

# EU Brokerage Event

## on Industrial KET\* in Horizon Europe

\*Key Enabling Technologies

10th November 2022 • Strasbourg

Conference &  
Bilateral/B2B Meetings

Calls  
2023- 2024

**Project idea/ Field of expertise:**

Digital twin, Soil processing model, Discrete element method (DEM), Finite element method (FEM), Wear analysis.

**Organisation Name:**

Faculty of Engineering (FE)  
Czech University of Life Sciences Prague (CZU)

**Addressed topic(s):**

**Horizon Europe Cluster 4**

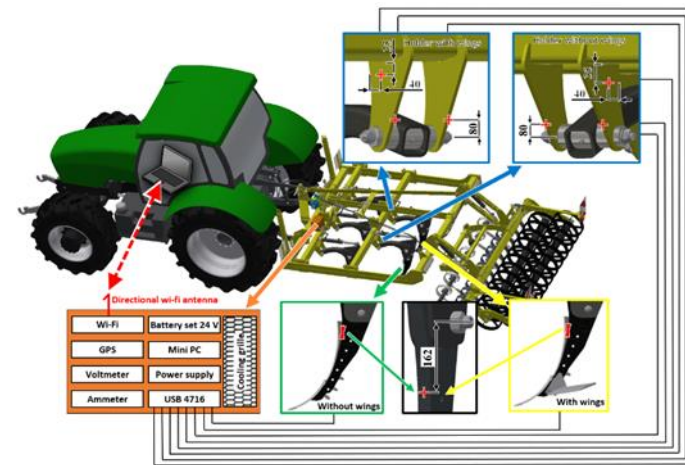
C4-D1-Climate neutral, Circular and Digitised Production

C4-D3-World-leading Data and Computing Technologies

C4-D4- Digital & Emerging Technologies

Public; established in 1952; over 8,000 graduates, 10 departments

- precision agriculture;
- design and development of smart solutions for the use of new technologies in the agri-food sector and its digitalization;
- design and construction of digital twins

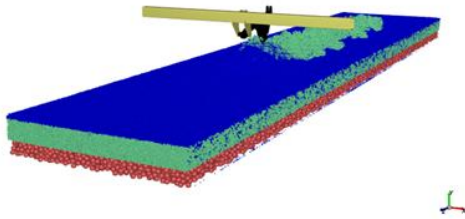


Over 3 mil. EUR from national and international funding programmes at FE (more info [Faculty of Engineering, CULS Prague \(czu.cz\)](http://Faculty of Engineering, CULS Prague (czu.cz)))

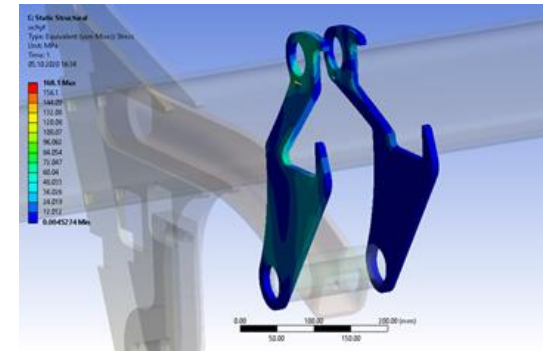
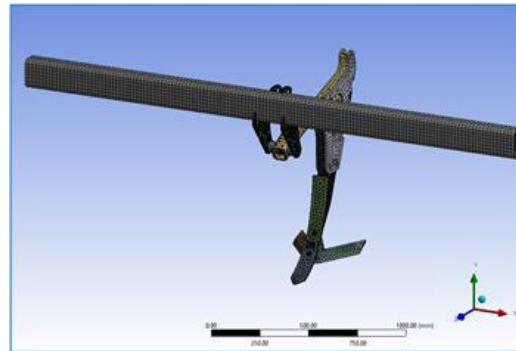
# Usage of digital twin concept in agri-food sector and smart farming

- FEM and DEM method application in agriculture and soil processing;
- fertilizing and seeding processes simulation;
- abrasive wear analysis;
- worn surface comparison to the actual shape.

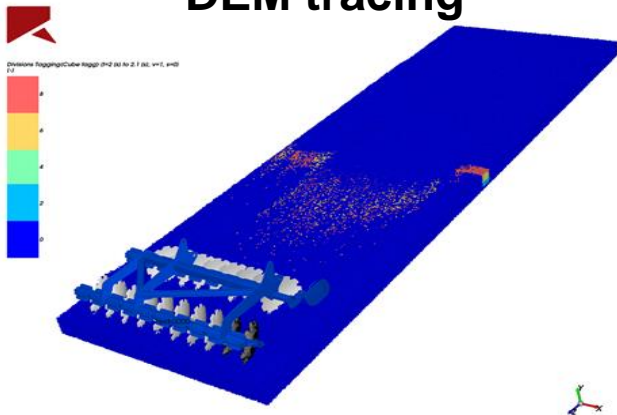
## DEM



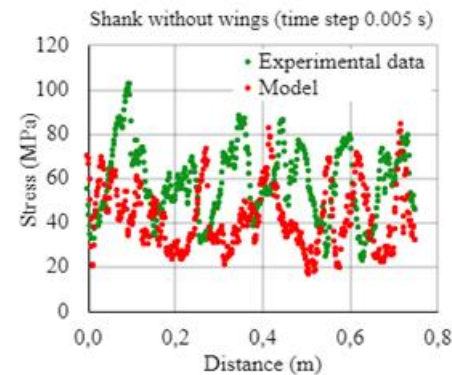
## FEM



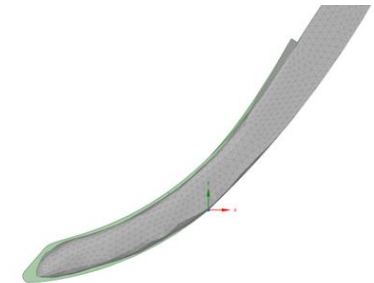
## DEM tracing



## Evaluation of result



## Wear analysis



# Contact details

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LinkedIn/Twitter	<a href="https://www.linkedin.com/in/egidijus-katinas-3000a6a5/">https://www.linkedin.com/in/egidijus-katinas-3000a6a5/</a>

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