

HORIZON
2020

Remote strategies for fossil finding: multispectral images and species distributional modelling applications for large-scale palaeontological surveys.

Fact Sheet

Project Information

REFIND

Grant agreement ID: 785821

[Project website](#) 

DOI

[10.3030/785821](https://doi.org/10.3030/785821) 

Project closed

EC signature date

23 February 2018

Start date

1 September 2018

End date

18 January 2023

Funded under

EXCELLENT SCIENCE - Marie Skłodowska-Curie Actions

Total cost

€ 262 269,00

EU contribution

€ 262 269,00

Coordinated by

UNIVERSITA CA' FOSCARI
VENEZIA



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Objective

The REFIND project aims to create a standardized methodology for large-scale palaeontological surveys. The protocol will be applied to the recovery of single exposed fossils, by comparing high-resolution multispectral images with the response of fossils to laboratory-light wavelengths. Where fossils cannot be directly detectable, my method applies the use of GIS spatial analyses to the palaeogeographical distribution of species, filtered with biotic and abiotic data, to recognize suitable areas for new fossil localities.

Images will be acquired by multispectral sensors placed on satellites and drones, and predictions will be computed using softwares for spatial raster analyses. Results will consist of thematic maps predicting the location of new exposed fossils and sites, and coordinates will be partially verified through field expeditions.

The proposed software tools are available to the large public only since recent years, and their application is now crucially important for preventing the destruction of undiscovered palaeontological heritage by humans and climate changes. The REFIND project will allow researchers to minimize costs and risks related to field research, and to access the first Fossil Endmember Library and to the largest database for Late Pleistocene fossil evidence.

The implementation of my results will change the approach of European researchers to palaeontological field work and add to the importance of the European historical fossil collections.

I have previous experience in both fields developed in the REFIND project, being developed in the project, allowing me to achieve of all the proposed results. The acquisition of new skills during the fellowship will significantly upgrade my career potential, because multispectral and raster analyses, cutting-edge studies in Europe, have never been applied to palaeontology for such innovative goals. For the same reason, high interest is expected from the research community.

Fields of science (EuroSciVoc) 

[natural sciences](#) > [computer and information sciences](#) > **[software](#)**

[natural sciences](#) > [computer and information sciences](#) > **[databases](#)**

[engineering and technology](#) > [mechanical engineering](#) > [vehicle engineering](#) > [aerospace engineering](#) > **[satellite technology](#)**

[engineering and technology](#) > [electrical engineering](#), [electronic engineering](#), [information engineering](#) > [electronic engineering](#) > [robotics](#) > [autonomous robots](#) > **[drones](#)**

[natural sciences](#) > [earth and related environmental sciences](#) > **[palaeontology](#)**



Keywords

[Multispectral analyses](#)

[Paleofauna mapping](#)

[GIScience](#)

[database managing](#)

[fossil recovery](#)

Programme(s)

[H2020-EU.1.3. - EXCELLENT SCIENCE - Marie Skłodowska-Curie Actions](#)

MAIN PROGRAMME

[H2020-EU.1.3.2. - Nurturing excellence by means of cross-border and cross-sector mobility](#)

Topic(s)

[MSCA-IF-2017 - Individual Fellowships](#)

Call for proposal

[H2020-MSCA-IF-2017](#)

[See other projects for this call](#)

Funding Scheme

[MSCA-IF - Marie Skłodowska-Curie Individual Fellowships \(IF\)](#)

Coordinator



UNIVERSITA CA' FOSCARI VENEZIA

Net EU contribution

€ 262 269,00

Total cost

€ 262 269,00

Address

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Region

Nord-Est > Veneto > Venezia

Activity type

Higher or Secondary Education Establishments

Links

[Contact the organisation](#)

[Website](#)

[Participation in EU R&I programmes](#)

[HORIZON collaboration network](#)

Partners (1)



PARTNER

UNIVERSITY OF OREGON



Net EU contribution

€ 0,00

Address

UNIVERSITY OF OREGON 5219 SPONSORED PROJETS SERVICES

97403-5295 Eugene Or

Activity type

Higher or Secondary Education Establishments

Links

[Contact the organisation](#)

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Total cost

€ 172 130,40

Last update: 1 February 2024

Permalink: <https://cordis.europa.eu/project/id/785821>

European Union, 2025

