CARE 4BIO

Horizon Europe Brokerage Event
Cluster 6 Calls 2024

Brussels, 26 September 2023

Digital twin concept in agri-food sector / smart farming

Dr. Egidijus Katinas

Czech University of Life Sciences Prague

This project has received funding from the European Union's Horizon Europe research and innovation programme, under Grant Agreement No 101059839

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or the European Commission. Neither the European Union nor the granting authority can be held responsible for them.

Topic(s) addressed:

- HORIZON-CL6-2024-GOVERNANCE-01-7: Enhancing working conditions and strengthening the work force through digital and data technologies – the potential of robotics and augmented reality in agriculture

Other topics of interest:

- We are looking for partners facing problems related to the agri-food sector where our knowledge and experience can suggest solutions based on numerical methods.

Project idea

Our team of experts has comprehensive experience in intelligent solutions for the use of new technologies in the agri-food sector and its digitalization, precision agriculture and development, such as *monitoring*, *collecting* and *analyzing* data, design and construction of *digital twins*, machinery and soil processing *simulation via FEM and DEM*, *live parameters monitoring*, laboratory and computational results evaluation.

CZECH UNIVERSITY OF LIFE SCIENCES PRAGUE

Main expertise:

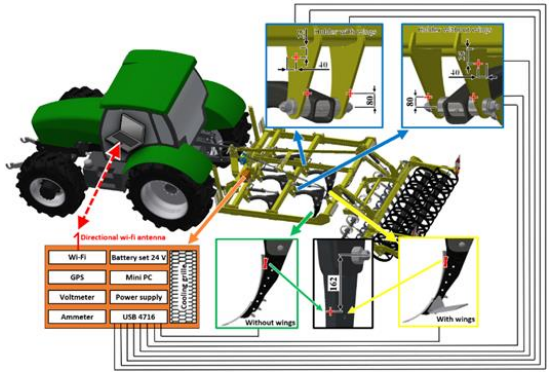
- FEM and DEM method application in agriculture and soil processing;
- Design and construction of digital twins;
- Soil processing, fertilizing and seeding processes simulation and analysis by DEM;
- Abrasive wear analysis, simulation, worn surface comparison to the actual shape.

Over 3 mil. EUR from national and international funding programmes at FE (more info Faculty of Engineering, CULS Prague (czu.cz))

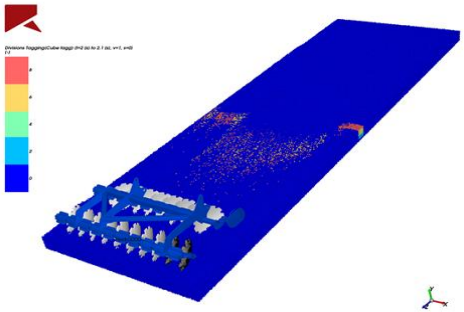
Cluster 6 Brokerage Event
Brussels, 26 September 2023

CZECH UNIVERSITY OF LIFE SCIENCES PRAGUE

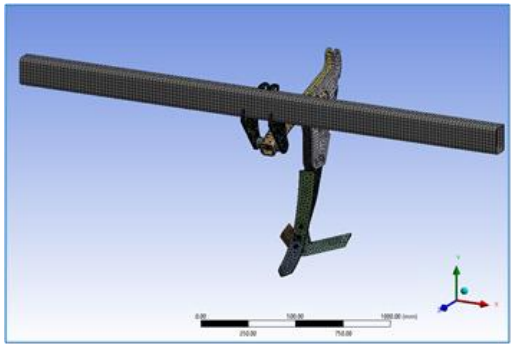
Real time measurement

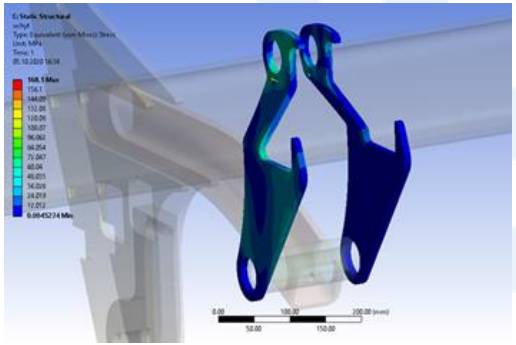


Particle tracing (DEM)



Design and FEM analysis





Contact details

- Dr. Egidijus Katinas;
- Faculty of Engineering, Czech University of Life Sciences Prague;
- Kamýcká 129, 16500 Praha – Suchdol, Czech Republic
- Linkedin – Egidijus Katinas (https://www.linkedin.com/in/egidijus-katinas-3000a6a5/); email: katinas@tf.czu.cz.