

Knowledge Sharing Symposium on Machine Learning and Deep Learning in Geoinformatics (Online)

Graduate School of Environmental Science/Faculty of Environmental Earth Science,
Hokkaido University, Japan
30th November – 3rd December, 2020

If you are interested to participate in symposium and hands-on training please contact to Dr. Ram Avtar for symposium Id and password (ram@ees.hokudai.ac.jp)

Programme Schedule

Date/Time	Event/Title of Presentation	Speaker (s)
Day 1 – November 30, 2020 (Monday) Online via ZOOM (Japan Standard Time)		
09:30-09:50	Online Registration and preparation/testing of ZOOM system	
09:50-09:55	<i>Inauguration speech</i>	Prof. So Kawanobe, <i>Deputy Executive Director Institute for International collaboration, Hokkaido University, Japan</i>
09:55-10:00	<i>Welcome remark</i>	Prof. Teiji Watanabe, <i>Executive Director Global Land Programme Japan Nodal Office, Japan</i>
10:00-10:15	<i>Brief introduction of participants and group photograph (online)</i>	
10:15-11:15	Technical Session-I	Chair: Prof. Yuichi Hayakawa, Hokkaido University, Japan
10:15-10:35	Impact of COVID-19 lockdown on NOx emission in North India	Dr. Prakhar Misra Research Institute for Humanity and Nature (RIHN), Kyoto, Japan
10:35-10:55	Discovering Frequent and Periodic Spatial Patterns in Very Large Spatiotemporal Databases	Dr. Uday Kiran Aizu University, Japan
10:55-11:15	How can Deep Learning help in analyzing remote sensing and other Geospatial data?	Mr. Vaibhav Katiyar Yamaguchi University, Japan
11:15-11:25	<i>Break</i>	
11:25-12:25	Technical Session-II	Chair: Dr. Ram Avtar, Hokkaido University, Japan
11:25-11:45	Artificial Intelligence in Construction Industry	Mr. Uttam Dwivedi, Hajma Ando corporation, Japan
11:45-12:05	AWL, Inc., our business	Mr. Armstrong Ngolo, AWL, Sapporo, Hokkaido, Japan
12:05-12:25	Learning to Search Like Human: Adaptive spotting for efficient object search	Dr. Onkar Krishna, NTT Communication Science Laboratories, NTT Corporation, Japan
12:25-13:30	<i>Lunch break</i>	
13:30-14:30	Technical Session-III	Chair: Prof. Olga Tutubalina, M.V.Lomonosov Moscow State University, Russia

13:30-13:50	Supporting sustainable Oil palm production using UAV imagery and Machine Learning	Dr. Pegah Hashemvand Khabani Remote Sensing Technology Center of Japan (RESTEC), Japan
13:50-14:10	Google Earth Engine and R tools for Satellite Time Series Analysis	Dr. Yunus Ali P., National Institute for Environmental Studies (NIES), Tsukuba, Japan
14:10-14:30	Drought monitoring and forecasting using artificial neural network model	Dr. Sourabh Shrivastava, Aizu University, Japan
14:30-14:40	<i>Break</i>	
14:40-14:50	Technical Session-IV	Chair: Dr. Yunus Ali P., NIES, Japan
14:40-15:00	Monitoring the state of vegetation around Noril'sk (north-central Siberia) with Google Earth Engine	Dr. Olga Tutubalina, M.V.Lomonosov Moscow State University, Russia Oleg Zheleznyy, Dr. Valentina Kravtsova, Russia
15:00-15:20	Racial difference of ordinary face temperature	Dr. Toshiaki Ichinose, National Institute for Environmental Studies, Tsukuba, Japan Prof. Kanichiro Matsumura, Tokyo University of Agriculture, Japan
15:20-15:40	Classification of burnt forest areas by age using radar satellite imagery	Dr Polina Mikhaylykova, M.V.Lomonosov Moscow State University, Russia Dr Olga Tutubalina, M.V.Lomonosov Moscow State University, Russia Dr Ram Avtar, Hokkaido University, Japan
15:40-16:00	Convolution Neural Network in image classification	Dr. Ashwani Kumar, Sant Longowal Institute of Engineering and Technology, Longowal, Punjab, India Dr. Ram Avtar, Hokkaido University, Japan
16:00-16:10	<i>Break</i>	
16:10-17:30	Student Poster Session/Networking session	Chair: Prof. Teiji Watanabe/Dr. Ram Avtar
16:10-16:20	Solar Panel Detection in Optical satellite imagery	Hitesh Supe, Graduate School of Environmental Science, Hokkaido University, Japan
16:20-16:30	Detection of clear-cut and selective logged areas on Sentinel-2 images with deep learning methods	Andrey Tarasov, Perm State University, Russia
16:30-16:40	Assessment of forest cover changes by Typhoon using remote sensing and GIS in eastern Hokkaido	Chen Xinyu Graduate School of Environmental Science, Hokkaido University, Japan
16:40-16:50	Using Generative Adversarial Networks for Automated Classification of Hyperpectral Images	Danruo Wu, M.V.Lomonosov Moscow State University, Russia
16:50-17:00	Spatial development of the city and its impact on urban climatology: A case study on Dhaka Metropolitan Area (DMA), Bangladesh	Md. Mustafizur Rahman Graduate School of Environmental Science, Hokkaido University, Japan
17:00-17:10	Monitoring subsidence in degraded tropical peatlands using multi-temporal InSAR technique	Deha Agus Umarhadi Graduate School of Environmental Science, Hokkaido University, Japan
17:10-17:20	UAV data in northern forests structure measurements	Olga Gommershtadt, M.V.Lomonosov Moscow State University, Russia Golubeva E., Medvedev A., Mikhailov N., Sereda I., Stasko A.
17:20-17:30	Height Estimation of Tropical Forest Plantations Using Interferometric TanDEM-X and Airborne InSAR data	Stanley Anak Suab Graduate School of Environmental Science, Hokkaido University, Japan
17:30-17:35	<i>Closing remark</i>	<i>Prof., Olga Tutubalina M.V.Lomonosov Moscow State University, Russia</i>

Hands-on training December 1 - 3, 2020 (Tuesday-Thursday) Online via ZOOM (Japan Standard Time)

Day 2: December 1st (Tuesday) Time: 10:00 – 17:30

10:00-12:00	Introduction to Google Colab for Machine Learning	Mr. Deepak Keshwani, Fujifilm, Japan
12:00-13:00	Lunch break	
13:00-14:30	Multi-temporal land-cover classification using GEE (Session-I)	Dr. Prakhar Misra, Research Institute for Humanity and Nature (RIHN), Kyoto, Japan
14:30-14:40	<i>Break</i>	
14:40–16:00	Multi-temporal land-cover classification using GEE (Session-II)	Dr. Prakhar Misra, Research Institute for Humanity and Nature (RIHN), Kyoto, Japan
16:00-16:10	<i>Break</i>	
16:10–17:30	Multi-temporal land-cover classification using GEE (Session-III)	Dr. Prakhar Misra, Research Institute for Humanity and Nature (RIHN), Kyoto, Japan

Day 3: December 2nd (Wednesday) Time: 10:00 – 17:30

10:00-12:00	Utilizing Deep learning for pixel-wise Image classification/ segmentation of the satellite images. (Session-I)	Mr. Vaibhav Katiyar, Yamaguchi University, Japan
12:00-13:00	<i>Lunch break</i>	
13:00-14:30	Utilizing Deep learning for pixel-wise Image classification/ segmentation of the satellite images. (Session-II)	Mr. Vaibhav Katiyar, Yamaguchi University, Japan
14:40-14:40	<i>Break</i>	
14:40–16:00	Utilizing Deep learning for pixel-wise Image classification/ segmentation of the satellite images. (Session-III)	Mr. Vaibhav Katiyar, Yamaguchi University, Japan
16:10-16:20	<i>Break</i>	
16:20- 17:30	Machine Learning using Weka	Dr. Yunus Ali P., National Institute for Environmental Studies, Tsukuba, Japan

Day 4: December 3rd (Thursday) Time: 10:00 – 17:00

10:00-12:00	Hands-on tutorial on machine learning models for landslide susceptibility studies	Dr. Yunus Ali P., National Institute for Environmental Studies, Tsukuba, Japan
12:00-13:00	<i>Lunch break</i>	
13:00-14:30	UAV hands-on-training-I	Dr. Ram Avtar, Hokkaido University Prof. Kanichiro Matsumura, Tokyo University of Agriculture, Japan
14:30-14:40	<i>Break</i>	
14:40- 17:00	UAV hands-on-training-II	Dr. Ram Avtar, Hokkaido University

Organizers:

- Faculty of Environmental Earth Science, Hokkaido University, Japan
- GLP Japan Nodal Office
- Human Resource Development Platform for Japan-Russia Economic Cooperation and Personnel Exchange (HaRP); Hokkaido University, Japan
- Developing Future Research Leaders (L-station), Hokkaido University
- M.V.Lomonosov Moscow State University (MSU), Russia

Convener:

Dr. Ram Avtar (Assistant Professor), Graduate School of Environmental Earth Science, Hokkaido University, Japan

Co-conveners:

Prof. Watanabe Teiji, Hokkaido University, Japan

Prof. Olga Tutubalina, M.V. Lomonosov Moscow State University (MSU), Russia

Advisory Committee:

Prof. Junichi Yoneda, Prof. Masashi Ohara, Prof. Shiro Tsuyuzaki, Prof. Hideaki Shibata, Prof. Yuichi Hayakawa, Dr. Ayumi Kotani, HaRP secretariate

Contact email: If you are interested to participate please contact to Dr. Ram Avtar for symposium Id and password (ram@ees.hokudai.ac.jp)

Registration Fee: Free

List of participants

No.	Name	Affiliation
Technical session participants		
1	Prof. So Kawanobe	<i>Deputy Executive Director Institute for International collaboration, Hokkaido University, Japan</i>
2	Prof. Teiji Watanabe	<i>Executive Director Global Land Programme Japan Nodal Office, Japan</i>
3	Prof. Yuichi Hayakawa	Hokkaido University, Japan
4	Dr. Prakhar Misra	Research Institute for Humanity and Nature (RIHN), Kyoto, Japan
5	Dr. Uday Kiran	Aizu University, Japan
6	Mr. Vaibhav Katiyar	Yamaguchi University, Japan
7	Ram Avtar,	Hokkaido University, Japan
8	Mr. Uttam Dwivedi,	Hajma Ando corporation, Japan
9	Mr. Armstrong Ngolo	AWL, Sapporo, Hokkaido, Japan
10	Dr. Onkar Krishna	NTT Communication Science Laboratories, NTT Corporation, Japan
11	Dr. Pegah Hashemvand Khabani	Remote Sensing Technology Center of Japan (RESTEC), Japan
12	Dr. Yunus Ali P.,	National Institute for Environmental Studies (NIES), Tsukuba, Japan
13	Dr. Sourabh Shrivastava,	Aizu University, Japan
14	Dr. Toshiaki Ichinose	National Institute for Environmental Studies, Tsukuba, Japan

15	Prof. Kanichiro Matsumura	Tokyo University of Agriculture, Japan
16	Dr. Ashwani Kumar	Sant Longowal Institute of Engineering and Technology, Longowal, Punjab, India
17	Hitesh Supe,	Hokkaido University, Japan
18	Chen Xinyu	Hokkaido University, Japan
19	Md. Mustafizur Rahman	Hokkaido University, Japan
20	Deha Agus Umarhadi	Hokkaido University, Japan
21	Stanley Anak Suab	Hokkaido University, Japan
22	Mr. Deepak Keshwani	Fujifilm, Japan
23	Prof. Junichi Yoneda	L-Station, Hokkaido University
24	Dr. Ayumi Kotani	Nagoya University, Japan
25	Ms. Tamami Yoshimoto	HaRP secretariat, Hokkaido University, Japan
26	Ms. Marina Lomaeva	HaRP secretariat, Hokkaido University, Japan
Russian participants		
27	Olga Tutubalina	M.V.Lomonosov Moscow State University, Russia
28	Mikhail Zimin	M.V.Lomonosov Moscow State University, Russia
29	Polina Mikhaylykova	M.V.Lomonosov Moscow State University, Russia
30	Igor Sereda	M.V.Lomonosov Moscow State University, Russia
31	Anna Sozontova	M.V.Lomonosov Moscow State University, Russia
32	Danruo Wu	M.V.Lomonosov Moscow State University, Russia
33	Oleg Zheleznyy	M.V.Lomonosov Moscow State University, Russia
34	Nikita Mikhaylov	M.V.Lomonosov Moscow State University, Russia
35	Olga Gommerstadt	M.V.Lomonosov Moscow State University, Russia
36	Yulia Timokhina	M.V.Lomonosov Moscow State University, Russia
37	Anna Terskaia	M.V.Lomonosov Moscow State University, Russia
38	Marina Vikulina	M.V.Lomonosov Moscow State University, Russia
39	Olga Gommershtadt	M.V.Lomonosov Moscow State University, Russia
40	Danruo Wu	M.V.Lomonosov Moscow State University, Russia
41	Andrey Tarasov	Perm State University, Russia
Other participants		
42	Manish Ramaiah	Hokkaido University, Japan
43	Nguyen Hong Duc	Hokkaido University, Japan
44	Raveena Raj	Hokkaido University, Japan
45	Xiao Juan	Hokkaido University, Japan
46	Nujaira Hafeza	Hokkaido University, Japan
47	Molekoa Mmasabata Dolly	Hokkaido University, Japan
48	Apisai Rinamalo Vakacegu	Hokkaido University, Japan
49	Stephan Louw	Hokkaido University, Japan
50	Mandvikar Kaushik Vilas	Hokkaido University, Japan

51	Fu Jinjin	Hokkaido University, Japan
52	Wang xiaoxiao	Hokkaido University, Japan
53	Isaac omede	Hokkaido University, Japan
54	<i>B.M. Refat Faisal</i>	Hokkaido University, Japan
55	Azim Zuhilmi	Hokkaido University, Japan
56	Zitong	Hokkaido University, Japan
57	CHEN ZHANZHUO	Hokkaido University, Japan
58	Sristi Saha	School of agriculture, Hokkaido University
59	Gunjan Joshi	University of Tokyo
60	Atupelye Komba	Hokkaido University, Japan