

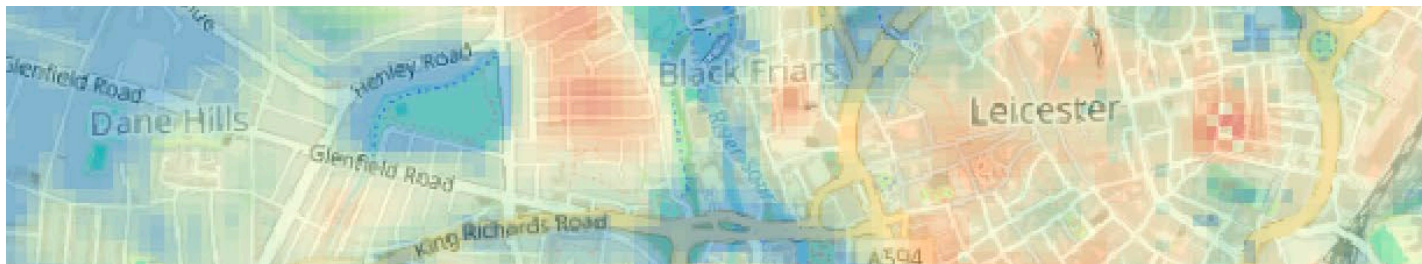
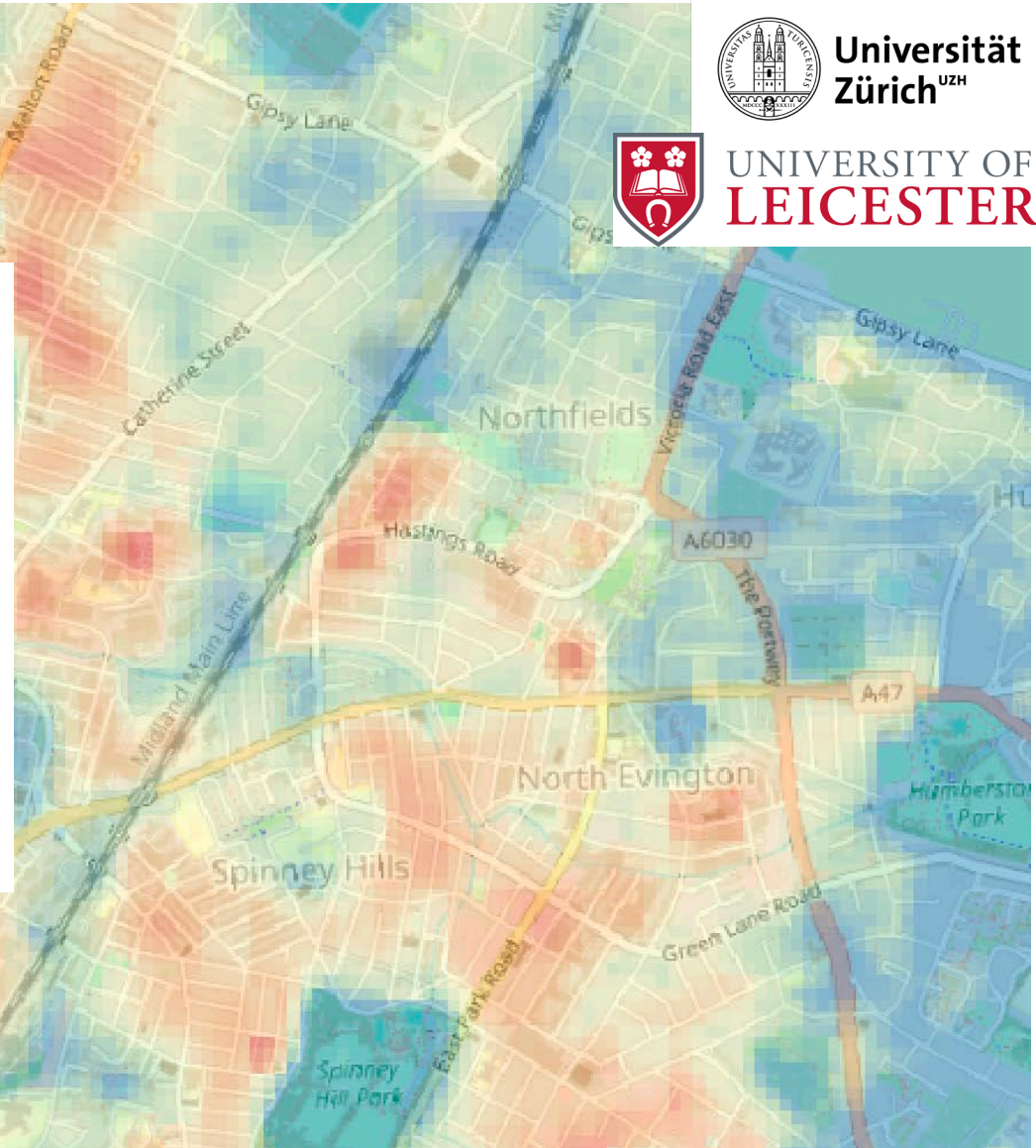


UNIVERSITY OF LEICESTER

Thermal Remote Sensing Workshop 2nd - 4th December

Welcome and Introduction

Agnieszka and Jennifer



Special Interest Group on Thermal Remote Sensing

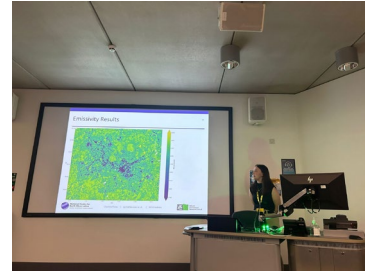
The Special Interest Group on Thermal Remote Sensing brings together all the people interested in the thermal remote sensing: be it science, industry, services, or education.



Thermal Remote Sensing SIG

Our SIG aims to bring together TIR community by:

1. the organisation and management of a communication platform for SIG users



Special session in **EARSeL main symposium** in Manchester, UK, 2024



Special session in **Imaging Spectroscopy Workshop in Valencia, Spain, 2024**

News and comments

We like to keep up to date with what is happening in the community. Do you have a piece of news that is worth sharing?

[Drop us a line!](#)

Recent news

[Hydrosat Launches into Space and Humanity](#)

Written by: Dr. Joshua B. Fisher, Science Lead at Hydrosat On August 16, 2024, Hydrosat launched into space what may be among the most cutting-edge thermal infrared (TIR) satellites in existence. The satellite, called Van Zyl-1 (VZ-1), is at the forefront not because it is a billion dollar complex large instrument, but rather the opposite...

Understanding Ice and Snow on Earth with Thermal Satellite Remote Sensing

by **Abigail Marie Waring** (PhD Candidate)

03/10/2024

University of Leicester (UoL) National Centre for Earth Observation (NCEO),
Department of Earth Observation Science, School of Physics & Astronomy, Surface Temperature Research Group

2. **the organisation of workshops and seminars**

3. the stimulation of communication and exchange of information between those building upcoming satellites, researchers, and end-users of thermal remote sensing data.

- Special session in “Challenges and Applications in Thermal Infrared Imaging Spectroscopy” at **10th EARSeL SIG Imaging Spectroscopy, Zurich, 2017**
- Special session on “Thermal Infrared Spectroscopy” and “Thermal Hyperspectral Remote Sensing of Vegetation” at **9th EARSeL SIG Imaging Spectroscopy, Luxembourg, 2015**
- **2nd Joint EARSeL Special Interest Groups Workshop, Ghent, 2011**

About us (the chairpersons)

Agnieszka Soszynska



Jennifer Adams



Our website: <https://thermal-rs.earsel.org/>

Information hub for thermal RS... news, learning material, jobs etc



The screenshot shows the top navigation bar of the EARSel website. On the left is the EARSel logo (EUROPEAN ASSOCIATION OF REMOTE SENSING LABORATORIES). On the right is the 'THERMAL REMOTE SENSING' logo with a color scale. Below the header is a vertical navigation menu with the following items: 'Who are we?', 'News and comments', 'New to thermal remote sensing?', 'Thermal Lens: a podcast series on thermal remote sensing', 'Useful information', 'Mailing list', 'Job openings', and 'Thermal Remote Sensing Workshop and LST_cci User Workshop 2024'.

Who are we?

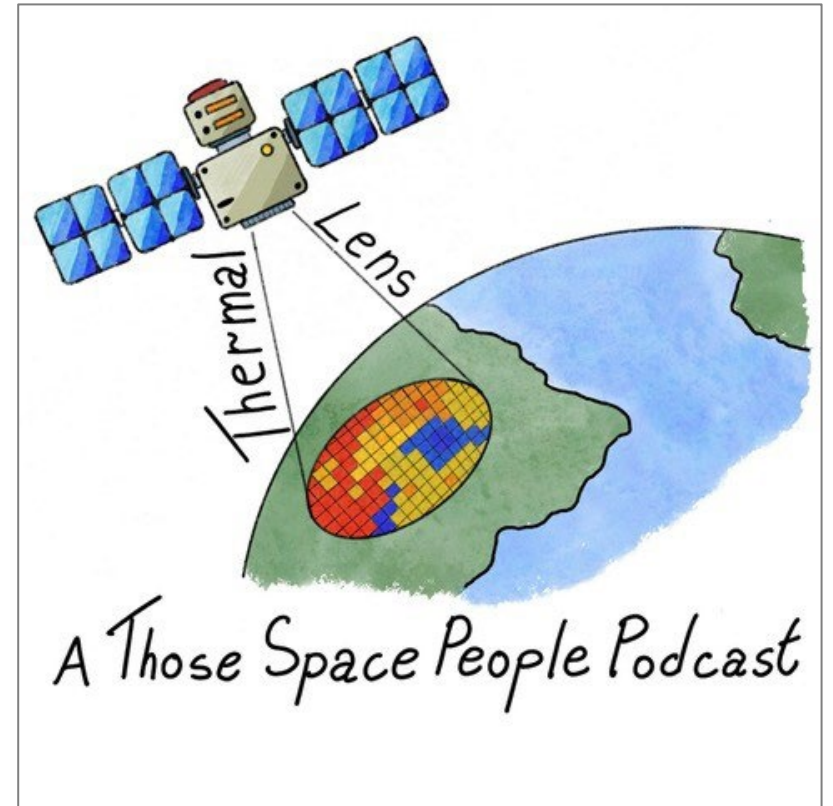
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Thermal Lens Podcast

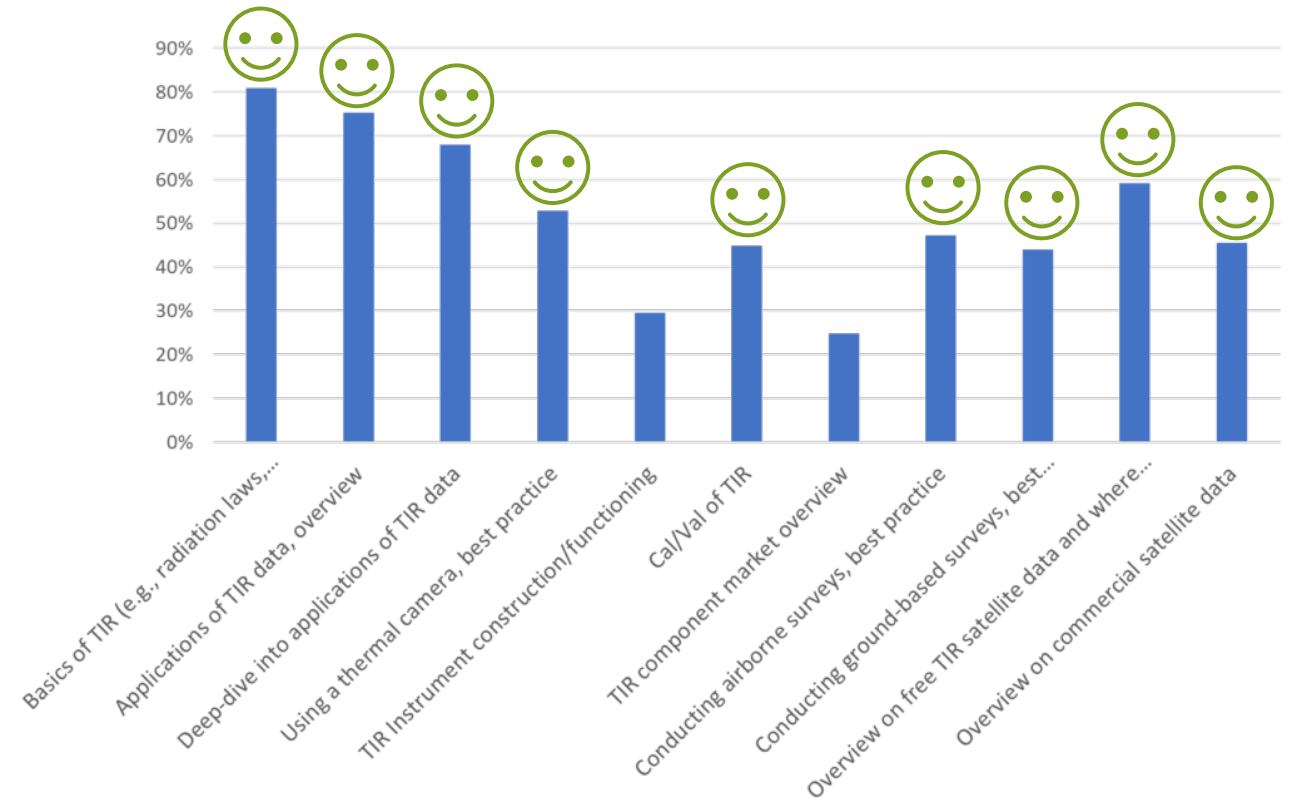
LST / thermal imagery explained, ASTER, new space, directionality



Workshop Background and Introduction

- We attended lots of workshops and found out that many people want to use thermal remote sensing data but aren't sure how or what kinds of applications it can really be used for
- We know how hard it is to get access to information (from basics to applications to where to get data) and want to make it easier for everyone !
- Questionnaire in Dec 2023 to find out what people might want from a workshop
- Funding from CEOI and workshop organisation
- Educational and networking event for all levels but a focus on new researchers to thermal remote sensing

Questionnaire results from Dec 2023 informed our Agenda



Agenda and workshop information



Agenda Day 1

Fire and safety			9:00
Welcome	Welcome and about the SIG	Agnieszka Soszynska and Jennifer Adams	9:05
Welcome	Welcome CEOI	Josh Vande Hey	9:25
Welcome	Welcome NCEO	John Remedios	9:35
Basics of thermal remote sensing	Fundamentals of thermal radiation	John Remedios	9:45
Coffee break			10:45
Basics of thermal remote sensing	Atmospheric effects in TIR	Adam Povey / Mike Perry	11:15
Basics of thermal remote sensing	Surface Temperature explanation	Agnieszka Soszynska	12:15
Lunch break			13:15
Basics of thermal remote sensing	Available thermal data	Agnieszka Soszynska and Jennifer Adams	14:15
CEOI session	SOLSTICE mission	Damien Weidmann	14:55
Coffee break			15:25
CEOI session	SuperSharp Telescopes	George Hawker/Ian Parry	15:55
Drone demo		Steve Lloyd	16:25
Evening and drinks			16:55

*All lectures will be recorded and put on our webpage!

Agenda Day 2

Groups for Day 2 are on your name tag, and are organised by knowledge level

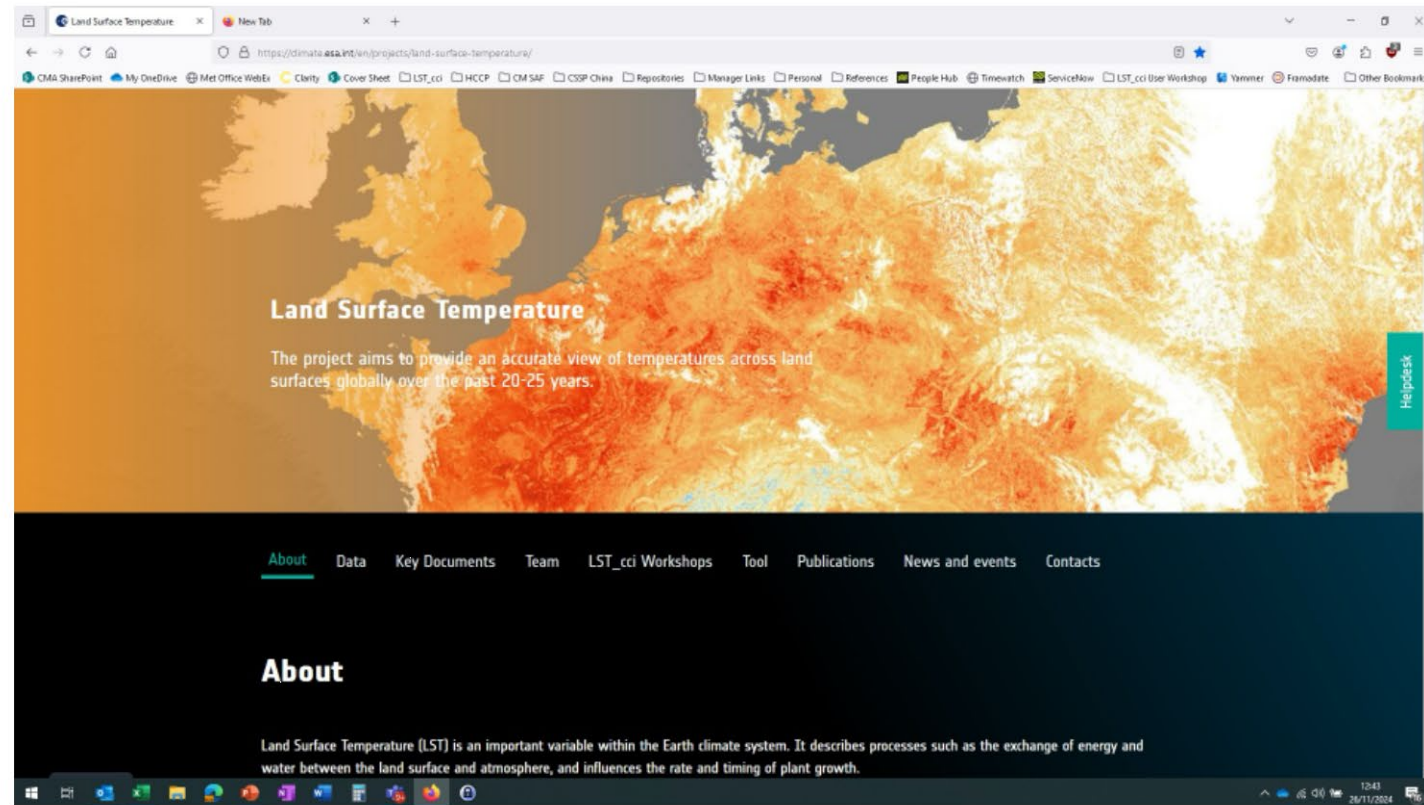
Fire and safety			9:00
Go to breakout rooms			9:05
Rotational session	How does a thermal camera work? Calibration	Dave Smith	9:15
Bio break			10:15
Rotational session	Aerial surveys plane	Martin Wooster	10:30
Coffee break			11:30
Rotational session	Aerial surveys drones	Jennifer Adams	12:00
Lunch break			13:00
Rotational session	Validation of TIR datasets + ground based surveys	Jasdeep Anand	14:00
Come back to conference room			15:00
Networking with the industry	Thermal Vision Research	Andrew Millner	15:10
Networking with the industry	Industry lightning presentations		15:25
Networking with the industry	+ coffee at 15:30		16:10
Evening and drinks			17:00

Agenda Day 3

Fire and safety			9:00
Future missions	LSTM	Zoltan Szantoi	9:05
Future missions	TRISHNA	Philippe Gamet	9:25
Applications of thermal remote sensing	Hydro+Cryo	Chris Merchant , Abigail Waring	9:45
Coffee break			10:25
Applications of thermal remote sensing	Evapotranspiration	Michael Marshall	10:45
Applications of thermal remote sensing	Fire	Martin Wooster	11:25
Applications of thermal remote sensing	Urban	Sue Grimmond	12:05
Lunch break			12:45
Applications of thermal remote sensing	Climate	Elizabeth Good	13:45
Current missions and data	All surface temperature dataset and uncertainties	Claire Bulgin	14:25
Current missions and data	LST datasets	Darren Ghent	14:55
Coffee break			15:25
Future missions and applications	Geology + SBG	Simon Hook	15:45
Closing		Agnieszka Soszynska and Jennifer Adams	16:45



- European Space Agency Climate Change Initiative for Land Surface Temperature (**LST_cci**)
- LST_cci aims to provide a suite of **satellite-derived LST datasets suitable for climate applications**
- **Day 1: The LST_cci project**
 - Dataset production
 - Validation
 - User requirements
 - User case studies
- **Day 2: User applications for LST**
 - User training session

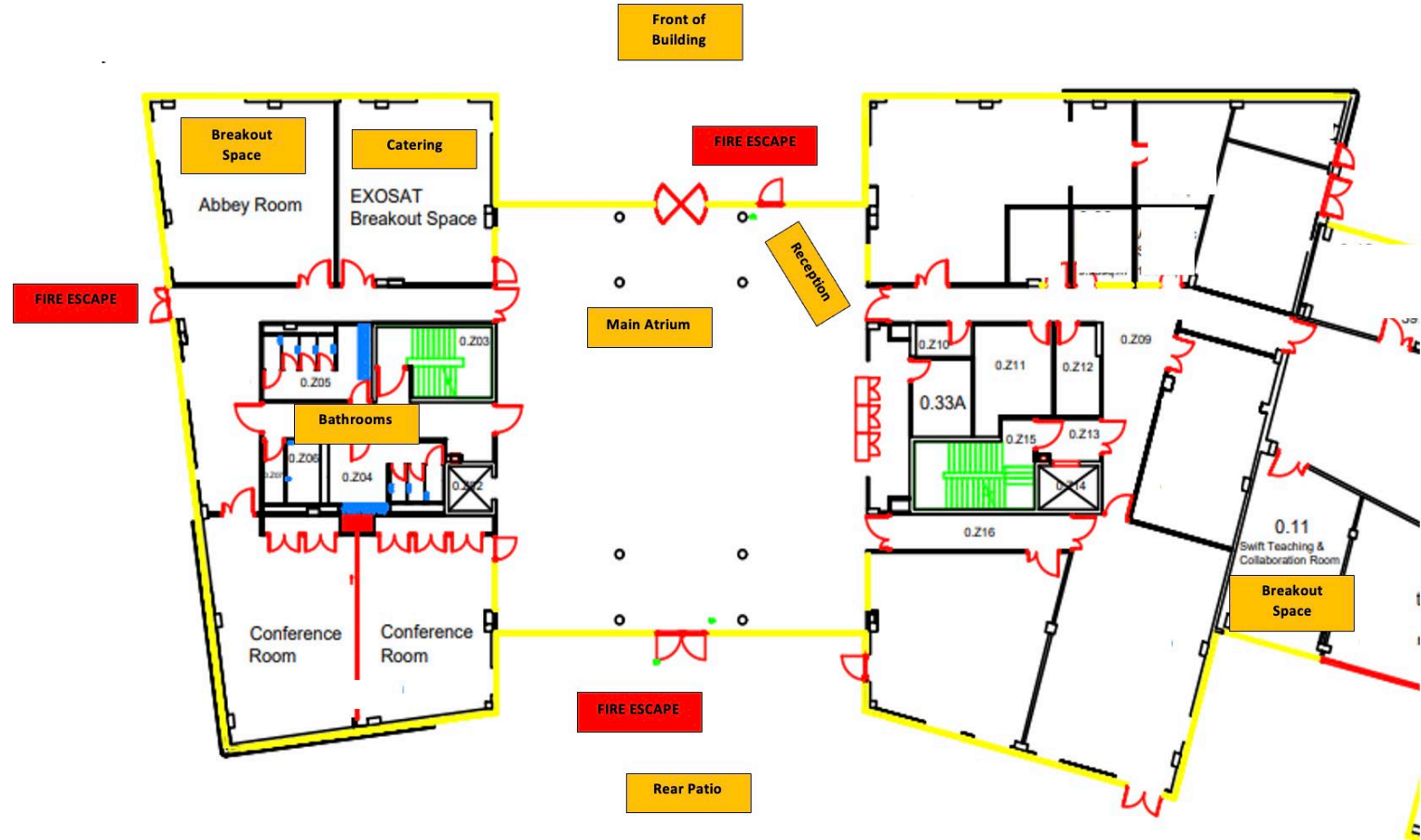


<https://climate.esa.int/en/projects/land-surface-temperature/>
Please register for our LST_cci mailing list (accessible via 'Contacts' on this website above)

Space Park Leicester

Rooms

- Conference room (Days 1 and 3)
- EXOSAT (coffee breaks, lunch, canapes)
- Abbey room, Swift (Day 2)
- Rooms 6/7 (Day 2) only accessible with authorised person, which will be most of the lecturers for day 2



Housekeeping

- Please fill up your water bottles at the fountain. Due to access, we will have a group going at every break!
- Catering
 - We have tea and coffee breaks with snacks, plus lunch every day
 - There is only one queue for the lunch so please be efficient !
 - Mainly vegan to cater for everyone
 - We'll also hold drinks and canapes on Monday and Tuesday from 5-7pm, and are really looking forward to getting to know you all!
- Don't hesitate to ask us for anything

Acknowledgements and special thank yous

Thank you to CEOI for funding our workshop!



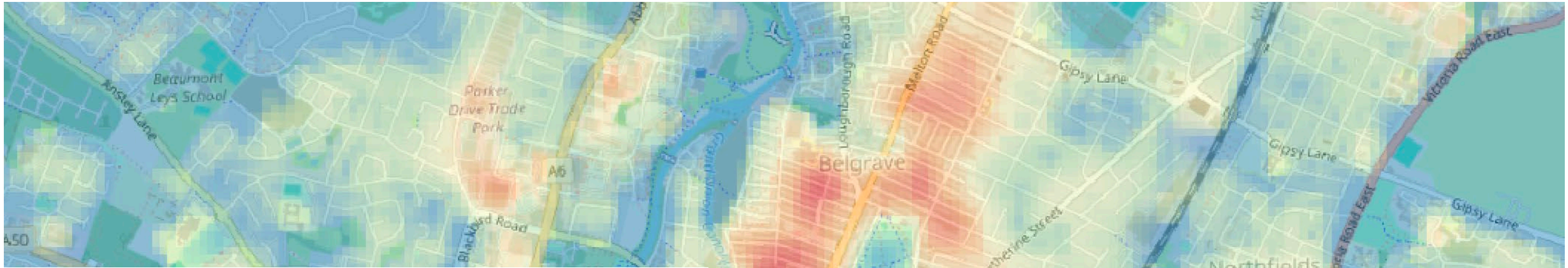
Thank you to our sponsors!



Organised and in collaboration with



Thank you to staff from University of Leicester and UK Met Office, especially **Karen, Lizzie, Darren, Josh , Abi and Charlotte**



Thanks and lets get started!

