

Carolina Mallol

Born in Barcelona, 2 October 1973

cmallol@ull.edu.es

<https://wp.ull.es/ambilab/>

Affiliations

Instituto Universitario de Bio-Organica Antonio González (IUBO), Avda. Astrofísico Fco. Sánchez s/n,
38203 La Laguna, Canary Islands, Spain

Departamento de Geografía e Historia, Universidad de La Laguna, C. Prof. José Luis Moreno Becerra s/n,
38200 La Laguna, Canary Islands, Spain

ICArEHB - Interdisciplinary Center for Archaeology and the Evolution of Human Behaviour, Universidade
do Algarve, Campus de Gambelas, Edificio 1, 8005-139, Faro, Portugal

Department of Anthropology, University of California Davis, 328 Young Hall, One Shields Ave, CA 95616
(Visiting Professor in 2022-2023)

Languages

Spanish, native

English, native

French, proficient

Catalan, proficient

Education

PhD 2004 Anthropology, Harvard University, USA

MA 2001 Anthropology, Harvard University, USA

BA 1996 Geography and History, Universitat Rovira I Virgili, Spain (and BA studies in other
universities: 1992-1994 History and Geography, Universidad de Castilla-La Mancha, Spain;
1991-1992 Anthropology, Universidad de Los Andes, Colombia)

Academic Experience

2022-present, Associate Professor at Universidad de La Laguna, Spain

2019-2022 Assistant Professor at Universidad de La Laguna, Spain

2013-2018 Ramón y Cajal Postdoc at Universidad de La Laguna, Spain

2008-2012 Juan de La Cierva Postdoc at Universidad de La Laguna, Spain

2005-2007 Marie Curie EIF Postdoc at MMSH-CNRS, France

2004-2005 ASPR Postdoc, Harvard University, USA

Grants (PI or co-PI)

2019 Purchase of an Elemental Analyzer coupled to an Isotopic Ratio Mass Spectrometer
(EQC2019-005741-P). Ministerio de Ciencia e Innovacion (Spain), 209.315 €

2020-2023 Climate-human interactions in central Mediterranean Iberia during MIS 4 (IBEMIS4).
Ministerio de Ciencia e Innovacion (Spain), 70.000 €

2020-2021 Sistema de etiquetado de imágenes basado en una red neuronal para la descripción
micromorfológica en arqueología (EIRA). Universidad de La Laguna, 8.300 €

2019-2021 Contextos paleoambientales aborígenes y su gestión. Algunos ejemplos insulares.

- Universidad de La Laguna, 54.000 €
- 2018-2021 Fire among Anatomically Modern Humans and Neandertals as revealed from Archaeological Microstratigraphic Evidence (FLAME) Fundação para a Ciência e Tecnologia (Portugal) 239.870 €.
- 2018-2019 Geoarqueología de alta resolución en la cueva de Las Estacas, Buenavista del Norte. Universidad de La Laguna, 8.850 €.
- 2015-2020 Insights into the Neanderthals and their demise from the study of microscopic and molecular charred matter in Middle Palaeolithic sediments (ERC-Consolidator-648871-PALEOCHAR). European Research Council, 1.600.000 €.**
- 2015-2016 Neandertal Fire Technology. Leakey Foundation (US), 20.659,37 €.
- 2014-2015 Paleoenvironmentary and Paleodietary Reconstruction of Early Hominin Sites. MISTI Global Seed Funds (MIT), 16.526,42 €
- 2013-2016 La desaparición de los grupos neandertales en la región central del mediterráneo ibérico. Una propuesta metodológica de aproximación al proceso histórico y marco paleoambiental. Ministerio de Ciencia e Innovación (Spain), 35.000 €.
- 2013-2014 Neandertal Fire Technology. Leakey Foundation (US), 13.208,52 €.
- 2010-2011 Neandertal Fire Technology. Leakey Foundation (US), 8.632 €

Collaborations

- 2022-2027 Into the Sedimentary Matrix: Mapping the Replacement of Neanderthals by early Modern Humans using micro-contextualized biomolecules (ERC Starting Grant MATRIX), 1,955,213 € to Vera Aldeias from ICArEHB, Portugal
- 2022-2026 Climate, vegetation, and cultural impact during the Holocene on molecular paleorecords from Caldera de Taburiente and Garajonay National Parks (PALEOMOL), Ministerio para la Transición Ecológica y el Reto Demográfico (Spain), 63.710 € to Margarita Jambrina, University of La Laguna
- 2022-2025 Cambios climáticos rápidos e impacto humano en Canarias. Herramientas para la predicción de riesgos climáticos e impactos ambientales futuros a partir de paleoregistros. Ministerio de Ciencia e Innovación (Spain), 127.650 € to Margarita Jambrina, University of La Laguna
- 2020-2023 Dinámicas históricas y paleoambientales en el Paleolítico medio norpeninsular. Neandertales y sus paisajes. Ministerio de Ciencia e Innovación (Spain), 48.400 € to Jesús González-Urquijo, Universidad de Cantabria
- 2018-2021 Documenting Neandertal Fire Signatures through High Resolution Analyses at Pech de l'Azé IV. NSF, \$ 161.000 to Harold Dibble
- 2018-2021 The Role of Fire in Neanderthal Adaptations. NSF, \$ 246.811 to Gilbert Tostevin and Gilliane Monnier, University of Minnesota
- 2017-2021 Proyecto de intervención arqueológica puntual para el conocimiento de las primeras ocupaciones humanas en Europa a través del yacimiento de Barranco León, dentro de la zona arqueológica de la cuenca de Orce (Orce, Granada). Junta de Andalucía, 300.000 € to Juan M Jiménez Arenas, University of Granada
- 2015-2018 Projet Collectif de Recherche de la Roche-à-Pierrot. CNRS (France), 194.000€ to Isabelle Crevecoeur, CNRS
- 2017-2018 Aplicación de técnicas soft computing y modelado en 3D en tratamiento masivo de datos en Arqueología. Ministerio de Ciencia e Innovación. 33.880 € to Sacha Gómez Moñivas, Universidad Autónoma de Madrid
- 2010-2016 Primeras sociedades productoras de alimentos en las tierras bajas del sureste

Curriculum Vitae – Bio Sketch

- Peninsular. Junta de Andalucía (Spain), 330.000 € to M.D. Camalich, University of La Laguna
- 2009-2012 Contexto y territorio en la Transición Paleolítico medio-Superior en la región Cantábrica. Ministerio de Ciencia e Innovación (Spain), 48.000 € to Federico Bernaldo de Quirós, University of Castilla y León
- 2008-2011 Territorio Neandertal. Caracterización de las primeras sociedades cazadoras recolectoras de los Valles Alcoyanos (Alicante, España). Ministerio de Ciencia e Innovación (Spain), 36.000 € to Bertila Galván Santos, University of La Laguna
- 2008-2011 Hrazdan Gorge Palaeolithic Project, Armenia. The Leakey Foundation (US), 25.000 € to Daniel S. Adler, University of Connecticut
- 2008-2010 Diversité biologique, diversité culturelle entre 45 et 35 Ka B.P. La France méditerranéenne entre deux mondes. CNRS, 1.500 € to Ludovic Slimak, CNRS
- 2007-2009 The Age of the Early Aurignacian: New Excavations at Willendorf II. The Leakey Foundation (US), \$ 22.000 to Philip Nigst, Max Planck Institute
- 2006-2012 PRADO: Proyecto de Investigación sobre las primeras sociedades productoras de alimentos de Andalucía Occidental de la provincia de Huelva. Junta de Andalucía (Spain), 120.000 € to D. Martín Socas, University of La Laguna
- 2003 Research at the Middle Paleolithic site of Obi-Rakhmat, Uzbekistan. Institute of Archeology and Ethnography of Siberia, Russia. PI: A.P. Derevianko
- 2003-2007 The Mashavera Gorge Palaeolithic Project. Wenner-Gren Foundation, \$ 30.000 to Daniel S. Adler, University of Connecticut
- 2000 Research at the Galeria Pesada Paleolithic site, Portugal. NSF. PI: Anthony Marks, Southern Methodist University
- 1997-2001 Research at Ortvale Klde Rockshelter, Georgia. The Leakey Foundation (US), \$ 50.000 to Daniel S. Adler, University of Connecticut

Students

Javier Davara, MA 2020-21, PhD 2022-present
Laura H. Tomé, MA 2020, PhD 2021-present
Enrique Fernández-Palacios, MS 2019-20, PhD 2021-present
Margarita Jambrina, PhD 2018-present
Antonio Herrera, PhD 2018-present
Rory Connolly, PhD 2015-2021
Lucia Leierer, PhD 2015-2021
Natalia Égüez, PhD 2015-2018
Ainara Sistiaga, PhD 2013-2015
Diana Gómez, PhD 2008-2011
Dorcas Vannieuwenhuyse, MA 2008

Postdocs

Antonio Herrera, 2015-present
Margarita Jambrina, 2015-21
Tammy Buonasera, 2015-20
Glenn Lambrecht, 2015-21
Caterina Rodríguez, 2017-22
Natalia Égüez, 2020-present
Sarah Pederzani, 2022-present
Álvaro Castilla, 2021-present

Other Professional Activities and Awards

Editor-in-chief:

Journal of Archaeological and Anthropological Sciences.

Associate Editor:

Geoarchaeology

Scientia Insularum.

Ad-hoc Reviewer:

Geoarchaeology

Journal of Archaeological Science

Quaternary International

Journal of Human Evolution

Antiquity

National Science Foundation (US)

Natural Environment Research Council (UK)

Social Sciences and Humanities Research Council (Canada)

“La Caixa” Foundation (Spain)

The Leakey Foundation (US)

Ministerio de Ciencia, Innovación y Universidades (Spain)

Agència de Gestió d'Ajuts Universitaris i de Recerca (Spain)

Executive Committee Member:

Instituto de Bio-orgánica Antonio González

International Union of Prehistoric and Protohistoric Sciences Pyroarchaeology Commission

Comité de Ponencias Técnicas del Consejo de Patrimonio Histórico de Canarias (Spain).

Society Memberships:

Society for American Archaeology (SAA)

International Union of Prehistoric and Protohistoric Sciences (UISPP)

European Association of Archaeologists (EAA)

Paleoanthropology Society of America

International Union for Quaternary Research (INQUA)

European Society for the study of Human Evolution (ESHE).

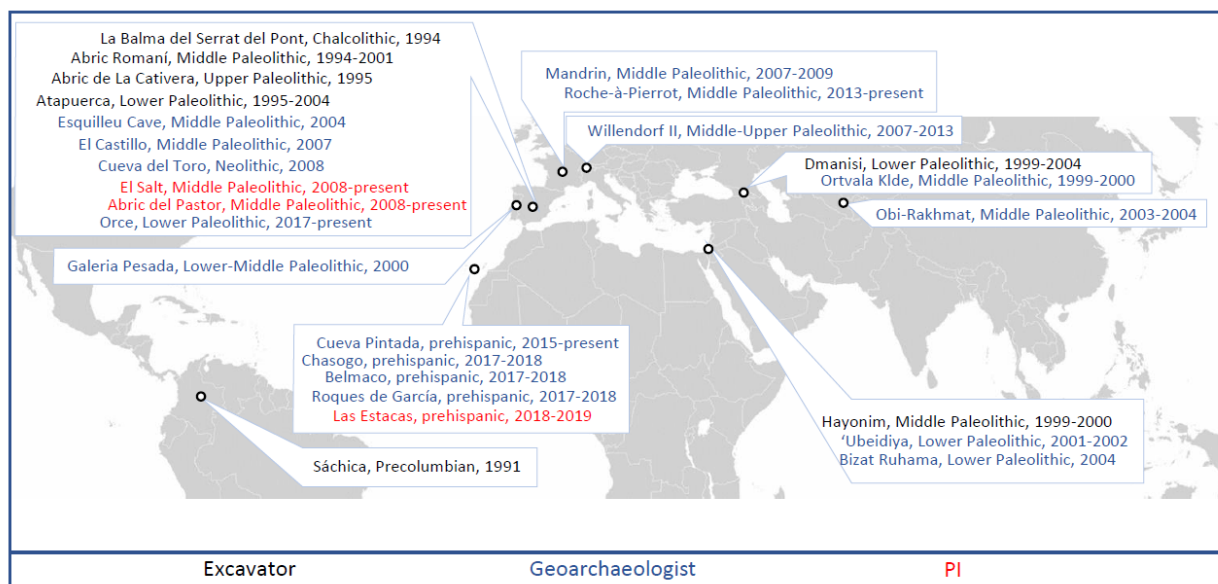
Prizes:

2016 Premio IUEM 8 de marzo (Women in Science)

2013 Lloyd Cotsen Prize for Lifetime Achievement in Archaeology (Junior Prize with Professor Ofer Bar-Yosef)

2000 Mellon Foundation Pre-dissertation Award.

Fieldwork



Publications

Articles

70. Jambrina-Enríquez, M., Mallol, C., Tostevin, G., Monnier, G., Pajović, G., Borovinić, N. and Baković, M., 2022. Hydroclimate reconstruction through MIS 3 in the Middle Paleolithic site of Crvena Stijena (Montenegro) based on hydrogen-isotopic composition of sedimentary n-alkanes. *Quaternary Science Reviews*, 295, p.107771. <https://doi.org/10.1016/j.quascirev.2022.107771>
69. Aldeias, V., Mallol, C., Goldberg, P., 2022. From Fire to Behavior. Documenting Archaeological Fire Evidence in the Field. In Naudinot, N. Ed., *Préhistoire et Protohistoire de l'Ouest de la France: Nouvelles perspectives en hommage à Jean-Laurent Monnier*, p. 67-76.
68. Égüez, N., Mallol, C. and Makarewicz, C.A., 2022. n-Alkanes and their carbon isotopes ($\delta^{13}C$) reveal seasonal foddering and long-term corraling of pastoralist livestock in eastern Mongolia. *Journal of Archaeological Science*, 147, p.105666.
67. Sossa-Ríos, S., Mayor, A., Hernández, C.M., Bencomo, M., Pérez, L., Galván, B., Mallol, C. and Vaquero, M., 2022. Multidisciplinary evidence of an isolated Neanderthal occupation in Abric del Pastor (Alcoi, Iberian Peninsula). *Scientific reports*, 12(1), pp.1-12.
66. Tomé, L., Jambrina-Enríquez, M., Égüez, N., Herrera-Herrera, A.V., Davara, J., Marrero Salas, E., Arnay de la Rosa, M. and Mallol, C., 2022. Fuel sources, natural vegetation and subsistence at a high-altitude aboriginal settlement in Tenerife, Canary Islands: Microcontextual geoarchaeological data from Roques de García Rockshelter. *Archaeological and Anthropological Sciences*, 14(10), pp.1-21.

65. Allué, E., Mallol, C., Aldeias, V., Burguet-Coca, A., Cabanes, D., Carrancho, Á., Connolly, R., Leierer, L., Mentzer, S., Miller, C. and Sandgathe, D., 2022. Fire among Neanderthals. In *Updating Neanderthals* (pp. 227-249). Academic Press.
64. Marquina-Blasco, R., Fagoaga, A., Crespo, V.D., Bailon, S., Mallol, C., Hernández, C.M., Galván, B., Blain, H.A. and Ruiz-Sánchez, F.J., 2022. Applying the UDA-ODA discrimination technique to a herpetological association: the case of the Middle Palaeolithic site of El Salt (Alcoi, Spain). *Archaeological and Anthropological Sciences*, 14(7), pp.1-25.
63. Mayor, A., Sossa-Ríos, S., Molina, F.J., Pérez, L., Galván, B., Mallol, C. and Hernández, C.M., 2022. An instance of Neanderthal mobility dynamics: a lithological approach to the flint assemblage from stratigraphic unit viii of El Salt rockshelter (Alcoi, eastern Iberia). *Journal of Archaeological Science: Reports*, 44, p.103544.
62. Frahm, E., Adler, D.S., Gasparyan, B., Luo, B., Mallol, C., Pajović, G., Tostevin, G.B., Yeritsyan, B. and Monnier, G., 2022. Every contact leaves a trace: Documenting contamination in lithic residue studies at the Middle Palaeolithic sites of Lusakert Cave 1 (Armenia) and Crvena Stijena (Montenegro). *PloS one*, 17(4), p.e0266362.
61. Slimak, L. et al. 2022. Modern human incursion into Neanderthal territories 54,000 years ago at Mandrin, France, *Science advances*, 8(6), p. eabj9496. <https://doi.org/10.1126/sciadv.abj9496>
60. Ferro-Vázquez, C., Mallol, C. and Aldeias, V., 2021. Simply red? A systematic colour-based method for identifying archaeological fires. *Geoarchaeology*. <https://doi.org/10.1002/gea.21886>
59. Lambrecht, G., Rodríguez de Vera, C., Jambrina-Enríquez, M., Crevecoeur, I., Gonzalez-Urquijo, J., Lazuen, T., Monnier, G., Pajović, G., Tostevin, G. and Mallol, C., 2021. Characterisation of charred organic matter in micromorphological thin sections by means of Raman spectroscopy. *Archaeological and anthropological sciences*, 13(1), pp.1-15. <https://doi.org/10.1007/s12520-020-01263-3>
58. Marin-Monfort, M.D., Fagoaga, A., García-Morato, S., Sánchez, F.J.R., Mallol, C., Hernández, C., Galván, B. and Fernández-Jalvo, Y., 2021. Contribution of small mammal taphonomy to the last Neanderthal occupations at the El Salt site (Alcoi, southeastern Spain). *Quaternary Research*, pp.1-17. <https://doi.org/10.1017/qua.2021.4>
57. Connolly, R., Jambrina-Enríquez, M., Herrera-Herrera, A.V., & Mallol, C. 2021. Investigating Hydrogen Isotope Variation during Heating of n-Alkanes under Limited Oxygen Conditions: Implications for Palaeoclimate Reconstruction in Archaeological Settings. *Molecules* 26(7): p.1830. <http://dx.doi.org/10.3390/molecules26071830>.
56. Marquina-Blasco, R., Fagoaga, A., Crespo, V.D., Bailon, S., Mallol, C., Hernández, C.M., Galván, B., Ruiz-Sánchez, F.J. 2021. Amphibians and reptiles as palaeoenvironmental proxies during the Late Pleistocene (MIS3): The case of Stratigraphic Unit V of El Salt, Alcoi, Spain, *Palaeogeography, Palaeoclimatology, Palaeoecology*, 110372. <https://doi.org/10.1016/j.palaeo.2021.110372>.
55. Rampelli, S., Turróni, S., Mallol, C., Hernandez, C., Galván, B., Sistiaga, A., Biagi, E., Astolfi, A., Brigidi, P., Benazzi, S. and Lewis, C.M., 2021. Components of a Neanderthal gut microbiome recovered from fecal sediments from El Salt. *Communications biology*, 4(1), pp.1-10. <https://doi.org/10.1038/s42003-021-01689-y>
54. Bradák, B., Carrancho, Á., Herrejón Lagunilla, Á., Villalaín, J. J., Monnier, G. F., Tostevin, G., Mallol, C. & Borovinić, N. 2021. Magnetic fabric and archaeomagnetic analyses of anthropogenic ash horizons in a cave

sediment succession (Crvena Stijena site, Montenegro). *Geophysical Journal International*, 224(2), 795-812. <https://doi.org/10.1093/gji/ggaa461>

53. Castilla-Beltrán, A., Duarte, I., De Nascimento, L., Fernández-Palacios, J. M., Romeiras, M., Whittaker, R. J., Jambrina-Enríquez, M., Mallol, C., Edwards, M. & Nogué, S. 2020. Using multiple palaeoecological indicators to guide biodiversity conservation in tropical dry islands: The case of São Nicolau, Cabo Verde. *Biological Conservation*, 242, 108397. <https://doi.org/10.1016/j.biocon.2019.108397>

52. Cullen, V. L., Smith, V. C., Tushabramishvili, N., Mallol, C., Dee, M., Wilkinson, K. N., & Adler, D. S. 2020. A revised AMS and tephra chronology for the Late Middle to Early Upper Paleolithic occupations of Ortvale Klde, Republic of Georgia. *Journal of Human Evolution*, 151, 102908. <https://doi.org/10.1016/j.jhevol.2020.102908>

51. de Vera, C. R., Herrera-Herrera, A. V., Jambrina-Enríquez, M., Sossa-Ríos, S., González-Urquijo, J., Lazuen, T., & Mallol, C. 2020. Micro-contextual identification of archaeological lipid biomarkers using resin-impregnated sediment slabs. *Scientific reports*, 10(1), 1-14. <https://doi.org/10.1038/s41598-020-77257-x>

50. Herrera-Herrera, A. V., Mohamed-Rodríguez, N., Socas-Rodríguez, B., & Mallol, C. 2020. Development of a QuEChERS-based method combined with gas chromatography-mass spectrometry for the analysis of alkanes in sediments. *Microchemical Journal*, 104774. <https://doi.org/10.1016/j.microc.2020.104774>

49. Lambrecht, G., & Mallol, C. 2020. Autofluorescence of experimentally heated bone: Potential archaeological applications and relevance for estimating degree of burning. *Journal of Archaeological Science: Reports*, 31, 102333. <https://doi.org/10.1016/j.jasrep.2020.102333>

48. Lambrecht, G., de Vera, C. R., Jambrina-Enríquez, M., Crevecoeur, I., Gonzalez-Urquijo, J., Lazuen, T., & Mallol, C. 2021. Characterisation of charred organic matter in micromorphological thin sections by means of Raman spectroscopy. *Archaeological and Anthropological Sciences*, 13(1), 1-15. <https://doi.org/10.1007/s12520-020-01263-3>

47. Leierer, L., Alonso, Á. C., Pérez, L., Lagunilla, Á. H., Herrera-Herrera, A. V., Connolly, R., Jambrina-Enríquez, M., Hernández, C. & Mallol, C. 2020. It's getting hot in here—Microcontextual study of a potential pit hearth at the Middle Paleolithic site of El Salt, Spain. *Journal of Archaeological Science*, 123, 105237. <https://doi.org/10.1016/j.jas.2020.105237>

46. Mallol, C. Fernández Aceituno, J., Arnav, R 2020. Soil micromorphological image classification using deep learning: The porosity parameter. *Applied Soft Computing*, in press, Elsevier, 18/01/2021. <https://doi.org/10.1016/j.asoc.2021.107093>

45. Mayor, A., Hernández, C. M., Machado, J., Mallol, C., & Galván, B. 2020. On identifying Palaeolithic single occupation episodes: archaeostratigraphic and technological approaches to the Neanderthal lithic record of stratigraphic unit xa of El Salt (Alcoi, eastern Iberia). *Archaeological and Anthropological Sciences*, 12(4), 1-29. <https://doi.org/10.1007/s12520-020-01022-4>

44. Mallol, C., Hernández, C., Mercier, N., Falguères, C., Carrancho, Á., Cabanes, D., Vidal-Matutano, P., Connolly, R., Pérez, L., Mayor, A. and Arous, E.B., 2019. Fire and brief human occupations in Iberia during MIS 4: Evidence from Abric del Pastor (Alcoy, Spain). *Scientific reports*, 9(1), pp.1-11. <https://doi.org/10.1038/s41598-019-54305-9>

43. Herrejón Lagunilla, Á., Carrancho, Á., Villalaín, J.J., Mallol, C. and Hernández, C.M., 2019. An experimental approach to the preservation potential of magnetic signatures in anthropogenic fires. *PloS one*, 14(8), p.e0221592. <https://doi.org/10.1371/journal.pone.0221592>

42. Leierer, L., Jambrina-Enríquez, M., Herrera-Herrera, A.V., Connolly, R., Hernández, C.M., Galván, B. and Mallol, C., 2019. Insights into the timing, intensity and natural setting of Neanderthal occupation from the geoarchaeological study of combustion structures: A micromorphological and biomarker investigation of El Salt, unit Xb, Alcoy, Spain. *PloS one*, 14(4), p.e0214955. <https://doi.org/10.1371/journal.pone.0214955>
41. Buonasera, T., Herrera-Herrera, A.V. and Mallol, C., 2019. Experimentally derived sedimentary, molecular, and isotopic characteristics of bone-fueled hearths. *Journal of Archaeological Method and Theory*, 26(4), pp.1327-1375. <https://doi.org/10.1007/s10816-019-09411-3>
40. Connolly, R., Jambrina-Enríquez, M., Herrera-Herrera, A.V., Vidal-Matutano, P., Fagoaga, A., Marquina-Blasco, R., Marin-Monfort, M.D., Ruiz-Sánchez, F.J., Laplana, C., Bailon, S. and Pérez, L., 2019. A multiproxy record of palaeoenvironmental conditions at the Middle Palaeolithic site of Abric del Pastor (Eastern Iberia). *Quaternary Science Reviews*, 225, p.106023. <https://doi.org/10.1016/j.quascirev.2019.106023>
39. Jambrina-Enríquez, M., Herrera-Herrera, A.V., de Vera, C.R., Leierer, L., Connolly, R. and Mallol, C., 2019. n-Alkyl nitriles and compound-specific carbon isotope analysis of lipid combustion residues from Neanderthal and experimental hearths: identifying sources of organic compounds and combustion temperatures. *Quaternary Science Reviews*, 222, p.105899. <https://doi.org/10.1016/j.quascirev.2019.105899>
38. Brittingham, A., Hren, M.T., Hartman, G., Wilkinson, K.N., Mallol, C., Gasparyan, B. and Adler, D.S., 2019. Geochemical evidence for the control of fire by Middle palaeolithic Hominins. *Scientific reports*, 9(1), pp.1-7.. <https://doi.org/10.1038/s41598-019-51433-0>
37. Mallol, C. and Henry, A., 2018. Ethnoarchaeology of fire and combustion residues: Current approaches. In *Ethnoarchaeology: Journal of Archaeological, Ethnographic and Experimental Studies*, vol. 10 (2). Special Issue. Francis & Taylor. <https://www.tandfonline.com/toc/yeth20/10/2>
36. Herrera-Herrera, A.V. and Mallol, C., 2018. Quantification of lipid biomarkers in sedimentary contexts: Comparing different calibration methods. *Organic geochemistry*, 125, pp.152-160. <https://doi.org/10.1016/j.orggeochem.2018.07.009>
35. Fagoaga, A., Blain, H. A., Marquina-Blasco, R., Laplana, C., Sillero, N., Hernández, C. M., Mallol, C. & Ruiz-Sánchez, F. J. 2019. Improving the accuracy of small vertebrate-based palaeoclimatic reconstructions derived from the Mutual Ecogeographic Range. A case study using geographic information systems and UDA-ODA discrimination methodology. *Quaternary Science Reviews*, 223, 105969. <https://doi.org/10.1016/j.quascirev.2019.105969>
34. Fagoaga, A., Laplana, C., Marquina-Blasco, R., Machado, J., Marin-Monfort, M. D., Crespo, V. D., Hernández Gómez, C. Mallol, C., Galván, B. & Ruiz-Sánchez, F. J. 2019. Palaeoecological context for the extinction of the Neanderthals: A small mammal study of Stratigraphic Unit V of the El Salt site, Alcoi, eastern Spain. *Palaeogeography, Palaeoclimatology, Palaeoecology*, 530, 163-175. <https://doi.org/10.1016/j.palaeo.2021.110221>
33. Jambrina-Enríquez, M., Herrera-Herrera, A.V. and Mallol, C., 2018. Wax lipids in fresh and charred anatomical parts of the *Celtis australis* tree: Insights on paleofire interpretation. *Organic Geochemistry*, 122, pp.147-160. <https://doi.org/10.1016/j.orggeochem.2018.05.017>
32. Mallol, C. and Henry, A., 2017. Ethnoarchaeology of Paleolithic fire: methodological considerations. *Current Anthropology*, 58(S16), pp.S217-S229. <https://doi.org/10.1086/691422>

31. Mallol, C. and Mentzer, S.M., 2017. Contacts under the lens: Perspectives on the role of microstratigraphy in archaeological research. *Archaeological and anthropological sciences*, 9(8), pp.1645-1669.
<https://doi.org/10.1007/s12520-015-0288-6>
30. Pérez, L., Sanchis, A., Hernández, C.M., Galván, B., Sala, R. and Mallol, C., 2017. Hearths and bones: An experimental study to explore temporality in archaeological contexts based on taphonomical changes in burnt bones. *Journal of Archaeological Science: Reports*, 11, pp.287-309.
<https://doi.org/10.1016/j.jasrep.2016.11.036>
29. Égüez, N., Mallol, C., Martín-Socas, D., Camalich, M.D. 2016. Radiometric dates and micromorphological evidence for synchronous domestic activity and sheep penning in a Neolithic cave: Cueva de El Toro (Málaga, Antequera, Spain). *Archaeological and Anthropological Sciences*, 8 (1), pp. 107-123.
<https://doi.org/10.1007/s12520-014-0217-0>
28. Vidal-Matutano, P., Hernández, C.M., Galván, B. and Mallol, C., 2015. Neanderthal firewood management: evidence from stratigraphic unit IV of Abric Del Pastor (eastern Iberia). *Quaternary Science Reviews*, 111, pp.81-93. <https://doi.org/10.1016/j.quascirev.2015.01.010>
27. Adler, D.S., Wilkinson, K.N., Blockley, S., Mark, D.F., Pinhasi, R., Schmidt-Magee, B.A., Nahapetyan, S., Mallol, C., Berna, F., Glauberman, P.J. and Raczynski-Henk, Y., 2014. Early Levallois technology and the Lower to Middle Paleolithic transition in the Southern Caucasus. *Science*, 345(6204), pp.1609-1613.
<https://doi.org/10.1126/science.1256484>
26. Nigst, P.R., Haesaerts, P., Damblon, F., Frank-Fellner, C., Mallol, C., Viola, B., Götzinger, M., Niven, L., Trnka, G. and Hublin, J.J., 2014. Early modern human settlement of Europe north of the Alps occurred 43,500 years ago in a cold steppe-type environment. *Proceedings of the National Academy of Sciences*, 111(40), pp.14394-14399 <https://doi.org/10.1073/pnas.1412201111>
25. Sistiaga, A., Mallol, C., Galván, B., Summons, R. 2014. The Neanderthal meal: a new perspective using faecal biomarkers. *PloS one*. 9 - 6, pp. e101045 - e101045. <https://doi.org/10.1371/journal.pone.0101045>
24. Garralda, M.D., Galván, B., Hernández, C.M., Mallol, C., Gómez, J.A. and Maureille, B., 2014. Neanderthals from El Salt (Alcoy, Spain) in the context of the latest Middle Palaeolithic populations from the southeast of the Iberian Peninsula. *Journal of Human Evolution*, 75, pp.1-15.
<https://doi.org/10.1016/j.jhevol.2014.02.019>
23. Galván, B., Hernandez, C.M., Mallol, C., Mercier, N., Sistiaga, A. and Soler, V., 2014. New evidence of early Neanderthal disappearance in the Iberian Peninsula. *Journal of Human Evolution*, 75, pp.16-27.
<https://doi.org/10.1016/j.jhevol.2014.06.002>
22. Machado, J., Hernández, C.M., Mallol, C. and Galván, B., 2013. Lithic production, site formation and Middle Palaeolithic palimpsest analysis: in search of human occupation episodes at Abric del Pastor Stratigraphic Unit IV (Alicante, Spain). *Journal of Archaeological Science*, 40(5), pp.2254-2273.
<https://doi.org/10.1016/j.jas.2013.01.002>
21. Mallol, C., Hernández, C.M., Cabanes, D., Machado, J., Sistiaga, A., Pérez, L. and Galván, B., 2013. Human actions performed on simple combustion structures: an experimental approach to the study of Middle Palaeolithic fire. *Quaternary International*, 315, pp.3-15. <https://doi.org/10.1016/j.quaint.2013.04.009>
20. Mallol, C., Hernández, C.M., Cabanes, D., Sistiaga, A., Machado, J., Rodríguez, Á., Pérez, L. and Galván, B., 2013. The black layer of Middle Palaeolithic combustion structures. Interpretation and archaeostratigraphic implications. *Journal of archaeological science*, 40(5), pp.2515-2537.
<https://doi.org/10.1016/j.jas.2012.09.017>

19. Mallol, C., Hernández, C.M. and Machado, J., 2012. The significance of stratigraphic discontinuities in Iberian Middle-to-Upper Palaeolithic transitional sites. *Quaternary International*, 275, pp.4-13.
<https://doi.org/10.1016/j.quaint.2011.07.026>
18. Mallol, C., VanNieuwenhuyse, D. and Zaidner, Y., 2011. Depositional and Paleoenvironmental setting of the Bizat Ruhama early pleistocene archaeological assemblages, Northern Negev, Israel: a microstratigraphic perspective. *Geoarchaeology*, 26(1), pp.118-141. <https://doi.org/10.1002/gea.20339/full>
17. Zaidner, Y., Yeshurun, R. and Mallol, C., 2010. Early Pleistocene hominins outside of Africa: recent excavations at Bizat Ruhama, Israel. *PaleoAnthropology*, 2010, pp.162-195.
<https://doi.org/10.4207/PA.2010.ART38>
16. Mallol, C., Cabanes, D. and Baena, J., 2010. Microstratigraphy and diagenesis at the upper Pleistocene site of Esquilleu Cave (Cantabria, Spain). *Quaternary International*, 214(1-2), pp.70-81.
<https://doi.org/10.1016/j.quaint.2009.10.018>
15. Cabanes, D., Mallol, C., Expósito, I. and Baena, J., 2010. Phytolith evidence for hearths and beds in the late Mousterian occupations of Esquilleu cave (Cantabria, Spain). *Journal of Archaeological Science*, 37(11), pp.2947-2957. <https://doi.org/10.1016/j.jas.2010.07.010>
14. Gómez de la Rua, D., Mallol, C., Galván, B. and Gómez, C.H., 2010. Una visión geoarqueológica general del yacimiento musteriense de El Salt (Alcoy, Alicante) a partir de la micromorfología de suelos. *Recerques del Museu d'Alcoi*, 19, pp.19-32. ISSN 1135-2663
13. Mallol, C., Mentzer, S.M. and Wrinn, P.J., 2009. A micromorphological and mineralogical study of site formation processes at the late Pleistocene site of Obi-Rakhmat, Uzbekistan. *Geoarchaeology: An International Journal*, 24(5), pp.548-575. <https://doi.org/10.1002/gea.20280>
12. Nigst, P.R., Viola, T.B., Haesaerts, P., Blockley, S., Damblon, F., Frank, C., Fuchs, M., Götzinger, M., Hambach, U., Mallol, C. and Moreau, L., 2008. New research on the Aurignacian of Central Europe: A first note on the 2006 fieldwork at Willendorf II. *Quartär*, 55, pp.9-15. DOI: halshs-00520996
11. Mallol, C. and Roura, E.C.I., 2008. The Collapse of Gran Dolina cave, Sierra de Atapuerca, Spain: Site formation processes of layer TD10-1. *Geoarchaeology: an International Journal*, 23(1), pp.13-41.
<https://doi.org/10.1002/gea.20206>
10. Mallol, C., Marlowe, F.W., Wood, B.M. and Porter, C.C., 2007. Earth, wind, and fire: ethnoarchaeological signals of Hadza fires. *Journal of Archaeological Science*, 34(12), pp.2035-2052. ISSN 0305-4403
<https://doi.org/10.1016/j.jas.2007.02.002>
9. Marriner, H. and Mallol, C. 2006. El Esqueleto de La Pradera. Un Posible Caso de Muerte por Trauma. *Antropologando*. 15, pp. 13 - 34.
8. Mallol, C., 2006. What's in a beach? Soil micromorphology of sediments from the Lower Paleolithic site of 'Ubeidiya, Israel. *Journal of human evolution*, 51(2), pp.185-206. ISSN 0047-2484
<https://doi.org/10.1016/j.jhevol.2006.03.002>
7. Arpin, T.L., Mallol, C. and Goldberg, P., 2002. Short contribution: A new method of analyzing and documenting micromorphological thin sections using flatbed scanners: Applications in geoarchaeological studies. *Geoarchaeology: An International Journal*, 17(3), pp.305-313. ISSN 0883-6353

6. Marks, A.E., Monigal, K., Chabai, V.P., Brugal, J.P., Goldberg, P., Hockett, B., Pemán, E., Elorza, M. and Mallol, C., 2002. Galeria Pesada, Portuguese Estremadura: 1997-1999. *Arqueólogo Português*. 20 - 4, pp. 3 – 38.
5. Marks, A.E., Brugal, J.P., Chabai, V.P., Monigal, K., Goldberg, P., Hockett, B., Peman, E., Elorza, M. and Mallol, C., 2002. Le gisement pléistocène moyen de Galeria Pesada (Estrémadure, Portugal): premiers résultats. *PALEO. Revue d'archéologie préhistorique*, (14), pp.77-100. ISSN 2101-0420
4. García-Antón Trassiera, M.D., Morant Sabater, N. and Mallol Duque, C., 2002. L'approvisionnement en matières premières lithiques au Pléistocène inférieur et moyen dans la Sierra de Atapuerca, Burgos (Espagne). *L'Anthropologie* (Paris), 106(1), pp.41-55. ISSN 0003-5521
3. Mallol, C., 1999. The selection of lithic raw materials in the Lower and Middle Pleistocene levels TD6 and TD10A of Gran Dolina (Sierra de Atapuerca, Burgos, Spain). *Journal of Anthropological Research*, 55(3), pp.385-407. ISSN 00917710
2. García-Antón, M.D. and Mallol, C., 1998. Nuevos datos sobre el aprovisionamiento de materias primas en el Pleistoceno Medio e Inferior de la Sierra de Atapuerca, Burgos. *Rubricatum: revista del Museu de Gavà*, pp.53-53. ISSN 2385-5088
1. Mallol, C., 1998. Paleoeconomía sistémica: modelo teórico para el estudio de recursos líticos en la Prehistoria. *Rubricatum: revista del Museu de Gavà*, (2), pp.15-20. ISSN 2385-5088

Book Chapters

11. Mallol, C. & Goldberg, P., 2017. Cave and Rockshelter Sediments. In: Nicosia, C. and Stoops, G. eds., *Archaeological soil and sediment micromorphology*. John Wiley & Sons, pp. 359 - 377. ISBN 978-1-118-94105-8
10. Mallol, C., Mentzer, S., Miller, C., 2017. Combustion Features. In: Nicosia, C. and Stoops, G. eds., *Archaeological soil and sediment micromorphology*. John Wiley & Sons, pp. 299 - 326. ISBN 978-1-118-94105-8
9. Mallol, C. 2017. 'Ubeidiya. In: Gilbert, A.S., Goldberg, P., Holliday, V.T., Mandel, R.D. and Sternberg, R.S. eds., *Encyclopedia of geoarchaeology*. Springer Netherlands, pp. 989 - 992. ISBN 978-94-007-4827-9
8. Mallol, C. 2017. Atapuerca. In: Gilbert, A.S., Goldberg, P., Holliday, V.T., Mandel, R.D. and Sternberg, R.S. eds., *Encyclopedia of geoarchaeology*. Springer Netherlands, pp. 62-64. ISBN 978-94-007-4827-9
7. Machado, J., Hernández, C., Mallol, C., 2015. Insights into Middle Palaeolithic Settlement Patterns: The Palimpsest Problem. In: Conard, N. ed., *Settlement Dynamics of the Middle Paleolithic and Middle Stone Age*. IV, Kerns Verlag Tübingen, pp. 361 - 382. ISBN 978-3-935751-00-1
6. Mallol, C., 2015. Aplicaciones en Geoarqueología. In: Loaiza, J.C. ed., *Manual de Micromorfología de suelos y técnicas complementarias*. Institución Universitaria Pascual Bravo, Medellín, pp. 321 - 352. ISBN 9789585851030
5. Adler, D.S., Yeritsyan, B., Wilkinson, K., Pinhasi, R., Bar-Oz, G., Nahapetyan, S., Mallol, C., Berna, F., Bailey, R., Schmidt, A., Glauberman, P., Wales, N., Gasparyan, B., 2012. The Hrazdan gorge Palaeolithic project, 2008-2009. *Archaeology of Armenia in Regional Context. Proceedings of the International Conference dedicated to the 50th Anniversary of the Institute of Archaeology and Ethnography*. Held on September 15-17, 2009 in Yerevan. Gitutyun, Yerevan, pp. 22 - 39. ISBN 9785808009691

4. Goldberg, P., Meignen, L., Mallol, C., 2009. Geoarchaeology, Site Formation and Transitions. In: Lieberman, D. ed., Transitions in Prehistory: Essays in Honor of Ofer Bar-Yosef. Oxbow, pp. 431 – 443. ISBN 978-1842173404
3. Carbonell, E., Vaquero, M., Maroto, J., Rando, J.M., Mallol, C., 2000. A Geographic Perspective on the Middle to Upper Palaeolithic Transition in the Iberian Peninsula. In: Bar-Yosef, O. and Pilbeam, D. eds., The Geography of Neandertals and Modern Humans in Europe and the Greater Mediterranean, 8, Peabody Museum Press, pp. 5 - 31. ISBN 9780873659581
2. Garcia-Antón, M.D., Mallol, C., Morant, N., Ollé, A., Sala, R., 1998. Gestión del sílex de la Sierra de Atapuerca en el Pleistoceno Inferior y Medio. Los recursos abióticos en la prehistoria. 2, Universitat de Valencia, pp. 39 - 54. ISBN 84-370-3450-7
1. Gabarró, J.M., Garcia-Antón, M.D., Mallol, C., 1996. Análisis de captación de las materias primas líticas en el conjunto técnico de Modo 2 de Galería. Atapuerca: ocupaciones humanas y paleoecología del yacimiento de Galería. Junta de Castilla y León, pp. 283 - 298. ISBN 9788478468768

Invited and Keynote Lectures

- 2022 In pursuit of the organic archaeological record. Micromorphology meets lipid analysis, Archaeological Research Center, UC Berkeley
- 2022 What lies under the Surface and how can we excavate it?, Far Western Inc., Davis, CA.
- 2022 What lies under the Surface and can we excavate it properly?, European Association of Archaeologists Meeting, Budapest
- 2020 Finally! Lipids as part of the archaeological record!...and they're in the sediment!, Simon Fraser University
- 2019 El uso de biomarcadores en estudios geoarqueológicos y paleoambientales, Universidad Nacional, Medellín (Colombia)
- 2018 Investigando la materia orgánica arqueológica a escala microscópica y molecular, Universidad de Cantabria
- 2018 La materia orgánica a escala microscópica y molecular, Microhistorias de la tierra: Geoarqueología de alta resolución en la investigación sobre las sociedades del pasado, University of Granada
- 2017 What is that Black Stuff? Micro-contextual Investigations of Charred Organic Matter in the Archaeological Sedimentary Record, Rutgers University
- 2015 Ethnoarchaeological approaches to Paleolithic fire, Fire and The Genus Homo Symposium (Wenner-Gren Foundation)
- 2015 Desafiando a Indiana Jones: Roles y retos de la mujer arqueóloga, Jornadas sobre científicas y tecnólogas: promoviendo nuevas vocaciones, University of La laguna
- 2014 Micromorfología de hogares simples: Una llamada a la experimentación, El Foc i la Prehistòria: una Visió des de la Geoarqueologia, Universitat de Barcelona
- 2014 Microstratigraphic investigations at El Salt Middle Palaeolithic site, Alcoy, Spain, Max Planck Institute for Evolutionary Anthropology
- 2012 Palaeolithic Archaeology from an Interdisciplinary Microstratigraphic Perspective, International Geoarchaeology Workshop: Bridging Gaps. Integrating Geosciences within Archaeological Research, University of Tübingen
- 2011 Geoarchaeological investigations at Willendorf II, Time for the Palaeolithic.

- Radiocarbon dating the Middle to Upper Palaeolithic Transition of Europe, Oxford University
- 2010 Site formation and the Middle-to-Upper Palaeolithic Transition from a microstratigraphic Perspective, Workshop on site formation and postdepositional processes in Archaeology, University of Barcelona
- 2008 Processus taphonomiques des éléments et structures de combustion étudiés en contexte ethnographique, Taphonomie des résidus organiques brûlés et des structures de combustion, Université de Nice Sophia Antipolis
- 2007 L'interface vestiges-sédiment à l'échelle microscopique: une fenêtre à quelques processus taphonomiques, Approches pluridisciplinaires en taphonomie, Maison Méditerranée des sciences de l'Homme
- 2005 A microscopic view of hominin occupation surfaces at TD10, Atapuerca, Spain, University of Haifa (Israel)
- 2005 Approaching Human Occupation Contexts through Soil Micromorphology", Department of Anthropology, University of Arizona

Conferences

Regular Participation since 1998:

- The International Workshop on Archaeological Soil Micromorphology (WASM)
- The Society of American Archaeology Meeting (SAA)
- The International Union for Prehistoric and Protohistoric Sciences (UISPP)
- Developing International Geoarchaeology Conference (DIG)

Occasional Participation:

- Goldschmidt Conference
- International Meeting on Organic Geochemistry (IMOG)
- European Geosciences Union General Assembly (EGU)
- International Union for Quaternary Research (INQUA)
- World Archaeological Congress (WAC)
- European Society for Human Evolution Meeting (ESHE)
- Paleoanthropology Society of America Annual Meeting

Organizer:

- 2017 The 1st Ethnoarchaeology of Fire Symposium, University of La Laguna (2017)
- 2008 Géoarchéologie et Taphonomie, Maison Méditerranée des sciences de l'Homme (2008)
- 2007 Lecture Morphodynamique des unités archéo-stratigraphiques: Implications Palethnographiques et Paléoenvironnementales, Musée de Préhistoire Tautavel (2007)