

JÖRG HAARPAINNER, PhD

Senior Research Scientist in Earth Observation

at Norut – Northern Research Institute in Tromsø, Norway, working on the application of satellite-borne SAR for operational monitoring. I started my research career in polar research using active microwave sensors during my PhD at the Norwegian Polar Institute and then at the national ice services in the US and Norway. Currently, I am focusing on the terrestrial application of synthetic aperture radar (SAR), specifically on forest, forest change and land cover monitoring with a strong interest in sustainable development. I have been involved in several projects on tropical regions in regard to REDD (Reduce Emission of Deforestation and Forest Degradation) and in GEO's Global Forest Observation Initiative (GFOI), leading the SAR processing, analysis and the service delivery to end users in Africa and South-America in EU FP7 and ESA projects. I am also a member of the ESA L-band SAR Mission Advisory Group.

PERSONAL INFORMATION

Home: Vårliveien 23

N-9012 Tromsø, Norway

Tel.: +47 47 07 03 41

E-mail: joerg.haarpainner@norut.no

Born in 1971 in Tönisvorst (Germany)

German nationality, living abroad since 1987 (France, Norway, Australia, USA, Poland)

PROFESSIONAL EXPERIENCE

- Since 2005 **Norut - Northern Research Institute, Tromsø (Norway)**
Senior scientist in the department of earth observation
- Project management and acquisition currently with focus on REDD and forest land cover monitoring.
 - R&D and capacity building on SAR application on tropical forest for REDD (MRV systems).
 - R&D on SAR and scatterometer remote sensing of snow and sea ice.
 - Algorithm development for operational monitoring.
 - Certified UAV pilot.
 - PhD project supervision in tropical forest monitoring.
- Recent projects:** *FramCentre Tromsø Terrestrial Flagskip "NorthState-TromsSAR" (2017), ESA DUE Innovator III SAR for REDD (2015-2017), EU FP7 NorthState (2013-2016), Tanzanian-Norwegian Cooperation (2011-2015), EU FP7 ReCover (2010-2013).*
- 2003-2004 **Norwegian Meteorological Institute, Tromsø (Norway)**
Researcher for the operational ice service.
- R&D on remote sensing of sea ice and climate change.
 - Algorithm development for operational monitoring and advising the ice analysts.
 - Scientific contribution to ICEMON (ESA project).
 - Guest lecturer at the University Centre in Svalbard (Norway).
- 2002-2003 **National Ice Center (NIC), Washington DC (USA)**
Post-Doc/Visiting Scientist of Univ. Corporation of Atmospheric Research (NASA/NOAA grant).
- R&D on QuikScat satellite scatterometry (QS) for sea ice and climate change research.
 - Implementation of QS in the operational sea ice analysis.
 - Contribution to implement QS in the EUMETSAT O&SI SAF.
 - Participation in the ICEX ice camp in the Beaufort Sea (April 2003).
- 2001 **Cooperative Research Centre for Greenhouse Accounting, Canberra, Australia (5 months).**
Assistant to the Education Manager.
- Preparation and organisation of professional short courses about carbon accounting in sinks based on the Kyoto Protocol and the IPCC Special Report "Land-use, land-use change and forestry".
 - Bibliographic research, outlining of the course plan, organisation of venue and fieldwork.
 - Coordination with lecturers.
 - Compilation of course material and interactive CD-ROM "How to measure forest carbon".
- 1997 - 2001 **Norwegian Polar Institute, Tromsø (Norway) and Longyearbyen (Svalbard, 1997-1998)**
PhD fellow supported by grants of the EU (MAST3) and the Norwegian Research Council (ALV)
- PhD project on polynya and ice formation modelling combined with ERS-2 SAR remote sensing and in-situ observations.
 - Oceanographic cruises and fieldwork on sea ice: planning and execution.
 - Writing of proposals and reporting to the EU and the Norwegian Research Council.
- 1996 **Laboratory for Atmospheric Optics (LOA), Lille, France (4 months training)**
- Remote sensing of sea-ice using active microwave and passive radiometry sensors.
- 1995 **Eurocopter Deutschland GmbH, Munich, Germany (2 months training)**
- Spectrometry of Night Vision Imaging Systems and thermal imagery of trees.

EDUCATION

University of Versailles - St.Quentin-En-Yvelines, France

- 1997-2001** PhD in Physical Methods for Remote Sensing with distinction “Très honorable avec félicitation du jury”
- 1997-1998 Sea-Ice-Air Interaction, Polar Oceanography & Polar Meteorology (University Courses on Svalbard)
- 1995-1996 “Diplôme d’Études Approfondies” in Physical Methods for Remote Sensing” (Masters)
- 1994-1995 "Maîtrise" in Applied Physics (Masters), Option: Telecommunication
- 1993-1994 "Licence" in Applied Physics, Option: Signal processing
- 1991-1993 Basic science studies (Mathematics and Physics) "DEUG A" (Bachelor)
- 1991 “Baccalauréat international en science”, Lycée de Sèvres, France

Computing: Proficiency in general computer use, PC and LINUX
 Programming in IDL, some Fortran and C++
 Image and data processing software (ENVI, PCI, ERDAS Imagine), GIS (ArcGIS)

Continuing Education

- Fall 2005 International Sustainable Development (University of Tromsø, Norway)
- Aug. 2004 2nd ENVISAT Summer-School “Earth System Monitoring and Modelling” (ESA ESRIN, I-Frascati)
- Summer 2002 Sustainable International Development (US Dep. for Agriculture (USDA), Washington DC, USA)
- Fall 2001 Managing and Developing Teams (Canberra Institute of Technology, Australia)
- Nov. 2001 How to measure forest carbon – A short course (CRC for Greenhouse Accounting, Australia)

LANGUAGES

- German:** Mother tongue
- English:** Fluent - working language, resident in Australia (1 year) and in the US (15 months)
- French:** Fluent - resident in France from 1987 to 1997
- Norwegian:** Fluent - resident in Norway since 1997
- Polish:** Advanced beginner - accomplished Level A0 and A1 at IKO language school, Warszawa, Poland
- Russian:** Beginner - 2-month stay in Kazakhstan in 1996 and one course at USDA (fall 2002)
- Spanish:** Beginner - 2 weeks intensive course in September 2003 and 1 semester at Folkeuniversitetet Tromsø

MISCELLANEOUS

- Member of ESA’s ESA L-band SAR Mission Advisory Group
- Reviewer for Journal of Geophysical Research, IEEE GRSL & JSTARS)
- Board member of Vestre Hansmark Borettslag (2009-2011)
- Board member of Norrøna Barnehave AS (2011-2015)
- Member of the Norwegian Red Cross Rescue Team (1st Aid certified and Mountain Rescue Course): 2005-2006
- Basketball trainer for under-10 and under-12 age group (Tromsø Storm Ungdom): 2015-2017

- 09/2007-05/2008 Parental leave in Warszawa, Poland
- 1999/2000 Organiser of the men’s rowing team and basketball team at the Norwegian Polar Institute
- 1997,'98 Safety Courses at UNIS (first aid, shooting, handling of snow-mobile and rubber boat)
- 1992 One month night-work in the Photo-laboratory Brunninger, Munich

HOBBIES

- Travelling - Visited continents and countries: Africa (Dem. Rep. Congo, Gabon, Morocco, Senegal, South Africa, Sultanate of Oman, Tanzania, Tunisia, UAE), America (Brazil, Colombia, Cuba, Ecuador, Peru, USA), Asia (China, Iran, Japan, Kazakhstan, Kyrgyzstan, Pakistan, Thailand), Europe (most countries), Oceania (Australia, New Zealand)
- Outdoor activities: Skiing, hiking, sea kayaking, SCUBA diving
- Indoor activities: Basketball, squash

SCIENTIFIC PUBLICATIONS, PRESENTATIONS & REPORTS

2018

- **Haarpaintner, J.**, (2018). ESA DUE – Innovator III SAR for REDD - D2.3 Final Report (FR). *NORUT Report 5/2018*, ISBN 978-82-7492-405-5, ISSN 2535-3004, Norut - Northern Research Institute, Tromsø, Norway, 22 March.2018.
- **Haarpaintner, J.**, (2018). Forest and forest loss mapping from ALOS to ALOS-2 in the Mai-Ndombe District, DRC. *Oral presentation at the 3rd PI Workshop of the Advanced Land Observing Satellite-2 Research Announcement (ALOS-2 RA)*, Tokyo, Japan, 22-25 Jan. 2018.
- **Haarpaintner, J.** (2018). Comparison of single (C/L-band) and multi-frequency SAR-based tropical forest mapping in the Mai Ndombe district, DRC. *Oral presentation at ForestSAT 2018, University of Maryland, College Park, MD, USA, 2-5 October 2018.*
- **Haarpaintner, J.**, & H. Tømmervik (2018). Sentinel-1 CSAR Forest Land Cover Mapping of Troms County. *Poster at ForestSAT 2018, University of Maryland, College Park, MD, USA, 2-5 October 2018.*
- Trier, Ø.D., A-B. Salberg, **J. Haarpaintner**, D. Aarsten, T. Gobakken, and E. Næsset. (2018) Multi-sensor forest vegetation height mapping methods for Tanzania, *European Journal of Remote Sensing*, 51(1), 587-606, DOI: 10.1080/22797254.2018.1461533.

2017

- **Haarpaintner, J.**, A. Mazinga, and L. Mane (2017). Sentinel-1 Forest Land Cover Classification and Forest Change of the Mai-Ndombe District, D.R. Congo. *Poster at the Worldcover 2017 Conference, ESA/ESRIN, Frascati, Italy, 14-16 March 2017.*
- **Haarpaintner, J.**, & H. Hindberg (2017). D2.1 – Product Delivery Report (PDR), *Delivery 2.1 for ESA DUE – Innovator III project “SAR for REDD”*, 4 Apr 2017.
- **Haarpaintner, J.** & C. Singa (2017). D2.2 – Product Validation Report (PVR), *Delivery 2.2 for ESA DUE – Innovator III project “SAR for REDD”*, 18 Apr 2017.
- **Haarpaintner, J.** (2017). D2.3 – Final Report (FR), Delivery 2.3 for ESA DUE – Innovator III project “SAR for REDD”, version 1.0 24 Apr 2017.
- **Haarpaintner, J.** & H. Tømmervik (2017). NorthState TromSAR - Climate Variability in SAR Land Cover Monitoring. Report in Research Database, Fram Centre, <http://www.ifram.no/db.343156.no.html?lid=436.9d85d5fe2a30b13501bb4975ad1ed032> .
- **Haarpaintner, J.** (2017). Forest and Forest Loss Mapping with SAR from the ENVISAT/ALOS era to the Sentinel-1/ALOS-2 present in the Mai-Ndombe District, DRC. *Oral presentation at the 37th International Symposium on Remote Sensing of Environment (ISRSE-37)*, Tshwane, South Africa, 8-12 May 2017.
- **Haarpaintner, J.** (2017). Validation of SAR-based forest land cover and forest change maps and detectability of slash-and-burn activities in the Kwamouth region, Mai-Ndombe District, DRC. *Oral presentation at the 37th International Symposium on Remote Sensing of Environment (ISRSE-37)*, Tshwane, South Africa, 8-12 May 2017.
- Ørka, H.O., V. Strimbu, **J. Haarpaintner** and T. Gobakken (2017). Mapping conifer trees by means of remote sensing, Final project report. *NMBU - Norges miljø- og biovitenskapelige universitet*, 31 pages, version 1. December 2017.
- Ørka, H.O., V. Strimbu, **J. Haarpaintner** and T. Gobakken (2017). Mapping natural forest by means of remote sensing. Final project report. *NMBU - Norges miljø- og biovitenskapelige universitet*, 35 pages, version 1. December 2017.

2016

- Davids, C., R. Storvold, **J. Haarpaintner**, and K. Árnason (2016). Simulation of Sentinel-2A Red Edge Bands with RPAS Based Multispectral Data. *Proc. ‘Living Planet Symposium 2016’, Prague, Czech Republic, 9–13 May 2016 (ESA SP-740, August 2016, ISBN 978-92-9221-305-3, ISSN 1609-042X).*
- **Haarpaintner, J.** (2016). SAR for REDD+ in the Mai Ndombe District (DRC). *Proc. ‘Living Planet Symposium 2016’, Prague, Czech Republic, 9–13 May 2016 (ESA SP-740, August 2016, ISBN 978-92-9221-305-3, ISSN 1609-042X).*
- **Haarpaintner, J.**, C. Davids, et al. (2016). Boreal Forest Landcover Mapping in Iceland and Finland using Sentinel-1A. *Proc. ‘Living Planet Symposium 2016’, Prague, Czech Republic, 9–13 May 2016 (ESA SP-740, August 2016, ISBN 978-92-9221-305-3, ISSN 1609-042X).*
- **Haarpaintner, J.** (2016). Project Management Plan (PMP) – Update April 2016, *Delivery for ESA DUE – Innovator III project “SAR for REDD”*, 7 Apr 2016.
- **Haarpaintner, J.** (2016). SAR for REDD (leaflet), *Delivery for ESA DUE – Innovator III project “SAR for REDD”*, 3 Jun 2016.
- **Haarpaintner, J.** (2016). D1.1 - Requirement Baseline (RB), *Delivery 1.1 for ESA DUE – Innovator III project “SAR for REDD”*, 3 Nov 2015.
- **Haarpaintner, J.** (2016). D1.2 – Technical Specifications (TS), *Delivery 1.2 for ESA DUE – Innovator III project “SAR for REDD”*, 31 Mar 2016.
- **Haarpaintner, J.** (2016). D1.3 – Product Validation Plan (PVP), *Delivery 1.3 for ESA DUE – Innovator III project “SAR for REDD”*, 31 May 2016.
- **Haarpaintner, J.** (2016). Mid-Term Review Progress Report (MTR-201606), *Delivery for ESA DUE – Innovator III project “SAR for REDD”*, 6 Jun 2016.
- **Haarpaintner, J.** (2016). SAR for REDD. *Oral presentation at GFOI Plenary Meetings, Frascati, Italy, 22-26 February 2016.*
- **Haarpaintner, J.** (2016). SAR FOR REDD+: Supporting GFOI R&D priorities using Synthetic Aperture Radar - SAR for REDD. *Oral presentation at GEO European projects’ workshop, Berlin, Germany, 31 May – 2 Jun 2016.*
- Reiche, J., R. Lucas, A.L. Mitchell, J. Verbesselt, D.H. Hoekman, **J. Haarpaintner**, J.M. Kellndorfer, A. Rosenqvist, E.A. Lehmann, C.E. Woodcock, F.M. Seifert and M. Herold (2016). Combining satellite data for better tropical forest monitoring. *Nature Climate Change* 6(2),120-122, DOI: 10.1038/nclimate2919.
- Trier, Ø. D., A.B. Salberg, **J. Haarpaintner**, D. Aarsten, T. Gobakken, and E. Næsset (2016). Automatic multi-sensor forest vegetation height mapping methods for Tanzania. *Norsk Regnesentral, Oslo, NR-notat, (SAMBA/04/16), 44pages.*

2015

- **Haarpaintner, J.** (2015). SAR for REDD+ - Providing Synthetic Aperture Radar Processing Capabilities to REDD Countries. *Oral presentation at BMZ-DLR International Conference on MRV of REDD, Bonn, Germany, 21-22 Sep 2015.*
- **Haarpaintner, J.** (2015). SAR for REDD+. *Oral presentation at 6th International Workshop on Retrieval of Bio- & Geo-physical Parameters from SAR Data for Land Applications, ESA/ECSAT, Harwell, Oxfordshire, UK, 17-19 November 2015.*
- **Haarpaintner, J.**, C. Davids, H. Hindberg, E. Zahabu, and R.E. Malimbwi (2015). Forest and Forest Change Mapping with C- and L-band SAR in Liwale, Tanzania. *Oral Presentation and Proceedings of the 36th International Symposium on Remote Sensing of*

Environment, 11 – 15 May 2015, Berlin, Germany, Int. Arch. Photogramm. Remote Sens. Spatial Inf. Sci., XL-7/W3, 391-395, doi:10.5194/isprsarchives-XL-7-W3-391-2015, 2015.

- **Haarpaintner, J.,** D. de la Fuente Blanco, F. Enßle, P. Datta, A. Mazinga, C. Singa & L. Mane (2015). Tropical Forest Remote Sensing Services for the Democratic Republic of Congo inside the EU FP7 ‘ReCover’ Project (Final Results 2000-2012). *Poster Presentation and Proceedings of the 36th International Symposium on Remote Sensing of Environment, 11 – 15 May 2015, Berlin, Germany Int. Arch. Photogramm. Remote Sens. Spatial Inf. Sci., XL-7/W3, 397-402, doi:10.5194/isprsarchives-XL-7-W3-397-2015, 2015.*
- **Haarpaintner, J.,** and F. Enßle (2015). Validating Optical and SAR Satellite-Based Forest Maps with Remotely Piloted Aerial Systems in Mai-Ndombe District (DRC), *Submitted to Int. J. Appl. Earth Observation and Geoinformation.*
- Häme, T., T. Mutanen, Y. Rauste, O. Antropov, M. Molinier, S. Quegan, E. Kantzas, A. Mäkelä, F. Minunno, J.A. Benediktsson, N. Falco, K. Árnason, R. Storbvold, **J. Haarpaintner**, V. Elsakov, J. Rasinmäki (2015). Enabling intelligent Copernicus Services for Carbon and Water Balance Modelling of Boreal Forest Ecosystems – North State. *Proceedings of the IEEE International Geoscience and Remote Sensing Symposium 2015, 26-31 July, Milan, Italy, 2048-2051, DOI: 10.1109/IGARSS.2015.7326203.*
- Häme, T., T. Mutanen, Y. Rauste, O. Antropov, M. Molinier, S. Quegan, E. Kantzas, A. Mäkelä, F. Minunno, J. A. Benediktsson, N. Falco, K. Árnason, R. Storbvold, **J. Haarpaintner**, V. Elsakov, and J. Rasinmäki (2015). Enabling intelligent Copernicus Services for Carbon and Water Balance Modelling of Boreal Forest Ecosystems – North State. *Proceedings of the 36th International Symposium on Remote Sensing of Environment, 11–15 May 2015, Berlin, Germany, ISRSE36-710-1.*

2014

- Desclée, B., Ph. Mayaux, M. Hansen, P. Lola Amani, C. Sannier, B. Mertens, T. Häusler, R. Ngamabou Siwe, H. Poilvé, V. Gond, M. Rahm, **J. Haarpaintner**, and J-P. Kibambe Lubamba, “Chapter 1. Evolution of forest cover at a national and regional scale and drivers of change”, pp. 21-46 in *“The Forests of the Congo Basin - State of the Forest 2013.”* by C. de Wasseige, J. Flynn, D. Louppe, F. Hiol, Hiol, and Ph. Mayaux (eds.), Weyrich Édition, Belgium, 328 p., Legal deposit: D/2014/8631/42, ISBN: 978-2-87489-299-8, 2014.
- Desclée, B., Ph. Mayaux, M. Hansen, P. Lola Amani, C. Sannier, B. Mertens, T. Häusler, R. Ngamabou Siwe, H. Poilvé, V. Gond, M. Rahm, **J. Haarpaintner**, and J-P. Kibambe Lubamba, “Chapitre 1. Évolution du couvert forestiers du niveau national au régional et moteurs de changement”, pp. 21-46 in *“Les forêts du bassin du Congo - État des Forêts 2013.”* by C. de Wasseige, J. Flynn, D. Louppe, F. Hiol, Hiol, and Ph. Mayaux (eds.), Weyrich Édition, Belgium, 328 p., Legal deposit: D/2014/8631/30, ISBN: 978-2-87489-298-1, 2014.
- **Haarpaintner, J.,** T. Kattenborn, and F. Enssle, Field data collection with Remotely Piloted Aerial Systems (RPAS). *Oral presentation at 1st Regional Workshop on Forest Monitoring -SE Asia Initiative GEO GFOI.* Chiang Mai, Thailand, 27-30 Jan 2014.
- **Haarpaintner, J.,** Science Based Remote Sensing Services to Support REDD and Sustainable Forest Management in the Tropical Region – ReCover. Oral presentation at Copernicus Day at the Norwegian Space Center, Oslo, Norway, 27 Mai 2014.
- **Haarpaintner, J.,** F. Enßle and S.A. Solbø, Geo-referenced aerial photography and tropical forest parameters from a low cost RC quadcopter in the Democratic Republic of Congo. *Oral presentation at 2nd Workshop of Special Interest Group on Forestry, 34th EARSeL Symposium,* Warsaw, Poland, 17-18 June 2014.
- **Haarpaintner, J.,** M. Kohling, F. Enßle, P. Datta, A. Mazinga, and J. Likunda, Validation of optical and SAR satellite-based forest maps with field data in the Mai Ndombe district, Dem. Rep. of Congo. *Poster presentation at the “ForestSAT2014” conference,* Riva Del Garda, Italy, 4-7 Nov. 2014.
- Solberg, S., T.P. Lohne, **J. Haarpaintner**, M. Kohling, M. Zortea, Ø.D. Trier. Monitoring deforestation and forest carbon stocks in Tanzania with satellite data. *Oral presentation at CCIAM, Morogoro, Tanzania, 1-3 April 2014.*

2013

- **Haarpaintner, J.,** Up-scaling ground reference observations with low cost aerial photography from a small quadcopter - 1st experience from the Democratic Republic of Congo. *Oral presentation at 8th Regional Workshop “Community-based Monitoring”,* Tena, Ecuador, 16-19 July 2013.
- **Haarpaintner, J.,** ”D310.4 Assessment Report on Future Data and Products Requirements”, *Delivery nr. D310.4 of EU FP7 Project “ReCover”,* VTT Technical Research Centre of Finland, Espoo, Finland, 6 Nov 2013.
- **Haarpaintner, J.,** and F. Enssle, Potential Support for Forest Biomass Inventories from Remotely Piloted Aerial Systems (RPAS). Oral presentation at 9th Regional Workshop on Forest Monitoring GEO GFOI “Methods for Biomass Estimation and Forest-Cover Mapping in the Tropics”, GFOI/SilvaCarbon, Bogota & Leticia, Colombia, 2-7 December 2013.
- **Haarpaintner, J.,** T. Häme, J. Reiche, F. Enßle, and D. Pedrazzani, ”D230.3 Report from User Training and Workshops”, *Delivery nr. D230.3 of EU FP7 Project “ReCover”,* VTT Technical Research Centre of Finland, Espoo, Finland, 6 Nov 2013.
- **Haarpaintner, J.,** M. Kohling, D. Pedrazzani, F. Enßle, and L. Mane, “Improving the Tropical Forest Remote Sensing Services for the Dem. Rep. of Congo inside the EU FP7 “RECOVER” Project”, *Oral presentation at the ESA Living Planet Symposium 2013, Edinburgh, UK, 09-13 Sep. 2013.*
- **Haarpaintner, J.,** T. Mutanen, T. Häme, D. Pedrazzani, J. Haikonen, J. Reiche, and M. Herold, ”D310.5 Assessment Report on Cost/Benefit and Market Analysis”, *Delivery nr. D310.5 of EU FP7 Project “ReCover”,* VTT Technical Research Centre of Finland, Espoo, Finland, 7 Nov 2013.
- **Haarpaintner, J.,** J. Reiche, and T. Häme, ”D310.3 Service Assessment Report v1.0”, *Delivery nr. D310.3 of EU FP7 Project “ReCover”,* VTT Technical Research Centre of Finland, Espoo, Finland, 7 Nov 2013.
- Häme, T., L. Sirro, E. Cabrera, **J. Haarpaintner**, F. Enssle, J. Hämäläinen, B. de Jong, F. Paz Pellat, D. Pedrazzani, J. Reiche, “ReCover: A Concept for Tropical Forest Assessment for REDD”, Oral presentation and article in *“Proceedings of the ESA Living Planet Symposium 2013, Edinburgh, UK, 09-13 Sep. 2013, ESA SP-722. 2-13, p.17*
- Kohling, M., and **J. Haarpaintner**, “Temporal Variability of SAR Backscatter over Tropical Regions in Tanzania, The Democratic Republic of Congo and Colombia”, *Poster at the ESA Living Planet Symposium 2013, Edinburgh, UK, 09-13 Sep. 2013.*
- Malnes, E., M. Eckerstorfer, **J. Haarpaintner**, M. Hreinn Jonsson, and H. Grimsdottir, Applicability of C-band SAR data for characterization of avalanche risk. Poster and article in *“Proceedings of the ESA Living Planet Symposium 2013, Edinburgh, UK, 09-13 Sep. 2013, submitted.*
- Musampa, C., and **J. Haarpaintner**, “GFOI/GEO FCT Briefing - Democratic Republic of Congo”, *Oral presentation at GEO FCT Science and Data Summit #4, Sydney, Australia, 4-6 Feb. 2013.*

2012

- Einzmann, K., **J. Haarpaintner**, and Y. Larsen, “Forest Monitoring in Congo Basin with combined use of SAR C- & L-band”, *Proceedings of the IEEE International Geoscience and Remote Sensing Symposium 2012, 22-27 July, Munich, Germany*, IEEE Catalog Number CFP12IGA-USB, ISBN 978-1-4673-1158-8, pp. 6573-6576, 2012.
- **Haarpaintner, J.**, K. Einzmann, D. Pedrazzani, M.T. Mateos San Juan, M. Gómez Giménez, J. Heinzl, F. Enßle, and L. Mane, “Tropical Forest Remote Sensing Services for the Democratic Republic of Congo case inside the EU FP7 ‘ReCover’ project (1st iteration)”, *Proceedings of the IEEE International Geoscience and Remote Sensing Symposium 2012, 22-27 July, Munich, Germany*, IEEE Catalog Number: CFP12IGA-USB, ISBN: 978-1-4673-1158-8, pp. 6392-6395, 2012.
- **Haarpaintner, J.**, M. Herold, J. Reiche, T. Häme, and B. de Jong, “D230.1 Assessment Report on User Needs in Capacity Development in regard to space-borne forest monitoring”, *Delivery nr. D230.1 of EU FP7 Project “ReCover”*, VTT Technical Research Centre of Finland, Espoo, Finland, 2 Apr. 2012.
- **Haarpaintner, J.**, J. Reiche, M. Herold, T. Häme, and B. de Jong, “D230.2 Report from User Training and Workshops”, *Delivery nr. D230.2 of EU FP7 Project “ReCover”*, VTT Technical Research Centre of Finland, Espoo, Finland, 2 Apr. 2012.
- **Haarpaintner, J.**, J. Reiche, and T. Häme, “D310.1 Service Assessment Report”, *Delivery nr. D310.1 of EU FP7 Project “ReCover”*, VTT Technical Research Centre of Finland, Espoo, Finland, 2 Jul. 2012.
- **Haarpaintner, J.**, “D310.2 Assessment Report on Future Data and Products Requirements”, *Delivery nr. D310.2 of EU FP7 Project “ReCover”*, VTT Technical Research Centre of Finland, Espoo, Finland, 2 Jul. 2012.
- **Haarpaintner, J.**, and T. Häme “Development de services de télédétection pour soutenir REDD et la gestion forestière durable dans les régions tropicales – ReCover”, *Oral presentation at “GEO-RDC Atelier de Coordination sur la Surveillance des Forêts et Inventaire de Carbone Forestier”*, organized by Group on Earth Observation and the Ministry of Environment, Nature Conservation and Tourism of the Dem. Rep. Congo, 12-14 Juin 2012, Kinshasa, Dem. Rep. Congo, 2012.
- **Haarpaintner, J.**, Ø. Due Trier, and J. Otieno, “GEO FCT Product Development Team report – Tanzania”, *Oral presentation at the GEO-FCT Science & Data Summit #3*, Arusha, Tanzania, 6-10 Feb. 2012.
- Häme, T., L. Sirro, E. Cabrera, **J. Haarpaintner**, J. Heinzl, J. Hämäläinen, B. de Jong, F. Paz Pellat, D. Pedrazzani, J. Reiche, “Chapter 8: ReCover: Services for the Monitoring of Tropical Forest to Support REDD+”, in *“Let’s Embrace Space, vol. II”* by Schulte-Braucks, R., P. Breger, H. Bischoff, S. Borowiecka, S. Sadiq (eds.), Publication office of the European Union, ISBN 978-92-79-22207-8, doi: 10.2769/31208, pp. 106-114, 2012.
- Hindberg, H. and **J. Haarpaintner**, “Validation of Ice-Ocean SAR Discrimination Algorithm”, *Norut Report 9/2012*, Norut, Tromsø, Norway, ISSN 1890-5226, 2012.
- Pedrazzani, D., M.T. Mateos San Juan, M. Gómez Giménez, **J. Haarpaintner**, K. Einzmann, and L. Mane, “Potential applications of Sentinel-2 data to forest monitoring services in support to REDD activities: The Democratic republic of Congo case within ReCover Project”, *Proceedings of the Sentinel-2 Preparatory Symposium*, ESA-ESRIN, Frascati, Italy, 23-27 April 2012.

2011

- **Haarpaintner, J.**, E. Malnes, H. Hindberg, and Y. Larsen, “Tropical Forest Monitoring with Synthetic Aperture Radar (SAR)”. *Oral presentation at LiDAR/GEO FCT Project kick-off meeting*, Dar Es Salaam, Tanzania, 2-5 May 2011.
- Pedersen, G., **J. Haarpaintner**, and Ø. Due Trier, “GEO FCT Product Development Team Report Tanzania”, *Oral presentation at GEO-FCT Science & Data Summit #2*, UN-FAO, Rome, Italy, 8-10 Feb. 2011.
- Sirro, L., H. Ahola, J. Heinzl, **J. Haarpaintner**, J. Reiche, J. Hämäläinen, D. Pedrazzani, and B. de Jong, “D120.1 Methods Compendium on Algorithms and Statistical Approach”, *Delivery nr. D120.1 of EU FP7 Project ReCover*, VTT Technical Research Centre of Finland, Espoo, Finland, 14 Sep. 2011.
- Sirro, L., T. Häme, H. Ahola, J. Heinzl, **J. Haarpaintner**, J. Reiche, J. Hämäläinen, and D. Pedrazzani, “D120.2 Critical Design Review Report”, *Delivery nr. D120.2 of EU FP7 Project ReCover*, VTT Technical Research Centre of Finland, Espoo, Finland, 14 Sep. 2011.

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