SCERIN-9 FINAL AGENDA 27 May, 2022

SCERIN-9 Virtual Workshop

Focus: Satellite remote sensing for forest management and ecosystem health -

floods, droughts, and wildfires in the context of climate change

SCERIN-9 workshop goals:
- Inform about the ongoing major scientific efforts and projects with possible contribution and follow-up activities for the participants
- Foster new ideas, joint activities and papers by the participants
- Facilitate progress of the on-going activities of the networks focus groups
- Professional networking and interaction

Virtual Host: START facilitating the GOFC-GOLD virtual events

Workshop Organizers:
- Ukrainian co-organizers: Serhii Havryliuk and Oleh Chaskovskyy, Ukrainian National Forestry University (UNFU), Lvov, Ukraine
- START virtual host: Jon Padgam, START, USA
- SCERIN coordinators: Petya Campbell (NASA GSFC / UMBC, USA), Jana Albrechtova (CUNI, CZ) and Lucie Kupkova (CUNI, CZ).

SCERIN web pages: https://www.scerin.eu/

Dates and timing	May 30, May 31, June 1	
	start	end
EST	8:30	12:30
CET	14:30	18:30
EET	15:30	19:30

Research highlights, May 30, Day 1: SCERIM-8 participants are invited to present live, research summary talks. Format: 1-5 slides, 5 min/talk, questions directed to authors, and/or discussed at the meeting on DAY 1 (title, presenter/authors, abstract ≤200 words).

Country/region hot-topics, June 1: Please use this link to deposit your slides on or before May 27.
Potential discussion topics:
1) forest management and natural disturbances
2) land degradation, soil erosion and desertification; associated with drought, pests/infestations

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3) effects from COVID-19 restrictions on agricultural and economic activities
4) new joined projects: Europe program for Danube:
https://www.interreg-danube.eu/about-dtp/new-funding-2021-2027; Interreg Europe program:
https://www.interregeurope.eu/next-call-for-projects (deadline 31 May 2022).

CET	EST	30-May-22 (DAY 1)
		Link to join https://zoom.us/j/6644106935
14:15	*8:15*	*Virtual host - J. Padgam, START, Agenda lead - J. Albrechtova, SCERIN*
14:30	*8:30*	Opening: START (J. Padgam, Workshop Goals, Agenda and Logistics)
14:40	*8:40*	SCERIN Report and Updates (J. Albrechtova, L. Kupková and P. Campbell, SCERIN)
		Research Highlights by Focus Group (FG, 8 min)
		FG 1: Forest monitoring
15:00	*9:00*	Near real time monitoring of forest clear cuts in Ukrainian Carpathian (O. Chaskovskyy, S. Havryliuk; UNFU, UKR)
15:08	*9:08*	Can spaceborne and terrestrial LiDAR technology be used to map the forest structure? (M. Nita and G. Baban; TUB, Brashov, ROU)
15:16	*9:16*	Forest monitoring by remote sensing methods with COPERNICUS data (Gašparović, Mateo; Pilaš, Ivan; Klobučar, Damir)
15:24	*9:24*	Retrieving floodplain forest parameters through time series analysis of HLS satellite observations with machine learning (M. Švik and P. Lukeš, CzechGlobe, CZE)
15:32	*9:32*	*Live - Discussion of Research highlights, Q&A from the chat **
		FG 2: Land Cover Changes
15:40	*9:40*	Study of greenhouse gas emissions using various treatments and automated measuring chambers on Kazakhstan croplands (M. Kussainova, KazNAU, KAZ)
15:48	*9:48*	Sentinel data fusion for official agriculture statistics in Hungary (D. Kovacs, PRE, Pecs, HUN)
16:56	*10:56*	Integration of LCLU data from satellite remote sensing with national databases and monitoring forest status in Poland (A. Hoscilo, IGiK, POL)
16:04	*10:04*	Analysis of LULCC and urban expansion in the Black Sea coastal zone in Bulgaria (R. Vatseva, BAS, Sofia, BGR)
16:12	*10:12*	*Live - Discussion of Research highlights, Q&A from the chat **
		FG 3: Products validation/verification
16:20	*10:20*	Comparing vegetation traits derived using VNIR versus VSWIR images (P. Campbell and F. Huemmrich, UMBC, USA)
		FG 4: Water management and LC impacts
16:30	*10:30*	Spatial and temporal distribution of Kaniv Reservoir hydromorphic landscapes formation (O. Brovkina, F. Zemek, M. Pikl, CzechGlobe, CZE; M. Ladyka & V. Starodubtsev, NULESU, Kiev, UKR)
16:40	*10:40*	Nationwide, operational Sentinel-1 based InSAR monitoring system in the cloud for strategic water facilities in Hungary, (L. Ronczyk; PRE, Pecs, HUN et I. Kovács, P.Pasquali, M. Defilippi, G. Zelenka, G. Török
16:50	*10:50*	Water scarcity in the Serbian Danube: Agricultural land use change and irrigation (S. Woznicki, AWRI/GVSU, MI, USA)
17:00	*11:00*	The SatWebMare project & potential for a joint SCERIN project for the Black Sea region (L. Pashova, BAS, Sofia, BGR)

17:10	*11:10*	The effects of excessive water use and agricultural intensification on Aral Sea shrinkage: socioeconomic-environmental systems dynamics within the Syr Darya River Basin (M. Kussainova; Kazakh National Agrarian Research University, KAZ)
17:20	*11:20*	*Live Discussion of Research highlights, Q&A from the chat **
17:30	*11:30*	Objectives for day 2, Closing of the day (Padgam, Albrechtova, Campbell)
17:35	**11:35**	***Adjourn***

CET	EST	31-May-22 (DAY 2)
		Link to join https://zoom.us/j/6644106935
14:15	*8:15*	*Virtual host - J. Padgam, START, Agenda lead: L. Kupková, SCERIN*
14:30	*8:30*	SCERIN updates and Highlights from Day 1 (P. Campbell)
		GOFC-GOLD Plenary Session
14:40	*8:40*	NASA LCLUC Updates (Garik Gutman, NASA Headquarters; Washington, District of Columbia, USA)
15:00	*9:00*	GOFC-GOLD Goals and Current priorities (Chris Justice; UMD, Maryland, USA)
15:20	*9:20*	GOFC-GOLD Regional Networks (Krishna Vadrevu, NASA/MSFC, Huntsville, Alabama, USA)
15:40	*9:40*	*Live discussion, Q & A from the Chat*
		***SCERIN Experts** (15 min)*
15:50	*9:50*	Forest damage in Ukraine according to the war (O. Chaskovskyy, S. Havryliuk; UNFU, Lviv, UKR)
16:05	*10:05*	High-Impact Hot Spots of Land Cover Land Use Change in Ukraine (S. Skakun; UMD, USA)
16:20	*10:20*	Estimating crop yields from space in the SCERIN region (M. Ozdogan; UWisc, USA)
16:35	*10:35*	Overview of the Copernicus Assisted Lake Water Quality Emergency Monitoring Service - WQeMS (I. Manakos, CRT Hellas, GRC)
16:50	*10:50*	*Live discussion, Q & A from the Chat*
		***Highlights & collaboration with other Regional Information Networks** (10 min)*
17:00	*11:00*	Central Asia Regional Information Network, CARIN (Geoff Henebry, MSU)
17:10	*11:10*	Caucasus Regional Information Network, CaucRIN (Mutlu Ozdogan, UWisc, USA)
17:20	*11:20*	Mediterranean Regional Information Network, MedRIN (Vince Ambrosia, NASA/AMES, USA)
17:30	*11:30*	*Live discussion, Q & A from the Chat*
17:35	*11:35*	Objectives for Day 3, Closing remarks (Gutman, Justice, Vadrevu & Kupkova)
17:40	**11:40**	***Adjourn***

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CET	EST	1-Jun-22 (DAY 3)
		Link to join https://zoom.us/j/6644106935
14:15	8:15	*Virtual host - J. Padgam, START, Agenda lead: P. Campbell, SCERIN*
14:30	8:30	Highlights from Day 1 and Day 2 (L. Kupkova)
14:35	8:35	*Keynote* PLANET Using science and space to help life on Earth (M. Guerra, PLANET)
14:50	8:50	*Live Discussion, Q & A from the Chat*
14:55	8:55	**SCERIN Hot Topics by Country/Region** *(5 min, alphabetical order)*
		Albania, Bulgaria, Croatia, Czech Republic, Hungary, Poland, Slovakia, Romania, Ukraine
15:30	9:30	*Live Discussion, Q & A from the Chat*
		Joint Activities, Projects and Manuscripts *(5 min)*
15:40	9:40	1) Bark Beetle (TACR, CZ) project, 2) Joined paper on Beetle damage (L. Kupková; CUNI Prague, CZE)
15:45	9:45	Joint project: MuSLI Canopy Chlorophyll (J. Albrechtova, P. Campbell and L. Kupková; CUNI Prague, CZE & UMBC, USA); 2) SCERIN Hot-topic seminars in 2022
15:50	9:50	Comparing S2GLC classification with SCERIN results based on manually collected training points (Lewiński, CBK PAN, POL)
15:55	9:55	Collaboration CZE-UKR for study of hydromorphic landscapes formation (O. Brovkina, CzechGlobe, CZE)
16:00	10:00	Trans-Atlantic Training and SCERIN (P. Stych, CUNI Prague, CZE)
16:05	10:05	Joint research and project activities in remote sensing for forest mapping (Gašparović, Mateo; Pilaš, Ivan; Klobučar, Damir; University of Zagreb, HRV)
16:10	10:10	Introduction to EO4UA initiative: focus on forest fires in Ukraine (Hoscilo, IGiK, POL)
16:15	10:15	Copernicus assisted environmental monitoring across the Black Sea Basin - PONTOS" project and results (A. Harutyunyan; AUA, ARM)
16:20	10:20	*Live - Q & A from the Chat, Discussion*
		SCERIN Future Directions & Venues
16:30	10:30	Invitation for SCERIN in 2023/24 in Brno, CzechGlobe, Czech Republic (P. Lukeš)
16:45	10:45	Invitation for a SCERIN workshop in 2023 in Bulgaria (L. Filchev)
17:00	11:00	*Live Discussion, Q & A from the Chat*
17:30	11:30	Concluding remarks (Padgam, Kupkova, Campbell)
17:35	**11:35**	***Adjourn***

Introduction of Kyenote workshop Presenters, May 31, 2022

Dr. Garik Gutman, the Program Manager for the NASA Land-Cover/Land-Use Change (LCLUC) Program, received his Ph.D. in Climate Modeling. In later 1980's he was a National Research Council of the National Academy of Sciences Fellow at National Oceanic and Atmospheric Administration (NOAA). Since 1990, Dr. Gutman worked as NOAA civil servant for about 10 years applying remote sensing in studies of Earth's land surface vegetation, for which he received the U.S. Department of Commerce Bronze Medal Award. He is author of over 80 publications in peer-reviewed scientific journals and of several chapters in various climate- and land-cover related scientific volumes.

Dr. Gutman has been playing a key role in developing and co-leading international regional initiatives, for which he received the NASA Cooperative External Achievement Award. These initiatives included the Large-Scale Biosphere Atmosphere Experiment in Amazonia (LBA), the Northern Eurasia Earth Science Partnership Initiative (NEESPI), and the South/Southeast Asia Research Initiative (SARI). His international activities included organization of regional workshops and trainings, attended by hundreds of local scientists and students, in almost every country of the SARI region. Dr. Gutman has been a lead or co-editor on several books on LCLUC-climate interactions in Northern Eurasia published by Springer (the Eurasian Arctic, Siberia, Eastern Europe, and Central Asia) as well as lead or co-editor on special issues in peer-reviewed journals. He serves as Editorial Board member in two open access MDPI journals: Remote Sensing and Land.

Over the last two decades Dr. Gutman has been leading the LCLUC program at NASA Headquarters as well as Landsat-related activities. He served as EO-1 Program Scientist to the end of the mission and is now Program Scientist for Landsat and Terra missions. Dr. Gutman has fostered multi-sensor land imaging methods fusing data from different sensors throughout the electromagnetic range and with different resolutions. To provide the land community with long-term time series from Landsat before its data became freely available, Dr. Gutman co-led the development of the NASA-USGS Global Land Survey (GLS)-2005 and -2010 30-m mosaic datasets and, more recently, in collaboration with GSFC, the Harmonized Landsat-Sentinel (HLS) reflectance dataset. Dr. Gutman's current research interests include the use of remote sensing at moderate to very high spatial resolution (1-5 m) for detecting changes in land cover and land use, and analyzing the impacts of these changes on climate, environment and society.

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Dr. Krishna Vadrevu is a Remote Sensing Scientist at NASA Marshall Space Flight Center, Huntsville, Alabama, and an Adjunct Associate Professor at the University of Maryland College Park. He also serves as the Deputy Program Manager for the NASA Land Cover/Land Use Change (LCLUC) Program (www.lcluc.umd.edu) and program lead for South/Southeast Asia Research Initiative (SARI), a regional program (www.sari.umd.edu). Dr. Vadrevu also serves as a regional network coordinator for the Global Observations of Forests and Land Use Dynamics (GOFC-GOLD), an international forum focusing on exchanging information on Earth observations, coordinating satellite observations, and providing a framework for and advocacy to establish long-term monitoring systems (www.gofcgold.org).

Dr. Vadrevu received his Ph.D. in 2000 while working at the National Remote Sensing Center, Indian Space Research Organization (ISRO). He served as PI and Co-I on diverse projects funded by multiple agencies. He worked as a postdoctoral researcher and research scientist at the Ohio State University for nine years and as an Associate Research Professor at the University of Maryland College Park, the USA, for seven years. His research focuses on remote sensing of land use/cover changes, mapping and monitoring fires, greenhouse gas emissions, land-atmospheric interactions, agroecosystems, and ecosystem sustainability. He promotes the use of various Earth Observations and interdisciplinary approaches to address environmental issues and societal challenges.

Prof. Chris Justice received his Ph.D. from the University of Reading, United Kingdom, in 1977. In 2001 he became a Professor and Research Director of Geography at the University of Maryland, and in 2010, became the Department Chair (to the renamed Department of Geographical Sciences). Dr. Justice is a Program Scientist for NASA's Land Cover Land Use Change (LCLUC) Program. He is the Land Discipline Leader for the NASA Moderate Imaging Spectroradiometer (MODIS) and the Soumi-NPP VIIRS Science Team and is responsible for the MODIS Fire Product. He is the Chair of the international GOFC/GOLD Program. Dr. Justice is co-chair of the GEOGLAM Initiative and Chief Scientist for NASA HARVEST. Dr. Justice's current research is on land cover and land use change, land observations and data products, global agricultural monitoring, and their associated information technology and decision support systems.

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South, Central and Eastern European Regional Information Network (SCERIN) Coordinators

Jana Albrechtová, is a Professor at Charles University (CU), Faculty of Science in Prague, Czech Republic, Department of Experimental Plant Biology. Her research focuses on plant ecophysiological studies employing plant anatomy, physiology, spectroscopy with emphasis given to multidisciplinary approaches. Long-term, she has been studying the monitoring of the physiological status of vegetation using remote sensing methods. She collaborates with GOFC-GOLD and START, being a European leader of SCERIN (South, Central and Eastern Regional Network) https://www.scerin.eu/

Lucie Kupková, is an Associate professor at Charles University Prague, Faculty of Science, a head of the Department of Applied Geoinformatics and Cartography. She is focused mainly on landscape change evaluation, vegetation classification/change detection and health status evaluation using different types of optical remote sensing data (including data from UAV), image and laboratory spectroscopy. She is coordinator of SCERIN (The South, Central and East European Regional Information Network) of the Global Observation of Forest and Land Cover Dynamics (GOFC-GOLD), a member of Steering Committee of International Geographical Union, Commission on Land Use and Land Cover Change, and a member of Eurosite Remote Sensing Support Group for conservation practitioners.

Petya Campbell, is an Associate Research Professor at University of Maryland Baltimore County and at NASA/Goddard Space Flight Center, Greenbelt, MD, USA. She is the GOFC-GOLD South Central and Eastern European Network (SCERIN) US Coordinator. Dr. Campbell's research combines forest ecology and silviculture with remote sensing, using the tools of reflectance and fluorescence spectroscopy. Her experience includes collaborative interdisciplinary research and networking. She is interested in monitoring vegetation function and detection of vegetation stress, using consistent measurements from field, UAS, airborne and satellite spectrometers.

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List of participants

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