorstkii

11:00 – 11:15

*Development of a “Virtual Learning Factory” for learning and applying specific Lean manufacturing methods*

• Georgiana Cătălina Neacșu, Iuliana Georgiana Pascu, Eduard Laurențiu Nițu, Laurențiu Ionescu, Ana Cornelia Gavriliuță and Nadia Belu

11:15 – 11:30

*Experimental tests to validate the usage domain for personalised formworks*

• Raluca Diaconu and Paul Dan Brindasu



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21-23  
OCTOBER  
2021

Friday,  
22 October 2021

## Chairs:

- Ivan Shorstkii
- Chitariu Dragoş

“ Process Quality  
and Evaluation

Section 09 ”

**ROOM 09a**

15:00 – 17:00

- *IManEE2021 - Section 9a \_Process Quality and Evaluation*
- *Friday, October 22 · 15:00am – 17:00pm*
- *Google Meet joining info*
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21-23  
OCTOBER  
2021

Friday,  
22 October 2021

“ Process Quality  
and Evaluation

Section 09”

15:00 – 15:15

*Using the finite element analysis to study the cutting speed influence on temperature and internal stresses in turning process*

• Aurel Mihail Țîțu and Alina Bianca Pop

15:15 – 15:30

*Study about the chip formation in the turning process using the finite element analysis*

• Alina Bianca Pop and Aurel Mihail Țîțu

15:30 – 15:45

*About Sensors and Transducers Used in the Control and Simulation of Activities in the Educational System*

• Daniela Alice Luta, Ioana Adrian, Claudiu Nicolicescu, Bianca Cezarina Ene, Daniela Ionela Juganaru, Mira Deonise and Massimo Pollifroni

15:45 – 16:00

*Expert Systems Applicable in Education and Training*

• Bianca Cezarina Ene, Alice Daniela Luta Manolescu, Adrian Ioana, Claudiu Nicolicescu, Daniela Ionela Juganaru, Mira Deonise and Massimo Pollifroni



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21-23  
OCTOBER  
2021

Friday,  
22 October 2021

“ Process Quality  
and Evaluation

Section 09”

16:00 – 16:15

*Frequency optimization of nozzle guide vane in the low pressure turbine system*

•Rafal Robak, Mirosław Szczepanik and Sebastian Rulik

15:45 – 16:00



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CHITARIU

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21-23  
OCTOBER  
2021

Friday,  
22 October 2021

## Chairs:

- Ágota Bányainé Tóth
- Margareta Coteață

Industrial and  
Product  
Management

Section 09

**ROOM 09b**

12:30 – 13:00

- *IManEE2021 - Section 9b\_Industrial and Product Management*
- *Friday, October 22 · 12:30 – 1:00pm*
- *Google Meet joining info*
- *[Video call link: https://meet.google.com/raf-uxgy-szx](https://meet.google.com/raf-uxgy-szx)*
- *Or dial: (US) +1 208-960-0827 PIN: 311 478 697#*



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ONLINE  
EDITION

21-23  
OCTOBER  
2021

Friday,  
22 October 2021

“ Industrial and  
Product  
Management

Section 09 ”

11:30 – 11:45

***Holistic management of next generation manufacturing system***

•Gabriel Frumusanu, Cezarina Afteni and Alexandru Epureanu

11:45 – 12:00

***Hybrid organization of manufacturing and operations: the Ukrainian case under quarantine restrictions***

•Tetiana Omelianenko, Kseniia Korotkova, Petr Banschykov, Mykhailo Sahaidak and Tetiana Sobolieva

12:00 – 12:15

***Industry management transformation in digital age***

•Olena Shatilova, Tetiana Sobolieva, Ludmila Batenko, Mykhailo Sahaidak and Tetiana Omelianenko

12:15 – 12:30

***Industry 4.0: challenges and opportunities in packaging logistics***

•Ágota Bányai



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ONLINE  
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21-23  
OCTOBER  
2021

Friday,  
22 October 2021

“ Industrial and  
Product  
Management ”  
Section 09

12:30 – 12:45

*Impact of digital twin technology on the real-time optimisation of material handling processes*

•Tamás Bányai

12:45 – 13:00

*Considerations on the structure of the process of manufacturing ventilated facades*

•Daniela Mariana Dumitru and Aurelian Vlase



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## Multifunctional Nanostructured Materials for Next Generation Photovoltaics

### Guest Editors

Dr. Mirela Petruta Sucheana, Dr. Petronela Pascariu, Dr. Cosmin Romanitan

### Deadline

28 February 2022

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## Invitation and Discount

- Applied Sciences offered a special discount (15%) for *all participants in IMANEE2021 for the publication of their contributions in the Special Issue*. To apply this discount, participants must *indicate in the cover letter that they are participants in IManEE 2021 and that the manuscript is for the special issue “Multifunctional Nanostructured Materials for Next Generation of Photovoltaics”*. Submission, until **28<sup>th</sup> February 2022**. Excellent contributions may benefit of larger APC discounts by contacting the GE Dr. Mirela Sucheana ([mirasuchea@hmu.gr](mailto:mirasuchea@hmu.gr)). We welcome original papers, short communications and reviews that report on fabrication, characterization, integration or application development as well as studies on toxicity, environmental issues etc.



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