

# Publications

## Cattles:

- Gavojdian D., Mincu M., Lazebnik T., Oren A., Nicolae I. and Zamansky A. (2024). BovineTalk: machine learning for vocalization analysis of dairy cattle under the negative affective state of isolation. *Front. Vet. Sci.* 11:1357109. doi: 10.3389/fvets.2024.1357109
- Lee, J.G.; Lee, S.S.; Alam, M.; Lee, S.M.; Seong, H.-S.; Park, M.N.; Han, S.; Nguyen, H.-P.; Baek, M.K.; Phan, A.T.; et al. Utilizing 3D Point Cloud Technology with Deep Learning for Automated Measurement and Analysis of Dairy Cows. *Sensors*, 2024, 24, 987.  
<https://doi.org/10.3390/s24030987>
- Moniek Smink, Haotian Liu, Dörte Döpfer, Yong Jae Lee; Proceedings of the IEEE/CVF Winter Conference on Applications of Computer Vision (WACV), 2024, pp. 7056-7065
- Alessio Cotticelli, Maria Teresa Verde, Annalisa Liccardo, Giorgio de Alteriis, Francesco Lamonaca, Roberta Matera, Gianluca Neglia, Tanja Peric, Alberto Prandi, Francesco Bonavolontà. On the use of 3D camera to accurately measure volume and weight of dairy cow feed. *Acta IMEKO*, vol. 12, no. 4, article 37, December 2023, identifier: IMEKO-ACTA-12 (2023)-04-37
- Kian Eng Ong, Sivaji Retta, Ramarajulu Srinivasan, Shawn Tan, Jun Liu. 2023. CattleEyeView: A Multi-task Top-down View Cattle Dataset for Smarter Precision Livestock Farming. *VCIP*.  
<https://doi.org/10.48550/arXiv.2312.08764>
- Marina, H., Ren, K., Hansson, I., Fikse, F., Nielsen, P.P., Rönnegård, L. New insight into social relationships in dairy cows and how time of birth, parity, and relatedness affect spatial interactions later in life (2024) *Journal of dairy science*, 107 (2), pp. 1110-1123. DOI: 10.3168/jds.2023-23483
- Bao Y., Lu H., Wu J., Lei J., Zhang J., Luo X., Guo H. (2023). Rapid and automated body measurement of cattle based on statistical shape model. *ISPRS Annals of the Photogrammetry, Remote Sensing and Spatial Information Sciences*, 10, pp. 541 – 546. DOI: 10.5194/isprs-annals-X-1-W1-2023-541-2023
- Arıkan, İ.; Ayav, T.; Seçkin, A.Ç.; Soygazi, F. Estrus Detection and Dairy Cow Identification with Cascade Deep Learning for Augmented Reality-Ready Livestock Farming. *Sensors* 2023, 23, 9795.  
<https://doi.org/10.3390/s23249795>
- Hamidi, D., Hütt, C., Komainda, M., Grinnell, N.A., Horn, J., Riesch, F., Hamidi, M., Traulsen, I., Isselstein, J. Grid grazing: A case study on the potential of combining virtual fencing and remote

sensing for innovative grazing management on a grid base (2023). *Livestock Science*, 278. DOI: 10.1016/j.livsci.2023.105373

- Guevara-Mann, D., Renaud, D.L., Cantor, M.C. Activity behaviors and relative changes in activity patterns recorded by precision technology were associated with diarrhea status in individually housed calves (2023). *Journal of Dairy Science*, 106 (12), pp. 9366-9376. DOI: 10.3168/jds.2023-23380.
- Ranzato, G., Lora, I., Aernouts, B. et al. Sensor-based behavioral patterns can identify heat-sensitive lactating dairy cows. *Int J Biometeorol* 67, 2047–2054 (2023). <https://doi.org/10.1007/s00484-023-02561-w>
- Nyamuryekung'e, S.; Cox, A.; Perea, A.; Estell, R.; Cibils, A.F.; Holland, J.P.; Waterhouse, T.; Duff, G.; Funk, M.; McIntosh, M.M.; et al. Behavioral Adaptations of Nursing Brangus Cows to Virtual Fencing: Insights from a Training Deployment Phase. *Animals* 2023, 13, 3558. <https://doi.org/10.3390/ani13223558>
- Christopher N. Boyer, Kevin E. Cavasos, Jamie A. Greig, Susan M. Schexnayder, Influence of risk and trust on beef producers' use of precision livestock farming, *Computers and Electronics in Agriculture*, Volume 218, 2024, 108641, ISSN 0168-1699, <https://doi.org/10.1016/j.compag.2024.108641>

#### Poultry:

- Siriani, A.L.R.; Miranda, I.B.d.C.; Mehdizadeh, S.A.; Pereira, D.F. Chicken Tracking and Individual Bird Activity Monitoring Using the BoT-SORT Algorithm. *AgriEngineering* 2023, 5, 1677–1693. <https://doi.org/10.3390/agriengineering5040104>

#### Pigs:

- Besteiro, R., Arango, T.; Rodríguez, M.R.; Fernández, M.D. Linear and Nonlinear Mixed Models to Determine the Growth Curves of Weaned Piglets and the Effect of Sex on Growth. *Agriculture* 2024, 14, 79. <https://doi.org/10.3390/agriculture14010079>
- Liu, Luo and Chen, Jinxin and Ding, Qi-an and Zhao, Ruqian and Shen, Mingxia and Liu, Longshen (2024). Nursing behavior detect and analysis of sows based on the number and location of piglets outside the sucking area with convolution neural network. Available at SSRN: <https://ssrn.com/abstract=4713191> or <http://dx.doi.org/10.2139/ssrn.4713191>

**Other:**

- Roberta Matera, Leopoldo Angrisani, Gianluca Neglia, Angela Salzano, Francesco Bonavolontà, Maria Teresa Verde, Nadia Piscopo, Domenico Vistocco, Oscar Tamburis. Reliable use of smart cameras for monitoring biometric parameters in buffalo precision livestock farming, Acta IMEKO, vol. 12, no. 4, article 39, December 2023, identifier: IMEKO-ACTA-12 (2023)-04-39
- Eftang, S., Vas, J.B., Holand, Ø., Bøe, K.E., Andersen, I.L. Sheep's learning ability and behavioural response to a fully automated virtual fencing system (2023). Applied Animal Behaviour Science, 269. DOI: 10.1016/j.livsci.2023.105373