



Program

2020 Research Conference of Technical University of Cluj-Napoca (TUCN)

November 18-19, 2020

The conference is organized by the Scientific Research Protectorate in cooperation with the CeS project in the framework of the 18th edition of PROINVENT.

Wednesday, 18th november

Trends and Applications of Additive Manufacturing – Chair prof. dr. eng. Nicolae Bâlc (TUCN)
18 November, 2020 13:00-14:30

1. Tool holders made by SLM, eng. Istvan Szabo (Guhring SA)
2. Molds Manufacturing by SLM, eng. Tarog Patricia (Bosch SA)
3. Hybrid Manufacturing and 3D printing applications, eng. Sergiu Pașcu (Blue Projects SA)
4. TUCN team in Formula Student Competition, eng. Ovidiu Popa (Porsche-Engineering)
5. New architecture and methods of 3D printing, eng. Guțiu Eugen, (Control 3D)
6. Panel Discussions on industrial and medical applications of AM

Link acces: <https://teams.microsoft.com/l/meetup-join/19%3a17ed95f9d693477b9a41d74606d835c2%40thread.tacv2/1605534758262?context=%7b%22Tid%22%3a%22a6eb79fa-c4a9-4cce-818d-b85274d15305%22%2c%22Oid%22%3a%224fccaf3b-4605-417f-a9d4-6e534b71ebe8%22%7d>

Innovative Approaches in Medical Robotics – Chair prof. dr. eng. Doina Pislă (TUCN)
18 November, 2020 15:00-16:30

1. Innovative Approaches Regarding Robotics in Rehabilitation, prof. dr. eng. Giuseppe Carbone (University of Calabria)
2. Innovative Robotic Systems for Cancer Treatment, prof. dr. eng. Doina Pislă (TUCN)



3. In Depth Analysis of Osteoarthritic and Orthotic Human Knee, prof. dr. eng. Daniela Tarnița (University of Craiova)

4. Virtual Biopsy and 3D Modelling of Tumours in Robotic Surgery, assoc. prof. dr. eng. Delia Mitrea (TUCN)

5. Artificial Intelligence and Ultrasound in Lung Disease Diagnosis, assoc. prof. dr. eng. Roxana Rusu-Both (TUCN)

6. Panel Discussions

Link acces : <https://teams.microsoft.com/l/meetup-join/19%3a17ed95f9d693477b9a41d74606d835c2%40thread.tacv2/1605534871225?context=%7b%22Tid%22%3a%22a6eb79fa-c4a9-4cce-818d-b85274d15305%22%2c%22Oid%22%3a%224fccaf3b-4605-417f-a9d4-6e534b71ebe8%22%7d>

Thursday, 19th november

Advanced technologies for intelligent electric vehicles I – Chair prof. dr. eng. Claudia Martiș
19 November, 2020 10:00-11:30 (TUCN)

1. Advanced electrical machines for electric vehicles auxiliaries, prof. dr. eng. Lorand Szabo (TUCN)

2. Multiphysics design and analysis of electrical machines for light vehicle propulsion, assoc. prof. dr. eng. Florin Jurca (TUCN)

3. Cloud services for electrical vehicle integration in smart cities, prof. dr. eng. Virgil Dobrota (TUCN)

4. HIL platform for batteries/ultracapacitors/fuel cells testing, lecturer dr. eng. Mircea Ruba (TUCN)

5. Light train concept, assoc. prof. dr. eng. Ștefan Breban (TUCN)

6. High efficiency power supply for electric buses propulsion, prof. dr. eng. Florin Mariașiu (TUCN)

7. Advanced composite materials for 2-places electrical vehicle mechanical structure, assoc. prof. dr. eng. Paul Bere (TUCN)

Link acces : <https://teams.microsoft.com/l/meetup-join/19%3a17ed95f9d693477b9a41d74606d835c2%40thread.tacv2/1605535036769?context=%7b%22Tid%22%3a%22a6eb79fa-c4a9-4cce-818d-b85274d15305%22%2c%22Oid%22%3a%224fccaf3b-4605-417f-a9d4-6e534b71ebe8%22%7d>



Advanced technologies for intelligent electric vehicles II – Chair prof. dr. eng. Claudia Martiș
19 November, 2020 11:45-13:15 (TUCN)

1. Propulsion system for BELCO concept, lecturer dr. eng. Claudiu Oprea, (TUCN)
2. High efficiency electrical machines for HVAC systems, dr.eng. Florin Pop Pigleșan, (TUCN)
3. Cloud services optimization and security for electrical vehicle integration in smart cities, prof. dr. eng. Virgil Dobrota, (TUCN)
4. Electrical vehicle market analysis, assoc. prof. dr. eng. Anca Constantinescu Dobra, (TUCN)
5. Propulsion systems identification and evaluation for INOVO concept, PhD student Sorin Cosman, (TUCN)
6. Electric cars research and innovation mobile platform, prof. dr. eng. Florin Mariașiu (TUCN)
7. Electrified mobility: trends and challenges, Nicolae Boicea (Groupe Renault)
8. Panel Discussions

Link acces: <https://teams.microsoft.com/l/meetup-join/19%3a17ed95f9d693477b9a41d74606d835c2%40thread.tacv2/1605535226615?context=%7b%22Tid%22%3a%22a6eb79fa-c4a9-4cce-818d-b85274d15305%22%2c%22Oid%22%3a%224fccaf3b-4605-417f-a9d4-6e534b71ebe8%22%7d>

Energy efficiency in buildings and industry - Chair prof. dr. eng. Dan D. Micu (TUCN)
19 November, 2020 13:30-15:00

1. Renewable Cogeneration and Storage Technologies Integration for energy Autonomous Buildings, Andrei Ceclan (SAMER - Societatea Auditorilor și Managerilor Energetici din România)
2. A holistic framework for Empowering SME's capacity to increase their energy efficiency, assoc. prof. dr. eng. Denisa Șteț (TUCN)
3. Barriers and solutions in the implementation of energy efficiency solutions, Bogdan Bargauan (SERVELECT - Cluj-Napoca)
4. Solutions for local energy production through cogeneration and renewable sources, Gheorghe Tucu (VALEG - Bucharest)
5. Good practices for Energy efficiency increase at end-users, Mihaela Coroiu (ENERGOBIT)



Link acces: <https://teams.microsoft.com/l/meetup-join/19%3a17ed95f9d693477b9a41d74606d835c2%40thread.tacv2/1605535339664?context=%7b%22Tid%22%3a%22a6eb79fa-c4a9-4cce-818d-b85274d15305%22%2c%22Oid%22%3a%224fccaf3b-4605-417f-a9d4-6e534b71ebe8%22%7d>

Increasing the performance of the research activity in UTCN by implementing the CLOUDUT project - Chair prof. dr. eng. Dorian Gorgan (TUCN)

19 November, 2020 10:00-12:00

1. CLOUDUT Infrastructure based Research and Development in UTCN, prof. dr. eng. Dorian Gorgan, prof. dr. eng. Sergiu Nedevschi (TUCN)
2. CLOUDUT Infrastructure Architecture
 - 2.1. Hardware and Software Architecture, assoc. prof. dr. eng. Emil Cebuc (TUCN)
 - 2.2. Infrastructure Management, eng. Laurentiu Chiorean (TUCN)
 - 2.3. Big Data and Machine Learning on Virtual Graphics Processing Units, assist. prof. dr. eng. Adrian Sabou (TUCN)
3. Developing and Migrating Applications and Services to CLOUDUT, assoc. prof. dr. eng. Victor Băcu (TUCN)
4. Multiscale Multiphysics Simulation of Power Integrated devices, Challenges and Opportunities, Author: prof. dr. eng. Ioan Marius Purcar (TUCN)
5. Software Tools for Cloud Computation in Engineering Applications, prof. dr. eng. Ioan Marius Purcar (TUCN)
6. Panel Discussion

Link acces: <https://teams.microsoft.com/l/meetup-join/19%3a17ed95f9d693477b9a41d74606d835c2%40thread.tacv2/1605535625127?context=%7b%22Tid%22%3a%22a6eb79fa-c4a9-4cce-818d-b85274d15305%22%2c%22Oid%22%3a%224fccaf3b-4605-417f-a9d4-6e534b71ebe8%22%7d>

AI Based Solutions for Automated Driving - chair prof. dr. eng. Sergiu Nedevschi (TUCN)

19 november, 2020 12:00-13:30

1. Perception for Automated Driving at TUCN, prof. dr. eng. Sergiu Nedevschi (TUCN)
2. Automated Driving in the Rise of AI Times, eng. Catalin Golban (Bosch Engineering Center Cluj)
3. Virtual Solutions in Highly Automated Driving, dr. eng. Tudor Ziman (Porsche Engineering Cluj)



4. Panel Discussions - from applied research activities to product development

Link acces: <https://teams.microsoft.com/l/meetup-join/19%3a17ed95f9d693477b9a41d74606d835c2%40thread.tacv2/1605535775400?context=%7b%22Tid%22%3a%22a6eb79fa-c4a9-4cce-818d-b85274d15305%22%2c%22Oid%22%3a%224fccaf3b-4605-417f-a9d4-6e534b71ebe8%22%7d>

Large scale distributed systems: challenges and use-cases in H2020 projects – chair prof. dr. eng. Ioan Salomie
19 November, 2020 13:30-15:00

1. DSRL Research in Large Scale Distributed Systems, prof. dr. eng. Ioan Salomie (TUCN)
2. Digital Twins and P2P models for building energy communities (H2020 BRIGHT), prof. dr. eng. Tudor Cioara (TUCN)
3. Decentralized control of flexibility in DR programs using blockchain and Zero-knowledge proof (H2020 eDREAM), assist. prof. dr. eng. Claudia Antal (TUCN)
4. Data Centers heat reuse in nearby neighborhoods: from air to liquid cooling (H2020 CATALYST & PN III COOLDC), assist. prof. dr. eng. Marcel Antal (TUCN)
5. Services for managing cognitive decline of elders (H2020 / AAL Remember-ME), assoc. prof. dr. eng. Ionut Anghel (TUCN)
6. Ambient intelligence and big data analytics for managing transitional care (H2020 / AAL H2HCare), assist. prof. dr. eng. Cristina Pop (TUCN)
7. Social robots and ontologies for personalized care of elders (H2020 / AAL ReMIND), assoc. prof. dr. eng. Viorica Chifu (TUCN)
8. Panel Discussion.

Link acces: <https://teams.microsoft.com/l/meetup-join/19%3a17ed95f9d693477b9a41d74606d835c2%40thread.tacv2/1605536084248?context=%7b%22Tid%22%3a%22a6eb79fa-c4a9-4cce-818d-b85274d15305%22%2c%22Oid%22%3a%224fccaf3b-4605-417f-a9d4-6e534b71ebe8%22%7d>