European Association of Remote Sensing Laboratories
A European Network

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ISS Astronaut Karen Nyberg looks through a window at the earth

EARSeL announcements

Editors of EuJoRS an official co-journal of EARSeL

If you are interested may we ask you to submit your candidacy (CV + expertise) by email to secretariat@earsel.org before November 30
EARSeL is a scientific network of European remote sensing institutes, coming from both academia and the commercial/industrial sector.

EARSeL was founded in 1977 under the auspices of the European Space Agency, the Council of Europe and the European Commission.
The principal activities are:

- stimulating and promoting education and training related to remote sensing and Earth observation,

- initiating and coordinating application-oriented research,

- forming a bridge between technology and applications of interest to the wide user community,

- assisting the sponsoring agencies in the development of new sensors and systems and in any technical matters of relevance,

- providing a network of experts for the agencies in Europe,

- carrying out joint research projects on the use of remote sensing for research, monitoring and education,
EARSel is a scientific network of European remote sensing institutes, coming from both academia and the commercial/industrial sector. EARSel rather than individuals, although individual membership is possible (see membership fees). Currently, there are about 250 member laboratories.

EARSel was founded in 1977 under the auspices of the European Space Agency, the Council of Europe and the European Commission (supporting agencies). EARSel is run by a Council of elected national representatives from each country where there are member laboratories.

The statutes of the Association, ratified at General Assembly on 1 June 2011, can be found here in English and in French.

News:

- As you probably know, on EARSel Council meeting held in Stockholm on June 2015, it was signed the agreement that establishment would like to inform you that EARSel is seeking editors for this journal. If you are interested may we ask you to submit your can November 30.

- From Stockholm Symposium we have a great news. On EARSel Council members meeting it was signed the agreement that ESTRACK becomes a new member of EARSel.

- Transforming Our World: The 2030 Agenda for Sustainable Development, is expected to be adopted by the Heads of State of the held in New York in September! For more information please see attached letter here!

- **Call for EARSel SIG chairperson candidacies**
  - The deadline for the submission of applications to the EARSel Secretariat is October 15th, 2015

- **Call for the organization of the 37th EARSel Symposium in June 2017**
  - Submit your candidacy as EARSel Symposium 2017 organizer to our secretary (secretariat@earsel.org) before the end of October

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- carrying out joint research projects on the use of remote sensing for research, monitoring and education,
- promoting co-operation between remote sensing experts and the environmental managers and decision-makers.
What is EARSel?

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Five candidates

Application of applications to the EARSeL Secretariat is October 15th, 2015

EARSeL Symposium in June 2017

EARSeL Symposium 2017 organizer to our secretary (secretariat@earsel.org) before the end of October

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- promoting co-operation between remote sensing experts and the environmental managers and decision-makers.
The importance of applying remote sensing as a non-destructive tool to uncover remains of ancient human occupation and past archaeological landscapes has been highlighted by national and international space agencies such as NASA and ESA, promoted by UNESCO and now recognized by archaeologists and remote sensing scientific community.

In this favourable cultural framework and in collaboration with UNESCO, in June 2007 EARSeL launched the Special Interest Group (SIG) on Remote Sensing for Archaeology, Cultural and natural Heritage (ReSeArCH) chaired by Rosa Lasaponara from CNR-IMAA, Nicola Masini from CNR-IBAM, and Mario Hernandez from UNESCO.

Over the years the SIG organized international conferences and workshops to explore the emerging capabilities and strategic challenges in the field of Remote Sensing in Archaeology.

The 1st International EARSeL Workshop on "Advances in Remote Sensing for Archaeology and Cultural Heritage Management" took place in Rome, 2008 September 30 to October 4. A large scientific community composed of archaeologists, geophysicists, experts in aerial archaeology, remote sensing and geomatics, gave rise to a lively debate on the potential, limitations and overlook of traditional and novel Earth Observation Technologies for archaeology and cultural heritage management applications.

The discussions of the successful Rome Workshop stimulated and addressed the dissemination activity of the SIG towards a rich scientific production with the publication of the Proceedings, four special issues on international journals, a book published by Springer entitled "Satellite Remote Sensing: A New Tool for Archaeology".
UNESCO Open Initiative and the European Association of Remote Sensing Laboratories (EARSeL)

Since the start of the ESA-UNESCO Open Initiative, EARSeL invited UNESCO to present its associated space related activities. This was the beginning of what today is a successful joint cooperation between UNESCO and EARSeL.

The main activities of EARSeL are:

- stimulating and promoting education and training related to remote sensing and Earth observation,
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- forming a bridge between technology and applications of interest to the wide user community,
- assisting the sponsoring agencies in the development of new sensors and systems and in any technical matters of relevance,
- providing a network of experts for the agencies in Europe,
- carrying out joint research projects on the use of remote sensing for research,
Introduction

In the EARSeL Symposium held in Bozen on June 1-6, 2007, a new Special Interest Group (SIG), on Remote Sensing for Archaeology and Cultural Heritage (Re.Se.Ar.C.H.) was launched.

The SIG is addressed to researchers interested in the application of active and passive remote sensing techniques for the archaeological and cultural heritage.
Introduction

In the EARSEL Symposium held in Bozen on June 1-6, 2007, a new Special Interest Group (SIG), on Remote Sensing for Archaeology and Cultural Heritage (Re.Se.Ar.C.H.) was launched.

The SIG is addressed to researchers interested in the application of active and passive Remote Sensing (ground, aerial and satellite) and Information Technologies for archaeological investigation, protection and management of Cultural Heritage.

In the context of Re.Se.Ar.C.H. activities, the 1st International Workshop on Advances in Remote Sensing for Archaeology and Cultural Heritage Management will take place in Rome 30 September - 4 October 2008.

The workshop is organised by Institute of Methodologies for Environmental Analysis and the Institute for Architectural and Archaeological Heritage of National Research Council (www.cnr.it), in collaboration with the Earth and Environmental Department and the Cultural Heritage Department of National Research Council, with patronage of CNR, UNESCO, MIBAC (Italian Ministry of Cultural Heritage and Activities), University of Bari and sponsoored by the European Space Agency (ESA) and BELSPO (Belgian Science Policy).

The topics of the workshop are:
- Aerial archaeology: from the historical photographs to multispectral and hyperspectral imagery.
- Active airborne sensors (lidar, SAR): data processing issues and applications.
- Satellite imagery for archaeology: data processing methods and study cases.
- Sub-surface reconstruction based on GPR, magnetic and electrical tomography for the archaeological research.
- Inverse problems related to sub-surface sensing.
- Integration of space/air/ground remote sensing techniques for archaeology and cultural heritage.
- 3D visualization and Virtual reconstruction of landscape and sites.
- Landscape archaeology and palaeo-environmental studies based on Remote sensing, GIS and ICT.
- Rescue archeology.
- International Archaeological missions as outstanding ‘laboratories’ of archaeological science.
SIG_Remote Sensing for Archeology, Cultural and natural Heritage Conference and workshop activities 2010

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SIG_Remote Sensing for Archeology, Cultural and natural Heritage Conference and workshop activities 2010
AMBITIONS AND REALITIES
Remote Sensing for Archaeology, Research and Conservation

Poznań, Poland, 21-24 September 2011

AMBITIONS AND REALITIES
Remote Sensing for Archaeology, Research and Conservation

The main - but not exclusive - theme of this conference will be exploration of objectives and challenges in the effective use of remote sensing techniques in archaeological and landscape studies, not only for research but also for the promotion of conservation and public understanding.

How can our various techniques be deployed in combination with one another, and with what practical outcomes? How can we build bridges across regional or national divides?

What can we learn from combining or comparing our techniques? How can we make our results useful to those involved in practical conservation and future planning? How do our national or regional realities assist or impede the use of remote sensing techniques in research, conservation and the promotion of public understanding?

Suggestions, with a maximum 150-word summary of the intended content, are invited on any of the following themes, or on other considerations relating to ambitions and realities in the fields of remote sensing for archaeology and landscape studies.

Recent updates

- NOTES ABOUT CONFERENCE PROCEEDINGS ADDED
- CONFERENCE PROGRAMME NOW AVAILABLE
- DESCRIPTION OF SOCIAL EVENTS ADDED
Aims and scope

After the overview provided by the Rome meeting in 2008, the Gent workshop will be focusing on strategical issues which involve not only the knowledge improvement but also the contribution of remote sensing for a sustainable management of cultural resources, not only in Europe but also and mainly in emerging and developing countries of Asia, Africa and Latin America.

The cultural and practical interconnections between environment, culture and territory are the framework of the third EARSel Workshop in Gent. The organising committee selected some priority themes related to:

- **fields of application** such as the use of remote sensing for risk management and cultural and natural heritage, interconnection between environmental, climatic changes and dynamics of human frequentation, the aware fruition of material and immaterial witnesses of ancient civilizations;
- **methodologies** such as the ad hoc semi-automatic and automatic approach for extracting cultural information, integration and fusion of passive and active remotely sensed data, remote sensing and geospatial analysis for preventive archaeology, palaeoenvironmental investigation and risk management;
- **cooperation strategies** for the creation of a permanent platform for data and knowledge sharing.

Session topics

- From aerial photo to declassified satellite images: the study of landscape over time by means of historical data source
- From visual data interpretation to semi-automatic and automatic procedures in an archaeological perspective
- Remote Sensing, GIS and Geospatial analysis for the risk monitoring and management of cultural resources
- Integration of space/air borne and ground remote sensing in archaeo-geophysics
- The “LiDAR revolution” for site discovery and the reconstruction of historical landscapes
4th EARSeL Workshop on Cultural and Natural Heritage

to be organised in the framework of the 33rd EARSeL Symposium

The 1st Workshop on Advances in Remote Sensing for Archaeology and Cultural Heritage Management took place in Rome on 30 September - 4 October 2008, organized by the chairmen of the EARSeL SIG Remote Sensing for Natural and Cultural Heritage (ReSeArCH). A large scientific community composed of archaeologists, geophysicists, experts in aerial archaeology, remote sensing and geomatics, gave rise to a lively debate on the potential, limitations and overlook of traditional and novel Earth Observation Technologies for archaeology and cultural heritage management applications.

The interest of the scientific community increased over years, thus pushing the SIG ReSeArCH to yearly
ADVANCES IN REMOTE SENSING FOR CULTURAL HERITAGE: FROM SITE DETECTION, TO DOCUMENTATION AND RISK MONITORING

12 - 13 November 2015 | ESA - ESRIN | Frascati (Rome), Italy

Remote-sensing is emerging as a key tool for both archaeology and the development and management of cultural heritage. For countries with fledgling sites and monuments records, it provides the only cost-effective means for locating and defining archaeological sites and landscapes. Remote-sensing, particularly its usefulness in providing regular and repeated imagery of less accessible areas, is also of unparalleled importance for monitoring the effects of climate change, urban and rural development, looting and conflict. Further to this, the data produced is providing an exciting opportunity to examine past human-environment dynamics.

The VEARSel (European Association of Remote Sensing Laboratories) workshop is organised by ESA and CNR (Department of Earth and Environment) and builds on previous workshops in 2008, 2011, 2012 and 2013. It will bring together experts in remote-sensing, archaeologists and cultural heritage specialists to address the key strategic issues of knowledge improvement and the sustainable management of cultural resources.

Chairs: Rosa Lasaponara, Volker Liebko and Francesco Sarti
SIG_Remote Sensing for Archeology, Cultural and natural Heritage: I ESA EARSeL CNR summer school
Gent University 2012
During the field trip in the framework of the II ESA RS Course: Remote Sensing for Archaeology.
SIG Remote Sensing for Archeology, Cultural and natural Heritage:
III ESA EARSeL CNR summer school
ESA Frascati 2015
SIG_Remote Sensing for Archeology, Cultural and natural Heritage: (ReSeArCH) Editorial activities book and proceedings

2008

2012

2013
SIG_Remote Sensing for Archeology, Cultural and natural Heritage (ReSeArCH) Editorial activities activities activities book and proceedings

Next:

On line proceedings 2015

hard copy 2016

Satellite Radar 2016
SIG_Remote Sensing for Archeology, Cultural and natural Heritage: (ReSeArCH) Editorial activities: Special issues

2009 2009 2010 2011

2009 2009 2010 2011

Call for the organization of the next workshop/conference of the

SIG_Remote Sensing for Archeology, Cultural and natural Heritage (ReSeArCH)