

CV – Ibai Rico

PERSONAL DETAILS

Date of birth 04.12.1980
Gender Man
Citizenship Spain
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Current profession Professor at the Department of Geography University of the Basque Country (Spain) / Safety Manager Juneau Icefield Research Program (Alaska)



EDUCATION / ACADEMIC QUALIFICATIONS

2013-01 - 2019-04 University of the Basque Country. - Degree: Phd The Glaciers of the Pyrenees. Glaciological Study and Current Dynamic in the Context of Global Change. Department of Geography, Archaeology and Prehistory Karakter: Cum Laude

2006-09 - 2009-06 University of Highlands and Islands (UK) - Degree: Master Managing Sustainable Mountain Development Fakultet / avdeling: Centre for Mountain Studies
Dissertation: The Little Ice Age in the Fuegian Andes. Geomorphological reconstruction of the last historic glaciation (Patagonia, Argentina).

2007-09 - 2008-07 University of the Basque Country - Degree: Master Msc Degree in Teaching

2007-09 - 2008-06 University of the Basque Country - Degree: Andre Postgraduate Research (Diploma of Advanced Studies) Department of Geography, Archaeology and Prehistory
Morphology and glacial evolution in the Aralar valley

1999-09 - 2005-06 University of the Basque Country - Degree: Bachelor Degree in Geography. Department of Geography, Archaeology and Prehistory
One year exchange at the University of Newcastle
One year exchange at the Universidad Autónoma de Madrid

WORK EXPERIENCE

2018-09 - current University of the Basque Country Stilling: Professor. Geography and Environmental Science Teaching, research and student project supervising in the fields of physical and human geography and environmental sciences.

2015-06 - current Foundation for Glacier and Environmental Research. Juneau Icefield Research Program (Alaska) Position: Safety Manager
Design, planning and overseeing of safety training programs, logistics and operations and scientific fieldwork of the Juneau Icefield Research Program (Alaska). Delivery of Glacier travelling and glacier rescue courses. Snow machine safety and snow machine rescue courses. Bear safety courses. Polar and Arctic safety protocols.

2013-01 - current Basque Mountain Guides Stilling: Mountain Guide
Part-time free-lance mountain guiding in the Pyrenees, Basque Country and overseas: Dolomites, High Atlas in Morocco, Great Caucasus (Georgia).

2020-07 – 2020-08 Jostedalens Breførarag. Position: Glacier / Mountain Guide
Risk management in mountain and glacier environments. Jostedalsbreen icecap and Jotunheimen. Ice-climbing and glacier travelling courses.

2016-10 - 2018-06 Pyrenean Institute of Ecology Stilling: Glaciology Safety Lead
Snow variability fieldwork, AWS maintenance and risk management on the field. Part-time.

2017-09 - 2018-01 University of the Basque Country. Position: Professor
Geography and Environmental Science Teaching, research and student project supervising in the fields of physical and human geography and environmental sciences.

2017-08 - 2017-09 Jostedalens Breførarag. Position: Glacier / Mountain Guide
Risk management in mountain and glacier environments. Jostedalsbreen icecap and Jotunheimen. Ice-climbing and glacier travelling courses.

2016-07 - 2016-09 Jostedalens Breførarag Position: Glacier / Mountain Guide
Guide Risk management in mountain and glacier environments. Jostedalsbreen icecap and Jotunheimen. Ice-climbing and glacier travelling courses.

2014-11 - 2016-09 University of the Basque Country Position: Professor
Professor Geography and Environmental Science Teaching, research and student project supervising in the fields of physical and human geography and environmental sciences.

2016-01 - 2016-02 Mountain Guiding School – Altsasua. Position: Risk Management, Expedition Planning and Avalanche safety Courses
Risk Management, Expedition Planning and Avalanche safety Courses

2015-07 - 2015-09 Icetroll Norway Position: Glacier / Mountain Guide
Risk management in mountain and glacier environments. Glacial lake kayaking guiding. Jostedalsbreen icecap. Ice-climbing and glacier travelling courses.

2011-09 - 2015-09 National Distance University Position: Professor
Professor Geography and Environmental Science Teaching, research and student project supervising in the fields of physical and human geography, environmental sciences and geology. Institusjon i utlandet

2014-06 - 2014-07 Icetroll Norway Position: Glacier / Mountain Guide
Risk management in mountain and glacier environments. Glacial lake kayaking guiding. Jostedalsbreen icecap. Ice-climbing and glacier travelling courses.

- 2008-09 - 2009-08 Water Resources Office. Tierra del Fuego Government (Ushuaia, Argentinean Patagonia) Position: Research Technician Internship
Glacier mass balance measurements, maintenance of AWS, risk management of scientific fieldwork, data processing, GIS and mapping.
- 2008-07 - 2008-09 Alventus Travel Position: Mountain guide austrian alps
Logistics and safety of hiking groups in the austrial alps Institusjon i utlandet
- 2007-06 - 2007-09 Alventus Travel Position: Mountain guide Madeira Island
Logistics and safety of hiking groups in Madeira Island (Atlantic Macaronesia, Portugal)

TEACHING / MENTOR QUALIFICATIONS

- 2020-01 - 2020-06 University of the Basque Country Subject: Geography. Supervision of Bachelor Dissertation
Glacier's Nature's Contributions to People in the context of global change. A case study in the Posets-Maladeta Natural Park.
- 2020-01 - 2020-06 University of the Basque Country Subject: Tools for Land
Management Degree in Geography
- 2020-01 - 2020-06 University of the Basque Country Subject: Physical Geography
Degree in Geography
- 2019-09 - 2020-06 University of the Basque Country Subject: Geographical Information
Systems Geographical Information Systems subject. Degree in
Geography
- 2019-09 - 2020-06 University of the Basque Country Subject: Land Planning and
Management Degree in Geography
- 2019-09 - 2020-06 University of the Basque Country Subject: Environmental and Human Issues of Today's
World Degree in Geography
- 2018-09 - 2019-09 University of the Basque Country Subject: Advanced GIS
Degree in Geography
- 2018-09 - 2019-09 University of the Basque Country Subject: Physical Geography of
Spain Degree in Geography
- 2018-09 - 2019-09 University of the Basque Country Subject: Human and Physical Geography of the Basque
Country Degree in Geography
- 2018-09 - 2019-09 University of the Basque Country Subject: Population Geography
Degree in Geography
- 2018-09 - 2019-09 University of the Basque Country Subject: Bachelor Dissertation
Supervision Sustainable Development Assessment in the Basque
Country
- 2018-09 - 2019-09 University of the Basque Country Subject: Bachelor Dissertation
Supervision Sustainable Development in Mountain Areas
- 2019-06 - 2019-08 Foundation for Glacier and Environmental Research Subject: Polar and Arctic Fieldwork Safety
Delivery of 6 ECTS credits to Juneau Icefield Research Program students on safety techniques applied to
scientific fieldwork in polar, arctic and alpine environments including glacier travel and rescue, emergency
protocols, communications, bear safety and snow machine safety.
- 2019-02 - 2019-07 University of the Basque Country Subject: Land Planning and
Management Degree in Environmental Sciences
- 2018-07 - 2018-08 University of the Basque Country Subject: Mentoring Intership on Mountain Research
- 2018-06 - 2018-08 Foundation for Glacier and Environmental Research Subject: Polar and Arctic Fieldwork Safety
Delivery of 6 ECTS credits to Juneau Icefield Research Program students on safety techniques applied to
scientific fieldwork in polar, arctic and alpine environments including glacier travel and rescue, emergency
protocols, communications, bear safety and snow machine safety.
- 2017-09 - 2018-01 University of the Basque Country Subject: Geomorphology and Soil
Science Degree in Environmental Sciences
- 2017-09 - 2018-01 University of the Basque Country Subject:
Climatology Degree in Geography
- 2017-06 - 2017-08 Foundation for Glacier and Environmental Research Subject: Polar and Arctic Fieldwork Safety
Delivery of 6 ECTS credits to Juneau Icefield Research Program students on safety techniques applied to
scientific fieldwork in polar, arctic and alpine environments including glacier travel and rescue, emergency
protocols, communications, bear safety and snow machine safety.
- 2016-09 - 2017-07 University of the Basque Country Subject: Bachelor Dissertation
Supervision Glacial Morphology and Evolution in the Gorbea Range
(Basque Country)
- 2017-01 - 2017-02 Mountain Guiding School - Altsasua Subject: Winter Risk Management and Avalanche
Rescue Snow Science, Risk Management, Rescue Protocols and Practice
- 2015-09 - 2016-09 University of the Basque Country Subject: Geography and Environmental
Issues Degree in Geography
- 2015-09 - 2016-09 University of the Basque Country Subject: Geography of the Basque
Country Degree in Geography
- 2015-09 - 2016-09 University of the Basque Country Subject: Economic Geography
Degree in Geography
- 2015-09 - 2016-09 University of the Basque Country Subject: Management of Natural Protected
Areas Degree in Geography
- 2016-06 - 2016-08 Foundation for Glacier and Environmental Research Subject: Polar and Arctic Fieldwork Safety,
Delivery of 6 ECTS credits to Juneau Icefield Research Program students on safety techniques applied to

scientific fieldwork in polar, arctic and alpine environments including glacier travel and rescue, emergency protocols, communications, bear safety and snow machine safety.

- 2015-11 - 2016-04 University of the Basque Country Subject: Msc. Mountaineering and Mountain Activities
Delivery of courses Msc level on Sustainable Mountain Development, Natural Hazards, Mountain Tourism and Expedition planning and fund-raising
- 2016-01 - 2016-02 Mountain Guiding School - Altsasua Subject: Winter Risk Management and Avalanche
Rescue Snow Science, Risk Management, Rescue Protocols and Practice.
- 2014-09 - 2015-09 National Distance Learning University Subject: Several. Detailed below,
Subjects: 1. General Geography: Access course; 2. General Geography: Human Geography; 3. Geology; 4. Geology I; 5. Geology II; 5. Human Geography; 6. Regional Geography of the World.
- 2014-09 - 2015-09 University of the Basque Country Subject: Land Planning and
Management Academic course 2014-2015 Degree in Geography
- 2015-06 - 2015-08 Foundation for Glacier and Environmental Research Subject: Polar and Arctic Fieldwork Safety
Delivery of 6 ECTS credits to Juneau Icefield Research Program students on safety techniques applied to scientific fieldwork in polar, arctic and alpine environments including glacier travel and rescue, emergency protocols, communications, bear safety and snow machine safety.
- 2014-09 - 2014-09 University of the Basque Country Subject: Land Planning Tools
Academic course 2014-2015 Degree in Geography
- 2013-09 - 2014-09 National Distance Learning University Subject: Subject: Several. Detailed below
Subjects: 1. General Geography: Physical Geography I; 2. General Geography: Human Geography; 3. Geology; 4. Geology I; 5. Geology II; 5. Human Geography; 6. Regional Geography of the World.
- 2013-02 - 2013-04 University of the Basque Country Subject: Geomorphology
Degree in Environmental Science
- 2012-09 - 2012-09 National Distance Learning University Subject: Subject: Several. Detailed below.
Subjects: 1. Geography; 2. Geology; 3. Geology I; 4. Geology II; 5. Physical Geography of Spain
- 2011-09 - 2012-09 National Distance Learning University Subject: Several. Detailed below.
Subjects:
1. Geography
2. Environmental Impact Assessment II
3. Geology II
4. Physical Geography of Spain

ICT EXPERIENCE

- ArcGIS** Capabilities: Good
10 year extensive use of ArcGIS for geomorphology, natural risk management, glaciology and mapping
2 year experience teaching ArcGIS at University level
- CorelDraw** Capabilities: Good
10 year experience
- HoboWare** Capabilities: Good
- QGIS** Capabilities: Good
10 year extensive use of QGIS for geomorphology, natural risk management, glaciology and mapping
1 year experience teaching QGIS at University level
- SigmaPlot** Capabilities: Good
The software can read multiple formats, such as Microsoft Excel spreadsheets, and can also perform mathematical transforms and statistical analyses
- SPSS** Capabilities: Good

PROJECT / RESEARCH EXPERIENCE

- 2016-01 - 2019-12 Project: Interactions and Dynamic of the Cryosphere in the Pyrenees and Cantabrian Mountains. Key topics: Glaciology, Geomorphology, permafrost, global change Funding Source: Spanish Science Ministry
- 2018-11 - 2019-11 Project: Impacts of climate change on the Baltoro glacier (Karakorum, Pakistan) Key topics: Glaciology, Snow Hydrology, Permafrost Funding Source: Basque Centre for Climate Change (BC3)
- 2018-08 - 2018-12 Project: Glacial evolution in the Pariacaca mountains (Peru) Key topics: Glaciology, Geomorphology
Funding Source: Spanish Science Council
- 2017-08 - 2017-09 Project: Cryosphere monitoring techniques applied to the snow and glaciers of Chile. Key topics: Snow Science, Glaciology. Terrestrial Laser Scanning Funding Source: Spanish Science Council
- 2016-01 - 2016-12 Project: Incognita Patagonia Key topics: Glaciology / Surveying Funding Source: National Geographic / The Royal Geographical Society
- 2013-09 - 2016-11 Project: The Monte Perdido Glacier. Glacier dynamics and monitoring in the context of global change Key topics: Glaciology, Geomorphology, permafrost, global change Funding Source: Ministry of Science and Innovation
- 2013-09 - 2016-09 Project: Permafrost degradation in steep alpine rock walls. Vignemale (France) Key topics: Permafrost, Rock Falls, Climate Change Funding Source: Spanish Science Council
- 2014-09 - 2014-10 Project: Debris-Covered Glacier Monitoring and hydrological response to climate change in the Lantang Valley (Nepal) Funding Source: UTH Zurich / Scott's Polar Institute
- 2012-01 - 2014-09 Project: The Cryosphere as indicator of global change in the mountains of the northern iberian peninsula. CGL-2010-19729. Key topics: Glaciology, Geomorphology, permafrost, global change, Funding Source: Spanish Science Ministry
- 2009-01 - 2012-12 Project: Cryosphere and global change in protected areas. Picos de Europa. OAPN 053/2010 Key topics: Glaciology, Geomorphology, permafrost, global change Funding Source: Spanish Science Ministry

PUBLICATIONS / SCIENTIFIC PRODUCTIONS

- 2020-08 Type: Scientific paper Title: "A farewell to glaciers: Ecosystem services loss in the Spanish Pyrenees", Journal : Journal of Environmental Management. Vol.275. Juan I. López-Moreno, José M. García-Ruiz, Sergio M. Vicente-Serrano, Esteban Alonso-González, Jesús Revuelto-Benedí, Ibai Rico, Eñaut Izagirre, Santiago Beguería-Portugués. <https://doi.org/10.1016/j.jenvman.2020.111247>.
- 2020-01 Type: Scientific paper Title: Variable effects of forest canopies on snow processes in a valley of the central Spanish Pyrenees Journal : Hydrological Processes Alba Sanmiguel-Vallelado Juan I. López-Moreno Enrique Morán-Tejeda Esteban Alonso-González Francisco M. Navarro-Serrano Ibai Rico J. Julio Camarero
First published:12 February 2020 <https://doi.org/10.1002/hyp.13721>
- 2020-01 Type: Scientific paper Title: Mapping the potential distribution of frozen ground in Tucarroya (Monte Perdido Massif, the Pyrenees) Journal : Cuadernos de Investigación Geográfica
<https://publicaciones.unirioja.es/ojs/index.php/cig/article/view/4414/3609>
- 2020-01 Type: Scientific paper Title: Frozen ground and periglacial processes relationship in temperate high mountains Journal : Journal of Mountain Science
<https://doi.org/10.1007/s11629-019-5614-5>
- 2019-01 Type: Chapter Title: El Glaciar de Monte Perdido: Condiciones actuales y evolución reciente. Journal : Naturaleza y Parques Nacionales (Pep Amengual)
https://www.miteco.gob.es/es/red-parques-nacionales/programa-investigacion/01_monografia_lopezmoreno_tcm30-506751.pdf
- 2019-01 Type: Scientific paper Title: Glacier and climate evolution in the Pariacacá Mountains, Peru Journal : Cuadernos de Investigación Geográfica
In Press
- 2019-01 Type: Scientific paper Title: Ground-based remote-sensing techniques for diagnosis of the current state and recent evolution of the Monte Perdido Glacier, Spanish Pyrenees Journal : Journal of Glaciology
doi: 10.1017/jog.2018.96
- 2018-01 Type: Scientific report Title: Climate change in the Pyrenees: impacts, vulnerabilities and adaptation Knowledge bases for the future strategy of adaptation to climate change in the Pyrenees Journal : The Pyrenees Climate Change Observatory OPCC2 Report
<https://www.opcc-ctp.org/sites/default/files/documentacion/opcc-informe-es-screen.pdf>
- 2018-01 Type: Scientific paper Title: Air and wet bulb temperature lapse rates and their impact on snowmaking in a Pyrenean ski resort Journal : Theoretical and Applied Climatology
doi: 10.1007/s00704-018-2448-y
- 2017-01 Type: Scientific paper Title: Current Glacier Area in the Pyrenees: An Updated Assessment 2016 Journal : Pirineos Journal
doi.org/10.3989/Pirineos.2017.172004
- 2017-01 Type: Scientific paper Title: In situ observations of meteorological variables and snowpack distribution at the Izas Experimental Catchment (Spanish Pyrenees): The importance of high quality data in sub-alpine ambients Journal : Earth System Science Data
Doi: 10.5194/essd-2017-43
- 2017-01 Type: Proceedings. International Permafrost Association (IPA) Title: First Evidence of Permafrost Occurrence in a Steep Rock Wall in the Pyrenees: The Vignemale North Face Journal : International Permafrost Association (IPA) 2017
- 2017-01 Type: Research abstract Title: Glacier inventory and 1945-2016 area changes of Cloue Icefield in southernmost South America Journal : Geophysical Research Abstracts Vol. 19, EGU2017-5256-1, 2017
- 2016-01 Type: Scientific paper Title: Responses to Climatic Changes since the Little Ice Age on La Paul Glacier Journal : Krei
<https://docplayer.es/90501177-Krei-n-o-13-circulo-de-estratigrafia->
- 2016-01 Type: Scientific paper Title: Thinning of the Monte Perdido Glacier in the Spanish Pyrenees since 1981. Journal : The Cryosphere
doi:10.5194/tc-10-681-2016
- 2016-01 Type: Scientific paper Title: Cambios geomorfológicos y evolución de una barra de arena en la desembocadura del río Lea, Lekeitio-Mendexa (Bizkaia) Journal : Cuaternario y Geomorfología Journal
<https://doi.org/10.17735/cyg.v30i1-2.43601>
- 2015-01 Type: Scientific paper Title: Accelerate wastage of the Monte Perdido Glacier in the Spanish Pyrenees during recent stationary climatic conditions Journal : The Cryosphere
doi: 10.5194/tcd-9-5021-2015
- 2015-01 Type: Scientific paper Title: Glacial chronology, environmental changes and implications for human occupation during the upper Pleistocene in the eastern Cantabrian Mountains Journal : Quaternary International
doi:10.1016/j.quaint.2014.09.039
- 2014-01 Type: Scientific paper Title: Applying GPR and Laser Scanner Techniques to Monitor the Ossoue Glacier (Pyrenees) Journal : Journal of Environmental & Engineering Geophysics
doi: 10.2113/JEEG19.4.239
- 2014-01 Type: Scientific paper Title: Geomatics techniques applied to glaciers, rock glaciers, and ice-patches in Spain (1991-2012) Journal : Geografiska Annaler Series A Physical Geography doi:10.1111/geoa.12047
- 2012-01 Type: Proceedings Title: The Maladeta Glacier (Pyrenees): Front evolution and environmental variability Journal : XIII National Geomorphology Meeting 2012
- 2011-01 Type: Book chapter Title: Un glaciar en la Sierra de Aralar - Glaciar bat Aralarren Journal : Diputación Foral de Guipuzcoa
Los Grupos de Cazadores-Recolectores en la Prehistoria de Guipuzcoa
https://www.academia.edu/1403934/Arrizabalaga_A_Iriarte_M.J._2011_Los_grupos_de_cazadores-recolectores_en_la_Prehistoria_de_Gipuzkoa_Ehiztari-biltzaileen_taldeak_Gipuzkoako_Historiaurrean
- 2011-01 Type: Book chapter Title: Análisis y control de indicadores geomorfológicos en el Parque Nacional Picos de Europa Journal : Organismo Autónomo Parques Nacionales
https://www.researchgate.net/publication/257987856_Analisis_y_control_de_indicadores_geomorfolog

2010-01

Type: Scientific paper Title: Glacial Morphology and Evolution in the Arritzaga Valley (Aralar Range, Gipuzkoa).
Journal : Cuaternario y Geomorfología Journal Rev. C. & G. 25(1-2): 83-104. 2011

REFERENCES

Evan Miles

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Juan Ignacio

López Moreno

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Martin Price

PhD Position: Director. Centre for Mountain Studies. University of Highlands and Islands (Scotland, UK) Telephone: +44 (0) 1738 877217 martin.price@perth.uhi.ac.uk

Seth Campbell

PhD Position: University of Maine / Foundation for Glacier and Environmental Research. Director, Juneau Icefield Research Program Telephone: +12073296014 seth@juneauicefield.org

Steinar Bruheim

IFMGA-IVBV Mountain Guide Position: Jostedalens Bredørarag Telephone: +47 576 83 111 post@bfl.no

Wes Farnsworth

PhD Position: Nordic Volcanological Centre, University of Iceland Telephone: +47 91910932 wesley.farnsworth@unis.no

COURSES

2016-01

European Higher Education Area Qualified Professor course. Duration: 3 months
National Distance Learning University (UNED) course

2013-07

Terrestrial Laser Scanning. Technical University of Graz. Duration: 1 month
Terrestrial Laser Scanning applied on glaciers and rock glaciers of the austrian Alps.

2013-02

Arctic Safety Duration: 3 days
UNIS Arctic Safety introduction course. Artic safety protocols, snow machine driving, polar bear safety.

2013-02

University Centre in Svalbard (UNIS). Glaciology 825 Course Duration: 6 weeks

2012-02

Snow Hidrology Course. Colorado State University and Pyrenean Institute of Ecology Duration: 1 week
Introduction to the Physical Processes of the Snowpack.

2007-09

Alpine Geography Course Duration: 2 weeks
Natural Hazards, Land Planning, Glacial Geomorphology, Landscape Change, Mountain Infrastructures and Climate Change. The course took place in the french and swiss alps.

2007-05

Geographic Information Systems ArcGIS Duration: 2 weeks

2006-04

Open Water Diving course. ArabaSub. Duration: 2 months

LANGUAGES

English

Speaking: Very good Written: Very good (C1 certification)

Spanish

Speaking: Very good Written: Very good (C1 certification)

Basque

Speaking: Very good Written: Very good (C1 certification)

Norwegian

Speaking: Basic Knowledge Written: Basic Knowledge

French

Speaking: Basic Knowledge Written: Basic Knowledge