

MAYORAL, Alfredo. 33 years old.

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RESEARCH TOPICS – Geoarchaeology, Geomorphology, Palaeoenvironment, Socio-environmental interaction, Holocene anthropogenic impact, (Proto-) Urbanization, Landscape evolution, Wetlands and Hydrosystems.

MAIN SKILLS- Stratigraphy, Sedimentology, Palaeopedology, Geochemistry, Soil and Sediment Micromorphology, Cartography, GIS, Remote Sensing.

PROFESSIONAL EXPERIENCE

- (Since 1/02/2020) **Postdoctoral researcher** at the ICAC-Catalan Institute of Classical Archaeology, Tarragona, Spain [**Current position**]
- (1/07/2018-31/12/2019) **Postdoctoral researcher** at GEOLAB UMR 6042 UCA-CNRS, Clermont-Ferrand, France. Funding by the Conseil Départemental du Puy de Dôme.

EDUCATION

- (01/02/2014-05/07/2018) **PhD in Geography**, University Clermont Auvergne, GEOLAB UMR 6042 UCA-CNRS and EVS UMR5600 UNIV. LYON2-CNRS. “Analysis of sensitivity to anthropo-climatic forcing of the protohistoric and antiquity landscapes of the volcanic plateau of Corent (Auvergne) and its margins: a multi-proxy geoarchaeological approach”, 372 pp. Funding by the Conseil Régional d’Auvergne. Awarded with jury’s congratulations.
- (01/09/2012-19/06/2013) **MSc in Territory Planning and Sustainable Development**, Universidad Autónoma de Madrid (9,26/10 or 3,17/4).
- (1/09/2008-1/09/2012) **Degree in Geography**, head of the promotion (9,18/10 or 3,16/4). Universidad Autónoma de Madrid & Universidad de Chile (6 months).

FELLOWSHIPS & AWARDS

- (1/01/2022-) **36 month JdC-I post-doctoral fellowship** at the ICAC. Success rate 18%. (91.500€)
- (1/11/2021-31/12/2021) **2 month post-doctoral fellowship** at the ICAC (5.166€)
- (1/02/2020-31/03/2021) **14 month post-doctoral fellowship** at the ICAC (36.166€)
- (01/07/2018-31/12/2019) **18 month post-doctoral fellowship** at the Univ. Clermont Auvergne (60.000€)
- (2015) **Spanish National Degree Award-Geography** (1st price); year 2011- 2012 (3.300€)
- (1/02/2014-31/01/2017) **3 yr. PhD contract** in the University Clermont Auvergne (90.000€)
- (1/11/2013-31/10/2014) **Third degree research starting grant**, Universidad Autónoma de Madrid (4.800€). Rejected (after 2 months) in favor of a PhD contract in the University Clermont Auvergne
- (1/11/2012-31/10/2013) **Third degree research starting grant**, Universidad Autónoma de Madrid (4.800€)
- (1/08/2011-31/01/2012) **CEAL study grant** at the University of Chile (funding Banco Santander, 4.600€)
- (2011) **Madrid Region Academic Excellence Award** (4.500€)
- (2010, renewed in 2011) **Academic Performance Award** for relatives of members, Colegio de Médicos de Madrid (600€)

WORKSHOPS & POST-GRADUATE COURSES

- Workshop of Archaeological Soil Micromorphology, Nancy, 11-12 april 2019

- Statistics with R, sept. 2016
- Geomorphology and Landscape evolution of the Sierra de Albarracín, Spain. Field course, sept. 2013
- Cartographic design (40 h), online course, AFIM, sept. 2013

TEACHING ACTIVITIES

- University of Tours François-Rabelais. MA II Histoire, Civilisations, Patrimoine ; Parcours Métiers de l'Archéologie et Archéomatique : *Landscape Archaeology*. Invited lecturer. Oct. 2018.
- University Clermont Auvergne. MA II Geo-environment: *Environmental trajectories*. Invited lecturer. Sept. 2018 & Oct. 2019.
- University Clermont Auvergne. MA I Geo-Environment: Field course (Geoarchaeology). Invited lecturer. Oct. 2018.
- Universidad Autónoma de Madrid. MA in archaeology & heritage: *Geoarchaeology and Geology*. Invited lecturer. Feb. 2015.

ACADEMIC MENTORING ACTIVITIES & ADVANCED TRAINING

- ICAC. Member of the supervisory and training team of the MSCA Horizon Europe Action IARCHMAP. Intelligent Archaeological Mapping of Long-Term Settlement in Punjab. Grant n° 101067031 HORIZON-MSCA-2021-PF-01. PI Dr Aftab Alam. 2023-2025
- ICAC. Member of the supervisory and training team of the MSCA Horizon Europe Action SIGNATURE. Mapping endangered cultural soils in post-conflict regions through Big Earth Observation Data, artificial intelligence and geoarchaeological signatures. Grant n° 101067100 HORIZON-MSCA-2021-PF-01. PI Dr Sayantani Neogi. 2023-2025
- ICAC. Member of the supervisory and training team of the PCI Project RIVERINE: Mapping archaeological mounds and long-term socio-ecological transformations in riverine monsoonal plains - Proyectos de Cooperación Internacional. Agencia Estatal de Investigación, PCI2021-122026-2B. PI. F. C. Conesa. 2022-2024
- ICAC. Member of the consulting team of the MSCA Horizon Europe Action UNDERTHESANDS. Ancient irrigation detection and analysis using advanced remote sensing methods. Grant n° 101062705 HORIZON-MSCA-2021-PF-01. PI. Dr. Nazarij Buławka. 2022-2024
- URV & ICAC. Member of the training team (geoarchaeology) of the PhD student Giannis Apostolou (PhD in Archaeological Survey and Landscape Archaeology), dirs. H. Orengo & A. García, 2020-
- UAB & ICAC. Master thesis mentoring (Remote Sensing & Geomorphology), co-direction with A. Garcia, Msc in Remote Sensing and GIS, 15/05/2022-6/09/2022 (Student: Pau Canudas)
- University Clermont Auvergne. Master thesis mentoring (geoarchaeology), co-direction with E. Defive, MA II Geo-Environment, 1/02/2022-8/09/2022 (Student: Anaïs Martres)
- University Clermont Auvergne. Master thesis mentoring (geoarchaeology), co-direction with E. Defive, MA II Geo-Environment, 1/02/2019-2/09/2019 (Student: Nicolas Tissot, awarded with high qualification, now PhD student)

PARTICIPATION IN RESEARCH PROJECTS (directed/co-directed projects and sections of projects in Bold)

- (2023-2025) IARCHMAP. Intelligent Archaeological Mapping of Long-Term Settlement in Punjab. MSCA Horizon Europe Action. Grant n° 101067031 HORIZON-MSCA-2021-PF-01. PI Dr Aftab Alam, Supervisors A. Garcia-Molsosa and H. Orengo. 2023-2025
- (2023-2025) SIGNATURE. Mapping endangered cultural soils in post-conflict regions through Big Earth Observation Data, artificial intelligence and geoarchaeological signatures. MSCA Horizon Europe Action. Grant n° 101067100 HORIZON-MSCA-2021-PF-01. PI Dr Sayantani Neogi, Supervisors F. Conesa and H. Orengo. 2023-2025
- **(2022-25) TranScapes: Transported Mediterranean landscapes: diachronic integrated study of socio-environmental interactions and land-use changes at both sides of the Mediterranean. PIs. J-M. Palet & A. Mayoral.** Funding Spanish Ministry of Science. Code: PID2021-127064NB-I00 (263.008€ including a FPI doctoral grant)

- (2022-25) **Arqueologia del paisatge agrari, ocupació del territori i interaccions socioambientals al Baix Ter.** PIs J-M Palet & A. Mayoral. Funding Generalitat de Catalunya. Ref: ARQ001SOL-147-2022. (30.595,99€), including yearly archaeological survey and excavation campaigns.
- (2022-25) Arqueologia de l'alta muntanya a les capçaleres del Segre - Ter (Cerdanya-Ripollès): territori i paisatge. PIs L. Colominas & A. Carbonell. Funding Gen. de Catalunya. Ref: ARQ001SOL-157-2022. **Responsible for geoarchaeology.**
- (2022-25) Pastoralisme i explotació del medi natural al Montseny Occidental en la transició de l'Antiguitat al món medieval. Recerca arqueològica, transferència de coneixement i proposta de socialització. PIs A. Gallego-Valle & V. Pescini. Funding Generalitat de Catalunya. Ref: ARQ001SOL-207-2022. **Responsible for geoarchaeology.**
- (2022-) MoundArch: Testing large-scale detection of mounded archaeological features and geomorphological signatures in the cultural landscapes of Northern Greece. Project supported by the German Space Agency (DLR) with TanDEM-X satellite data PI: A. García-Molsosa. **Responsible for geomorphology and geoarchaeology.**
- (2022-2024) **Landscape Geoarchaeology. Applications in Mediterranean landscapes of Greece, Spain and France.** PI A. Mayoral, co-PI H. Orengo. Juan de la Cierva Incorporación IJC2020-045609-I research project (6.300€). Funding Spanish Ministry of Science.
- (2022-2024) RIVERINE: Mapping archaeological mounds and long-term socio-ecological transformations in riverine monsoonal plains. PCI, Proyectos de Cooperación Internacional. Agencia Estatal de Investigación, PCI2021-122026-2B. PI. F. C. Conesa. 2022-2024
- (2022) IOLE. Impact des activités humaines sur la biodiversité de La Narse de la Nouvelle (Planète de St Flour) sur le temps long : approche paléoenvironnementale interdisciplinaire. PI Aude Beauger. Funded by the Fédération des Recherches en Environnement.
- (2022-) Proyecto Arqueológico en el Kachchh (India): pastoralismo, intercambio y los orígenes de la Civilización del Indo. PIs F. Conesa & J-J García-Granero. Funded by PALARQ foundation. 2020-2023. **Responsible for geomorphology and landscape (off-site) geoarchaeology.**
- (2021-2027) TRANSEANT. Landscape of transhumance: Environmental archaeology research between Eastern Pyrenees (Spain) and Maritime Alps (Italy). PI V. Pescini. Funded by Juan de la Cierva Formación FJC2019-040406-I grant, Ramón y Cajal RYC2021-034621-I grant, Spanish Ministry of Science, and Palarq foundation. 2020-2027. **Responsible for geoarchaeology.**
- (2021-) Le Puy Saint-Romain, Saint-Maurice-ès-Allier (Puy-de-Dôme). Opération de Fouille Programmée n° 03-8982, Dir. Fl. Couderc & M. Vallée. Funding Ministère de la Culture (SRA Auvergne-Rhône-Alpes) and Conseil Général du Puy-de-Dôme. **Responsible for geomorphology and geoarchaeology.**
- (2021-) GAP - Grevena Archaeological Project. Funding Eforia of Grevena, Greece. Dir. S. Dimaki & M. Georgiadis. **Responsible for geoarchaeology.**
- (2021) Espais agraris i ocupació del territori a la plana de l'Empordà: arqueologia d'un paisatge cultural, Funding Generalitat de Catalunya. Dir. H. Orengo & M. J. Ortega. 2018-2021
- (2021) Arqueologia dels paisatges culturals de muntanya a les capçaleres del Ter i del Segre (Ripollès-Cerdanya), Funding Generalitat de Catalunya. Dir. J-M. Palet & L. Colominas. 2018-2021
- (2021-) Un paléolac au pied de l'oppidum de Gergovie: données paléoenvironnementales et archéologiques. PAS INRAP 2019-2022, Dir. G. Vernet.
- (2019-22) TransMed: Transported Landscapes of Greek Mediterranean Colonisation. Dir. M. Georgiadis & H. A. Orengo. European Research Area, H2020-MSCA-IF-2018-8396. 2019-2022. **Responsible for geoarchaeology.**
- (2020-21) TransLands: Transported Mediterranean Landscapes: an integrated analysis of long-term land-use dynamics at both sides of the Mediterranean. Dir. J-M. Palet & H. A. Orengo. Funding Spanish Ministry of Science. Code: PGC2018-093734-B-I00. 2019-2021. **Responsible for geoarchaeology.**
- (2020-) Archaeological Project at Abdera and Xanthi (APAX). Funding Institution: Institute for Aegean Prehistory (INSTAP), Eforia of Xanthi (Hellenic Ministry of Culture), National and Kapodistrian University of Athens. PI: Constantina Kallintzi; Mercurios Georgiadis; Eurydice Kafelidou; Yoannis Xydopoulos. Duration: 2015-2024. **Responsible for geoarchaeology.**

- (2018-2019) **Responsible of the geomorphological and geoarchaeological studies of the project « L'oppidum de Gergovie dans son contexte géomorphologique, paléoenvironnemental et géoarchéologique »** (PI. E. Defive & Y. Miras). Funding Conseil Départemental du Puy-de-Dôme (20.000€)
- (2015) **Prospection thématique-sondages géoarchéologiques du Lac du Puy de Corent (Corent, 63). Dir. A. Mayoral**. Funding Service Régional d'Archéologie d'Auvergne (5.000€)
- (2015-2016) Évolution d'un espace périurbain durant la protohistoire : analyse socio-environnementale des faubourgs du site de Corent (Auvergne). Dir. M. Poux & J-F. Berger. Funding Univ. Lyon 2. **Responsible for geoarchaeological analysis.**
- (2013-2016) AYPONA programme (pAysages et visages d'une agglomération arverne : apProche intégrée et diachrONique de l'occupAtion de l'Oppidum de CoreNt (Auvergne). Dir. Y. Miras & F. Vautier. Funding Conseil Régional d'Auvergne. **Responsible for geoarchaeology.**
- (2012-2013) **Aproximación al medio físico y a la evolución del paisaje en el interfluvio de los ríos Aranzuelo y Arandilla, suroeste de la Sierra de la Demanda, Burgos (Dir. J-A. González-Martín, Co-Dir. A. Mayoral)**. Research Project funded by a third degree research starting grant, Universidad Autónoma de Madrid.

REVIEWER FOR JOURNALS AND FUNDING BODIES

- Member of the expert evaluators board of the Spanish Research Agency - Spanish Ministry of Science and Innovation (since 2022)
- Reviewer for the *CNRS Editions – Alpha Collection* (2022)
- Reviewer for the journal *Archaeological Prospection* (2022)
- Reviewer for the journal *Quaternary (MDPI)*- 2021
- Reviewer for the journal *Geomorphology (Elsevier)* - 2020
- Reviewer for the journal *RUG-Revista Universitaria de Geografía* - 2019
- Reviewer for the Czech Science Foundation (GACR) - 2020

EDITORIAL RESPONSIBILITIES

- Member of the Reviewer Board of the journal *MDPI Quaternary* (from 2020)
- Member of the Reviewer Board of the journal *MDPI LAND* (from 2023)
- Member of the Editorial Committee of the journal *Revista Universitaria de Geografía* (from 2020)

INSTITUTIONAL RESPONSIBILITIES

- Member of the Equality Committee of the ICAC (since 2022). Dr Mayoral has contributed to implement in the ICAC the Ethical Chart and the Vademecum against the discrimination during fieldwork. He contributes to organize regularly equality talks and communication and participative outreach events and activities, especially for international relevant dates such as the 11F, 8M or 25N. He is also part of the organizing committee of the joint exhibition URV-ICAC «arqueo-sexisme» (programmed for dec. 2023).
- Responsible of the ICAC (CERCA-GINYS) Microscopy Laboratory (with M-C. Savin).

ORGANIZATION OF INTERNATIONAL SCIENTIFIC EVENTS

- Organization with A-M Dendievel of the session n°230 in the 28th EAA Annual meeting, Budapest, sept. 2022. Title of the session: *Sediment and soil archives to decipher human-environment interactions in wetland landscapes from the Neolithic to the XXth century*. Number of communications: 18.

MEMBERSHIPS

- Affiliated Member of the Department of Archaeology, University of Kerala, India since 2021.

- Member of the Landscape Archaeology Research Group (GIAP) since 2020, recognized and funded by the Catalan Government SGR program.
- Associated Member of GEOLAB (UMR 6042 UCA-CNRS) since 2020, team “Palaeoenvironments and Geoarchaeology”
- Member of the EAA-European Association of Archaeologists (since 2019)
- Member of the UISPP- International Union for Prehistoric and Protohistoric Sciences (2012-2014)
- Founding Member (since 2009) of GEOnopia (association of Geography students of the Universidad Autónoma de Madrid).

LANGUAGES

- *Spanish* - Native
- *French* - Native
- *English* - Good

FIELDWORK

Dr. Mayoral has developed geoarchaeological and geomorphological fieldwork, and has **organized, directed and co-directed, or participated in many archaeological, geoarchaeological and palaeoenvironmental survey campaigns** in several countries, including France, Greece, Spain and Chile. In many of these he has **trained students** in field concepts and techniques in geoarchaeology and geomorphology. In 2022, he directed and coordinated the multidisciplinary geoarchaeological survey campaign in the Archaic and Classical harbour of Abdera, Thrace, Gr., and since 2022 he co-directs the survey and excavation campaigns in the Baix Empordà in the hinterland of Ullastret.

OTHER SKILLS

- **Software:** ArcGis (Expert), QGis (Basic), Office Pack (Advanced), Illustrator (Advanced), Xlstat (Basic), R-project (Basic), C2, CALIB.

PUBLICATIONS-Papers in Peer Reviewed Journals

Pescini, V. ; Carbonell, A. ; Colominas, L.; Éguez, N.; **Mayoral, A.**; Palet, J. M. (2023). Neolithic livestock practices in high mountain areas: a multi-proxy study of pastoral enclosures of Molleres II (Eastern Pyrenees). *Quaternary International*, XX, XXX. [in press]

Colominas, L.; Carbonell, A.; Pescini, V.; **Mayoral, A.**; Gallego-Valle, A.; Garcia-Molsosa, A.; Orengo, H.; Palet, J. M. (2023). L’arqueologia del paisatge aplicada a l’estudi dels espais altimontans: experiències a les capçaleres del Ter i del Segre (Ripollès, Cerdanya, Andorra). *Treballs d’Arqueologia*, XX, XXX. [in press]

Toumazet, J. P., Simon, F. X., & **Mayoral, A.** (2021). Self-AdaptIve Local Relief Enhancer (SAILORE): A New Filter to Improve Local Relief Model Performances according to Local Topography. *Geomatics*, 1(4), 450-463, <https://doi.org/10.3390/geomatics1040026>

Mayoral, A., Vernet, G., Voltaire, O., Berger, J. F., Miras, Y., & Defive, E. (2021). Times are changing: A new chronology for Holocene volcanic events and hydro-sedimentary history recorded in the Sarliève marsh (central France). *Quaternary Science Reviews*, 272, 107237, <https://doi.org/10.1016/j.quascirev.2021.107237>

Mayoral, A.; Berger, J-F.; Peiry, J-L.; Ledger, P.; Miras, Y. (2020). Five millennia of human-environment interactions reconstructed from pedosedimentary archives of the Lac du Puy wetland (Corent, Fr.). *CATENA*, 195, 104908, <https://doi.org/10.1016/j.catena.2020.104908>

Mayoral, A.; Granai, S.; Deville, A-L.; Peiry, J-L; Miras, Y.; Couderc, F.; Vernet, G.; Berger, J-F. (2020) Early human impact on soils and hydro-sedimentary systems: multi-proxy geoarchaeological analyses from La Narse de la Sauvetat (France). *The Holocene*, 30(12), 1780-1800. <https://doi.org/10.1177%2F0959683620950390>

Simon, F-X.; Pareilh-Peyrou, M.; Buvat, S.; **Mayoral, A.**; Labazuy, P.; Kelfoun, K.; Tabbagh, A. (2020) Quantifying multiple electromagnetic properties in EMI surveys: A case study of hydromorphic soils in a volcanic context – The Lac du Puy (France). *Geoderma*, 361, 114084, <https://doi.org/10.1016/j.geoderma.2019.114084>

Miras, Y., Mariani, M., Ledger, P.M., **Mayoral, A.**, Chassiot, L., Lavrieux, M. (2018). Holocene vegetation dynamics and first land-cover estimates in the Auvergne Mountains (Massif Central, France): key tools to landscape management. *Interdisciplinaria Archeologica: Natural Sciences in Archaeology*, IX/2, 179-190. <http://dx.doi.org/10.24916/iansa.2018.2.5>

Mayoral, A., Peiry, J. L., Berger, J. F., Simon, F. X., Vautier, F., & Miras, Y. (2018). Origin and Holocene geomorphological evolution of the landslide-dammed basin of la Narse de la Sauvetat (Massif Central, France). *Geomorphology*, 320, 162–178. <https://doi.org/10.1016/j.geomorph.2018.08.015>

Mayoral, A., Peiry, J.-L., Berger, J. F., Ledger, P. M., Depreux, B., Simon, F. X., Milcent, P.-Y., Poux, M., Vautier, F., & Miras, Y. (2018). Geoarchaeology and chronostratigraphy of the Lac du Puy intra-urban protohistoric wetland, Corent, France. *Geoarchaeology* 33(5), 594-604. <https://doi.org/10.1002/gea.21678>

Mayoral, A., Toumazet, J. P., Simon, F. X., Vautier, F., & Peiry, J. L. (2017). The highest gradient model: A new method for analytical assessment of the efficiency of LiDAR-derived visualization techniques for landform detection and mapping. *Remote Sensing*, 9, 120. <https://doi.org/10.3390/rs9020120>

PUBLICATIONS-Other journals

Vautier F., Simon F.-X., Dousteysier B., **Mayoral A.**, Miras, Y., (2016). Utilisation de méthodes non intrusives pour la détection et la cartographie de vestiges archéologiques et des formes du relief dans le cadre du programme AYPONA. *Revue d'Auvergne*, 618, 173-180.

Poux, M., **Mayoral, A.**, Depreux, B. (2015). Corent. Découverte d'une importante batterie de silos enterrés de l'Age du Fer. *Archéologia*, 536, 22-25.

PUBLICATIONS-Papers and abstracts in Peer-Reviewed Conference Proceedings

Carbonell, A.; Colominas, L.; Pescini, V.; **Mayoral, A.**; Egüez, N.; Aliende, P.; Palet, J-M. Rere les passes de la transhumància a l'antiguitat: arqueologia d'alta muntanya al massís de Puigpedrós i a la vall del Duran (La Cerdanya). Proceedings of the II congrés de Transhumància i camins ramaders de Catalunya , Amposta, 13-15 oct. 2022

Colominas, L., Carbonell, A., Gallego-Valle, A., Martínez, J., Pescini, V., **Mayoral, A.**, Palet, JM. (2022) Recerca en espais altimontans ceretans: intervencions arqueològiques a la capçalera del Duran, Vall de la Llosa i sector de Puigpedrós-Malniu (la Cerdanya). *Campanyes 2020-2021. XVI Jornades d'Arqueologia de les Comarques de Girona, Castelló d'Empuries*, oct. 2022.

Mayoral, A., Ejarque, A., Garcia-Molsosa, A.; Georgiadis, M.; Apostolou, G.; Gaertner, V.; Kallintzi, C., Kefalidou, E.; Orenge, H., Palet, J-M (2022). Waterscapes of Greek colonization: a geoarchaeological approach to socio-environmental interaction and coastal landscape changes around ancient Abdera (Thrace, Gr.). *LAC22-7th Landscape Archaeology Conference 2022, Iasi*, sept. 2022.

Mayoral, A., Ejarque, A., Garcia-Molsosa, A.; Georgiadis, M.; Apostolou, G.; Gaertner, V.; Kallintzi, C., Kefalidou, E.; Palet, J-M; Orenge, H. (2022). A geoarchaeological tale of two cities: palaeogeography, socio-environmental interaction and coastal landscape evolution around ancient Abdera (Thrace, Gr.). *EAA22- 28th EAA Annual meeting, Budapest*, sept. 2022.

Carbonell, A, Colominas, L., Pescini, V., **Mayoral, A.**, Egüez, N., Gallego-Valle, A., Martínez, J., Palet, J-M. (2022). Tracing Neolithic and Medieval livestock farming in eastern Pyrenees: the combined archaeological and palaeoenvironmental study of Molleres II (Puigpedrós massif). *EAA22- 28th EAA Annual meeting, Budapest*, sept. 2022.

- Georgiadis, M., Garcia-Molsosa, A., **Mayoral, A.**, Orengo, H., Ejarque, A., Kefalidou, E., Kallintzi, C. (2022) The Ionian foundations of Abdera: developing a multidisciplinary approach to explore the construction of colonial landscapes in the Mediterranean. Princeton Athens Center Workshop-Mediterranean Colonial Landscapes, Athens, July 2022.
- Mayoral, A.**, Granai, S., Develle, A-L, Berger, J-F., Peiry, J-L., Vautier, F., Miras, Y (2018). Trois millénaires d'impact anthropique sur les sols et le système morpho-sédimentaire de la Narse de la Sauvetat (Auvergne, Fr.) du Néolithique au Moyen-Âge. Actes de la 26^e Réunion des Sciences de la Terre, 513, Lille, oct. 2018.
- Mayoral, A.**, Peiry, J.-L., Berger, J., Vautier, F., & Miras, Y. (2017). La aportación del LiDAR a la cartografía geomorfológica de detalle y al análisis de potencial geoarqueológico: el ejemplo del Puy de Corent (Auvernia, Francia). In Allende, F; Cañada, R; Fernández-Mayoralas, G; Gómez, G; López, N; Palacios, A; Rojo, F. y Vidal M.J. (eds.) (2017) Naturaleza, territorio y ciudad en un mundo global. Actas. XXV Congreso de la Asociación Española de Geografía, Madrid, Dpto. Geografía de la Universidad Autónoma de Madrid y Ediciones UAM, 287-296 <https://doi.org/10.15366/ntc.2017>
- Simon, F-X., Tabbagh, A., Dousteysier, B., Pareil-Peyrou, M., **Mayoral, A.**, Labazuy, P. (2017). Potential of multi-frequency electromagnetic induction in volcanic soils for archaeological prospection. Proceedings of the 12th International Conference of Archaeological Prospection, Bradford, sept. 2017, Archaeopress archaeology.
- Mayoral A.**, Depreux B., Saint-Sever G., Peiry J.L., Berger J.F., Simon F.X., Cabanis M., Poux M., Milcent P.Y., Vautier F., Miras Y. (2016). Premiers résultats des sondages géoarchéologiques 2015 du Lac du puy de Corent (Puy-de-Dôme). Journée régionale de l'Archéologie, DRAC Auvergne, Clermont-Ferrand, june 2016.
- Mayoral A.**, Simon F.X., Vautier F., Miras Y. (2015). Premiers résultats des volets géoarchéologie et géomatique du programme interdisciplinaire AYPONA. Journée régionale de l'Archéologie, DRAC Auvergne, Clermont-Ferrand, june 2015.
- Simon, F.-X., **Mayoral, A.**, Vautier, F., & Miras, Y. (2015). Refinement of ALS point cloud through the assessment of bare-earth classification algorithms: the Aypona Project case study. *Archaeologia Polona*, 53, 578–581.
- Soteres, R. L., et **Mayoral, A.**, (2013); “Avances en el establecimiento de la curva de crecimiento de *Aspicilia calcarea* en la Meseta meridional y sus posibles aplicaciones liquenométricas”, *El Cuaternario Ibérico: investigación en el s. XXI* (proceedings of the VIII Iberian Quaternary conference, La Rinconada-Sevilla, oct. 2013), pp. 270-272.
- Mayoral, A.**, Gómez, J., Soteres, R. (2010). Educar en el paisaje. Excursión a Guadalupe de Geonopia; un ejemplo para educar sobre el medio ambiente. Proceedings of the CONAMA10 meeting, Madrid, 2010.
- Sánchez, A., Gómez, J., Soteres, R., **Mayoral, A.** (2010) El Bierzo. Naturaleza y hombre: un paisaje multivariado. Proceedings of the CONAMA10 meeting, Madrid, 2010.

PUBLICATIONS-Peer Reviewed Poster Communications in Conferences

- Simon F.X., Doustessier B., Pareilh-Peyrou M., Labazuy P., Donnadiou F., Guillemoteau J., **Mayoral A.**, Vautier F. (2016). Nouvelles données archéologiques sur l'occupation du sol de la Narse de la Sauvetat (63) durant l'Antiquité. Journée régionale de l'archéologie, Clermont-Ferrand.
- Mayoral A.**, Berger J.F., Peiry J.L., Poux M., Milcent P.Y., Vautier F., Miras Y., (2016). Approche des forçages anthropo-climatiques des paysages protohistoriques du plateau de Corent (Auvergne) et de ses marges par l'analyse de registres sédimentaires palustres complémentaires. Q10 meeting – AFEQ – CNF INQUA «Paléoclimats et environnements quaternaires», Bordeaux, feb. 2016.
- Mayoral, A.**, Peiry, J.-L., Berger, J.-F., Poux, M., Milcent, P.-Y., Vautier, F., & Miras, Y. (2014). An integrated geoarchaeological approach to assess human forcing on landscape: evolution of an Iron Age oppidum

(Auvergne, France). In Proceedings of XVII UISPP World Congress, session 46- Iron Age communities in western-central Europe: new approaches to landscape and identity, sept. 2014, Burgos, Spain.

PUBLICATIONS-Reports

Couderc, F.; Vallée, M.; Cabanis, M. ; Lauranson, R.; Marticorena, P. ; Mondou, M. ; **Mayoral, A.**; Pasty, J-F. ; Rolland, J. (2023). Rapport de fouille programmée : Le site de hauteur fortifié du Puy Saint-Romain (Saint-Maurice-ès-Allier, Puy-de-Dôme), junio-julio 2022, dir. F. Couderc & M. Vallée.

Palet, J.M.; Colominas, L.; Carbonell, A.; Gallego, A.; Martínez, J.; Aliende, P.; **Mayoral, A.**; García-Molsosa, A.; Pescini, V.; Ricou, F.; Badenes, S.; García, A. (2022). Memòria de les intervencions arqueològiques a la Capçalera del Duran i sector de Puigpedrós-Malniu, Vallcivera i Guils (Meranges, Guils de Cerdanya, Ger, Lles, La Cerdanya). 2020-2021. Expedients: 437 K121 N428 2020_1_28261 / 437 K121 N382 N321 N4282021-1-33064.

Palet, J. M.; Rodrigo, E.; **Mayoral, A.**; Carbonell, A.; García-Molsosa, A. (2022). Memòria de prospeccions arqueològiques als sectors sud i sud-oest del massís del Montgrí (Torroella de Montgrí, Ullà, La Tallada d'Empordà i Bellcaire d'Empordà, Baix Empordà). 2021. Expedient 437 K121 N839-2018/1-22821

Couderc, F.; Vallée, M.; Lauranson, R.; **Mayoral, A.**; Cabanis, M. (2022). Rapport de fouille programmée : Le site de hauteur fortifié du Puy Saint-Romain (Saint-Maurice-ès-Allier), septembre 2021, dir. F. Couderc & M. Vallée.

Mayoral, A.; Tissot, N.; Defive, E.; Miras, Y. (2021). L'oppidum de Gergovie : contexte Géomorphologique, Paléoenvironnemental et Géoarchéologique. Rapport final scientifique. Conseil Départemental du Puy-de-Dôme.

Mayoral, A., & Depreux, B. (2017). Lac du Puy de Corent-Opération 2015: Sondages géoarchéologiques - Rapport de prospection thématique.

Lauranson, R., Couderc, F., **Mayoral, A.**, Evrard, M., Duchamp, H., & Dubreu, N. (2016). «Le Bay» (Les Martres-de-Veyre, 63) : Occupation laténienne. Opération 2014 : Sondages d'évaluation Rapport de prospection thématique.

PUBLICATIONS-Monographies, Books and Book Chapters

Mayoral, A. (2018). "Analyse de sensibilité aux forçages anthropo-climatiques des paysages protohistoriques et antiques du plateau volcanique de Corent (Auvergne) et de ses marges par une approche géoarchéologique pluri-indicateurs". PhD Thesis - Geography, Université Clermont Auvergne, Clermont-Ferrand, 372p. Available on-line: <https://tel.archives-ouvertes.fr/tel-01864032>

PUBLICATIONS-Edited Special Issues and Books

Mayoral, A. & Dendievel, A-M. (Editors) (2023). Multidisciplinary approaches to socio-environmental interactions in wetland landscapes. Special Issue in Environmental Archaeology, Accepted by the journal and in preparation.

PUBLICATIONS-Other Publications

Toumazet, J-P., **Mayoral, A.**, Simon, F-X.. SAILORE : Self-AdaptIve LOcal Relief Enhancer (SAILORE) Toolbox for ArcGIS V1.1 -2021. 2022, <https://hal.archives-ouvertes.fr/hal-03560443>

COMMUNICATIONS IN CONFERENCES AND OTHER SCIENTIFIC MEETINGS-Without proceedings

García-Molsosa, A.; Orengo, H.; Georgiadis, M.; Dimakis, N.; Motsiou, P.; **Mayoral, A.**; Kefalidou, E.; Kallintzi, C. Machine Learning approaches for a multi-scale and multi-source detection and characterization of

- archaeological sites: the case of the funerary tumuli at Abdera (Thrace, Greece, 6th – 2nd C. BCE, aprox.). CAA2023 -Computer Applications in Archaeology- Conference, Amsterdam, 2023.
- Garcia-Molsosa, A., **Mayoral, A.**, Orengo, H. A., Kallintzi, C., Georgiadis, M., & Kefalidou, E. Integration of Computational Methods in Archaeological Surveys: Experimenting with Digital Approaches in the Context of the Archaeological Project of Abdera and Xanthi (APAX). Workshop Surveying Aegean Thrace in the Digital Era (επιφανειακες Ερευνες Στην Αιγαιακη Θρακη Στην Ψηφιακη Εποχη). Organised by the HFRI-funded project Archaeological and Geophysical Research on the Peraia of Samothrace. 12 September 2022, Athens and online.
- Apostolou, G.; Georgiadis, M; Orengo, H.; Garcia-Molsosa, A; Dimaki, S.; Venieri, K & **Mayoral, A.** Testing a multi-level extensive survey in a semi-mountainous landscape: the case of Grevena, NW Greece. 41st International Mediterranean Survey Workshop. Montpellier, Dec. 2021.
- Georgiadis, M.; Garcia-Molsosa, A.; Orengo, H.; Kallintzi, C.; Kefalidou, E.; Ejarque, A.; **Mayoral, A.**; Palet, J-M. The Archaeological Project at Abdera and Xanthi: New techniques and data. LAC 2020+1, Landscape Archaeology Conference, Madrid, June 2021.
- Mayoral, A.** ; Peiry, J-L. ; Berger, J-F. ; Simon, F-X.; Vautier, F.; Miras, Y. Approche géoarchéologique intégrée du bassin hydromorphe de la Narse de la Sauvetat (Auvergne, France) : origine, évolution géomorphologique et interaction socio-environnementale holocène. Rencontres Géosciences-Archéologie, Strasbourg, June 2019.
- Mayoral, A.**; Ledger, P.; Miras, Y. Premier bilan des recherches paléoenvironnementales et géoarchéologiques menées autour du site de Corent (Auvergne): 5 millénaires d'interactions socio-environnementales. Journée d'Études – UMR 5608 TRACES Territoires et paysages, de l'Age du Bronze à l'Antiquité, Nouvelles approches. Toulouse, Nov. 2017
- Mayoral, A.** Socio-environmental interactions from Neolithic to Antiquity in the intra-urban wetland of the Lac du Puy de Corent (Fr.): a geoarchaeological approach. XI Taller Doctoral de Arqueología Antigua Casa de Velázquez-Deutsches Archäologisches Institut, June 2017, Madrid
- Mayoral A.**, Peiry J.L., Berger J.F., Vautier F., Miras Y. Apports du LIDAR à la cartographie géomorphologique de détail et à l'analyse géoarchéologique du Puy de Corent (Auvergne, France). Journée des Jeunes Géomorphologues, Chambéry, June 2016.
- Mayoral, A.** Analyse de sensibilité aux forçages anthropo-climatiques des paysages protohistoriques et antiques du plateau volcanique de Corent. Colloque doctoral LLSHS UBP-Maison des Sciences de l'Homme, June 2016 Clermont-Ferrand.
- Miras, Y., Vautier, F., Beauger, A., Bellavia, V., Berger, J-F., Cabanis, M., Dousteysier, B., Defive, E., Flottes, L., Garreau, A., Ledger, P-M., **Mayoral, A.**, Milcent, P-Y., Poux, M., Roussel, E., Simon, F-X, Voldoire, O., Zech-Matterne, V. Dynamiques paysagères, gestion des ressources et émergence de l'oppidum de Corent (puy-dôme, France). Seminar in the University Rennes 2, Rennes, Nov. 2015.
- Mayoral, A.** L'approche géomorphologique et géoarchéologique des paysages protohistoriques du Puy de Corent et ses marges. Ie Journée d'Études du programme AYPONA, Jan. 2015 Clermont-Ferrand.
- Mayoral, A.**, Vautier, F., Dousteysier, B. Premiers résultats issus de l'analyse des données LiDAR du Puy de Corent: Archéologie et Géomorphologie. Journée technique du CRAIG: Cartographie et Archéologie, Oct. 2014, Clermont-Ferrand.
- Mayoral, A.** L'approche géomorphologique et géoarchéologique des paysages protohistoriques du Puy de Corent et ses marges: état d'avancement et perspectives. Ière Journée d'Études du programme AYPONA : état d'avancement et premiers résultats, July 2014, Clermont-Ferrand.

INVITED TALKS & CONFERENCES

- Mayoral, A.** et al. (2022). Geoarchaeology and palaeoenvironments of the Greek colony of Abdera (Thrace): recent advances and perspectives. Invited talk to the EU-funded Workshop “Landscape, display and economy at Abdera and Thrace”, 24 Nov. 2022, ICAC, Tarragona, Spain.
- Mayoral, A.** (2022). Progress in geoarchaeological studies at Abdera (Gr.). Invited talk to the Archaeological Museum of Avdira/Ephorate of Antiquities of Xanthi, Greece, July 2022.

- Mayoral, A.**, together with A. Ejarque, (2021). Recherche paléoenvironnementale à Abdera dans le cadre des projets TransLands & TransMed (2019-2021). Invited webinar to the Palaeoenvironment & Geoarchaeology team meeting, GEOLAB UMR 6042 UCA CNRS, Maison des Sciences de l'Homme, June 2021.
- Mayoral, A.**, (2021). Recherches géoarchéologiques et paléoenvironnementales autour de l'ancienne colonie Grecque d'Abdera (Thrace, Grèce). Invited webinar at GEOLAB UMR 6042 UCA-CNRS, June 2021.
- Mayoral, A.**, (2021). Geoarchaeological research at Abdera (Thrace, Greece) as part of TransLands/TransMed projects. Invited webinar at the ICAC-Catalan Institute of Classical Archaeology, March 2021.
- Mayoral, A.**, together with A. Ejarque, A. García-Molsosa & M. Georgiadis (2020). Landscape research at Abdera as part of TransLands/TransMed projects (2019-2021): Transported Landscapes of Greek Mediterranean Colonisation. Invited talk at the Archaeological Museum of Avdira, Ephorate of Xanthi, Greece, July 2020.
- Mayoral, A.** together with H.A. Orengo, A. García-Molsosa and M. Georgiadis (2020). Current and future research at Abdera (Thrace, Greece) as part of TransLands. Invited presentation at the GEO3BCN-Geosciences Institute of Barcelona, Feb. 2020, Barcelona.
- Mayoral, A.** ; Tissot, N. ; Defive, E. ; Miras, Y. (2019). L'oppidum de Gergovie dans son contexte géomorphologique, paléoenvironnemental et géoarchéologique : bilan et premiers résultats. Invited talk at the MAB-Musée Archéologique de la Bataille de Gergovie, la Roche Blanche, Nov. 2019.
- Mayoral, A.** (2019). Paysages protohistoriques autour de Corent. Le regard du géoarchéologue. Invited conference for Archaeo-Logis/CDERAD, Laussonne, August 2019.
- Mayoral, A.** & Tissot, N. (2019). L'oppidum de Gergovie dans son contexte géomorphologique, paléoenvironnemental et géoarchéologique. Invited talk at the Maison des Sciences de l'Homme, Clermont-Ferrand, April 2019.
- Mayoral, A.**, (2018). Interaction socio-environnementale et impact paysager des occupations protohistoriques du plateau volcanique de Corent (Auvergne). Invited talk for the laboratory "Image Ville Environnement", Faculty of Geography, University of Strasbourg, Strasbourg, Nov. 2018.
- Mayoral, A.** (2017). Presentation of the Lac du Puy Geoarchaeological survey. Workshop in environmental archaeology, Institut National de la Recherche Archéologique Préventive. Invited talk together with Y. Miras during the field day. Corent, May 2017.
- Mayoral, A.** & Miras, Y., (2016). Corent : découvertes paléoenvironnementales et géoarchéologiques. Invited conference for the Société d'Histoire Naturelle d'Auvergne, Dec. 2016, Clermont-Ferrand.
- Mayoral, A.** (2016). L'approche géoarchéologique : l'opération de sondage du Lac du Puy de Corent. Invited conference in the Maison des Sciences de l'Homme de Clermont-Ferrand, March 2016 Clermont-Ferrand.
- Mayoral, A.** (2015). Programme Aypona: L'approche géomorphologique et géoarchéologique des paysages protohistoriques du Puy de Corent et ses marges. Invited talk (together with Y. Miras, F. Vautier and J-P. Toumazet) at the European Archaeological Centre of Bibracte, Glux-en-Glenne, Jan. 2015.
- Mayoral, A.** (2014). L'approche géomorphologique et géoarchéologique des paysages protohistoriques du Puy de Corent et ses marges: état d'avancement et perspectives. Invited talk (together with Y. Miras and F. Vautier) for the LUERN archaeological association, Les Martres de Veyre, July 2014.

PUBLIC ENGAGEMENT & COMMUNICATION ACTIVITIES

- Mayoral, A.** (2022) Retracer les interactions entre les sociétés préhistoriques, les volcans, le climat et les paléoenvironnements dans le Massif Central. Outreach article for *La Minute Recherche* scientific communication program by the Université Clermont Auvergne, Oct. 2022. [Available online.](#)
- Mayoral, A.** (2021) Gergovie : nouvelles recherches géoarchéologiques et paléoenvironnementales. Échos d'Archéos –Cycle de conférences archéologiques n°3– Invited webconference at the MAB-Musée Archéologique de la Bataille de Gergovie, la Roche Blanche, Sept. 2021. [Available online.](#)
- Mayoral, A.** (2019) Analyse de sensibilité aux forçages anthropo-climatiques des paysages protohistoriques et antiques du plateau volcanique de Corent (Auvergne) et de ses marges par une approche géoarchéologique pluri-indicateurs. Conference for the *Young Researcher Award*, Clermont-Ferrand, April 2019.
- Mayoral, A.** & Vautier, F. (2017). Applications de la Géomatique et de la Géomorphologie au site archéologique de Corent dans le cadre du projet de recherche AYPONA (2013-2016). Conference « Les mercredis de la science », Clermont-Ferrand, June 2017.

Mayoral, A. (2016) La recherche en Paléoenvironnement. School conference for students, « Cordées de la Réussite » action, may 2016.

PRESS RELEASES

Note in the CNRS yearly report «2020 *Une année avec le CNRS en Rhône-Auvergne* », summarizing the best scientific advances in Auvergne-Rhône-Alpes in 2020 (oct. 2021, p. 23).

Interview in the radio program « *De pierre et d'os* », specialized in archaeology and natural history. *RCF Haute-Loire*, (sept. 2019).

Specialized press article by Briet, S. (2015). “Quand les gaulois stockaient leurs céréales en Auvergne“. *Le Monde Histoire et Civilisations*, 13, dec. 2015.

Newspaper article by Valo, M. (2015). “Découverte d’un méga-site gaulois de silos à grains“. *Le Monde*, 14-08-2015.

Newspaper article by Thivat, G. (2015). “Un millier de silos à grain trouvés à Corent“. *La Montagne*, 18-08-2015.

Newspaper article by Romain, D. (2015). “En Auvergne, des archéologues font une découverte majeure sur les gaulois“. *Le Figaro*, 17-08-2015.

Newspaper article (2015). “ C’est une découverte majeure pour la compréhension de l’économie gauloise “. *Libération*, 14-08-2015.

TV interview & report by Kerroux, S. (2015). “ A Corent (63), les archéologues font une découverte majeure “. *France3*, 16-08-2015.