

EVENT REPORT

4th-2021 Partnership Colloquium on Agricultural and Environmental Engineering

Organized by



TOKYO UNIVERSITY OF AGRICULTURE



HOCHSCHULE OSNABRÜCK
UNIVERSITY OF APPLIED SCIENCES



November 17, 2021 (online)

List of Participants

Tokyo University of Agriculture (20 participants)

Prof.	Sawahiko Shimada	(shima123@nodai.ac.jp)
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Prof.	Takahiko Nakamura	(ntaka@nodai.ac.jp)
Prof.	Machito Mihara	(m-mihara@nodai.ac.jp)
Prof.	Hiromu Okazawa	
Assoc. Prof.	Ayako Sekiyama	
Assoc. Prof.	Toru Nakajima	
Assoc. Prof.	Narong Touch	(nt207118@nodai.ac.jp)
Asist. Prof.	Yuri Yamazaki	
Asist. Prof.	Satoru Tanaka	(st205724@nodai.ac.jp)
Dr.	Sarvesh Maskey	
Dr.	Takanori Kaneko	
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Miss	Somara Oum	(oum.somara128@gmail.com)
Mr.	Xiaoming Zhang	(zhangxiaoming0108@gmail.com)
Mr.	Antonio Perez Fuentes	(ftesantonio@gmail.com)
Mr.	Juan Uego Perez	
Mr.	Kazuki Matsuura	(12521005@nodai.ac.jp)

Osnabrück University of Applied Sciences (9 participants)

Prof.	Dieter Trautz	(d.trautz@hs-osnabrueck.de)
Prof.	Stefan Taeger	(s.taeger@hs-osnabrueck.de)
Prof.	Hubert Korte	(h.a.korte@hs-osnabrueck.de)
Prof.	Stefan Taeger	
Mr.	Tobias Reuter	(tobias.reuter@hs-osnabrueck.de)
Mr.	David Hagemann	(david.hagemann@hs-osnabrueck.de)
Mr.	David Richard	(d.richard-guionneau@hs-osnabrueck.de)
Mr.	Janis Bald	(janis.bald@hs-osnabrueck.de)
Mr.	Hannes Hollmeier	(hannes.hollmeier@hs-osnabrueck.de)

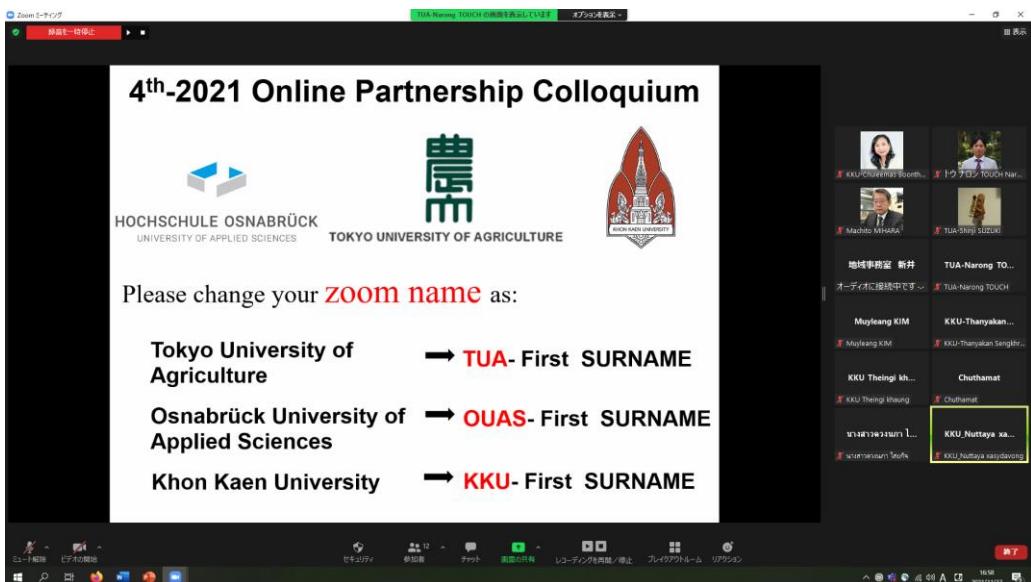
Khon Kaen University (12 participants)

Assoc. Prof.	Chuleemas Boonthai Iwai	(chuleemas1@gmail.com)
Miss	Chuthamat Mongchu	(eyehahajtm@gmail.com)
Miss	Duangnapa Saiyakit	(saiyakit1997@gmail.com)
Miss	Thanyakan Sengkhrua	(ki_karn@hotmail.com)
Miss	Nuttaya Xasydavong	(Nuttaya.x@kkumail.com)
Miss	Arisa Iwai	(arisaiwai@gmail.com)
Miss	Krongkamon Nutpiren	(n.krongkamon@kkumail.com)
Mr.	Nattakit Petmuenwai	(Nattakit@kkumail.com)
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Miss	Siriluck Boonyong	(Siriluck_b@kkumail.com)
Mrs.	Theingi Khaung	(theingi.yau@gmail.com)
Miss	Supawadee Ruangjanda	(orangegeim@gmail.com)

Yezin Agricultural University

Mrs. Theingi khaung (theingi.yau@gmail.com)

Group Photo



Colloquium Program

Time in Tokyo (JST)

(17:00-17:05) 1. Opening by Assoc. Prof. Dr. Narong Touch

(17:05-17:10) 2. Opening remarks by Prof. Machito Mihara

(Dean of the center for Global Initiatives, Tokyo University of Agriculture)

(17:10-18:40) 3. Presentations and Discussion

(20 min for presentation, 10 min for Qs and As)

From Tokyo University of Agriculture

(17:10-17:40) 3-1 Estimation of tea leaf chemical components using UAV remote sensing imagery in a Shizuoka tea garden

Mr. Kazuki MATSUURA

Utilization of spectral reflectance information from UAV imagery for SMART AGRICULTURE

Prof. Dr. Sawahiko SHIMADA

From Osnabrück University of Applied Sciences

(17:40-18:10) 3-2 The Influence of protective nets on the infestation of Sitona lineatus in faba beans

Mr. Janis Bald

Digitization of farms by deploying and networking various sensors

Mr. Hannes Hollmeier

From Khon Kaen University

(18:10-18:40) 3-3 Vermi-filtration and Vermi-remediation: Ecological and sustainable green technology for agricultural wastewater treatment and agro-waste management.

Assoc. Prof. Dr. Chuleemas Boonthai IWAI

(18:40-18:50) 4. Group photo and Questionnaire

(18:50-19:00) 5. Closing remarks

Prof. Dr. Dieter Trautz

(From Osnabrück University of Applied Sciences)

Assoc. Prof. Dr. Chuleemas Boonthai IWAI

(From Khon Kaen University)

Opening remarks by Prof. Machito Mihara



Presentations and Discussion

ESTIMATION OF TEA LEAF CHEMICAL COMPONENTS USING UAV REMOTE SENSING IMAGERY IN A SHIZUOKA TEA GARDEN

Tokyo University of Agriculture AGRICULTURAL ENGINEERING
Kazuki MATSUURA, Aren OTSUKA, Sawahiko SHIMADA,
Ayako SEKIYAMA,
Nobuhiro HORI, Kaihei KOSHIO, Naoki TERADA

CONCLUSION

- The NDVI values increased as the harvest date approached.
- Confirmed a negative correlation between a total of eight tea leaf components and NDVI values in the first-crop tea.
- Alanine and Succinic acid showed the significantly strong correlations.

Analysis of tea polyphenols, etc.
Verification of the accuracy of the multispectral camera Survey3.

Zoom interface elements are visible at the bottom of both screenshots.

Zoom レコーディング中

KKU-Chuleemas Boonthai Iwai オプション表示

Research Topic from Tokyo University of Agriculture
(17:10-17:40 JST)

3-1.
Estimation of tea leaf chemical components using UAV remote sensing imagery in a Shizuoka tea garden
Kazuki MATSUURA

Utilization of spectral reflectance information from UAV imagery for SMART AGRICULTURE
Prof. Dr. Sawahiko SHIMADA

Zoom レコーディング中

KKU-Chuleemas Boonthai オプション表示

参加者 (31)

- KKU-Chuleemas Boonthai Iwai
- KKU-Chanthamat Mongkhun
- KKU-Duangnapha Sajikit
- KKU-Nuttaya Kaewdavong
- KKU-Thanakan Sangherna
- Machito MIHARA
- Sanveeth Maskey
- TUA Juan Lugo Perez
- TUA-Majeleang KIM
- TUA-Ayako SEKINAMA
- TUA-Kazuhisa MATSUURA
- TUA-Narong TOUCH
- TUA-OKAZAWA Hiromu
- TUA-Oum somara
- TUA-Sheji SUZUKI
- TUA-Sokly SORM
- TUA-Takanori Kaneko
- TUA-TANAKA Satoru
- TUA-Toru Nakajima
- Yuri YAMAZAKI
- 地域事務室 新井

音声 ビデオの停止 セキュリティ 参加者 チャット 地図の共有 レコーディングを一時停止/停止 ブレイクアウトルーム リアクション

音声 ビデオの停止 セキュリティ 参加者 チャット 地図の共有 レコーディングを一時停止/停止 ブレイクアウトルーム リアクション

Zoom レコーディング中

KKU-Chuleemas Boonthai オプション表示

Utilization of spectral reflectance information from UAV imagery for SMART AGRICULTURE

- Spectral Reflectance Information can be utilized for the estimation of yield, leaf chemical component, growing heterogeneity of agricultural crops.

- Time-series imagery data can be used for monitoring the growing status and to assist optimum harvest timings.

- Agricultural big imagery data can be anticipated to be collected and will hold a big potential to be utilized on more detailed information assisted by AI (deep learning) models.

Zoom レコーディング中

KKU-Chuleemas Boonthai オプション表示

参加者 (31)

- KKU-Theegi Khuang
- KKU-Chanthamat Mongkhun
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- KKU-Nuttaya Kaewdavong
- KKU-Thanakan Sangherna
- Machito MIHARA
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Zoom レコーディング中

KKU-Chuleemas Boonthai オプション表示

Khon Kaen University **AGKKU** Agriculture Khon Kaen University **VERMITECHOMU**

Vermifiltration and Vermiremediation:
Ecological and Sustainable Green Technology for Agricultural Wastewater Treatment and Agro-Waste Management.

Assoc.Prof.Dr. Chuleemas Boonthai IWAI
Director of Integrated Land and Water Resources Management Research and Development Center in Northeast Thailand, Thailand
Khon Kaen University, Department of Soil Science and Environment
E-mail: chuleemas1@gmail.com

音声 ビデオの停止 セキュリティ 参加者 チャット 地図の共有 レコーディングを一時停止/停止 ブレイクアウトルーム リアクション

Zoom レコーディングしています... オプション表示...

Research Developing and Learning Center on Earthworm for Agriculture and Environment, Khon Kean University, Thailand

VERMITECH@ku

SUSTAINABLE DEVELOPMENT GOALS

It is an effective method for decomposing organic waste. Earthworms can change organic matter into high-quality organic fertilizer.

Build a career and income
Production of vermi-tea and vermicompost for sale.

Increase agricultural productivity
In the vermicompost, there are activities of microorganisms, enzymes, plant growth promoters, and the content of nutrients which is beneficial for plant growth and promotes plant growth products better. Good for health.

Develop agricultural systems
Promote organic agriculture farming, reduce the use of chemicals, increase the quality and value of agricultural products.

Environmental balance
Reduce the amount of waste in the environment by changing waste into high-quality organic fertilizers, and increase the fertility of the soil and the environment.

KKU-Chaleemai Boonthai Imai

参加者 (40)

- TUA-Narong-(添付: 自分)
- KKU-Chaleemai Boonthai Imai
- Hannes
- Hubert Korte
- 12321004 Xiaoming Zhang
- Antonio Fuentes
- Anisa Imai
- David Hagemann
- David Richard
- Dieter Trautz
- Fumio Watanabe
- Janis Bald
- KKU Krongkham Naphine
- KKU Nuttakrit Pehmuwai
- KKU Saranya Seetasing
- KKU Sirikuck Boonyong
- KKU Theeng Khuang
- KKU-Chuthamat Mongchu
- KKU-Duangnapa Sayikit
- KKU-Nuttaya xasydavong
- KKU-Thanyakan Sengkhira

Zoom レコーディングしています... オプション表示...

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THE INFLUENCE OF PROTECTIVE NETS ON THE INFESTATION OF *SITONA LINEATUS* IN FABA BEANS



JANIS BALD

1

セキュリティ ビデオの停止 メッセージ チャット ブレイクアウトルーム リアクション

Janis Bald

参加者 (3)

- TUA-Narong-(添付: 自分)
- Janis Bald
- 12321004 Xiaoming Zhang

Zoom レコーディングしています... オプション表示...

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SUMMARY

- Net reduced the leaf feeding of *S. lineatus*
 - Highest yield and biomass
- No benefit from NeemAzal
- Comparison is difficult due to net influence
 - Net beneficial for weather conditions in 2020
- No differences in the nodules weight and number

THANK YOU FOR YOUR ATTENTION

Are they any questions?

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セキュリティ ビデオの停止 メッセージ チャット ブレイクアウトルーム リアクション

Janis Bald

参加者 (3)

- TUA-Narong-(添付: 自分)
- Janis Bald
- 12321004 Xiaoming Zhang

レコードしています... オプションを表示...

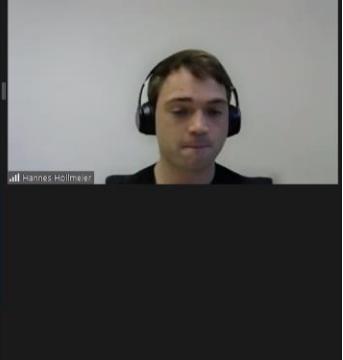
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DIGITIZATION OF FARMS THROUGH DEPLOYMENT AND NETWORKING OF VARIOUS SENSORS

HANNES HOLLMEIER
26.10.2021

1

音声 ビデオの停止 セキュリティ 参加者 チャット モードの共有 レコードを一時停止/停止 ブレイクアウトルーム リアクション



Zoom ミーティング レコードしています... オプションを表示...

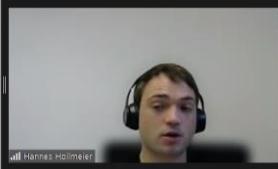
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OUTLOOK

- Improve range
- Visual programming
- Create manuals
- More use cases

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音声 ビデオの停止 セキュリティ 参加者 チャット モードの共有 レコードを一時停止/停止 ブレイクアウトルーム リアクション



参加者 (36)

名前	状況
TUA-Narong...	オスロ、自分
Hannes Hollmeier	オスロ
Antonio Fuentes	オスロ
Arisa Iwai	オスロ
David Hagemann	オスロ
David Richard	オスロ
Dieter Trautz	オスロ
Fumio Watanabe	オスロ
Hubert Korte	オスロ
Janis Bald	オスロ
KKU Kronglamon Nutpiree	オスロ
KKU Nattakit Petmumeai	オスロ
KKU Saranya Seetatang	オスロ
KKU Siriluck Boonyong	オスロ
KKU Thengi Khuang	オスロ
KKU-Chuleemas Boonthai Iwai	オスロ
KKU-Chuthamat Mongchu	オスロ
KKU-Duangnapa Sayalit	オスロ
KKU-Nuttaya xasydpong	オスロ
KKU-Thanyakan Sengkhrua	オスロ
Machito MIHARA	オスロ

招待 すべてミート

18:43 2021/11/17

Closing remarks

