



The 3rd  
*Sakura Alumni Meeting*  
THAILAND



Ms. Jintanant Tohtubtiang



Dr. Toungporn Uttarotai



Prof. Dr. Panmanas Sirisomboon

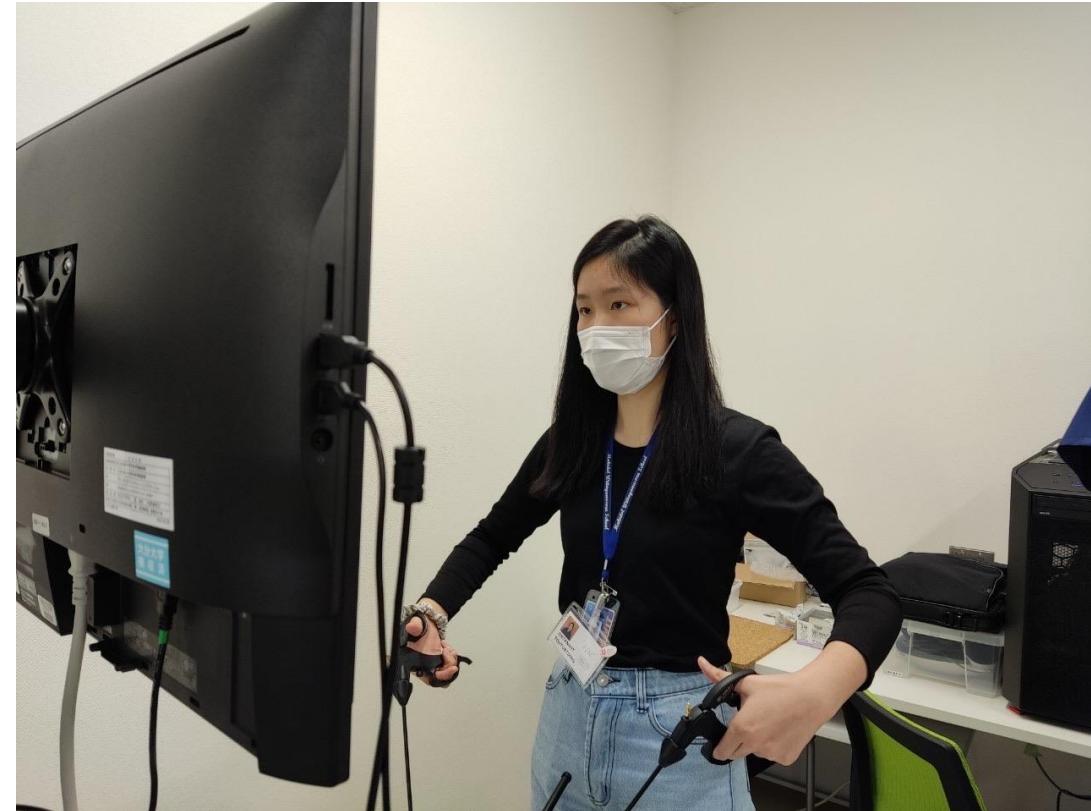
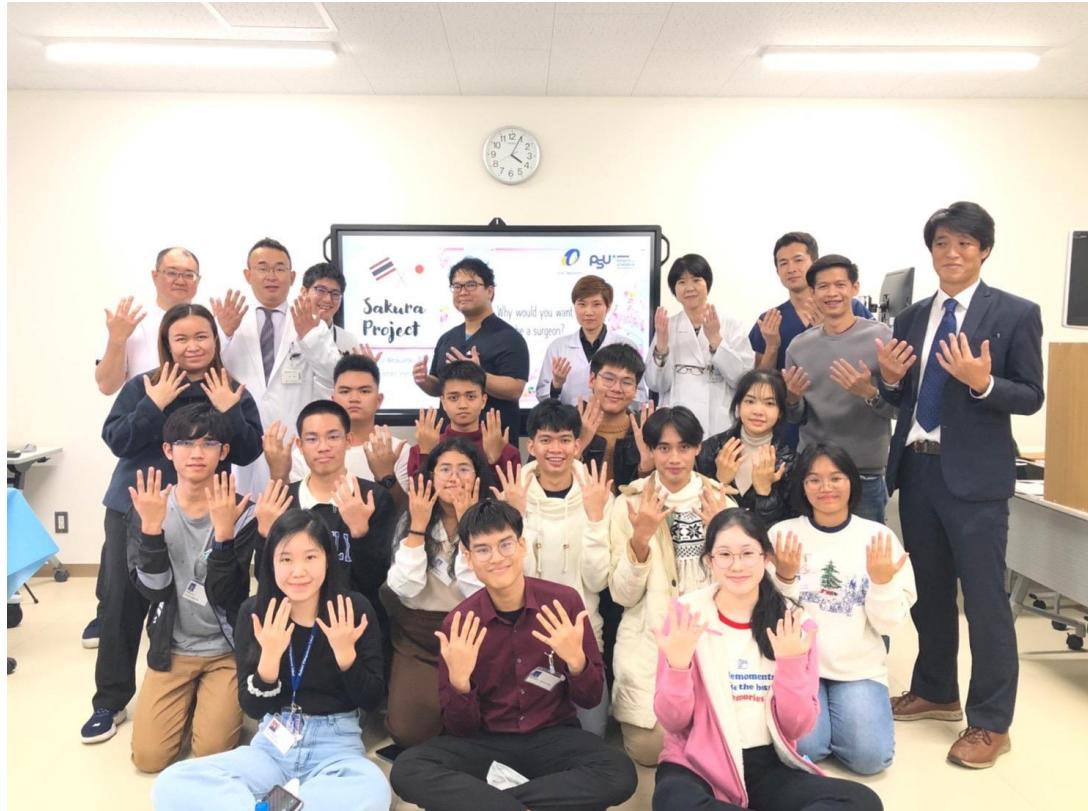
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# Sakura Science Exchange Program at Oita University, 2022



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Sakura Science Exchange Program  
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JST Japan Science and Technology Agency

we are one!  
Sakura Science Club

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# Sakura Science Exchange Program at Ritsumeikan University, Shiga, 2018



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# Sakura Science Exchange Program at Ritsumeikan University, Shiga, 2018



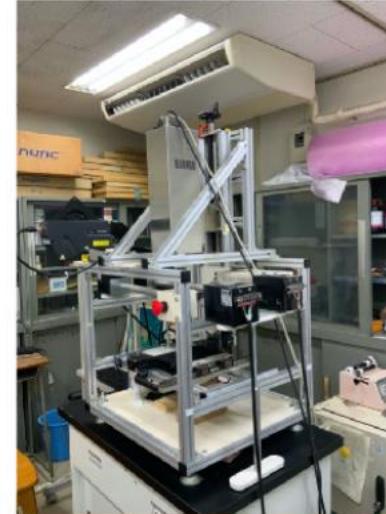
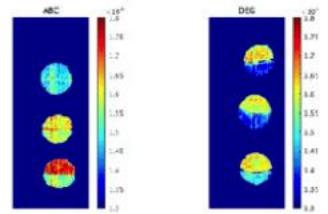
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# Sakura Science Exchange Program

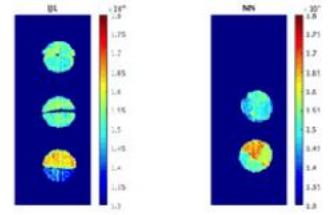


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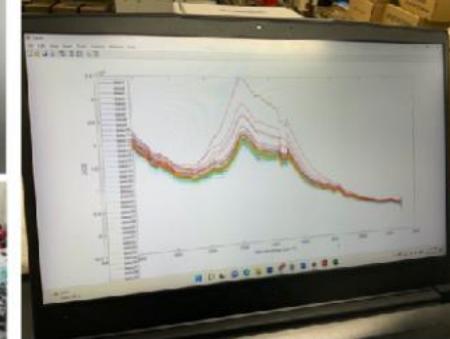


Near infrared spectroscopy imaging time-resolved  
Support vector machine (SVM)  
Convolutional neural network (CNN)

HDD 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 wavelength, approximately 45% 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 65%. It means the chemical composition difference and its spatial distribution in the milled rice could contribute higher classification accuracy. Additionally, the surface noise effects of brown rice could be reduced by using averaged spectral data coupled with the SVM method.



**Higher heating value intensity map of ground bio-mass**



long wavelength near-infrared spectra of bark were measured to check the feasibility of on-site evaluation of latex quality by measuring the NIR spectra of standing tree. From the observation of near infrared spectra, it was shown that there was more latex signal in inner part of wood bark than in outer 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.

