

Projekta Izp-2019/1-0094 rezultāti

Mašīnu dziļās mācīšanās un datizraces pielietošana augu un patogēnu mijiedarbības izpētei: ābeļu un bumbieru kraupja patosistēmas

Oriģināli zinātniskie raksti, kuru citēšanas indekss sasniedz vismaz 50 procentus no nozares vidējā citēšanas indeksa, kas iesniegti, vai pieņemti publicēšanai Web of Science Core Collection, vai SCOPUS datubāzēs iekļautajos žurnālos vai konferenču rakstu krājumos:

1. Sokolova, O.; Moročko-Bičevska, I. Evaluation of Venturia pyrina virulence on European pear (*Pyrus communis*) cultivars by an in vitro methodology. - Journal of Phytopathology, 2021, <https://onlinelibrary.wiley.com/doi/10.1111/jph.13002>
2. Zelmene, K.; Kārklīņa, K.; Ikase, L.; Lācis, G. Inheritance of Apple (*Malus × domestica* (L.) Borkh) Resistance against Apple Scab (*Venturia inaequalis* (Cooke) Wint.) in Hybrid Breeding Material Obtained by Gene Pyramiding. - Horticulturae, 2022, <https://www.mdpi.com/2311-7524/8/9/772>
3. Sokolova, O.; Moročko-Bičevska, I.; Lācis, G. Genetic Diversity of *Venturia inaequalis* in Latvia Revealed by Microsatellite Markers. - Pathogens, 2022, <https://www.mdpi.com/2076-0817/11/10/1165>

Oriģināli zinātniskie raksti, kas iesniegti, vai pieņemti publicēšanai Web of Science vai SCOPUS datubāzēs iekļautajos žurnālos vai konferenču rakstu krājumos:

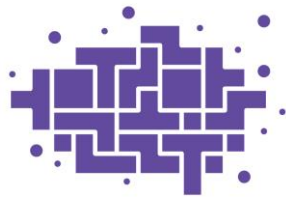
1. Kodors, S.; Lācis, G.; Sokolova, O.; Zhukovs, V.; Apeinans, I.; Bartulsons, T. Apple scab detection using CNN and Transfer Learning. - Agronomy Research, 2021, <https://dspace.emu.ee/xmlui/handle/10492/6447?locale-attribute=en>
2. Kodors, S.; Lācis, G.; Zhukov, V.; Bartulsons, T. Pear and apple recognition using deep learning and mobile. - Engineering for Rural Development, 2020, <http://www.tf.llu.lv/conference/proceedings2020/Papers/TF476.pdf>
3. Zarembo, I.; Teilans, A.; Bartulsons, T.; Sokolova, O.; Litavniece, L.; Nikolajeva, A. Apple and pear scab onthology. - ENVIRONMENT. TECHNOLOGIES. RESOURCES. Proceedings of the 13th International Scientific and Practical Conference, 2021, <http://journals.rta.lv/index.php/ETR/article/view/6589>
4. Lācis, G.; Kota-Dombrovska, I.; Kārklīņa, I.; Lāce, B. Genetic diversity and relatedness of Latvian *Pyrus* germplasm revealed by a set of SSR markers. - Proceedings of the Latvian Academy of Sciences, 2021, <https://sciendo.com/article/10.2478/prolas-2022-0068>

5. Kodors, S.; Sokolova, O.; Morocko-Bicevska, I.,; Bartulsons, T.; Zhukov, V.; Apeinans, I.; Pruthi, R. Apple Scab Detection in the Early Stage of Disease Using a Convolutional Neural Network. - Proceedings of the Latvian Academy of Sciences, 2022, <https://sciendo.com/article/10.2478/prolas-2022-0074>
6. Sokolova, O.; Moročko-Bičevska, I.- Evaluation of Apple Scab and Occurrence of Venturia Inaequalis Races on Differential Malus Genotypes in Latvia. - Proceedings of the Latvian Academy of Sciences, 2022, <https://sciendo.com/article/10.2478/prolas-2022-0075>
7. Sokolova, O.; Moročko-Bičevska, I.; Lācis, G. Screening of Venturia inaequalis virulence and resistance of apple (Malus) genotypes to apple scab by in vitro methodology. - Rural Sustainability Research, 2023, <https://sciendo.com/article/10.2478/plua-2022-0018>
8. Apeināns, I.; Zarembo, I.; Lācis, G.; Litavniece, L. Apple and Pear Scab Expert System. - Baltic Journal of Modern Computing (BJMC) ISSN 2255-8950 (Online), 2022, <https://www.bjmc.lu.lv/contents/papers-in-production/>

Zinātniskās datubāzes un datu kopas, kas izstrādātas projekta ietvaros:

1. Projekta grupa, Ābeļu un bumbieru kraupja izpētes ontoloģija. - Webprotege, 2020, <https://webprotege.stanford.edu/#projects/4bfe4eaa-0664-447a-8509-3ffe48b58b63/edit/Classes>
2. Projekta grupa, Natural images with apple scab (leaves). - kaggle.com, 2021, <https://www.kaggle.com/projectlzp201910094/applescabfds>
3. Projekta grupa, Natural images with apple scab (fruits). - kaggle.com, 2021, <https://www.kaggle.com/projectlzp201910094/applescablds>
4. Projekta grupa, Natural images with apple scab (leaves). - PaperWithCode, 2021, <https://paperswithcode.com/dataset/applescablds>
5. Projekta grupa, Natural images with apple scab (fruits). - PaperWithCode, 2021, <https://paperswithcode.com/dataset/applescabfds>
6. Projekta grupa, eAppleScab. - kaggle.com, 2021, <https://www.kaggle.com/dataset/f0b8815d57ff9ad7112cd2f2ac5a59ad53b20f16a650ce14f87e3759e34f5e75>
7. Projekta grupa, eAppleScab. - PaperWithCode, 2022, <https://paperswithcode.com/dataset/eapplescab>

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PROJEKTI

1. Projekta grupa, Crowdsourcing sistēma ābeļu kraupja atpazīšanai. - Dārzkopības institūts, RTA, 2022, <https://apples.rta.lv>
2. Projekta grupa, Ekspertu sistēma apples.rta.lv. - Dārzkopības institūts, RTA, 2022, <https://apples.rta.lv>
3. Projekta grupa, Viedais dārzs (eGarden). - 2023, <https://egarden.rta.lv/>