



ANNUAL REPORT OF THE SIG THERMAL REMOTE SENSING, SIG-TRS FOR THE YEAR 2016

THE DEADLINE FOR THE SUBMISSION OF THIS REPORT TO THE EARSEL SECRETARIAT IS JANUARY 10th, 2017 (by email: secretariat@earsel.org)

Name of SIG:	Thermal Remote Sensing, SIG-TRS
Name of chairperson:	PD Dr. Claudia Kuenzer, Dr. Chris Hecker
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Year:	2016

WORKSHOPS

Please describe here activities conducted in 2016 (attached files compiling information and scientific and/or budgetary results can be added to the report) and workshops foreseen for the year 2017 or 2018 if already planned.

Two full length sessions on thermal infrared remote sensing were organized by the SIG-TRS in the context of the 36th EARSeL Symposium 2016 in Bonn « Frontiers in Earth Observation »
The Sessions were chaired by the SIG-Session Chairs.

Both Chairs furthermore were part of the EARSeL Scientific Committee of this conference, and contributed to abstract reviews in all fields of the conference.

Thermal Remote Sensing 1 :

Real Data Assessment of Thermal Sharpening Algorithms Exploiting Multitemporal Heterogeneous Data

Paolo Addesso¹, Riccardo Garella¹, Maurizio Longo¹, Rita Montone¹, Rocco Restaino¹, Gemine Vivone²

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[Addesso-Real Data Assessment of Thermal Sharpening Algorithms Exploiting Multitemporal Heterogeneous Data-99.pdf](#)

Calibration of DART Radiative Transfer Model with Satellite Images for Simulating Albedo and Thermal Irradiance Images and 3D Radiative Budget of Urban Environment

Lucas Landier¹, Nicolas Lauret¹, Jean-Philippe Gastellu-Etchegorry¹, Ahmad Al Bitar¹, Zina Mitraka², Christian Feigenwinter³, Eberhard Parlow³, Wieke Heldens⁴, Simone Kotthaus⁵, Sue Grimmond⁵, Fredrik Lindberg⁶, Nektarios Chrysoulakis²

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[Landier-Calibration of DART Radiative Transfer Model with Satellite Images-110.pdf](#)

Multitemporal Analysis Of Urban Surface Temperature Dynamics In The City Of Basel, Switzerland

Andreas Wicki, Eberhard Parlow

University Basel, Switzerland

[Wicki-Multitemporal Analysis Of Urban Surface Temperature Dynamics-124.pdf](#)

"Spatial and temporal air temperature variability in the city. Case study in Tel-Aviv"

Alexandra A. Chudnovsky, Ran Pelta

Tel-Aviv University, Israel

[Chudnovsky-Spatial and temporal air temperature variability-152.pdf](#)

Thermal Remote Sensing 2 :

Sharpening of VIIRS Thermal Images Based on Blind Filter Estimation

Paolo Adesso¹, Riccardo Garella¹, Maurizio Longo¹, Rita Montone¹, Rocco Restaino¹, Gemine Vivone²

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[Adesso-Sharpener of VIIRS Thermal Images Based on Blind Filter Estimation-105.pdf](#)

TIMELINE 1-km AVHRR basis parameters: reflectance, clouds, LST

Corinne Myrtha Frey, Lars Klüser, Gerhard Gesell, Martin Bachmann

DLR, Germany

[Frey-TIMELINE 1-km AVHRR basis parameters-138.pdf](#)

The usage of thermal remote sensing in the field of crisis information - examples from the European PHAROS project and the thermal analysis of the 2014/15 Holuhraun fissure eruption

Christian Strobl, Simon Plank, Torsten Riedlinger

German Aerospace Center, Germany

[Strobl-The usage of thermal remote sensing in the field of crisis information-140.pdf](#)

Combining Satellite, In-situ and Modeling Approaches to Reconstruct the Diurnal Sea Surface Temperature Variation in the Mediterranean Sea: Impact on the basin heat budget

Salvatore Marullo¹, Peter Minnett², Rosalia Santoleri³, Vincenzo Artale¹

¹ENEA, Agenzia nazionale per le nuove tecnologie, l'energia e lo sviluppo economico sostenibile, Italy; ²Rosenstiel School of Marine & Atmospheric Science, Miami, Florida 33149, USA; ³CNR — Istituto di Scienze dell'Atmosfera e del Clima, Rome, Italy

[Marullo-Combining Satellite, In-situ and Modeling Approaches-148.pdf](#)

In April 2017 there is a workshop by the SIG on Imaging Spectroscopy. Chair C. Hecker submitted a Special Session Proposal for "Thermal Spectroscopy" – a branch field in the context of Thermal Infrared Remote Sensing.

This proposal has been accepted by the organized and 2 Sessions with overall 8 speakers will be realized.

WEBSITE AND PROMOTION ACTIVITIES

The website of SIG-TRS will be migrated from its prior ITC address to the new EARSeL website.

Furthermore, both Chairs have been involved in a thermal sensor proposal in the context of ESA's Earth Explorer 9 mission for a novel thermal instrument TMAX (no sensor proposal has been selected and a novel proposal will be submitted in 2017).

OTHER INFORMATION

A Workshop by SIG-TRS is envisaged for 2018