



# WELCOME

Introduction to the Use of  
Geophysical & Soil Science  
Methods in Archaeology

29 Jul - 2 Aug 2019, Auritz/Burguete

# Training School 1





# Organisers & Collaborators

- A new interdisciplinary network of scientists
- Develops, promotes & facilitates research activities bringing together archaeology, geophysics & soil science
- To maximise interpretation of proxy data for archaeology

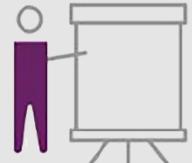
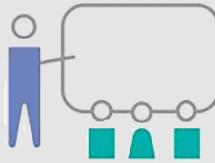


Meetings  
Workshops  
Conferences

Training Schools

Short-term  
Scientific Missions  
(STSM)

Dissemination  
activities





# Organisers & Collaborators



**aranzadi**

ZIENTZIA ELKARTEA · SOCIEDAD DE CIENCIAS  
SCIENCE SOCIETY · SOCIÉTÉ DE SCIENCES



AURIZKO Udala  
Ayuntamiento de BURGUETE





# People



Ekhine



Carmen



Armin



Philippe



Roger



Clare



Kseniia



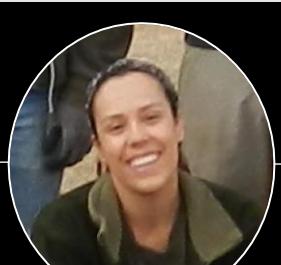
**aranzadi**

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SCIENCE SOCIETY · SOCIÉTÉ DE SCIENCES

Local  
Collaborators



Oihane



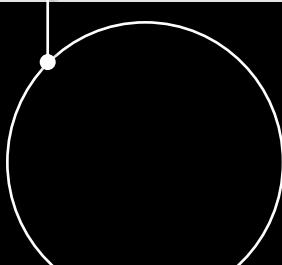
Patricia



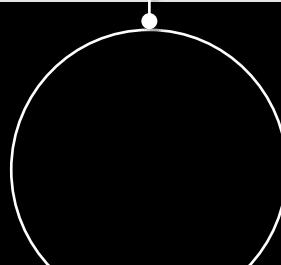
Eder



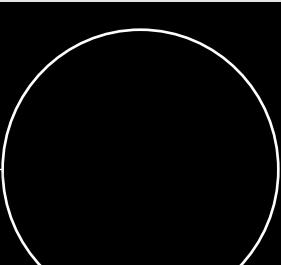
Julia



Eneko



Javier



Eulatz



SAGA Trainers

Local  
Trainers



# The Trainees

- 21 participants
- 12 affiliation countries (Spain, Bulgaria, Norway, Montenegro, Croatia, Finland, Poland, Portugal, Cyprus, Slovenia, Belgium & UK)
- 14 nationalities (Spanish, Italy, Bulgarian, Norwegian, Montenegrin, China, Croatian, Polish, Sri Lankan, Cypriot, Slovenian, Italian, Basque-Spanish & Greek)
- Very diverse backgrounds but all working on cultural heritage or archaeological studies
- More during the poster sessions



# Programme

TIME	MONDAY	TUESDAY	WEDNESDAY	THRUSDAY	FRIDAY	
9h	Registration & poster's installation (with coffee)	LECTURE 3: Soil mag properties & principles and applications of magnetic survey methods for archaeology (by Armin Schmidt)	LECTURE 7: Introduction to geophysical data processing (by Armin Schmidt, Philippe De Smedt & Roger Sala)	To the site	HANDS-ON SESSION 4: Focusing Sessions	
9h30					<b>Option1:</b> Geophysical Data processing (systems depending on availability of lecturers) <b>Option 2:</b> how to process geochemical data <b>Option 3:</b> planning a geophysical survey: what has to be taken into account?	
10		LECTURE 4: Soil elect properties & principles and applications of electric survey methods for archaeology (by Armin Schmidt)	HANDS-ON SESSION 2: geophysical data processing (4 stations, 15' x station)	HANDS-ON SESSION 3: STATION ROTATION on geophysical data collection, soil sampling & soil physico-chemical characterisation (4 stations, ~1h x station)		
10h30						
11h		Coffee break	Coffee break	Coffee break	Coffee break	
11:30		Welcome & Intro to the training school	LECTURE 5: Soil EM properties & Principles and applications of EMI survey methods for archaeology (by Philippe De Smedt)	LECTURE 8: Multi-element geochemical prospection and characterisation of archaeological deposits (by Clare Wilson)	HANDS-ON SESSION 5: Cross-interpretation of the results	
12h		LECTURE 1: Intro to archaeological prospection & archaeo-geophysics (by Carmen Cuenca García)				
12h30		LECTURE 2: Intro the archaeological site of Iturissa (by Ekhine García García)	LECTURE 6: Principles and applications of GPR survey methods for archaeology (by Roger Sala)	LECTURE 9: Soil properties and processes and the interaction with geochemical parameters (by Clare Wilson)		
13h					Closing	
13:30						
14h	LUNCH BREAK					
14:30						
15h	To the site	To the site		To the site	Optional trip to Pamplona	
15H30	Visit of Archaeological site of Iturissa (by Oihane Mendizabal)	HANDS-ON SESSION 1: STATION ROTATION on geophysical survey systems & field operation at the archaeological site (4 stations, 4 rotations/groups, 30' x station)	LECTURE 10: Introduction to sediment analyses on boreholes & How to interpret soils (by Eneko Iriarte)	HANDS-ON SESSION 3 (continuation)		
16h						
16h30	Back to Burguete	Break	Break	Break		
17h	Presentation of trainees & poster session	HANDS-ON SESSION 1 (continuation)	LECTURE 11: Magnetic properties of soils and archaeological materials: sampling, measuring, interpreting (by Kseniia Bondar)	HANDS-ON SESSION 3 (continuation)		
17h30						
18h			Feedback session & option selection by each trainee for the <b>Focusing Sessions</b> on Friday	Back to Burguete		
18:45		Back to Burguete				
19h	Group Photo			SOCIAL DINNER @ Camping Urrobi		



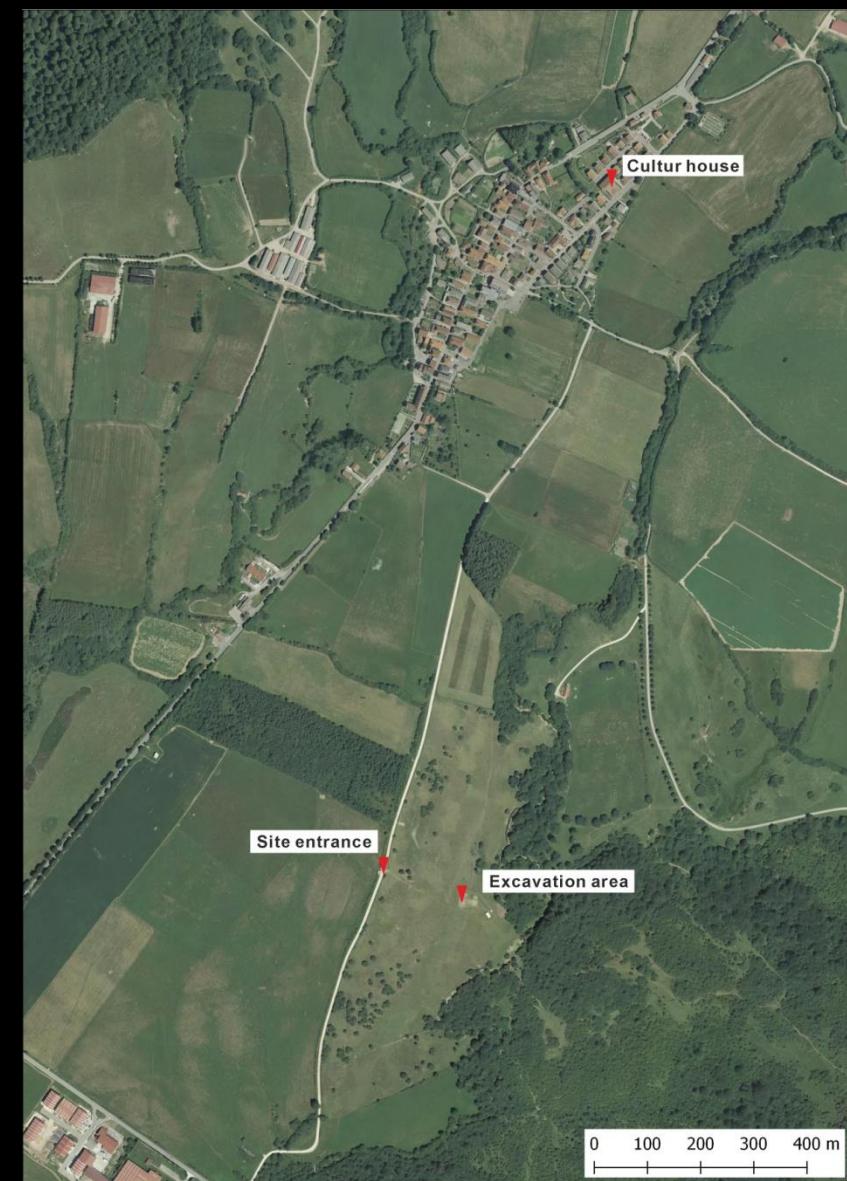
# Travelling to the site

## Sessions at the site:

Monday, Tuesday and Thursday

The site is located 5min away by car

1. Everybody will meet at the venue
2. People are divided in fixed car groups





# Travelling to the site

Car groups:

**1. Alexandre Duró:**

Deyan Veselinov  
Marina Faka  
Erik Kjellman  
Huiru Lian  
Jelena Behaim

**3. Michelle Abballe**

Patricia Reyna  
Julia Muñoz  
Milan Gazdic

**5. Roger Sala**

Philippe De Smedt  
Armin Schmidt  
Pablo Barruezo  
Vasiliki Andreaki

**2. Caterina Rafonne**

Jussi-Pekka Kinnunen  
Katarzyna Agnieszka  
Kishan Amarasinghe

**4. Oihane Mendizabal**

Eder martinez  
Mateja Ferk  
Marina Eguílez  
Robert Ryndziewicz

**6. Ekhine Garcia**

Kseniia Bondar  
Carmen Garcia-Cuenca  
Clare Wilson



## At the site

1. There are cows and horses: always close the entrance.
2. They are used to people, but do not disturb them.
3. There are no facilities, only a tent.
4. We will bring water but take an individual bottle.
5. There is no shadows, take protection.
6. Thursday coffee break at the site, lunch at Loizu (optional)



# Hands-on sessions

Trainees will be divided in four groups

## Group 1

Michelle Abballe

Kishan Amarasinghe

Vasiliki Andreaki

Pablo Barruezo

Jelena Behaim

## Group 2

Alexandre Duró

Marina Eguílez

Marina Faka

Mateja Ferk

Milan Gazdic

## Group 3

Katarzyna Agnieszka

Erik Kjellman

Deyan Veselinov

Patricia Reyna

Oihane Mendizabal

## Group 4

Eder Martinez

Julia Muñoz

Robert Ryndziewicz

Caterina Rafonne

Huiru Lian

Jussi Kinnunen



## To remember

- Sign the attendance list EVERYDAY!
- Be ready for the Group Picture today
- Questions?