



The 3rd Sakura Alumni Meeting THAILAND



Ms. Jintanant Tohtubtiang



Dr. Toungporn Uttarotai



Prof. Dr. Panmanas Sirisomboon

Ms. Jintanant Tohtubtiang

Sakura Science Exchange Program at Oita University, 2022



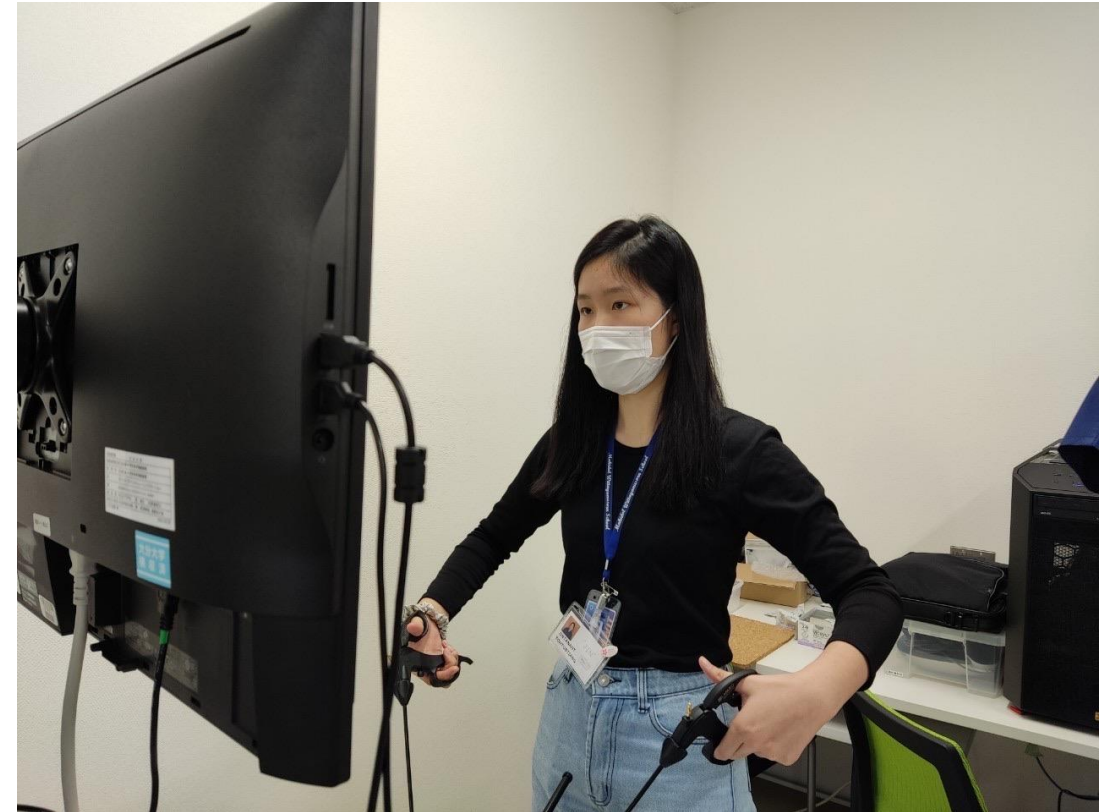
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Dr. Toungporn Uttarotai

Sakura Science Exchange Program at Ritsumeikan University, Shiga, 2018



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Dr. Toungporn Uttarotai

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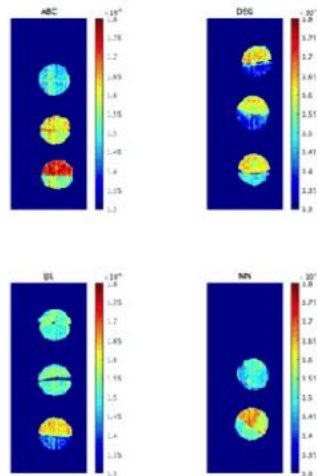


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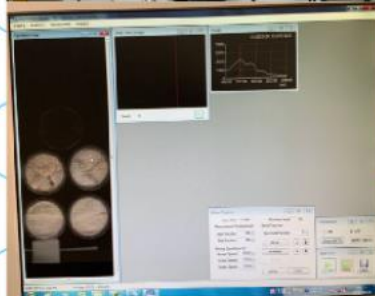
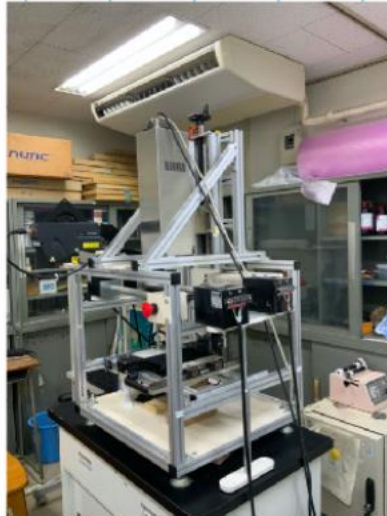




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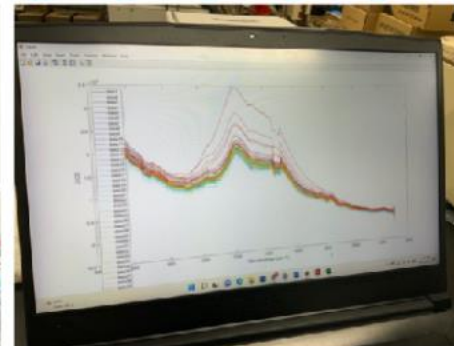
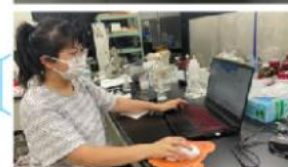
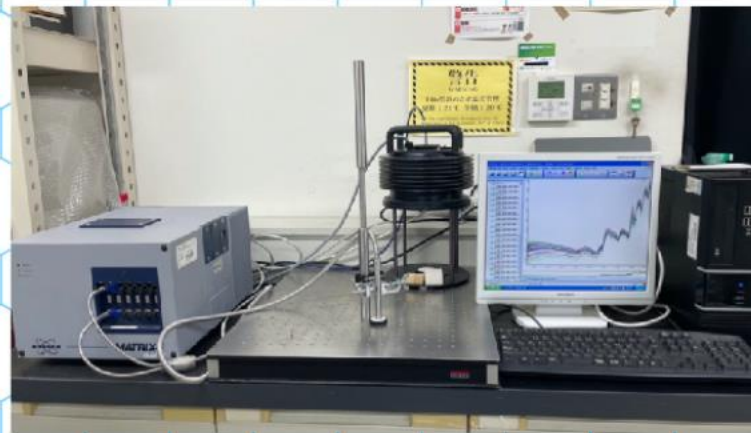


Higher heating value
intensity map of
ground bio-mass



near infrared hyperspectral imaging (NIR-HSI)
Support vector machine (SVM)
Convolutional neural network (CNN)

NIR coupled with machine learning and deep learning approaches. The best classification accuracy for the milled rice was achieved using the spectral imaging-based analysis on the NIR-HSI data with selected wave-length, approximately 60% for the test set either by convolutional neural network or support vector machine (SVM), whereas for the brown rice, the SVM model based on the averaged NIR spectra could achieve the best classification accuracy of 95.4%. It suggests the chemical component difference and its spatial distribution in the milled rice could contribute higher classification accuracy. Additionally, the surface bias effects of brown rice could be reduced by using averaged spectral data coupled with the SVM method.



quality control of latex using UV-NIR spectroscopy. The long wavelength NIR spectra of bark were scanned to check the feasibility of on-site evaluation of latex quality by measuring the NIR spectra of standing trees. From the observation of near infrared spectra, it was shown that there was more latex signal in outer part of wood bark than in inner part of wood bark. This result suggests that the focal point should be on the outer part of bark to get the signal of latex when we measure the spectra of standing trees.

