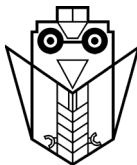




Sveučilište u Zagrebu
Agronomski fakultet



University of Zagreb
Faculty of Agriculture



**FACULTY OF AGRICULTURE ZAGREB
AGRICULTURAL ENGINEERING DEPARTMENT
FACULTY OF AGROBIOTECHNICAL SCIENCES OSIJEK
FACULTY OF AGRICULTURE AND LIFE SCIENCES
UNIVERSITY OF MARIBOR
INSTITUTE OF AGRICULTURAL ENGINEERING, BOKU, VIENNA
AGRICULTURAL INSTITUTE OF SLOVENIA
NATIONAL INSTITUTE FOR AGRICULTURAL MACHINERY - INMA BUCHAREST
CROATIAN AGRICULTURAL ENGINEERING SOCIETY**



48th International Symposium “Actual Tasks on Agricultural Engineering”

PROGRAMME

2nd – 4th March 2021, Zagreb, Croatia

Due to the corona pandemic the 48th ATAEE symposium will be held completely on-line using Zoom platform. Links for joining each session will be announced on the official [ATAEE web pages](#).

TUESDAY - 2nd March 2021

Moderators: Nikola Bilandžija, Mateja Grubor, Igor Kovačev

10.00-10.30 OFFICIAL OPENING (Live – 5 minutes each speaker)

<https://us02web.zoom.us/j/89437731612?pwd=QkErNEEzVi9mYWZ3QWlQOXIybWJRUT09>

Prof. Darko VONČINA, Vice-Dean for Science and International Cooperation, Faculty of Agriculture

Prof. Dubravko FILIPOVIĆ, Head of Department of Agricultural Engineering, Faculty of Agriculture

Prof. Michal LOŠŤÁK, President of the CASEE network, Czech University of Life Sciences, Prague

Prof. Peter SCHULZE LAMMERS, CIGR Representative @ EurAgEng, University of Bonn

10.30-12.00 PLENARY SESSION (Live presentations + Live discussion)

<https://us02web.zoom.us/j/89437731612?pwd=OkErNEEzVi9mYWZ3OWlOQXlrbWJRUT09>

Peter SCHULZE LAMMERS, Milan MARTINOV, Andreas GRONAUER, Silvio KOŠUTIĆ
Agriculture 4.0 – Challenge for Agricultural and Biosystems Engineering

Heinz BERNHARDT, Mehmet BOZKURT, Eduardo COLANGELO, Jan HORSTMANN, Martin KRAFT, Johannes MARQUERING, Thilo STECKEL, Heiko TAPKEN, Cornelia WELTZIEN, Clemens WESTERKAMP

Industry 4.0 - The next stage of agricultural technology?

Live discussion

12.00-12.30 BREAK

12.30-14.00 SESSION 1 (Recorded presentations 1h03m + Live discussion)

<https://us02web.zoom.us/j/82796448489?pwd=dEdOdk9nNEdDbGNSTVFXtk9WOS9PdZ09>

Maximilian TREIBER, Heinz BERNHARDT

The NEVONEX ecosystem – Implications of an IoT framework on automation in the agricultural machinery sector

Jochen Georg WIECHA, Kathrin L. M. ZIEGLER, Heinz BERNHARDT

Draft force reduction by an electrification-unit on implements

Georg SUPPER, Viktoria MOTSCH, Norbert BARTA, Andreas GRONAUER

Planning and development of a mobile, autonomous robot platform for crop cultivation applications using ROS

Peter LEPEJ, Jurij RAKUN

An overview of an autonomous farm robot software architecture

Eglė JOTAUTIENĖ, Antanas JUOSTAS

Automatic steering of combine harvester for agricultural and environmental monitoring

Erik RIHTER, Damijan KELC, Denis STAJNKO, Peter VINDIŠ, Peter BERK, Peter POLIČ, Miran LAKOTA, Jurij RAKUN

The state of precision agriculture in Slovenia in comparison to four Central European countries

Matthias STETTNER, Franz-Xaver MAIDL, Jürgen SCHWARZENSTEINER, Kurt-Jürgen HÜLSBERGEN, Heinz BERNHARDT

Sustainability of site-specific fertilization systems

Live discussion

14.00-15.00 BREAK

15.00-16.30 SESSION 2 (Recorded presentations 1h06m + Live discussion)

<https://us02web.zoom.us/j/85102926210?pwd=U0FHZ3ozb291OXhoTXFOaWp2TUJLOT09>

Atanas ATANASOV, Ivaylo HRISTAKOV, Mihail MILCHEV, Milan KOSZEL, Dario KNEŽEVIĆ
Influence of local climatic factors on sunflower inflorescence visit by honey bees

Aleksandra DIMITRIJEVIĆ, Carmela SICA, Ilija KAMENKO, Zoran MILEUSNIĆ, Rajko MIODRAGOVIĆ
Greenhouse decision support model and its web-based application

Dan CUJBESCU, Iuliana GĂGEANU, Cătălin PERSU, Mihai MATAACHE, Iulian VOICEA, Gabriel GHEORGHE, Ion MURGESCU

Operation and design simulation of the photovoltaic system for smart greenhouses

Roberto PUGLISI, Dina STATUTO, Pietro PICUNO

Effects of greenhouse lime shading on filtering the solar radiation

Prud NETSAWANG, Lutz DAMEROW, Peter SCHULZE LAMMERS

Use of laser radiation as an alternative technique for selective blossom thinning in apple

Peter BERK, Andreja URBANEK KRAJNC, Denis STAJNKO, Peter VINDIŠ, Damijan KELC, Miran LAKOTA, Aleš BELŠAK, Tomaž POJE, Matej SEČNIK

Digital evaluation of the green leaf wall area of the vine in the "Yellow Muscat" variety

Denis STAJNKO, Peter VINDIŠ, Damijan KELC, Miran LAKOTA, Jurij RAKUN, Peter BERK
3D evaluation of apple tree canopies based on the LIDAR sensing system

Damijan KELC, Peter VINDIŠ, Erik RIHTER, Jurij RAKUN, Peter BERK, Denis STAJNKO, Miran LAKOTA
Monitoring the condition of rapeseed plants using UAVs to determine the NDVI index

Live discussion

WEDNESDAY - 3rd March 2021

10.00-11.30 SESSION 3 (Recorded presentations 1h10m + Live discussion)

Gheorghe VOICU, Gabriel-Alexandru CONSTANTIN, Paula TUDOR, Elena-Madalina STEFAN
Mathematical modeling of material movement on the sieves of the cleaning system at the cereal combine harvester

Theresa ERTL, Maximilian TREIBER, Heinz BERNHARDT
Ginger production in Europe and Asia – a comparison of cultivation methods

Petru CARDEI, Radu CIUPERCA, Adriana MUSCALU, Sebastian MURARU
Planting errors in the exploitation of seedling planters, causes and improvement solutions

Edvardas VAICIUKEVIČIUS, Rolandas DOMEIKA, Egidijus ŠARAUSKIS, Algirdas JASINSKAS, Paulius JASEVIČIUS, Kęstutis ROMANECKAS
Research of pea seed sorting in the sloping air flow

Tomaž POJE, Viktor JEJČIČ
Oil extraction from rapeseed with screw press for small scale production

Gabriele DAGLIO, Damiano ZAMPIERI, Raimondo GALLO, Fabrizio MAZZETTO
New solution to harvest cereals in high mountain-Alpine region: first test with a stripper machine

Live discussion

11.30-12.00 BREAK

12.00-13.30 SESSION 4 (Recorded presentations 1h11m + Live discussion)

Christoph KREITENWEIS-EISGRUBER, Heinz BERNHARDT
Development of sustainable solutions for the construction of cowsheds in Bavaria

Martin HÖHENDINGER, Agnes SIXT, Maximilian TREIBER, Heinz BERNHARDT
Heat-stress indices for automated climate control systems dairy cowshed

Radu ROȘCA, Petru CÂRLESCU, Virgil VLAHIDIS
Assessment of the constructive properties of some milking liners and their effect over the pulsation cycle

Kathrin L. M. ZIEGLER, Jochen G. WIECHA, Heinz BERNHARDT
Concept study of a cooling system for fattening pigs with heat recovery by conductivity

Mariana FERDEȘ, Bianca - Ștefania ZĂBAVĂ, Mirela DINCĂ, Georgiana MOICEANU, Mariana IONESCU
The effect of ozone on certain yeasts in wastewater

Željko JUKIĆ, Igor KOVAČEV, Nikola BILANDŽIJA, Zlatko KORONC, Ivan SMILJANOVIĆ
Corn stover management on family farm

Željko JUKIĆ, Igor KOVAČEV, Lepomir ČOGA, Zlatko KORONC, Ana MATKOVIĆ, Antun ZMAIĆ
Potential and actual quantities of wheat straw that can be collected on family farm

Live discussion

13.30-14.30 BREAK

14.30-16.00 SESSION 5 (Recorded presentations 1h02m + Live discussion)

Stjepan PLIESTIĆ, Ante GALIĆ
Automation and digitalization in the processing of agricultural products

Davor PETROVIĆ, Đuro BANAJ, Anamarija BANAJ, Dario KNEŽEVIĆ, Vjekoslav TADIĆ
The use of sensor technology in crop protection

Andreas CHRIST, Oliver SCHMITTMANN, Peter SCHULZE LAMMERS
Plant differentiation with truecolor arrays for online precision plant protection

Indrė BRUČIENĖ, Domantas ALELIŪNAS, Egidijus ŠARAUSKIS
Time and costs analysis of different non-chemical weed control methods in sugar beet

Josip LAKIĆ, Igor KOVAČEV, Dubravko FILIPOVIĆ, Klara BARIĆ, Ana PINTAR, Mateja GRUBOR
Influence of different weed control methods on soybean yield

Peter BERK, Andrej PAUŠIČ, Denis STAJNKO, Andreja URBANEK KRAJNC, Peter VINDIŠ, Damijan KELC, Aleš BELŠAK, Danijela KOSI, Mario LEŠNIK
Efficiency of alternative weed control systems in the vineyard

Vjekoslav TADIĆ, Đuro BANAJ, Dario KNEŽEVIĆ, Anamarija BANAJ, Davor PETROVIĆ, Juraj SABLJAK
Technical inspection of crop protection machines according to HRN EN ISO 16122:2015

Live discussion

THURSDAY - 4th March 2021

10.00-11.30 SESSION 6 (Recorded presentations 1h09m + Live discussion)

Tajana KRIČKA, Mateja GRUBOR, Dijana VICAN, Ana MATIN
Influence of drying air temperature on maize grain breakage

Ana MATIN, Tajana KRIČKA, Tugomir MAJDAK, Astrid SARAPA, Mateja GRUBOR, Igor KOVAČEV
Influence of drying on physical and energy properties of pistachio shell

Neven VOČA, Nikola BILANDŽIJA, Anamarija PETER, Jona ŠURIĆ, Tajana KRIČKA
Potential of biogas generation from processing grape by-products

Oana-Diana CRISTEA, Luminița CATANĂ, Carmen BRĂCĂCESCU, Carmen BĂLȚATU, Laurențiu VLADUȚOIU, Iulia GRIGORE, Nicoleta UNGUREANU
Processing methods of wine by-products to obtain grape seed oil and grape seed flour as functional ingredients for food fortification

Mateja GRUBOR, Ana MATIN, Nikola BILANDŽIJA, Sandra BISCHOF, Vanja JURIŠIĆ, Mislav KONTEK, Tajana KRIČKA
Miscanthus and maize stalk as source for green energy production

Anamarija GUDELJ VELAGA, Nikola BILANDŽIJA, Mateja GRUBOR, Zorana KOVAČEVIĆ, Tajana KRIČKA
Energy utilisation of biofibre production residues – circular economy approach

Cristian SORICĂ, Valentin VLĂDUȚ, Ion GRIGORE, Mario CRISTEA, Elena SORICĂ, Ion PIRNĂ, Dragoș PREDA, Bogdan DURAN
Technical performances of a portable UV-C device used for the decontamination of various working spaces

Aleksandar NESTEROVIC, Djordje DJATKOV, Miodrag VISKOVIĆ, Milan MARTINOV
Airborne emissions from agricultural biomass combustion in the city of Novi Sad

Live discussion

11.30-12.00 BREAK

12.00-13.30 SESSION 7 (Recorded presentations 1h07m + Live discussion + Closing symposium)

Vlad MĂRĂZAN, Antoanela COZMA, Rareș HĂLBAC - COTOARĂ – ZAMFIR
Designing a common framework for climate change impact assessment in agriculture for the western part of Romania

Josef J. BAUERDICK, Berenike KRÖCK, Maximilian TREIBER, Heinz BERNHARDT
The future of pasture management in Germany – aspects of technology and regulation

Francisco MEDEL-JIMENEZ, Norbert BARTA, Andreas GRONAUER, Iris KRAL
Financial evaluation of variable rate nitrogen application using a ground-based optical crop sensor

Nicolae LONTIS, Dumitru TUCU, Gabriel MALAIMARE, Ioan-Vasile GROZA
Simulation model of agricultural transport units behaviour on public roads

Ileana TOMOIAGA, Alexandra SUTA, Iasmina DIMCEA, Titus SLAVICI, Roxana BALINT, Florin NEDELCU, Lavinia CERNESCU MIHALI, Cristina SIRBU
Artificial intelligence methods for sustainable agribusiness involving pellets

Alexandra SUTA, Ileana TOMOIAGA, Iasmina DIMCEA, Ștefan-Alfred MARIS, Roxana BALINT, Evelyne POP, Titus SLAVICI
Innovative results concerning optimized recipes for heat pellets

Alexandru TUCU, George Catalin CRISAN, Dumitru TUCU, Alexandru VASILICA
Motivational factors in systems of occupational risk management in agriculture

Alexandru TUCU, Anca-Alexandra PURCAREA, George Catalin CRISAN, Alexandru VASILICA, Dumitru TUCU
Quality evaluation of occupational health & safety (OHS) risk management systems from agriculture

Live discussion

CLOSING SYMPOSIUM

15.00 CLOSED SESSION - Annual meeting of Croatian Agricultural Engineering Society (live)
