Joint Finnish-Estonian seminars continued after the end of the cooperation project. Here you see the chronicle of related events. You can share this with anyone interested.

== 1991 ==

IGARSS'91 was on June 3-6, 1991 in Espoo.
The team of Tartu Observatory was
Juhan Ross
Tiit Nilson
Viivi Russak
Andres Kuusk
Urmas Peterson

They all had oral presentations.

== 1992 ==

In 1992 from October 19 to Noveber 2 Andres Kuusk and Urmas Peterson visited the University of Joensuu. For a shorter period there were Juhan Ross and Tiit Nilson too. They all made presentations at the seminar there.

== 1993 ==

Finnish-Estonian remote sensing seminar
January 27-29, 1993, Tõravere

Partisipants
H. Hänninen, University of Joensuu
Paavo Pelkonen, University of Joensuu
Pertti Hari, Helsinki University
Eero Nikinmaa, Finnish Academy
Leo Kaipiainen, Petroskoi

Presentations:
Tiit Nilson, Modeling of forest reflectance.
Pertti Hari, Forest research stations in Finland.

== 1995 ==

In 1995 Juhan Ross took part in three seminars/symposia in Finland.

Seminar 'Long-term Effects of CO2-Increase and Climate Change on Europan Forests,', 28.02-10.03.1995 Hyytiälä

Symposion 'XVII Geofysiikan päivät', 11.-12.05.1995, Oulu

XX IUFRO World Congress, 6.-12.08.1995 Tampere

== 1996 ==

NOPEX Annual meeting, 7.-13.02.1996 Helsinki

Juhan Ross
Meelis Mölder

International seminar ’Radiation Measurements in Forest.’
March 24-31, 1996 Hyytiala

Participants, presentations
Juhan Ross, Principles of radiation measurements in forest.
Madis Sulev, Instruments and methodology of the actinometrical measurements in forest.
Enn-Märt Maasik, Calibration of net radiometers.

== 1997 ==

Seminar ’Utilization of Theoretical Canopy Radiation Models in Remote Sensing Applications.’
April 9-10, 1997 Suonenjoki Research Station
Hosted by Heikki Smolander

Participants
Pauline Stenberg
Tuomas Häme
Juhan Ross
Terhikki Manninen
Heikki Smolander
Tiit NIlson
Juha Lappi
Andres Kuusk
Jaan Praks

Forest Monitoring in Europe with Remote Sensing (FMERS) seminar.
October 2-3, 1997, VTT Automation, Helsinki
Hosted by Tuomas Häme

Participants in the project (among others)
Pauline Stenberg
Risto Päivinen
Terhikki Manninen
Andres Kuusk

== 1998 ==

Seminar at University of Joensuu March 27-29, 1998.

Juhan Ross, Study of the energy forest in Estonia.

== 2000 ==

A measurement campaign taking place at Ruokolahti.
June 14-22, 2000
Project leader Pauline Stenberg

Estonian team
Andres Kuusk
Mait Lang
Urmas Peterson

Instruments
KFM-4
LAI-2000
Hemispherical CCD-radiometer

== 2001 ==

Finnish-Estonian Forest Seminar
January 20, 2001 Sagadi

Participants
Pauline Stenberg
Heikki Smolander
Terhikki Manninen
Toivo Pohja
Jari Varjo
Juhan Ross
Tiit Nilson
Urmas Peterson ?

In November 2001 visited Tõravere Pauline Stenberg and Miina Rautiainen.

== 2002 ==

Heikki Smolander revived the Finnish-Estonian seminar series that began during Project 12.

Finnish-Estonian seminar 'Assessment of leaf area index of boreal coniferous forest at stand and regional scales'
May 16-17, 2002 Helsinki
Hosted by Heikki Smolander

Program
Juha Hyyppä, Detection of single trees with laser scanner.
Andres Kuusk, Angular distribution of radiation beneath a forest.
Tiit Nilson, An algorithm to retrieve the LAI and canopy closure of forest canopies from gap fraction data.
Miina Rautiainen, Application of a forest reflectance model in estimating leaf area index of Scots pine stands using Landsat 7 ETM reflectance data.
Sampo Smolander, Small scale clumping in conifers and its effect on canopy optical properties.
Fraser Gemmel & Jari Varjo, Comparison of measured boreal forest characteristics with estimates from TM data and limited ancillary information using reflectance model inversion.
Tuomas Häme, Semiautomatic estimation of forest biomass and tree species using optical data.

Participants
Tiit Nilson
Andres Kuusk
Mait Lang
Matti Mõttus
Juha Hyppä
Tuomas Häme
Terhikki Manninen
Laura Sirro
Heikki Ahola
Kaj Andersson
Jari Varjo
Fraser Gemmel
Pola Stenberg
Miina Rautiainen
Sampo Smolander

== 2003 ==

Finnish–Estonian remote sensing seminar
May 8, 2003 Finnish Forest Research Institute at Tikkurila, Vantaa
Hosted by Miina Rautiainen

Program
Andres Kuusk, Reflectance spectra of ground vegetation in sub-boreal forests.
Karri Muinonen, Reflectance of a particulate medium.
Matti Mõttus, Measurement and modelling of the vertical distribution of sunflecks, penumbra and umbra in willow coppice.
Hannes Böttcher, Retrieval of forest leaf area index (LAI) from SPOT images in Järvselja by means of reflectance model inversion.
Miina Rautiainen, The effect of crown shape on the reflectance of coniferous stands.
Sampo Smolander, A scattering model for coniferous shoots including specular reflection.

Invited participants:
Tiit Nilson
Andres Kuusk
Mait Lang
Matti Mõttus
Hannes Böttcher
Tõnu Lükk
Erkki Tomppo
Tuomas Häme
Yrjö Rauste
Terhikki Manninen
Markus Holopainen
Karri Muinonen
Heikki Smolander
Pekka Voipio
Sampo Smolander
Pola Stenberg
Miina Rautiainen

== 2004 ==

Finnish–Estonian remote sensing seminar
March 2, 2004 Tõravere
Hosted by Tiit Nilson

Program
Jouni Peltoniemi, Field goniospectrometry of undervegetation.
Miina Rautiainen and Pauline Stenberg, LAI measurements in Suonenjoki (Hirsikangas) on summer 2003.
Terhikki Manninen, Estimation of boreal forest LAI using C-band SAR.
Jaan Praks, FOREMMS project: introduction and some results. (Problematic)
Mait Lang, Forest reflectance modelling: a test on the network of permanent forest growth sample plots.
Heidi Kadarik, Tõnu Lükk and Tiit Nilson, Spectral-seasonal signatures of vegetation in Emajõe Suursoo.
Urmas Peterson, Issues on forest area change in Eastern Baltic region.
Markko Paas and Andres Kuusk, Metrological problems of the CCD radiometer.
Matti Mõttus, Modelling radiative transfer in willow coppice.

Lecture cources 'Physical models in remote sensing'
April 13-16, 2004 Tikkurila
Hosted by the Finnish Forest Research Institute (METLA),
Heikki Smolander

Tuesday, 13 April 2004
1. Physical basis and consepts used in remote sensing (Tiit)
2. Solar radiation and its tarnsfer through the atmosphere (Tiit)
3. Atmospheric radiative transfer packages (Andres)
4. Radiative transfer in vegetation (Andres)
5. Leaf optical models (Andres)

Wednesday, 14 April 2004
1. Soil reflectance models (Tiit)
2. Spectral characteristics of forests, understorey and soil (Tiit)
3. Reflectance spectra (Andres)
4. Overview of canopy reflectance models (Andres)
5. Application example - vegetation indices (Andres)
6. Practical work (Andres & Tiit)

Thursday, 15 April 2004
1. RT in a forests (Andres)
2. Simulation examples (Tiit)
3. Practical work (Tiit & Andres)
4. Microwave (Jouni Pulliainen)

Friday, 16 April 2004
1. Instruments (Tiit)
2. Research methodologies (Tiit)
3. Field measurements (Andres)
4. Discussion

Participants were master and doctor students from Finnish universities, Tartu University and Tartu Observatory.

== 2005 ==

Finnish-Estonian Vegetation Remote Sensing Seminar 2005
May 3, 2005 University of Helsinki, Viikki
Hosted by Miina Rautiainen and Pauline Stenberg

Program
Tiit Nilson, Using a forest reflectance model to simulate the reflectance spectra of a shrubland.
Timo Tokola, Recent high-resolution remote sensing studies at the University of Helsinki.
Andres Kuusk, Radiometric correction of hemispherical images.
Sampo Smolander, Simple parameterizations for the amount of multiple scattering in uniform broadleaved and coniferous canopies.
Miina Rautiainen, An explanation for the low reflectances of coniferous forests.
Jouni Peltoniemi, [..]
Jaan Praks, Simulation of Scots pine forest polarimetric scattering properties with coherent scattering model for L-band.
Janne Heiskanen, Forest cover estimation in the tundra-taiga boundary using multiangular MISR data.
Barnaby Clark, The development of a historical empirical line method for the absolute radiometric correction of multi-temporal SPOT XS satellite imagery for use in land cover mapping of the Taita Hills, Kenya.

Invited participants:
Tartu Observatory: Tiit Nilson, Andres Kuusk, Urmas Peterson, Matti Mõttus, Mait Lang
University of Helsinki:
Department of Forest Ecology: Pauline Stenberg, Miina Rautiainen, Sanna Ervasti, Sampo Smolander
Department of Forest Resource Management: Timo Tokola, Markus Holopainen, Ilkka Korpela
Department of Geography: Petri Pellikka, Janne Heiskanen, Barnaby Clark
Department of Mathematics and Statistics: Johanna Rämö
VTT, Remote sensing group: Tuomas Häme
Finnish Geodetic Institute: Jouni Peltoniemi, Sanna Kaasalainen
Finnish Forest Research Institute: Heikki Smolander, Pekka Voipio, Jari Varjo
Finnish Meteorological Institute: Terhikki Manninen
Helsinki University of Technology: Jaan Praks
Univ. of Joensuu, Faculty of Forestry: Lauri Korhonen

== 2006 ==

Finnish-Estonian vegetation remote sensing seminar
April 19-20, 2006 Tõravere
Hosted by Andres Kuusk

Program
Matti Mõttus (TO), The effect of canopy structure on photon recollision probability as calculated using a physically-based forest reflectance model.
Antti Penttilä and Kari Lumme (HU), Review of opposition (hot spot) effect, coherent backscattering and the use of the DDA method in vegetation remote sensing problems.
Juha Suomalainen (FGI), Finnish Geodetic Institute Field Goniospectrometer (FiGIFiGo) and our latest results.
Andres Kuusk (TO), Validation of the forest radiative transfer model FRT.
Terhikki Manninen (FMI), Boreal forest LAI estimation using ENVISAT ASAR.
Lauri Korhonen (JU), Regression models for predicting forest canopy cover.
Mait Lang (TO), Comparison of allometric and gap fraction data inversion based LAI and canopy cover.
Miina Rautiainen (HU), About the crown shape of pine and spruce.
Tiit Nilson, Sandra Suviste et al. (TO), Seasonal reflectance course of some forest types in Järvselja as determined from a series of LANDSAT TM and SPOT images and via simulation.
Jaan Liira (TU), Shadow detection at forest edges on winter images.
Urmas Peterson et al. (TO), Forest edges on medium resolution Lansat TM winter images.
Tõnis Kärdi (TU), Urban remote sensings: linear spectral unmixing of Landsat TM data acquired over Tartu (Estonia).

HU – University of Helsinki
FMI – Finnish Meteorological Institute
JU – University of Joensuu
TU – Tartu University
TO – Tartu Observatory
FGI – Finnish Geodetic Institute

Participates
1. Lauri Korhonen (JU)
2. Kari Lumme (HU)
3. Terhikki Manninen (FMI)
4. Pontus Olofsson (LU)
5. Antti Penttilä (HU)
6. Miina Rautiainen (HU)
7. Juha Suomalainen (FGI)
8. Krista Alikas (TU)
9. Julia Budenkova (EAU)
10. Alo Eenmäe (EAU)
11. Andres Kuusk (TO)
12. Joel Kuusk
13. Tõnis Kärdi (TU)
14. Mait Lang (TO)
15. Jaan Liira (TU)
16. Tõnu Lükk (TO)
17. Tiit Nilson (TO)
18. Matti Mõttus (TO)
19. Urmas Peterson (TO)
20. Kersti Püssa (TU)
21. Anu Reinart (TO)
23. Sandra Suviste (TU)
24. Kristi Valdmets (TU)

== 2007 ==

Finnish-Estonian Vegetation Remote Sensing Seminar
April 11, 2007 Helsinki
Hosted by Pauline Stenberg

Program
Andres Kuusk, Hyperspectral reflectance of sub-boreal forests measured by CHRIS/PROBA and airborne spectrometer.
Sanna Kaasalainen, Laboratory laser measurements of forest understorey and vegetation.
Mait Lang, Estimation of crown closure, canopy cover and tree grouping index.
Miina Rautiainen & Pola Stenberg, PARAS (PARIM) perspectives.
Juha Suomalainen, Spectral definition of understorey in Tähelä (Sodankylä).
Terhikki Manninen, Simulation of the effect of forest floor on the albedo of forest.
Matti Mõttus, Spectral invariants and beyond.
Jaan Praks, Forest height estimation with polarimetric SAR, FinSAR campaign and prospects for global application.
Petri Pellikka, User-driven reqirements of the European Hyperspectral Remote Sensing Community.
Joel Kuusk, Overview of the airborne spectrometer UAVSPEC.
Lauri Korhonen, Airborne laser scanning - the future of forest inventory?
Aku Riihelä, Vertical albedo profiling of a northern boreal forest.
Janne Heiskanen, Mapping tree cover in northern Finland using MODIS 1-km data.

Invited participants
Tiit Nilson, Andres Kuusk, Mait Lang, Matti Mõttus, Joel Kuusk, Miina Rautiainen (TO)
Pauline Stenberg, Petri Pellikka, Janne Heiskanen, Alemu Gonsamo (UH)
Sanna Kaasalainen, Jouni Peltoniemi, Juha Suomalainen (FGI)
Pekka Voipio (METLA)
Terhikki Manninen, Aku Riihelä (FMI)
Jaan Praks (VTT)
Lauri Korhonen (Univ. of Joensuu)

Participants
Pauline Stenberg
Tiit Nilson
Andres Kuusk
Mait Lang
Joel Kuusk
Matti Mõttus
Miina Rautiainen
Petri Pellika
Alemu Gonsamo
Janne Heiskanen
Jouni Peltoniemi
Sanna Kaasalainen
Juha Suomalainen
Terhikki Manninen
Aku Riihelä
Jaan Praks
Lauri Korhonen
Pekka Voipio

The first seminar of the Nordic Network on
Physically based remote sensing of forests [PHYSENSE]
September 25, 2007 in Tartu, Estonia
Miina Rautiainen, PHYSENSE network secretary

Organizing committee:
Tiit Nilson (network director), Tartu Observatory
Miina Rautiainen, Tartu Observatory / Univ. of Helsinki
Pontus Olofsson, Lund University
Matti Mõttus, Tartu Observatory
Mait Lang, Estonian University of Life Sciences
Lauri Korhonen, Univ. of Joensuu

Program:

Key note: Tiit Nilson, The role of reflectance models in forest remote sensing.
Key note: Jouni Peltoniemi, Measurement and modelling of reflectance of forest uderstorey and bare land objects.
Pille Mänd, Responses of reflectance indices to experimental warming and drought at European shrublands.
Per Schubert, The applicability of a light use efficiency (LUE) model for an ombrotrophic bog in southern Sweden.
Juha Suomalainen, Polarization in forest understorey multiangular reflectance – first results from our summer 2007 campaigns.
Joel Kuusk, Airborne measurements of forest reflectance at Järvselja, Estonia.
Key note: Matti Mõttus, Photon recollision probability and canopy reflectance.
Mait Lang, Järvselja test site for RAdiation transfer Model Intercomparison.
Miina Rautiainen, Multiangular reflectance propertiesof a hemiboreal forest: an analysis using CHRI PROBA data.
Lauri Korhonen, Estimation of forest canopy cover in the Finnish NFI.
Jaan Praks, Forest height estimation with polarimetric interferometric synthetic aperture radar.

Physical Methods in Remote Sensing. Course for Graduated Students
October 9–11, 2007 Viikki
Hosted by Pauline Stenberg & METLA

Tuesday, October 9, 2007
1. Physical basis and concepts used in remote sensing (Tiit)
2. Solar radiation and its transfer through the atmosphere (Tiit)
3. Atmospheric radiative transfer packages (Andres)
4. Radiative transfer in vegetation (Andres)
5. Leaf optical models (Andres)
6. Soil reflectance models (Tiit)

Wednesday, October 10, 2007
1. Spectral characteristics of forests, understorey and soil (Tiit, Andres)
2. Overview of canopy reflectance models (Andres)
3. RT in a forests (Andres)
4. Simulation examples (Tiit)
5. Instruments and methodologies (Tiit)
6. Field measurements (Andres)
7. Practical demostration of models (Tiit & Andres)

Thursday, October 11, 2007
Physical basis of microwave remote sensing, Jouni Pulliainen
Physical basis of laser scanning, Sanna Kaasalainen

== 2008 ==

The second workshop of the Nordic Network on
Physically based remote sensing of forests [PHYSENSE]
June 3–4, 2008 in Helsinki, Finland
Miina Rautiainen, PHYSENSE network secretary

Program
Sune Haga, What is SNS?
Svein Solberg, Towards an LAI-based remote sensing method for forest health monitoring.
Tiit Nilson, Mait Lang, Tõnu Lükk, Alo Eenmäe, On remote sensing of forest productivity in Järvselja, Estonia.
Aku Riihelä, Terhikki Manninen, Subarctic boreal forest albedo estimation using ENVISAT ASAR for BRDF determination.
Ilkka Korpela, Airborne discrete-return LiDAR in the mapping of understory lichens.
Sannamaija Susiluoto, Vegetation classification of the European Russian tundra and taiga ecosystems using multiple spatial scale satellite images.
Pauline Stenberg, Remote sensing of vegetation based on spectrally invariant structure parameters.
Matti Mõttus, Contribution of multiply-scattered radiation to multiangular forest reflectance.
Terhikki Manninen, Simulation of the effect of forest floor on forest albedo.
Zbyneck Malenovský, Structural parameterization of Norway spruce trees in radiative transfer of high spatial resolution.
Tuomas Häme, A new satellite for monitoring forests.
Joel Kuusk, Hyperspectral reectance of boreonemoral forests in a dry and normal summer.
Henri Niitymäki, Hyperspectral laser measurement system: application to coniferous needles and branches.
Jouni Peltoniemi, Reflectance of snow in forests: field measurements, modelling, and applications.
Eetu Puttonen, Measurement of scattering function and polarization from pine and spruce shoots.
Mait Lang, Combining LAI-2000 PCA and digital camera for gap fraction measurements.
Lauri Korhonen, Automated estimation of LAI from hemispherical canopy images.
Lauri Mehtatalo, A model-based approach for ALS-based forest inventory.
Jari Vauhkonen, Quantifying tree crown shape and structure using alpha shape metrics of ALS data.
Aaron Weiskittel, Effects of forest ownership and change on forest harvest rates, types, and trends in northern Maine.

Participants (TO)
Tiit Nilson
Miina Rautiainen
Andres Kuusk
Matti Mõttus
Mait Lang
Joel Kuusk
Tõnis Kärdi
Tõnu Lükk

Seminar on Theoretical Background and Current Issues in Optical Remote Sensing of Forests (Helsinki, Finland, 09.12.2008)

TO presentations
Nilson, T., Radiative transfer in vegetation and application of the theory in remote sensing of forests (invited keynote presentation).
Mõttus, M., Theoretical studies on the validity and utility of the spectral invariants.
Rautiainen, M., Current applications and future prospects of the ’p-theory’ in remote sensing of forests.

== 2009 ==

Finnish–Estonian Vegetation Remote Sensing Seminar
May 28, 2009, Tartu
Hosted by Matti Mõttus

Program
Joel Kuusk, Hyperspectral reflectance measurements from unmanned aerial platform.
Jouni Peltoniemi et al., UAV @ FGI.
Andres Kuusk, The role of hot spot in the single scattering albedo of vegetation canopies.
Abdelaziz Kallel, Vegetation radiative transfer modeling using virtual flux decomposition.
Tiit Nilson, Once more about eigenvalues of the radiative transfer problem.
Matti Mõttus, p explained?
Mait Lang, Gap fraction measurements in forests using digital hemispherical cameras and LAI-2000.
Lauri Korhonen, LAI and canopy cover from airborne laser scanning.
Terhikki Manninen, LAI measurements of boreal forest from helicopter.
Janne Heiskanen, Modeling forest reflectance using Swedish National Forest Inventory data.
Jaan Praks, SAR polarimetric coherence tomography, mapping the vertical structure of the boreal forest.

Invited participants
Tiit Nilson
Mait Lang
Andres Kuusk
Joel Kuusk
Tõnu Lükk
Urmas Peterson
Madis Sulev
Tõnis Kärdi
Julia Budenkova
Anton Kardakov
Ave Kodar
Alo Eenmäe
Abdelaziz Kallel
Pauline Stenberg
Miina Rautiainen
Janne Heiskanen
Lauri Korhonen
Jouni Peltoniemi
Juha Suomalainen
Teemu Hakala
Eetu Puttonen
Sanna Kaasalainen
Terhikki Manninen
Aku Riihelä
Jaan Praks
Lauri Mehtätalo
Petri Pellikka
Alemu Gonsamo
Barnaby Clark

Finnish participants
Pauline Stenberg, Miina Rautiainen, Janne Heiskanen, Lauri Korhonen, Jouni Peltoniemi, Juha Suomalainen, Teemu Hakala, Eetu Puttonen, Terhikki Manninen, Aku Riihelä, Jaan Praks, Barnaby Clark, Eeva Bruun

Nordic Remote Sensing Days
October 22–23, 2009 Helsinki

TO presentations
J. Pisek, Measuring gap size distribution and beyond-shoot clumping at Järvselja RAMI (RAdiation transfer Model Intercomparison) test sites.
J. Envall, ESTCube Mission Testing the Electric Sail with the First Estonian Satellite.
M. Mõttus, Reflectance of forests: from shoots to global models.
U. Peterson, Edge proximity influence on radiance at forest edges on a very high resolution IKONOS winter satellite image.
Poster
Rautiainen, T. Nilson, T. Lükk, Seasonal Reflectance Courses of Hemiboreal Birch Forests.

TO participants
Anu Reinart
Andres Kuusk
Tiit Nilson
Urmas Peterson
Matti Mõttus
Joel Kuusk
Jouni Envall
Krista Alikas
Jan Pisek
Ilmar Ansko

== 2010 ==

Joint NASA LCLUC Science Team Meeting
and GOFC-GOLD/NERIN, NEESPI Workshop
Monitoring land cover and land use in boreal and temperate Europe
August 25–28, 2010 Tartu

TO and Finnish presentations
Matti Mõttus, LCLUC-related projects at Tartu Observatory, Tõravere.
Urmas Peterson, Land use and land cover in Environment monitoring programme in Estonia.
Tiit Nilson, Monitoring vegetation: theoretical basis.
Terhikki Manninen, Field experiments in northern Europe.
Pekka Kauppi, Overview of forest exploitation in Baltics.
Anu Reinart, Monitoring water quality in the Baltic region.
Mart Noorma, Overview of university programs on land remote sensing in the Baltic States.
Posters
Knyazikhin, Y., Schull, M.A., Stenberg, P., Rautiainen, M., Mõttus, M.
Stenberg, P., Rautiainen, M., Mõttus, M., Heiskanen, J.
Pisek, J.
Nilson, T.
Kuusk, A.

Some more participants
Krista Alikas
Tuomas Häme
Miina Rautiainen
Lea Hallik
Mait Lang
Tõnu Lükk
Ave Kodar
Tauri Arumäe
Pauline Stenberg
Jan Pisek
Joel Kuusk

== 2011 ==

Finnish Remote Sensing Days 2011
November 24–25, 2011 Otaniemi

TO participants
Joel Kuusk
Ilmar Ansko
Tiit Nilson

Presentation
Joel Kuusk, Can we trick the tricky weather? Reflectance measurements in changing illumination conditions.

== 2012 ==
Finnish–Estonian remote sensing seminar FinEst2012
May 9, 2012, Tartu, Eesti Maaülikool, Metsamaja
Hosted by Mait Lang

Program
Andres Kuusk, Estimation of LAI of hemiboreal forests
Mait Lang, Mapping of general habitat categories from satellite images in EBONE project
Jan Pisek, Are non-varying spherical leaf inclination angle distributions a valid assumption across temperate and boreal broad-leaf tree species?
Lauri Korhonen, Estimation of crown volume from airborne lidar data.
Tuure Takala, AISA Eagle forest measurements in 2011–2012.
Matti Mõttus, Seasonal course of the optical properties of alder and birch leaves.
Petr Lukes, Simulations of boreal forest black-sky albedo using a radiative transfer model and forestry database.
Titta Majasalmi, Allometric and optical LAI -- what's the connection?
Kalle Vanhatalo, Testing Canopy Spectral Invariants Derived from Imaging Spectroscopy Data in Southern Boreal Forests: A Case Study.
Tiit Nilson, Time course of reflectance for some forest types in Järvselja.
Maris Nikopensius, Does the radiative temperature of forests change along with stand age?
Tõnu Lükk, Seasonal imagery in kNN estimation.
Tauri Arumäe, Estimation of forest characteristics using LIDAR in Aegviidu test site.

Finnish participants
Titta Majasalmi, Lauri Korhonen, Pauline Stenberg, Kalle Vanhatalo, Tuure Takala, Matti Mõttus, Miina Rautiainen, Petr Lukes

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Finnish Remote Sensing Days 2012
October 25–26, 2012 Helsinki

TO presentations
Alikas K.: A Robust Kd(490) Algorithm for Remote Sensing of Optically Complex Waters (poster).
Ansko I.: A New Baseline Laboratory for Calibration and Characterization of Remote Sensing Radiometers (poster).
Kuusk J.: BRF of Forests (oral presentation).
Pisek J.: Estimating Leaf Inclination and G-function From Leveled Digital Camera Photography for Broadleaf Tree and Shrub Species in Kaisaniemi and Kumpula Botanical Gardens, Helsinki (oral presentation).
Peterson U., Lang M., Liira J., Nilson T.: Cross-Border Comparison of Forest Area Changes Caused by Clear-Cutting and Afforestation of Abandoned Agricultural Land Using Snow Covered Satellite Imagery in Northeastern Europe (oral presentation).
Kuusk J.: Reference Panel for Remote Sensing Studies at Järvselja, Estonia (poster).

== 2013 ==

Finnish–Estonian Remote Sensing Seminar
March 13, 2013, Gardenia tropical garden, Viikki
Hosted by Miina Rautiainen

Program
Andres Kuusk, Directional properties of forest reflectance: Measurements and modeling.
Petr Lukeš, Optical properties of leaves and needles for boreal tree species in Europe.
Lea Hallik, Leaf spectral properties and carotenoids content.
Maria Gritsevich / Jouni Peltoniemi, Polarisation of vegetation: what we know, what we don't know.
Pola Stenberg, A new approach for simulating canopy absorption.
Titta Majasalmi, Modeled and measured FPAR in a boreal forest.
Zou Xiao Chen, Leaf angles in field crops: measurement methods and effect on spectral reflectance.
Jan Pisek, My personal journey through leaf angles.
Aarne Hovi, Simulating waveform recording LiDAR signals from seedling stand vegetation using Monte Carlo ray tracing.
Taras Kazantsev, Remote sensing of photosynthetic activity in arctic plants.
Jan Pisek, What can multi-angle MISR observations at 275 m resolution tell us about foliage clumping?
Mait Lang, Observation of phenophases in beech forest from MODIS NDVI.
Ave Kodar, Leaf area index mapping with airborne lidar, satellite images and ground measurements in Järvselja VALERI test site.
Tauri Arumäe, Using LIDAR data to assess forest characteristics in Estonia.
Ilkka Korpela, Backscattering of individual LiDAR pulses from forest canopies explained by photogrammetrically derived vegetation structure.

Participants

Terhikki Manninen	Finnish Meteorological Institute
Emmihenna Jääskeläinen	Finnish Meteorological Institute
Jouni Peltoniemi	Finnish Geodetic Institute
Maria Gritsevich	Finnish Geodetic Institute
Tiit Nilson	Tartu Observatory
Andres Kuusk	Tartu Observatory
Joel Kuusk	Tartu Observatory
Jan Pisek	Tartu Observatory
Tauri Arumäe	Estonian Univ. Life Sciences, Dept. Forest Manag.
Kairi Raabe	Tartu Observatory
Maris Nikopensius	Tartu Observatory
Mait Lang	Estonian Univ. Life Sciences, Dept. Forest Manag.
Lea Hallik	Estonian Univ. Life Sciences, Dept. Plant Physiol.
Taras Kazantsev	Estonian Univ. Life Sciences, Dept. Plant Physiol.
Pauline Stenberg	Univ. of Helsinki, Dept. Forest Sciences
Miina Rautiainen	Univ. of Helsinki, Dept. Forest Sciences
Petr Lukeš	Univ. of Helsinki, Dept. Forest Sciences
Titta Majasalmi	Univ. of Helsinki, Dept. Forest Sciences
Kalle M. Vanhatalo	Univ. of Helsinki, Dept. Forest Sciences
Aarne Hovi	Univ. of Helsinki, Dept. Forest Sciences
Ilkka Korpela	Univ. of Helsinki, Dept. Forest Sciences
Nea Kuusinen	Univ. of Helsinki, Dept. Forest Sciences
Albert Porcar	Univ. of Helsinki, Dept. Forest Sciences
Jon Atherton	Univ. of Helsinki, Dept. Forest Sciences
Matti Mõttus	Univ. of Helsinki, Dept. Geosciences and Geography
Tuure Takala	Univ. of Helsinki, Dept. Geosciences and Geography
Zou Xiao Chen	Univ. of Helsinki, Dept. Geosciences and Geography
Janne Heiskanen	Univ. of Helsinki, Dept. Geosciences and Geography

Finnish Remote Sensing Days 2013
October 23–24, 2013 Helsinki

TO presentations
Nikopensius M., Seasonal Reectance Dynamics of Common Understory Types in Hemi-Boreal Forests, Järvselja, Estonia (poster).
Raabe K., Does Leaf Angle Distribution Change as a Function of Height and Season for Broadleaf Tree Species Common to Estonia and Finland? (poster).

TO participants
P. Grötsch, J. Kuusk, M. Nikopensius, K. Raabe

== 2014 ==

Finnish-Estonian Remote Sensing Seminar
May 8, 2013 Tartu Observatory, Tõravere
Hosted by Jan Pisek

Program
Rocío Hernández-Clemente, Retrieval of leaf pigment concentration from imaging spectroscopy.
Maris Nikopensius, Spectral reflectance patterns and temporal dynamics of common understory types in hemi-boreal forests in Järvselja, Estonia.
Francesco Chianucci, The impact of sensor footprint on LAI and foliage clumping retrieval from multidirectional view canopy instruments.
Mait Lang, HemiSPherical Project Manager - new software to calculate canopy transmittance from hemispherical images.
Ave Kodar, Phenology of the forest: from gap fraction to true leaf area index.
Kairi Raabe, Seasonal and vertical changes in leaf angle distribution for deciduous broadleaf tree species common to Estonia.
Matti Mõttus, Canopy functioning from multiangular and high spatial resolution data.
Aarne Hovi, Variation in radiometric LiDAR features for individual trees effects of quantifiable factors, within-species structural variation, and random noise.
Tauri Arumäe. Using ALS data to estimate forest characteristics.
Elar Asuküll, CDOM estimation from MERIS images.
Kaupo Voormansik, Grassland polarimetric signatures with C- and X-band SAR.
Karlis Zalite, Monitoring of Estonian Grasslands with Repeat-Pass Interferometry.
Titta Majasalmi, Validating satellite-derived fPAR for boreal forests.
Andres Kuusk, WorldView-2 calibration experiment at Järvselja.
Ilkka Korpela, Tree species identification in aerial image data using directional reflectance signatures.

Participants
Alikas, Krista, TO
Arumäe, Tauri, RMK
Asuküll, Elar, TO
Chianucci, Francesco, Research Centre for Forestry (Arezzo) (CRA-SEL)
Hallik, Lea, TO
Hernández-Clemente, Rocío, Univ. of Helsinki, Dept. Geosc. Geography
Hovi, Aarne, Univ. of Helsinki, Dept. of Forest Sciences
Kodar, Ave, Estonian Univ. of Life Sciences, Dept. of Forest Manag.
Korpela, Ilkka, Univ. of Helsinki, Dept. of Forest Sciences
Kuusk, Joel, TO
Kuusk, Andres, TO
Lang, Mait, Estonian Univ. of Life Sciences, Dept. of Forest Manag.
Ligi, Martin, TO
Majasalmi, Titta, Univ. of Helsinki, Dept. of Forest Sciences
Mõistus, Marta, TO
Mõttus, Matti, Univ. of Helsinki, Dept. of Geosciences and Geography
Nikopensius, Maris, TO
Nilson, Tiit, TO
Peterson, Urmas, Estonian Univ. of Life Sciences, Dept. Forest Manag.
Pisek, Jan, TO
Raabe, Kairi, TO
Rautiainen, Miina, Univ. of Helsinki, Dept. of Forest Sciences
Stenberg, Pola, Univ. of Helsinki, Dept. of Forest Sciences
Tamm, Tanel, University of Tartu
Voormansik, Kaupo, TO
Zalite, Karlis, TO

Finnish Remote Sensing Days 2014
October 27–28, 2014 Helsinki

TO presentations
Pisek J., Lang M., Kuusk J., What is the Most Suitable Viewing Congu-
ration for Retrieval of Forest Understory Reectance from Multi-Angle
Remote Sensing Data? (oral presentation).
Asuküll E., What Can Fine Resolution Satellites Provide for Small Colo-
red Lakes? (oral presentation).

TO participants
E. Asuküll, J. Pisek, K. Raabe

== 2015 ==

Finnish Estonian Remote Sensing Seminar
March 18, 2015 Kumpula campus
Hosted by Matti Mõttus

Program
Aarne Hovi, Towards enhanced understanding of airborne LiDAR measurements of forest vegetation.
Tauri Arumäe, Validation of space-borne lidar based vegetation height map products.
Lauri Korhonen, Relationships between lidar-derived tropical forest canopy structure and MODIS albedo products.
Pola Stenberg, Quantitative characterization of clumping in Scots pine.
Tiit Nilson, Optimum LAI from light use efficiency-type NPP models.
Mait Lang, MERIS and MODIS data based NPP estimates in relation to disturbances, forest site productivity and forest age.
Titta Majassalmi, Wrapping up my dissertation: Estimation of LAI and fPAR in a boreal forest.
Jan Pisek, Testing the performance of semi-empirical and physically-based approaches for retrieval of forest understory signal in Yatir forest, Israel.
Kaupo Voormansik, Research activities of Tartu Observatory/Aalto University radar remote sensing workgroup and latest research results.
Martin Neerot, Developing a SAR for a microsatellite platform.
Andres Kuusk, Tree stems from TLS measurements.
Lea Hallik, Performance of vegetation indices.
Xiaochen Zou, Leaf angles and spectral features in field crops.
Matti Mõttus, Vegetation indices, shadow fraction and phenology in Hyytiälä.

Participants

Kati Anttila,	FMI
Tauri Arumäe,	EULS
Lea Hallik,	TO
Janne Heiskanen,	UH, Department of Geosciences and Geography
Aarne Hovi,	UH, Department of Forest Sciences
Emmihenna Jääskeläinen,	FMI
Lauri Korhonen,	UH, Department of Forest Sciences
Andres Kuusk,	TO
Joel Kuusk,	TO
Mait Lang,	TO / EULS
Titta Majassalmi,	UH, Department of Forest Sciences
Terhikki Manninen,	FMI
Vincent Markiet,	UH, Department of Geosciences and Geography
Matti Mõttus,	UH, Department of Geosciences and Geography
Martin Neerot,	Aalto University
Tiit Nilson,	TO
Viljami Perheentupa,	UH, Department of Geosciences and Geography
Jan Pisek,	TO
Kairi Raabe,	TO
Miina Rautiainen,	UH, Department of Forest Sciences
Pola Stenberg,	UH, Department of Forest Sciences
Kaupo Voormansik,	TO / Aalto University
Xiaochen Zou,	UH, Department of Forest Sciences

FMI - Finnish Meteorological Institute
EULS - Estonian University of Life Sciences
TO - Tartu Observatory
UH - University of Helsinki
FMI - Finnish Meteorological Institute

== 2016 ==

Finnish-Estonian Seminar of Remote Sensing
May 24-25, 2016 Tõravere
Hosted by Lea Hallik

Program
Jaan Praks, Aalto-1 experience.
Matti Mõttus, Daily course of needle PRI.
Jon Atherton, What controls the spatial variation of physiological leaf optical properties in a boreal forest?
Aarne Hovi, Quantifying the missing link between albedo and productivity in the boreal forests.
Andres Kuusk, Metrology of LAI-2000.
Tiit Nilson, Once more on gap fraction formulas in forests.
Lauri Korhonen, Relationships between MODIS black-sky shortwave albedo and airborne lidar based forest canopy structure.
Jaan Liira & Marta Mõistus, Comparison of forest canopy point-measured from above and below.
Tauri Arumäe, Estimation of canopy cover in hemi-boreal broad-leaved forests in Estonia using hemispherical images and lidar data.
Sara Alibakhshi, Remotely sensed early warning signals of a critical transition in a wetland ecosystem.
Hadi Hadi, Estimating boreal forest canopy cover from Landsat multispectral image using empirical and spectral mixture analysis.
Jouni Peltoniemi, FIGIFIGO and the newest ideas of modelling.
Jan Pisek, On the conservativeness of leaf angle distributions among species.

Participates
Lea Hallik, TO
Andres Kuusk, TO
Jouni Peltoniemi, Univ. Helsinki
Tiit Nilson, TO
Joel Kuusk, TO
Urmas Peterson, TO
Mirjam Randla, TO
Valentina Sagris, UT Geography
Tanel Tamm, UT Geography
Hadi Hadi, Aalto Univ.
Sara Alibakhshi, Aalto Univ.
Babak Naimi, Univ. of ?
Lauri Korhonen, Univ. Easten Finland
Mait Lang, TO
Kaupo Voormansik, TO
Pola Stenberg, Univ. Helsinki
Terhikki Manninen, FMI
Miina Rautiainen, Aalto Univ.
Maris Nikopensius, Est. Environ. Agency
Tauri Arumäe, RMK
Jon Atherton ?, Univ. Helsinki
Matti Mõttus, Univ. Helsinki
Jan Pisek TO
Jaan Praks, Aalto Univ.
Jaan Liira, UT, ÖMI
Anu Reinart, TO
Aarne Hovi, Aalto Univ.

== 2017 ==

Finnish-Estonian remote sensing seminar 2017
May 18-19, 2017 Aalto campus, Espoo
Hosted by Miina Rautiainen

Program
Mait Lang, Preparations for forest map construction in Estonia.
Titta Majasalmi, Structural quantification of boreal forest canopies using ALS/NFI data.
Hadi, Forest canopy structure and reflectance in humid tropical Borneo: application of a model based on spectral invariants.
Jaan Praks, TanDEM-X and small SDR radar measurements.
Oleg Antropov, Forest inventory using ALOS PALSAR data, and TanDEM-X and Sentinel-2/Landsat-8 data fusion.
Lea Hallik, H2020 Project MULTIPLY (MULTIscale SENTINEL land surface information retrieval PLatform).
Sara Alibakhshi, Temporal dynamics of albedo after disturbances: a case study in oak forests in the Zagros area.
Jan Pisek, Can leaf angle distribution be considered a species-specific property?
Jouni Peltoniemi, Understory measurements in Järvselja 2017 using FIGIFIGO.
Matti Mõttus, Multiangular measurements of the spectral reflectance of a pine stand.
Aarne Hovi, Spectral library of Eurasian and North American tree species.
Jan Pisek, On the relationship of photon recollision probability and foliage clumping derived from MODIS BRDF data in vegetation canopies.
Petri Varvia, Bayesian estimation of canopy LAI from hyperspectral remote sensing data.
Kairi Raabe, Modelling GPP in Estonia and Finland using the process-based model BEPS.

Invited participants
Miina Rautiainen
Jan Pisek
Anu Reinart
Andres Kuusk
Tauri Arumäe
Mait Lang
Kaupo Voormansik
Urmas Peterson
Kairi Raabe
Terhhiki Manninen
Hovi Aarne
Jaan Praks
Hadi Hadi
Sara Alibakhshi
Pekka Raitio
Oleg Antropov
Krista Alikas
Juha Suomalainen
Tiit Nilson
Lea Hallik
Pauline Stenberg
Matti Mottus
Lauri Korhonen
Jouni Peltoniemi
N. Kuusinen
Daniel Schraik
Petri Forsström
Titta Majasalmi

== 2018 ==

FIN-EST Remote Sensing Seminar 2018
June 4-5, 2018 Tartu Observatory, Tõravere
Hosted by Jan Pisek

Program
Eva Neuwirthová, Leaf optical properties in relation to leaf anatomical properties.
Matti Mõttus, Response of leaf reflectance to light.
Petri Forsström, Temporal-spectral profiles of lingonberry and blueberry shrubs.
Jaan Praks, Forest snow damage mapping from SAR images.
Kairi Raabe, Estimating the beyond-shoot foliage clumping at two contrasting points in the growing season using a variety of field-based methods.
Tiit Nilson, Single-crown transmittance of pine trees and its effect on stand level gap fraction.
Daniel Kükenbrink, Spatio-temporal modelling of the light regime in forest canopies.
Hadi, A study on the drivers of canopy reflectance variability in a boreal forest.
Tauri Arumäe, Detection of thinning cutting related changes in hemi-boreal forest stands using multitemporal airborne lidar measurements.
Lauri Korhonen, The accuracy of direct lidar-based estimation of forest canopy cover.
Mait Lang, Construction of tree species composition map of Estonia using multispectral satellite images, soil map and a random forest algorithm.
Aarne Hovi, Seasonal dynamics of albedo across European boreal forests: analysis of MODIS albedo and structural metrics from airborne LiDAR.
Daniel Schraik, Estimating leaf area index in boreal forest using satellite images and PARAS model.
Titta Majasalmi, Spatiotemporal representation of forests in land surface models employed in climate research.
Andres Kuusk, Estimation of variable parameters of the atmosphere from SkySpec spectra.

Invited participants
Jan Pisek
Tiit Nilson
Anu Reinart
Andres Kuusk
Joel Kuusk
Lea Hallik
Tauri Arumäe
Mait Lang
Kaupo Voormansik
Urmas Peterson
Pauline Stenberg
Jouni Peltoniemi
Terhikki Manninen
Lauri Korhonen
Matti Mõttus
Hovi Aarne
Jaan Praks
Titta Majasalmi
Hadi Hadi
Sara Alibakhshi
Pekka Raitio
Vincent Markiet
Oleg Antropov
Krista Alikas
N. Kuusinen
Juha Suomalainen
Daniel Schraik
Petri Forsström
Joan A Porcar Castell
Maris Nikopensius
Daniel Kuekenbrink
Kairi Raabe

== 2019 ==

Finnish-Estonian remote sensing seminar 2019
May 23-24, 2019 Aalto University
Hosted by Miina Rautiainen

Program
Jan Pisek, How can elevated CO2 affect the vegetation structure of Australian woodlands results from the Eucalyptus Free-Air CO2 Enrichment (EucFACE) experiment.
Mihkel Kaha, Changes in hemiboreal forest spectral signatures measured from Sentinel-2 MSI images following Eurasian Beaver (Castor fiber) caused disturbances.
Emmihenna Jääskeläinen, The effect of existence of snow at forest floor on boreal forest albedo diurnal variation.
Sara Alibakhshi, How forest does affect albedo: a global analysis?
Aarne Hovi, Measurements of coniferous needle spectra with double and single integrating spheres.
Jouni Peltoniemi, New laboratory goniopolarimeter at FGI.
Titta Majasalmi, Evaluation of leaf-level optical properties employed in land surface models.
Mait Lang, News on laser scanning of forests in Estonia.
Lauri Korhonen, Estimation of mean annual increment of tree diameters by airborne laser scanning.
Daniel Schaik, Bayesian inversion of PARAS model using Landsat 8 and Sentinel-2 images.
Eelis Halme, Utility of hyperspectral remote sensing data in estimating forest structure variables in boreal forests of Finland.
Vincent Markiet, Estimation of boreal forest floor reflectance from airborne hyperspectral data.
Jorge Ruiz, Complex domain analysis of Random Volume over Ground model for forest height.
Tauri Tampuu, SAR Interferometry for gauging seasonal dynamics of raised bogs.
Jan Pisek, On seasonal variation of Scots pine shoot level clumping at ICOS Brasschaat site, Belgium.

Registered participants
1. Aarne Hovi, Aalto University
2. Daniel Schraik, Aalto University
3. Eelis Halme, VTT
4. Emmihenna Jääskeläinen, Finnish Meteorological Institute
5. Erkki Tomppo, Aalto University
6. Jaan Praks, Aalto University
7. Jan Pisek, Tartu Observatory
8. Jorge Ruiz, Aalto University
9. Jouni Peltoniemi, Finnish Geospatial Research Institute
10. Juha Suomalainen, Finnish Geospatial Research Institute
11. Jussi Juola, Aalto University
12. Lauri Korhonen, University of Eastern Finland
13. Mait Lang, Tartu Observatory
14. Matti Mõttus, VTT
15. Mihkel Kaha, Tartu Observatory (& ESA/ESRIN)
16. Miina Rautiainen, Aalto University
17. Nea Kuusinen, University of Helsinki
18. Oleg Antropov, VTT
19. Pauline Stenberg (emerita)
20. Sara Alibakhshi, Aalto University
21. Tauri Arumäe, RMK, Estonian State Forest Management Centre
22. Tauri Tampuu, University of Tartu
23. Terhikki Manninen, Finnish Meteorological Institute
24. Titta Majasalmi, Norwegian Institute of Bioeconomy Research
25. Triin Kaasiku, University of Tartu
26. Vincent Markiet, VTT

== Due to Covid pandemic, there was no meetings in 2020–2022 ==

== 2023 ==

FIN-EST Remote Sensing Seminar 2023
April 11–12, 2023 University of Tartu Library
Hosted by Jan Pisek

Program
Margit Aun, Exploring the potential of machine learning for leaf angle distribution type identification from leveled digital photography.
Oleksandr Borysenko, Estimation of coniferous shoot structure by high precision blue light 3D photogrammetry scanning.
Andres Kuusk, Specular reflection on a cylinder.
Jussi Juola, Spectral characteristics of stem bark.
Olli Ihalainen, Spectral invariant theory at sub-meter spatial resolution Imaging spectroscopy.
Mait Lang, Sentinel-1 SAR time series in Laeva-Kursi-Pikknurme-Kärkna forest test site.
Sini-Selina Salko, Spectral characteristics of peatland vegetation types of Southern Finland – preliminary results.
Mihkel Kaha, On the compatibility of ICOS, NEON, TERN sampling designs for leaf area index estimation with digital hemispherical photography.
Eelis Halme, Improved parametrisation of a forest reflectance model for retrieval of boreal forest structure.
Daniel Schraik, STAR at canopy scale: what it is and how to measure it with TLS.
Aarne Hovi, Modeling spectral transmittance of forest canopies using photon recollision probability.
Shaohui Zhang, Comparison of semi-physical and empirical models in the estimation of boreal forest leaf area index and clumping with airborne laser scanning data.
Iuliia Burdun, Monitoring temporal changes in water table depth over the northern peatlands with optical satellite data.
Tauri Tampuu, KappaMask: a highly accurate open-source AI-based cloudmask for Sentinel-2.
Jaan Praks, Upcoming Finnish Hyperfield hyperspectral satellites.

Expected participants
1. Aarne Hovi, Aalto University
2. Andres Kuusk, Tartu Observatory
3. Audrey Mercier, Aalto University
4. Daniel Schraik, Aalto University
5. Eelis Halme, VTT
6. Iuliia Burdun, Aalto University
7. Jaan Praks, Aalto University
8. Jan Pisek, Tartu Observatory
9. Joel Kuusk, Tartu Observatory
10. Jussi Juola, Aalto University
11. Lea Hallik, Tartu Observatory
12. Mait Lang, Tartu Observatory/University of Life Sciences
13. Margit Aun, Tartu Observatory
14. Matti Mõttus, VTT
15. Mihkel Kaha, Tartu Observatory/University of Life Sciences
16. Miina Rautiainen, Aalto University
17. Oleksandr Borysenko, Tartu Observatory
18. Olli Ihalainen, VTT
19. Shaohui Zhang, University of Eastern Finland
20. Sini-Selina Salko, Aalto University
21. Tauri Tampuu, KappaZeta
22. Tauri Arumäe, RMK
23. Triin Tajur, ESTHub

== 2025 ==

FIN-EST Remote Sensing Seminar 2025
May 15-16, 2025 Tartu Nature House
Hosted by Jan Pisek

Program
Oleksandr Borysenko, EST-LEAF - new tool to measure and determine leaf inclination angle distribution (LIAD) information with your phone.
Karl Käis, Exploring the geographic variation in needle shoot architecture with 3D photogrammetry.
Ržena Janoutová, A step towards advanced forest inventory through laser scanning and 3D modelling. Can field surveys be minimized?
Mait Lang, Problems in the atmospheric correction of satellite images stand on the way of enhanced remote sensing support for national forest inventories.
Iuliia Burdun, Restored peatlands align with intact peatlands in satellite-derived albedo and land surface temperature over time.
Daniel Schraik, State-space model for disturbance detection in optical satellite image time series.
Lauri Korhonen, Nationwide estimation of boreal forest above-ground biomass using ICESat-2 data.
Tomáš Hanousek, Spruce shoots: laboratory measurements vs DART.
Olli Ihalainen, Recent developments in the spectral invariant theory for sub-meter resolution hyperspectral images.
Shaohui Zhang, Large-area estimation of boreal forest leaf area index with airborne laser scanning data.
Jussi Juola, Comparison of contemporaneous Sentinel-2 and EnMAP data for vegetation index-based estimation of leaf area index and canopy closure of a boreal forest.
Ian Davenport, Extracting the Congo Basin Land Surface Topography from Remote Sensing.
Tauri Tampuu, Detecting Forest Storm Damage Using Sentinel-1 InSAR Coherence Time Series.

Expected participants

1. Aarne Hovi, Aalto
2. Andres Kuusk, Tartu Observatory
3. Daniel Schraik, LUKE
4. Ian Davenport, University of Eastern Finland
5. Iuliia Burdun, Aalto
6. Jan Pisek, Tartu Observatory
7. Joel Kuusk, Tartu Observatory
8. Jussi Juola, Aalto
9. Karl Käis, Tartu Observatory
10. Kening Huang, Aalto
11. Lauri Korhonen, University of Eastern Finland
12. Lea Hallik, Tartu Observatory
13. Mait Lang, Tartu Observatory
14. Matti Mõttus, VTT
15. Miina Rautiainen, Aalto
16. Mirjam Uusõue, Tartu Observatory
17. Oleksandr Borysenko, Tartu Observatory
18. Olli Ihalainen, VTT
19. Pinja-Emilia Lämsä, Aalto
20. Ržena Janoutová, CzechGlobe
21. Shaohui Zhang, University of Eastern Finland
22. Stanislav Herber, Mendel University
23. Tauri Tampuu, KappaZeta
24. Tomáš Hanousek, CzechGlobe