

Prof. Dr. Christiane Schmullius: Peer-reviewed Publications since 2010

2017

1. BERGER C., ROSENRETER J., VOLTERSEN M., BAUMGART C., HESE S., SCHMULLIUS C. (2017): Spatio-temporal analysis of the relationship between 2D/3D urban site characteristics and land surface temperature. – **Remote Sensing of Environment**, 193, 225-243.

2016

1. BAADE J., SCHMULLIUS C. (2016): TanDEM-X IDEM precision and accuracy assessment based on a large assembly of differential GNSS measurements in Kruger National Park, South Africa. – **ISPRS Journal of Photogrammetry and Remote Sensing**, 119, 496-508.
2. EBERLE J., URBAN M., HOMOLKA A., CHÜTTICH C., SCHMULLIUS C. (2016): Multi-Source Data Integration and Analysis for Land Monitoring in Siberia. – Springer Water “Novel Methods for Monitoring and Managing Land and Water Resources in Siberia”, (Eds.: Mueller, L., Sheudshen, A., Eulenstein, F.). – **Springer International Publishing**, Part III, 471-487.
3. ODIPO V. O., NICKLESS A., BERGER C., BAADE J., URBAZAEV M., WALTHER C., SCHMULLIUS, C. (2016): Assessment of Aboveground Woody Biomass Dynamics Using Terrestrial Laser Scanner and L-Band ALOS PALSAR Data in South African Savanna. – **Forests**, 7(12), 294. doi:10.3390/f7120294.
4. STELMASZCZUK-GORSKA M., RODRIGUEZ-VEIGA, P., ACKERMANN N., THIEL C., BALZTER H. SCHMULLIUS C. (2016): Non-Parametric Retrieval of Aboveground Biomass in Siberian Boreal Forests with ALOS PALSAR Interferometric Coherence and Backscatter Intensity. – **Journal of Imaging**, 2(1), 1.
5. THIEL C., BAADE J., SCHMULLIUS C. (2016): Comparison of UAV Photograph based and Airborne LiDAR based Point Clouds over Forest from a Forestry Application Perspective. – **International Journal of Remote Sensing**, 1-16. doi:10.1080/01431161.2016.1225181.
6. THIEL C., SCHMULLIUS C. (2016): The potential of ALOS PALSAR backscatter and InSAR coherence for forest growing stock volume estimation in Central Siberia images. – **Remote Sensing of Environment**, 173, 258–273.
7. THURNER M., BEER C., CARVALHAIS, N., FORKEL M., SANTORO M., TUM M., SCHMULLIUS, C. (2016): Large-scale variation in boreal and temperate forest carbon turnover rate related to climate. – **Geophysical Research Letters**, doi:10.1002/2016GL068794.
8. URBAN M., VOLTERSEN M., POECKING S., HESE S., HEROLD M., SCHMULLIUS C. (2016): Multi-Scale Vegetation and Water Body Mapping of the Northern Latitudes in Siberia with Optical Remote Sensing. – Springer Water “Novel Methods for Monitoring and Managing Land and Water Resources in Siberia”, (Eds.: Mueller, L., Sheudshen, A., Eulenstein, F.). – **Springer International Publishing**, Part III, 451-470.

9. URBAZAEV M., THIEL C., MIGLIAVACCA M., REICHSTEIN M., RODRIGUEZ-VEIGA P., SCHMULLIUS C. (2016): Improved Multi-Sensor Satellite-Based Aboveground Biomass Estimation by Selecting Temporally Stable Forest Inventory Plots Using NDVI Time Series. – **Forests**, 7, 1-16.

2015

1. BAADE J. & SCHMULLIUS C. (2015): Catchment properties in the Kruger National Park derived from the new TanDEM-X Intermediate Digital Elevation Model (IDEM) **The International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences**, XL-7/W3, doi:10.5194, 293-300.
2. BALZTER H., COLE B., THIEL C., SCHMULLIUS C. (2015): Mapping CORINE Land Cover from Sentinel-1A SAR and SRTM Digital Elevation Model Data using Random Forests. – **Remote Sensing**, 7(11), 14876-14898.
3. BERGER C., RIEDEL F., ROSENRETER J., STEIN E., HESE S., SCHMULLIUS C. (2015a): Fusion of airborne hyperspectral and LiDAR remote sensing data to study the thermal characteristics of urban environments. In: Helbich M., Arsanjani J. & Leitner M. (Eds.) Computational approaches for urban environments. Geotechnologies and the environment 13, Heidelberg, Germany. – **Springer**, 273-292.
4. SANTORO M., BEAUDOIN A., BEER C., CARTUS O., FRANSSON J., HALL R., PATHE C., SCHMULLIUS C., SCHEPASHENKO D., SHIDENKO A., THURNER M., WEGMÜLLER U. (2015): Forest growing stock volume of the northern hemisphere: Spatially explicit estimates for 2010 derived from Envisat ASAR. – **Remote Sensing of Environment**, 168, 316-334.
5. SCHMULLIUS C.C., THIEL C.J., PATHE C., SANTORO M. (2015): Radar Time Series for Land Cover and Forest Mapping. In: Kuenzer C., Dech S., Wagner W. (Eds.) Springer Book Series "Remote Sensing and Digital Image Processing", Volume 22: Remote Sensing Time Series, Revealing Land Surface Dynamics. – **Springer International Publishing**, 323-356.
6. THIEL C., SCHMULLIUS C. (2015): The Potential of ALOS PALSAR Backscatter and InSAR Coherence for Forest Growing Stock Volume Estimation in Central Siberia. – **Remote Sensing of Environment**, RSE-D-15-00118R2.
7. URBAZAEV M., THIEL C.J., MATHIEU R., NAIDOO L., LEVICK S., SMIT J.P, ASNER G.P, SCHMULLIUS C.C. (2015): Assessment of the mapping of fractional woody cover in southern African savannas using multi-temporal and polarimetric ALOS PALSAR L-band images. – **Remote Sensing of Environment**, 166, 138-153.

2014

1. CHOWDHURY T.A., THIEL C., SCHMULLIUS C. (2014): Growing stock volume estimation from L-band ALOS PALSAR polarimetric coherence in Siberian forest. – **Remote Sensing of Environment**, 155, 129-144.

2. DUBAYAH R., SCHMULLIUS C., COHEN W., GOBRON N., KASISCHKE E., McDONALD K., QUEGAN S., OMETTO J., PLUMMER S., RUNNING S., SAATCHI S. (2014): Land Domain. CEOS Strategy for Carbon Observations from Space. The Committee on Earth Observation Satellites (CEOS) Response to the Group on Earth Observations (GEO).
3. HÜTTICH C., EBERLE J., KOTZERKE P., SCHMULLIUS C. (2014): Operational Forest Monitoring in Siberia Using Multi-Source Earth Observation Data. – **Siberian Journal of Forest Science**, 5, 38-52.
4. HÜTTICH C., EBERLE J., SCHMULLIUS C., BARTALEV S., EMELYANOV K., KORETS M., SHVIDENKO A., SHEPASCHENKO D. (2014): Supporting a Forest Observation System for Siberia: Earth Observation for Monitoring, Assessing and Providing Forest Resource Information. – **Earthzine**, available online: <http://www.earthzine.org>.
5. SCHLUND M., PONCET F., HOEKMAN D., KUNTZ S., SCHMULLIUS C. (2014): Importance of bistatic SAR features from TanDEM-X for forest mapping and monitoring. – **Remote Sensing of Environment**, 151, 16-26.
6. THIEL C. and SCHMULLIUS C. (2014): Impact of Tree Species on Magnitude of PALSAR Interferometric Coherence over Siberian Forest at Frozen and Unfrozen Conditions. – **Remote Sensing**, 6, 1124-1136.
7. THURNER M., BEER C., SANTORO M., CARVALHAIS N., WUTZLER T., SCHEPASCHENKO D., SHVIDENKO A., KOMPTER E., AHRENS B., LEVICK S., SCHMULLIUS C. (2013): Carbon stock and density of northern boreal and temperate forests. – **Global Ecology and Biogeography**, 23, 297–310.
8. URBAN M., FORKEL M., EBERLE J., HÜTTICH C., SCHMULLIUS C. and HEROLD M. (2014): Pan-Arctic Climate and Land Cover Trends Derived from Multi-Variate and Multi-Scale Analyses (1981–2012). – **Remote Sensing**, 6(3), 2296-2316.
9. ÜREYEN S., HÜTTICH C., SCHMULLIUS C. (2014): Modeling Growing Stock Volume Using SAR Data and OBIA: Effects of Scale Parameter and Textural and Geometrical Features. – **Journal of Remote Sensing Technology**, 2(1), 108-117.
10. VOLTERSEN M., BERGER C., HESE S., SCHMULLIUS C. (2014): Object-based land cover mapping and comprehensive feature calculation for an automated derivation of urban structure types at block level. – **Remote Sensing of Environment**, 154, 192-201.
11. WALDE I., HESE S., BERGER C. and SCHMULLIUS C. (2014): From land covergraphs to urban structure types. – **International Journal of Geographical Information Science**, 28(3), 584-609.
12. WILHELM S., HÜTTICH C., KORETS M. and SCHMULLIUS C. (2014): Large Area Mapping of Boreal Growing Stock Volume on an Annual and Multi-Temporal Level Using PALSAR L-Band Backscatter Mosaics. – **Forests**, 5(8), 1999-2015.

1. BERGER C., VOLTERSEN M., HESE S., WALDE I., SCHMULLIUS C. (2013): Robust Extraction of Urban Land Cover Information from HSR Multi-Spectral and LiDAR Data. – **IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing**, 6(6), 1-16.
2. BERGER C., VOLTERSEN M., ECKARDT R., EBERLE J., HEYER T., SALEPCI N., HESE S., SCHMULLIUS C., TAO J., AUER S., BAMLER R., EWALD K., GARTLEY M., JACOBSON J., BUSWELL A., DU Q., PACIFICI F. (2013b) Multi-modal and multi-temporal data fusion: Outcome of the 2012 GRSS Data Fusion Contest. – **IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing**, 6(3), 1324-1340.
3. CHOWDHURY T., THIEL C., SCHMULLIUS C., STELMASCZCZUK-GÓRSKA M. (2013): Polarimetric Parameters for Growing Stock Volume Estimation Using ALOS PALSAR L-Band Data over Siberian Forests. – **Remote Sensing**, 5(11), 5725-5756.
4. EBERLE J., CLAUSNITZER S., HÜTTICH C. and SCHMULLIUS C. (2013): Multi-Source Data Processing Middleware for Land Monitoring within a Web-Based Spatial Data Infrastructure for Siberia.- **ISPRS International Journal for Geo-Information**, 2, 553-576.
5. ECKARDT, R., BERGER, C., THIEL, C. and C. SCHMULLIUS (2013): Removal of Optically Thick Clouds from Multi-Spectral Satellite Images Using Multi-Frequency SAR Data. – **Remote Sensing**, 5(6), 2973-3006.
6. GORDOV E.P., BRYANT K., BULYGINA O.N., CSISZAR I., EBERLE J., FRITZ S., GERASIMOV I., GERLACH R., HESE S., KRAXNER F., LAMMERS R.B., LEPTOUKH G., LOBODA T.V., MCCALLUM I., OBERSTEINER M., OKLADNIKOV I.G., PAN J., PRUSEVICH A.A., RAZUVAEV V.N., ROMANOV P., RUI H., SCHEPASCHENKO D., SCHMULLIUS C., SHEN S., SHIKLOMANOV A.I., SHULGINA T.M., SHVIDENKO A.Z., TITOV A.G. (2013): Development of Information-Computational Infrastructure for Environmental Research in Siberia as a Baseline Component of the Northern Eurasia Earth Science Partnership Initiative (NEESPI) Studies. In: Groisman P., Gutman G. (Eds.): Regional Environmental Changes in Siberia and Their Global Consequences. – **Springer Environmental Science and Engineering Series**.
7. McCALLUM, FRANKLIN O., MOLTCHONOVA E., MERBOLD L., SCHMULLIUS C., SHVIDENKO A., SCHEPASCHENKO D., FRITZ S. (2013): Improved light and temperature responses for light use efficiency based GPP models. – **Biogeosciences**, 10, 8919–8947.
8. THIEL C., SCHMULLIUS C. (2013): Investigating the impact of freezing on the ALOS PALSAR InSAR phase over Siberian forests. – **Remote Sensing Letters**, 4(9), 900-909.
9. THIEL C., SCHMULLIUS C. (2013): Investigating ALOS PALSAR Interferometric Coherence in Central Siberia at Unfrozen and Frozen Conditions. – **Canadian Journal of Remote Sensing**, 39(3), 232-250.

10. SANTORO M., CARTUS O., FRANSSON J., SHVIDENKO A., MCCALLUM I., HALL R., BEAUDOIN A., BEER C., SCHMULLIUS C. (2013): Estimates of Forest Growing Stock Volume for Sweden, Central Siberia, and Québec Using Envisat Advanced Synthetic Aperture Radar Backscatter Data. – **Remote Sensing**, 5, 4503-4532.
11. URBAN M., EBERLE J., HÜTTICH C., SCHMULLIUS C., HEROLD M. (2013): Comparison of satellite derived Land Surface Temperature and Air Temperature from meteorological station on pan-arctic scale. – **Remote Sensing**, 5, 2348-2367.
12. URBAN M., FORKEL M., SCHMULLIUS C., HESE S., HÜTTICH C., HEROLD M. (2013): Identification of Land Surface Temperature and Albedo Trends in AVHRR Pathfinder data from 1982 to 2005 for northern Siberia. – **International Journal of Remote Sensing**, 34(12), 4491-4507.
13. WALDE I., HESE S., BERGER C., SCHMULLIUS C. (2013): Graph based Mapping of Urban Structure Types from High Resolution Satellite Image Objects - A case study of the German cities Rostock and Erfurt. – **IEEE Geoscience and Remote Sensing Letters**, 10(4), 932-936, doi: 10.1109/LGRS.2013.2252323.
14. WALDE I., HESE S., BERGER C., SCHMULLIUS C. (2013): Vom Satellitenbild zu Stadtstrukturtypen: Wie Graphen die Flächennutzung charakterisieren. IÖR-Schriften: Flächennutzungsmonitoring V. – **Rhombos-Verlag**, 143-151.

2012

1. ACKERMANN N., BECKER F., BERGER C., BINDEL M., EBERLE J., ELBERTZHAGEN I., FRANKE K.-H., HECHTJEN A., KOCH T., KUBERTSCHAK T., MENZ G., RIEDEL T., SCHMULLIUS C., SCHWARZ M., THONFELD F., WEISE K., WOLF B. (2012): ENVILAND2 - Von multisensoralen Satellitenbildern zu operationellen Produkten. In: Borg E., Daedelow H., Johnson R. (ed.): Rapideye Science Archive (RESA) - Vom Algorithmus zum Produkt. – **GITO Verlag**, Berlin, 123-149.
2. AVITABILE V., BACCINI A., FRIEDL M.A., SCHMULLIUS C. (2012): Capabilities and limitations of Landsat and land cover data for aboveground woody biomass estimation of Uganda. – **Remote Sensing of Environment**, 117, 366-380.
3. BERGER, C., S. HESE, M. BINDEL & C. SCHMULLIUS (2012): Evaluation of image fusion techniques to combine high resolution SAR data and multispectral imagery at pixel level. – **SPRS Journal of Photogrammetry and Remote Sensing**.
4. FORKEL M., THONICKE K., BEER C., CRAMER W., BARTALEV S., SCHMULLIUS C. (2012): Extreme fire events are related to previous-year surface moisture conditions in permafrost-underlain larch forests of Siberia. – **Environmental Research Letters**, 7, 044021.
5. HILBERT C., SCHMULLIUS C. (2012): Influence of surface topography on ICESat/GLAS forest height estimation and waveform shape. – **Remote Sensing**, (4)8, 2210-2235.

2011

1. AVITABILE V., HEROLD M., HENRY M., SCHMULLIUS C. (2011): Mapping biomass with remote sensing: a comparison of methods for the case study of Uganda. – **Carbon Balance and Management**, 6:7.
2. CARTUS O., SANTORO M., SCHMULLIUS C., LI Z. (2011): Large area forest stem volume mapping in the boreal zone using synergy of ERS-1/2 tandem coherence and MODIS vegetation continuous field. – **Remote Sensing of Environment**, 115, 931-943.
3. HÜTTICH C., HEROLD M., WEGMANN M., CORDA., STROHBACH B., SCHMULLIUS C., DECH S. (2011): Assessing effects of temporal compositing and varying observation periods for large-area land cover mapping in semi-arid ecosystems: Implications for Global Monitoring. – **Remote Sensing of Environment**, 115(10), 2445-2459.
4. RIEDEL T., ELBERTZHAGEN I., MENZ G., SCHMULLIUS C. (2011): Synergetische Nutzung von hochauflösenden optischen und SAR Daten zur automatisierten Ableitung von Landbedeckungsprodukten. - In: Borg E., Daedelow H. (ed.): Rapideye Science Archive (RESA) - erste Ergebnisse, S. 165 - 175.
5. SANTORO M., BEER, C., CARTUS O., SCHMULLIUS C., SHVIDENKO A., MCCALLUM I., WEGMÜLLER U., WIESMANN A. (2011): Retrieval of growing stock volume in boreal forest using hyper-temporal series of Envisat ASAR ScanSAR backscatter measurements. – **Remote Sensing of Environment**, 115(2), 490-507.

2010

1. BAADE J., SCHMULLIUS C. (2010): Interferometric micro-relief sensing with TerraSAR-X – First results. – **IEEE Transactions on Geoscience and Remote Sensing**, 48(2), 965-970.
2. GOERNER A., REICHSTEIN M., TOMELLERI M., HANAN N., RAMBAL S., PAPALE D., DRAGONI D., SCHMULLIUS C. (2010): Remote sensing of ecosystem light use efficiency with MODIS-based PRI – the DOs and DON'Ts. – **Biogeosciences Discussions**, 7, 6935-6969.
3. MCCALLUM I., WAGNER W., SCHMULLIUS C., SHVIDENKO A., OBERSTEINER S., FRITZ S., NILSSON S. (2010): Comparison of four global FAPAR datasets over Northern Eurasia for the year 2000. – **Remote Sensing of Environment**, 114 (5), 941-949.
4. NATIVI S., SCHMULLIUS C., BIGAGLI L., GERLACH R. (2010): Interoperability, data discovery and access: the e-Infrastructures for Earth Sciences resources. In: Balzter H. et al. (ed.): Environmental Change in Siberia: Earth Observation, Field Studies and Modelling. Advances in Global Change Research 40. Dordrecht: **Springer**, 213-231.
5. QUEGAN S., BEER C., SHVIDENKO A., MCCALLUM I., HANDOH I., PEYLIN P., RÖDENBECK C., LUCHT W., NILSSON S., SCHMULLIUS C. (2010): Estimating the carbon balance of central Siberia using a landscape-ecosystem approach, atmospheric inversion and Dynamic Global Vegetation Models. – **Global Change Biology**, 17(1), 351–365.

6. URBAN M., HESE S., HEROLD M., PÖCKING S., SCHMULLIUS C. (2010): Pan-Arctic Land Cover Mapping and Fire Assessment for the ESA Data User Element Permafrost. – **PFG Photogrammetrie, Fernerkundung, Geoinformation**, 4, 283-293.

Reviewer for the following scientific journals:

- IEEE Geoscience and Remote Sensing
- Remote Sensing of Environment
- Photogrammetric Engineering and Remote Sensing
- ISPRS Journal of Photogrammetry and Remote Sensing
- Geophysical Research Letters
- Remote Sensing
- International Journal of Remote Sensing