

Curriculum Vitae

(Status 2017)

Name:

Prof. Dr. rer. nat. Christiane Cornelia Schmallius

German Federal Cross of Merit (Bundesverdienstkreuz 1. Klasse) for achievements in Earth observation education at the Friedrich-Schiller-University Jena (2010)

Place and Date of Birth:

Darmstadt/Hessen, 14. May 1960

Major Research Interests

Application of operational and experimental Earth observation sensors in the optical, thermal and microwave domains (with a focus on radar) for geoscientific applications. Special expertise is on global satellite monitoring concepts for land surface analyses to support climate change topics and in this context also big data handling from the Sentinel-satellites and in situ networks.

Education

1991: Ph.D., Institute of Space Sciences, Freie Universität Berlin, Germany

1986: Master of Arts, Remote Sensing Laboratory, Department of Geography, University of California at Santa Barbara, USA

Fellowships

1984-86: Fulbright-Fellowship plus additional 2-year full ITT International Fellowship

1983: DAAD Travel Support, Internship at Redwood National Park, California

Academic Positions

2006- W3-Professorship, Chair – Department for Earth Observation (www.eo.uni-jena.de), Institute of Geography, Faculty of Chemistry and Earth Sciences, Friedrich-Schiller-University Jena

2005-08: Director of the Institute of Geography, Friedrich-Schiller-University Jena

2000-05: C3-Professor for Remote Sensing at the Geoinformatics Department, Institute of Geography, Friedrich-Schiller-University Jena

1996-00: Group Leader „Geomatics“ at DLR Institute of High Frequency Technology and DLR Project Scientist for the Shuttle Radar Topography Mission (SRTM)

1994-96: DLR Science Team Lead of the Mission Operations Team for the two spaceshuttle missions “SIR-C/X-SAR”

1991-94: Postdoc Research Assistant, DLR - Institute of High Frequency Technology

1988-91: Research Assistant, Institute of Space Sciences, Freie Universität Berlin, Germany

1986-88: Research Assistant, Institute of Photogrammetry and Remote Sensing, Technical University Karlsruhe, Germany



Panels, Awards and Special Appointments

- 2017:** Appointment as member to the Committee on Earth Observation Satellites (CEOS) Working Group on Capacity Building and Data Democracy (WGCapD)
- 2017:** Appointment as member of the Thuringian Task Force for the establishment of a DLR Data Analytics Institute in Jena
- 2016:** Appointment as partner to the Global Forest Observations Initiative
- 2016:** Nomination to the International Council of the Siberian Federal University (Partner of the Russian Academic Excellence Project)
- 2015:** Nomination to the Science Advisory Board by the Indonesian Government and the Packard Foundation for the Indonesian Peat Prize
- 2015-:** Re-election to DLR's Senate and as Chair of DLR's Senate Committee
- 2014:** Election as International Program Chair for the International Astronautical Congress 2018 in Bremen
- 2014:** Invitation to the Editorial Board of the new "Siberian Journal of Forest Science" of the Russian Academy of Science
- 2014-:** Re-election to the TERENO Advisory Board, the Helmholtz Agency's Terrestrial Environmental Observatories
- 2013:** Nomination to the Thuringian Academy of Sciences (Akademie gemeinnütziger Wissenschaften zu Erfurt)
- 2013:** Member of the Evaluation Panel for the Remote Sensing Cluster of the German Aerospace Center (DLR)
- 2013:** Member of the Evaluation Panel for the Institute of Geography, University Zurich
- 2013-:** Nomination as Chair of the DLR Senate Committee
- 2012-16:** Nomination to the German Science Foundation "German Committee Future Earth" (Deutsches Komitee für Nachhaltigkeitsforschung in Future Earth)
- 2011-14:** Lead Author "Land Chapter" for the Carbon Strategy of the Committee on Earth Observation Satellites
- 2010:** German Federal Cross of Merit (Bundesverdienstkreuz 1. Klasse)
- 2010-:** Nomination to the DLR Senate
- 2010:** Invited Session Organiser "Global Biomass Monitoring" at the ESA ENVISAT Symposium, Bergen, and the International Geoscience and Remote Sensing Symposium, Honolulu
- 2009-...:** Appointment as Lead of the new GOFC-GOLD Working Group "Biomass" (Global Observation of Forest Cover and Global Observation of Land Dynamics), a panel of the UN Food and Agriculture Organisation
- 2008-13:** Appointment to the TERENO Advisory Board, the Helmholtz Agency's Terrestrial Environmental Observatories
- 2007-11:** Appointment to the Earth Science Advisory Committee (ESAC) to the Earth Observation Director of the European Space Agency
- 2006-12:** Nomination as Earth Observation Specialist to the Space Advisory Group (SAG) of the European Commission for the Framework Programs 7 and 8

On-going Research Projects

<http://www.geographie.uni-jena.de/Lehrstuehle/Fernerkundung/Forschung-p-989.html>

- 2017-20** **Coordinator (tbd)** – Forest DRAGON-4: Project Wall-to-Wall Forest Mapping and Change Monitoring in China with Radar Remote Sensing **ESA**
- 2017-19** **Coordinator** – SAR-EDU-II: SAR Remote Sensing Education Initiative **DLR/BMWi**
- 2017-18** **Coordinator** – SAR-EDU MOOC: Development of a Massive Open Online Course for the SAR Remote Sensing Education Initiative **ESA**
- 2017-19** **Coordinator** – BioFor: Forest Monitoring in Cooperation with the Forest and Cartographic Agencies of Poland **BMBF**
- 2016-19** **Coordinator** – Sen4REDD: Entwicklung von integrierten multi-temporalen Prozessierungsketten basierend auf Sentinel-1 und -2 für die Unterstützung von UNFCCC REDD+ MRV Systemen **DLR/BMWi**
- 2016-18** **Coordinator** – PhaenOpt: Phänologische App-Entwicklung zur Untersuchung des Klimawandels in Thüringen **DLR/BMWi**
- 2015-18** **Partner** – SWOS Satellite-based Wetland Observation Service **EU**
- 2015-18** **Partner** – BACI Towards a Biosphere Atmosphere Change Index **EU**
- 2015-17** **Coordinator** – GlobBiomass Provision of improved biomass maps at regional and global scale by integration of user requirements from Science, Policy and Forest Industry **ESA**
- 2015-17** **Partner** – SenThIS: Sentinels für ein Thüringer Informationssystem **DLR/BMWi**
- 2014-17** **Partner** – Ars Africae: Adaptive Resilience of Southern African Ecosystems **BMBF**
- 2013-17** **Coordinator** – EO-LDAS-App: Application of the EO-LDAS Lands Data Assimilation System Prototype and Data Base to Prepare Sentinel-2 Assimilation **DLR/BMWi**
- 2012-17** **Partner** – Helmholtz Allianz “Remote Sensing and Earth System Dynamics” **DLR**
- 2012-17** **Partner** – BexIS++: Biodiversity-Exploratories Information System **DFG**
- 2012-17** **Coordinator** – SAR-EDU: SAR Remote Sensing Education Initiative **DLR/BMWi**
- 2004-...** **Coordinator** – Sib-ESS-C: Siberian Earth System Science Cluster **FSU/EU**
- 2002-...** **Partner** - K & C Kyoto & Carbon Initiative of the Japanese Space Agency **JAXA**
- 2001-...** **Coordinator** - SIBERIA II, METHANEO, RAMSAR, AgRAL, China-Monitoring **ESA**
ENVISAT-Data Announcement of Opportunities
- 2001-...** **Coordinator** - ALOS Satellite Data AO for Kyoto&Carbon Activities **NASDA**

Publications (Selection)

https://scholar.google.de/citations?view_op=list_works&hl=en&user=wRZG0qkAAAAJ

h-index: 30

- BERGER, C., ROSENTERER, J., VOLTERSEN, M., BAUMGART, C., SCHMULLIUS, C., HESE, S. (2017): Spatio-temporal analysis of the relationship between 2D/3D urban site characteristics and land surface temperature. – *Remote Sensing of Environment*, 193, 225–243.
- 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.
- 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.
- 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*, DOI: 10.1080/01431161.2016.1225181
- 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*, 10.1002/2016GL068794
- 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.
- 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* 2016, 7, 169; doi:10.3390/f7080169
- BAADE, J. & SCHMULLIUS, C. (2015): Catchment properties in the Kruger National Park derived from the new TanDEM-X Intermediate Digital Elevation Model (IDEM).- *Int. Archives Photogrammetry, Remote Sensing, Spatial Information Science*, XL-7/W3, doi:10.5194, 293-300.
- 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 Sens.* 2015, 7(11), 14876-14898.
- 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.
- SCHMULLIUS, C.C., THIEL, C.J., PATHE, C., SANTORO, M. (2015): Radar Time Series for Land Cover and Forest Mapping. – Springer Book Series “Remote Sensing and Digital Image Processing”, Volume 22: Remote Sensing Time Series, Revealing Land Surface Dynamics (Eds.: Kuenzer, C., Dech, S., Wagner, W.), Springer International Publishing, Chapter 16, 323-356.
- 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.
- 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.
- BALZTER, H., BETH, C., THIEL, C., SCHMULLIUS, C. (2014): Mapping CORINE Land Cover from Sentinel-1A SAR and SRTM Digital Elevation Model Data using Random Forests. - *Remote Sens.* 6,
- 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).