

CURRICULUM VITAE

Federico Lugli

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FORMAZIONE

27/02/2018

Dottorato di Ricerca *cum laude*, in Models and Methods for Material and Environmental Sciences (SSD: GEO/08), Dipartimento di Scienze Chimiche e Geologiche, Università di Modena e Reggio Emilia.

Titolo tesi: *Strontium isotopes as tracers of animal and human mobility in the past* (tutor: Anna Cipriani).

14/07/2014

Laurea Magistrale *cum laude* (110/110 e Lode), in Quaternario, Preistoria e Archeologia (LM02), Università di Ferrara.

24/07/2012

Laurea Triennale *cum laude* (110/110 e Lode), in Scienze per i Beni Ambientali, Naturali e Culturali (specializzazione in Conservazione dei Beni Culturali - L43), Università di Modena e Reggio Emilia.

2009

Diploma di maturità scientifica, Liceo Rinaldo Corso, Correggio (RE).

POSIZIONI

01/11/2024 (ad oggi)

Associate Professor presso il Dipartimento di Scienze Chimiche e Geologiche, Università degli Studi di Modena e Reggio Emilia, Modena, Italia. Settore scientifico disciplinare: GEOS-01/C Geochimica e vulcanologia.

01/08/2023 – 31/10/2024

Marie Skłodowska-Curie Research Fellow presso Institut für Geowissenschaften, Goethe University Frankfurt, Germania. Progetto di ricerca: *AROUSE - Assessing the impact of climate fluctuations on hibernation phenology using novel dental biomarkers*, n. 101104566.

01/07/2020 – 01/07/ 2023

Senior postdoc presso il Dipartimento di Beni Culturali, Università di Bologna, Campus di Ravenna. Progetto di ricerca: “*Proteomic and isotopic analyses of human and faunal remains from Italian Middle-Upper Palaeolithic contexts*” – parte del progetto MIUR-FARE: SAPIENS – “*Using paleoproteomics to identify human remains in Italian archaeological sites with Middle-to-Upper Paleolithic deposits*”(P.I. Stefano Benazzi).

02/09/2020 – 1/11/2020

Guest scientist (su invito) presso Institute of Geosciences (Johannes Gutenberg-Universität Mainz, Germania) nel framework del progetto ERC Consolidator “*Vertebrate Herbivory*” n. 681450 (P.I. Thomas Tütken).

01/04/2018 – 01/07/2020

Senior ERC postdoc presso il Dipartimento di Beni Culturali, Università di Bologna, Campus di Ravenna. Progetto di ricerca: “*Provenance and human adaptation in Archaeological Sciences: isotope geochemistry of animal and human remains from Italian Middle-Upper Palaeolithic transition contexts*” – parte del progetto ERC Consolidator SUCCESS n.724046 (P.I. Stefano Benazzi).

15/11/2017 – 22/12/2017

Borsista di Ricerca presso il Dipartimento di Scienze Chimiche e Geologiche, Università degli Studi di Modena e Reggio Emilia. Progetto di ricerca: “*Geochemical and Isotopic budget of highly metasomatized sub-continental mantle in the Africa and Europe geodynamic systems: modern and fossil analogues*” – PRIN MIUR 2015.

08/06/2017 – 08/07/2017

Visiting scientist presso Inorganic Gas Isotope Geochemistry Group, Max Planck Institute for Chemistry, Hahn-Meitner-Weg 1, 55128 Mainz, Germania.

1/09/2016 – 01/11/2016

Visiting scientist presso Paleoclimate Research Group, Max Planck Institute for Chemistry, Hahn-Meitner-Weg 1, 55128 Mainz, Germania.

ABILITAZIONI SCIENTIFICHE NAZIONALI

27/09/2022

Abilitazione Scientifica Nazionale (art.16 della legge del 30 Dicembre 2010, n.240) di Seconda Fascia - **04/A2** (Geologia strutturale, geologia stratigrafica, sedimentologia e paleontologia).

03/02/2022

Abilitazione Scientifica Nazionale (art.16 della legge del 30 Dicembre 2010, n.240) di Seconda Fascia - **05/B1** (Zoologia e antropologia).

31/05/2021

Abilitazione Scientifica Nazionale (art.16 della legge del 30 Dicembre 2010, n.240) di Seconda Fascia - **04/A1** (Geochimica, mineralogia, petrologia, vulcanologia, georisorse e applicazioni).

PREMI E RICONOSCIMENTI

2019

Premio poster – Congresso dell’Associazione Antropologica Italiana – Padova (300.00 €)

2019

Premio nazionale giovane ricercatore – Società Chimica Italiana, Divisione di Spettrometria di Massa (1,000.00 €) per l’articolo: “*Strontium and stable isotope evidence of human mobility strategies across the Last Glacial Maximum in southern Italy*” pubblicato su *Nature Ecology and Evolution*.

2017

Travel grant della European Association of Geochemistry per il corso internazionale “*Application of Laser Ablation Inductively Coupled Plasma Mass Spectrometry (LA-ICP-MS) to Earth Sciences*” – Università di Perugia (200.00 €).

2015

Premio studio per merito, Fondazione Cassa di Risparmio Carpi, Laurea magistrale (1,000.00 €)

2013

Premio studio per merito, Fondazione Cassa di Risparmio Carpi, Laurea triennale (1,000.00 €)

PROGETTI FINANZIATI

2023 – 2024

Marie Skłodowska-Curie Individual Fellowship, Horizon Europe. Progetto: “*Assessing the impact of climate fluctuations on hibernation phenology using novel dental biomarkers*” | AROUSE - 101104566. Fondi: 189,687.36 €. Ruolo: PI. Panel: ENV (Environmental and Geosciences). Host institution: Goethe University Frankfurt, Germania. 2023-2025. Il progetto si propone di indagare l’impatto delle fluttuazioni (plaeo)climatiche sulla fenologia e fisiologia dell’ibernazione dei piccoli mammiferi, usando tecniche geochemiche ed istologiche. Nello specifico, analisi elementali ed isotopiche in alta risoluzione spaziale sono utilizzate in combinazione all’istomorfometria dello smalto di incisivi di marmotte per identificare nuovi biomarcatori per l’ibernazione. Il confronto fra campioni da diversi contesti climatici (dal MIS3 ad oggi) permetterà di comprendere come il clima può influire sulla sopravvivenza delle popolazioni di mammiferi ibernatori.

2021 – 2022

Leakey Foundation. Progetto di ricerca – “*Continuation of New Investigations at the Hominin site of Tighennif (formerly Ternifine), Algeria: Study of Homo erectus Behavior and Adaptation*”. Fondi: 19,441.00 €. Ruolo: co-proponente, partner responsabile delle analisi isotopiche.

2016

UNIMORE progetto di mobilità e ricerca internazionale – istituzione ospitante: Max Planck Institute for

Chemistry. Titolo del progetto: “*Celtic mobility: genetic and isotopic approach to the study of human migration*”.
Fondi: 2,000.00 €. Ruolo: PI.

2014 – 2017

Assegno ministeriale di dottorato presso UNIMORE (~36,000.00 €). Titolo del progetto: “*Strontium isotopes as tracers of animal and human mobility in the past*”.

PARTECIPAZIONE A PROGETTI DI RICERCA FINANZIATI

2024 – in corso

Horizon Europe ERC SYNERGY “*LAST NEANDERTHALS – The physical, cultural and bio-genetic landscape of the last Neanderthals*” (P.I. Stefano Benazzi, UNIBO; coP.I. Francesco Berna & Omry Barzilai). Partecipazione attiva alla scrittura del proposal e alle attività di ricerca.

2023 – in corso

PRIN PNRR “*CAST – Copper Accumulation, Supply and Technology among the Italian Prehistoric Societies*” (P.I. Maurizio Cattani, UNIBO; coP.I. Anna Cipriani, UNIMORE). Partecipazione attiva alla scrittura del proposal e alle attività di ricerca.

2023 – in corso

PRIN PNRR “*OCEANS – impacts Of aCidification on past biodivErsity: insights from mAriNe vertebrateS*” (P.I. Manuel Rigo, UNIPD; coP.I. Annalisa Ferretti, UNIMORE). Partecipazione attiva alla scrittura del proposal e alle attività di ricerca.

2023 – in corso

MIUR PRIN “*HABITS – Life-histories of prehistoric human groups in South America: a tale on environmental adaptations and subsistence economies*” (P.I. Tommaso Giovanardi, UNIMORE; coP.I. Eugenio Bortolini, UNIBO). Partecipazione attiva alla scrittura del proposal e alle attività di ricerca.

2023 – in corso

Progetto finanziato da European Union NextGeneration EU, nel framework del PNRR “*GIRLS – Evolution of puberty and reproductive life history of women: age-at-menarche and age-at-first childbirth from farming subsistence to urban societies in Italy*”, P.I. Melania Gigante (UNIPD). Partecipazione attiva alla scrittura del proposal e alle attività di ricerca.

2023 – in corso

Progetto Marie Skłodowska-Curie IF “*TULAR – TranscULTurality and social innovation in Villanovan AReas of pre-Roman Italy*”, P.I. Carmen Esposito (UNIBO). Partecipazione attiva alle attività di ricerca.

2020 – in corso

MIUR PRIN “*HERDS – Animal Husbandry and its Economic Role in the Development of Central Mediterranean Protohistoric*” (P.I. Andrea Cardarelli, Sapienza). Partecipazione attiva alle attività di ricerca.

2023 – in corso

Progetto Horizon Europe ERC Starting “*MOTHERS – MOdelling THE Evolution of the mother-infant*”.

Relationships”; P.I. Alessia Nava (Sapienza). Partecipazione attiva alla scrittura del proposal e alle attività di ricerca.

2020-2022

Progetto Marie Skłodowska-Curie IF “WEAN-IT – *Weaning Practices in Ancient Italy*”, P.I. Alessia Nava. Partecipazione attiva alle attività di ricerca.

2019-2022

Progetto MIUR-FARE “*SAPIENS – Using paleoproteomics to identify human remains in Italian archaeological sites with Middle-to-Upper Paleolithic deposits*”. P.I. Stefano Benazzi (UNIBO). Partecipazione attiva alla scrittura del proposal e alle attività di ricerca.

2017-2022

Progetto H2020 ERC Consolidator “*VERTEBRATE HERBIVORY – Evolution of herbivory in vertebrates: developing combined isotope (Ca, Sr) and dental surface texture analysis as deep time diet proxies*”; P.I. Thomas Tütken. Partecipazione attiva alle attività di ricerca.

2017-2022

Progetto H2020 ERC Consolidator “*SUCCESS – The earliest migration of Homo sapiens in Southern Europe*”; P.I. Stefano Benazzi. Partecipazione attiva alle attività di ricerca.

2017-2020

MIUR PRIN 2017-2020 “*Micro to Macro – How to unravel the nature of the Large Magmatic Events*” (P.I. Massimo Coltorti, UNIFE; coP.I. Unità di UNIMORE: Anna Cipriani). Partecipazione attiva alle attività di ricerca.

04/05/2016 – 09/05/2016

European Synchrotron Radiation Facility, team member dell’esperimento ES-421: “*Tracking biotic and abiotic processes at play within the serpentinizing ocean crust by characterizing the distribution of metals and metalloids associated to organic remnants*”, beamline 16B-NA, Grenoble, Francia. Parte del team proponente e partecipazione attiva alle attività di ricerca.

2015-2018

MIUR PRIN “*Geochemical and Isotopic budget of highly metasomatized sub-continental mantle in the Africa and Europe geodynamic systems: modern and fossil analogues*” (P.I. Sandro Conticelli, UNIFI; coP.I. Unità di UNIMORE: Maurizio Mazzucchelli). Partecipazione attiva alle attività di ricerca.

CAPACITÀ PROFESSIONALI E INTERESSI DI RICERCA

- Analisi e data reduction di sistematiche isotopiche stabili e radiogeniche (e.g. Rb-Sr, Sr stabile, U-Pb, Pb-Pb, U-Th, O, C, N, Lu-Hf, Sm-Nd, Ca, B) su svariate matrici geobiologiche come suoli, acque, rocce, biominerali, tessuti biologici tramite (LA-)MC-ICPMS.
- Analisi di elementi in traccia in soluzione e su campioni solidi, tramite (LA-)ICPMS Q(QQ) e sector field, software correlati (e.g. PlasmaLab, Iolite, Glitter, in-house R script).
- Analisi isotopi stabili di acque, tessuti biologici e carbonati tramite IRMS accoppiato ad equilibratore e/o

- analizzatore elementale.
- Utilizzo di sistemi di ablazione laser (Nd:YAG 213 nm, 193 nm a eccimeri, e femtosecond) accoppiati a (MC-)ICPMS.
- *Imaging* di tessuti biologici e campioni geologici tramite LA-ICPMS con analizzatore tradizionale e/o Time of Flight; software toolbox: R, MATLAB, MapIT!
- Gestione di laboratorio *clean* geochimico e biologico.
- Cromatografia a scambio ionico.
- Micro-drilling su tessuti geobiologici incrementali.
- Analisi di proteomica su smalto dentale e tessuto osseo tramite LC-MS/MS e MALDI-ToF; software toolbox: Mascot, mMass, Xcalibur package (Thermo Scientific), MaxQuant, R.
- Utilizzo avanzato di statistica univariata e multivariata, modelling, geostatistica e machine learning; software toolbox: R, OriginPro, QGIS, SAGA.

Mi occupo di applicazioni (bio)geochimiche in geologia, ecologia, sedimentologia, archeologia, paleoantropologia e paleontologia dall'inizio del mio dottorato di ricerca nel 2014. Nel corso della mia carriera, ho sviluppato tecniche analitiche per la determinazione di rapporti isotopici bulk e *in-situ* tramite (LA-)MC-ICPMS, su svariate matrici biologiche e geologiche, come acque, suoli, rocce, minerali, e ossa/denti fossili. Presso il Laboratorio di Geochimica di UNIMORE, ho avviato e impostato nuove linee di ricerca riguardanti l'archeometria e le indagini su resti scheletrici, analizzando campioni che vanno dal Pleistocene (es. Lugli et al., 2019 *Nature Eco. Evo.*) all'epoca moderna (es. Lugli et al., 2018 *Am. J. Biol. Anthropol.*), con il fine di ricostruire catene trofiche e mobilità umana e animale. Inoltre, ho applicato diverse sistematiche isotopiche *in-situ* (e.g. Sr-Sr, B, U-Pb, Lu-Hf) ad archivi geologici di alta (e.g. zirconi: Giovanardi & Lugli, 2017 *Earth Sci. Inf.*; carbonati di mantello: Consuma et al., 2020; *Lithos*; Libyan Desert Glass: Sighinolfi et al., 2020 *Meteorit. Planet. Sci.*) e bassa temperatura (e.g. speleotemi: Weber et al., 2018 *Quat. Sci. Rev.*, Columbu et al., 2024 *Quat. Sci. Rev.*; *seep carbonates*: Argentino et al., 2019 *Chem. Geol.*; brachiopodi: Garbelli et al., 2022 *Chem. Geol.*; vene di calcite: Berio et al., 2022 *J. Geol. Soc.*). In laboratorio, sono in grado di eseguire autonomamente analisi biogeochimiche, dal campione al dato, utilizzando la spettrometria di massa organica (MALDI-ToF e LC-MS/MS) e inorganica (LA-ICPMS e (LA-)MC-ICPMS). Ciò è dimostrato, ad esempio, dal coinvolgimento in diversi progetti dedicati alla caratterizzazione di materiali di riferimento internazionali (e.g. Weber et al., 2018 e 2019; Jochum et al., 2019; Boer et al., 2022; Kazlagic et al., 2023 *Geostand. Geoanalytical Res.*), anche in collaborazione con aziende internazionali (i.e. myStandards GmbH). Sono interessato a espandere continuamente il mio campo di competenze, come recentemente dimostrato dall'applicazione della (paleo)proteomica alla bio-, paleo-antropologia (Lugli et al., 2019 *Sci. Rep.*), sfruttando anche tecniche spettroscopiche e immunochimiche all'avanguardia (Lugli et al., 2021 *Talanta* e Gatti, Lugli, Sciutto et al., 2022 *Sci. Rep.*). In questo senso, ho avviato il Laboratorio di Paleoproteomica presso il Dipartimento di Beni Culturali di UNIBO, dedicato all'analisi del proteoma di ossa e denti fossili, archeologici e moderni, nel framework del progetto ERC CoG SUCCESS (P.I. Benazzi). In una rete multidisciplinare di ricercatori che ha coinvolto istologia, geochimica e archeologia, ho messo a punto un metodo per l'identificazione del periodo di svezamento dallo smalto dentale tramite proxy elementali (Sr/Ca), con profonde implicazioni per lo studio dell'evoluzione umana (Nava & Lugli et al., 2020 *PNAS*). Tra settembre e ottobre 2020, sono stato invitato come *guest scientist* presso la Johannes Gutenberg-Universität (Mainz, Germania), nell'ambito del progetto ERC CoG VERTEBRATE HERBIVORY (P.I. Tütken), dove ho effettuato analisi di isotopi non tradizionali (Ca) su denti di dinosauri (Michailow, Lugli et al., *in prep.*) e ominini/animali fossili (Lugli et al., *in prep.*). Da Agosto 2023 a Ottobre 2024 sono stato Marie Skłodowska-Curie Research Fellow presso la Goethe University (Frankfurt, Germania) dove ho analizzato denti fossili e moderni di marmotte tramite tecniche geochimiche nel contesto del progetto Individual Fellowship AROUSE. I miei attuali interessi di ricerca includono: (paleo)ecologia isotopica; distribuzione di isotopi ed elementi in archivi biogeologici incrementali; sviluppo e caratterizzazione di nuovi materiali di riferimento per analisi geochimiche; preservazione della materia organica in *deep-time*,

paleoproteomica; isoscapes; tecniche statistiche applicate a dati (geochimici).

ATTIVITÀ DI EDITING E REVISIONE

- Grant referee per l'European Research Council (H2020 ERC StG 2018 Evaluations) – Earth System Science Panel.
- Grant referee per la French National Research Agency (AAPG 2021, Generic Call) – Panel “CE27 - Culture, création, patrimoine”.
- Editor di *PlosONE* (da Agosto 2023 ad oggi).
- Reviewer per: *Archaeological and Anthropological Sciences* (x1), *Quaternary Science Reviews* (x1), *Nature Ecology & Evolution* (x1), *Rapid Communications in Mass Spectrometry* (x1), *Journal of Chromatography A* (x1), *Bioarchaeology International* (x1), *Geostandards and Geoanalytical Research* (x2), *Earth System Science Data* (1x), *Scientific Reports* (x3), *PLoS ONE* (x20), *Journal of Archaeological Science: Reports* (x1), *Quaternary International* (x2), *Heritage Science* (x2), *Forensic Sciences Research* (x1), *Environmental Archaeology* (x1) (le cifre tra parentesi indicano il numero di articoli revisionati).

ATTIVITÀ DIDATTICHE E TUTORAGGIO

Ad oggi ho co-supervisionato dodici tesi triennali, cinque tesi magistrali e tre dottorati di ricerca. Ho effettuato supporto alla didattica tramite seminari ed attività di laboratorio presso l'Università di Modena e Reggio Emilia, l'Università di Bologna e l'Università di Padova.

Nell'anno accademico 2024/2025 sono titolare del corso 'Advanced Isotope Geochemistry' della laurea magistrale 'Geoscienze, georischi e georisorse' – UNIMORE.

COMUNICAZIONI E SEMINARI SCIENTIFICI SU INVITO

18/05/2023

Biogeochemistry of (fossil) bones and teeth. Seminario su invito presso il Dipartimento di Scienze dell'Ambiente e della Terra, Università Milano-Bicocca – Milano.

4/10/2022

Elemental and isotopic analyses of tooth enamel disclose individuals' life histories. Seminario su invito presso il workshop: 'Recovering ancient remains and reconstructing the past', parte del simposio internazionale: 'Insights into Human History in the Eurasian Stone Age: Recent Developments in Archaeology, Palaeoanthropology and Genetics'. Università di Tohoku (Sendai, Giappone).

27/05/2022

Isotope Tales: hominin mobility, diet and ecology. Seminario su invito presso il Dipartimento di Biologia, Università di Firenze.

13/10/2020

Detecting the introduction of non-breastmilk food in infants' diet through histologically-defined LA-(MC)-ICPMS analyses of deciduous dental enamel. Comunicazione su invito presso il simposio: New Geochemical and Dental Wear Approaches to Reconstruct the Diet, Ecology, and Physiology of Fossil Vertebrates. Congresso annuale della Society of Vertebrate Palaeontology – Cincinnati, 2020.

24/11/2020

Palaeoproteomics. Seminario su invito presso il Dipartimento di Scienze della Vita, Università degli Studi di Modena e Reggio Emilia.

08/11/2019

Le proteine dello smalto dentale svelano il sesso degli 'Amanti di Modena'. Seminario su invito presso l'Accademia delle Scienze e delle Arti di Modena – Modena.

21/06/2019

Isotope evidence of Gravettian and Epigravettian mobility strategies across the Last Glacial Maximum in Southern Italy. Comunicazione su invito presso il congresso internazionale MASSA 2019 – Aboca, Sansepolcro.

20/10/2018

In situ Sr isotope analysis of bioapatites by LA-MC-ICP-MS. Comunicazione su invito presso il workshop: 7th Asia-Pacific Workshop on Laser-Ablation and Micro-Analysis 2018. State Key Laboratory of Lithospheric Evolution, Institute of Geology and Geophysics, Chinese Academy of Sciences – Pechino, Cina.

PUBBLICAZIONI

Scopus ID: 57193222687; ORCID: 0000-0002-5642-2216.

H-index: 23 (Google Scholar); 19 (Scopus).

Citazioni totali: 1472 (Google Scholar); 1119 (Scopus).

Articoli *peer-review* pubblicati (o accettati) su riviste internazionali

(* articoli dove sono *corresponding author*)

1. Esposito C, Higgins OA, Galbusera A, Gigante M, **Lugli F**, Müller W, Madgwick R, Coppa A, Benazzi S, Bondioli L, Nava A (2024) NOthing goes to WAstE (NOWA): A protocol to optimise sampling of ancient teeth. *Journal of Archaeological Science* 171, 106087.
2. Nava A, **Lugli F**, Lemmers S, Cerrito P, Mahoney P, Bondioli L, Müller W (2024) Reading children's teeth to reconstruct life history: the wealth of information hidden inside dental enamel microstructure and chemical composition. *Neuroscience and Biobehavioral Reviews*, 163, 105745.
3. Higgins OA, Modi A, Cannariato C, Diroma MA, **Lugli F**, Ricci S, Zaro V, Vai S, Vazzana A, Romandini R, Yu H, Boschini F, Magnone L, Rossini M, Di Domenico G, Baruffaldi F, Oxilia G, Bortolini E, Dellù E, Moroni A, Ronchitelli A, Talamo S, Müller W, Calattini M, Nava A, Posth C, Lari M, Bondioli L, Benazzi S,

- Caramelli D (2024) Life history and ancestry of the Late Upper Palaeolithic infant from Grotta delle Mura (Southern Italy, 17 ka). *Nature Communications*, 15, 8248.
4. Seghi F, **Lugli F**, James H, Löffelmann T, Armaroli E, Vazzana A, Cipriani A, Snoeck C, Benazzi S (2024) Investigating mobility patterns in north-eastern Italy during the Roman Empire: isotope and osteological analyses at *Mutina*. *Journal of Archaeological Science: Reports*, 58, 104728.
 5. Silvestrini S, Real C, **Lugli F**, Delpiano D, Harvati K, Collina C, Peresani M, Spinapolice EE, Romandini M, Benazzi S (*accepted*) Hunting game: new data on the subsistence strategies during the Uluzzian in Italy. *Journal of Archaeological Science: Reports*.
 6. Müller W, **Lugli F**, McCormack J, Evans D, Anczkiewicz R, Bondioli L, Nava A (*in-press*) Human Life Histories. *Treatise on Geochemistry*, Elsevier 3rd edition [[invited review article](#)].
 7. Armaroli E, **Lugli F***, Cipriani A, Tütken T (2024) Spatial-ecology of moose in Sweden: combined Sr-O-C isotope analyses of bone and antler. *Plos ONE*, doi: 10.1371/journal.pone.0300867.
 8. Columbu A, Pérez-Mejías C, Regattieri E, **Lugli F**, Dong X, Depalmas A, Melis R, Cipriani A, Cheng H, Zanchetta G, De Waele J (2024) Speleothems uncover environmental changes during late Holocene intra- and post-Nuragic period in Sardinia (Italy): A possible human influence on land use during bronze to Iron Age cultural shifts. *Quaternary Science Reviews*, doi: 10.1016/j.quascirev.2024.108534.
 9. Bigi D, Lugli S, Manzi V, Roveri M, Pashko P, Milushi I, Muttoni G, Turco E, Cipriani A, **Lugli F** (2024) The Messinian salinity crisis onset in Albania: an integrated approach by bio-magnetostratigraphy and rock magnetic analyses. *Palaeogeography, Palaeoclimatology, Palaeoecology* 638: 112036.
 10. Vola G, Ardit M, Frijia G, Di Benedetto F, Fornasier F, **Lugli F**, Natali C, Sarandrea L, Schmitt K, Cipriani A (2023) Characterization of carbonate rocks for quicklime and dolomite production: the case of twin shaft regenerative kilns from the Arabian Peninsula and neighboring countries. *Minerals*, doi: 10.3390/min2656771
 11. Granja R, Araújo AC, **Lugli F**, Silvestrini S, Silva AM, Gonçalves D (2023) Unbalanced sex-ratio in the Neolithic individuals from the Escoural Cave (Montemor-o-Novo, Portugal) revealed by peptide analysis. *Scientific Reports* 13, 19902.
 12. Piccirilli E, Sorrentino R, **Lugli F**, Bortolini E, Silvestrini S, Cavazzuti C, Conti S, Czifra S, Figus C, Gyenesei K, Köhler K, Oxilia G, Tankó K, Vazzana A, Vitali D, Jerem E, Cipriani A, Gottarelli A, Belcastro MG, Hajdu T, Benazzi S (2023) New insights on Celtic migration in Hungary and Italy through the analysis of non-metric dental traits. *PlosONE* 18, e0293090.
 13. Porcaro M, Barbaro B, Canovaro C, Artioli G, Lucarelli C, **Lugli F**, Depalmas A, Brunetti A, (2023) A multi analytical characterization of a small bronze figurine from Gran Carro site (Bolsena lake, Italy). *Journal of Archaeological Science: Reports*, doi: <https://doi.org/10.1016/j.jasrep.2023.104230>.
 14. Romandini M, Silvestrini S, Real C, **Lugli F**, Tassoni L, Carrera L, Badino F, Bortolini E, Marciari G, Delpiano D, Piperno M, Collina C, Peresani M, Benazzi S (2023) Late Neanderthal “Menù” in Italy: Freshwater and terrestrial animal resources from North to South. *Quaternary Science Reviews*, doi: 10.1016/j.quascirev.2023.108233.

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Capitoli di libro e articoli su riviste nazionali

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Convener e chairman di sessioni a conferenze

1. Real C, Silvestrini S, Vidas L, **Lugli F** (2024) What Do Animal Bones Have to Offer? Zooarchaeology and Taphonomy during the Middle to Upper Palaeolithic Transition in Southern Europe. *European Association of Archaeologists (EAA) 2024*, Sapienza Università, Roma, Italia. <https://submissions.e-a-a.org/ea2024/sessions/overview/preview.php?id=398> [convener]
2. Nava A, Esposito C, Madgwick R, **Lugli F**, Buckley M (2024) Advanced Methodologies for Life History Reconstruction in Bioarchaeology. *European Association of Archaeologists (EAA) 2024*, Sapienza Università, Roma, Italia. <https://submissions.e-a-a.org/ea2024/sessions/overview/preview.php?id=1000> [convener]
3. **Lugli F** (2021) Preservation of organic molecules in bones in deep-times. *9th International Bone Diagenesis Meeting 2021*, University of Évora, Évora, Portogallo. <http://www.bonediagenesis2021.uevora.pt/program.html> [chairman]

Comunicazioni a conferenze (selezionate)

(* presentate da **Lugli F**)

1. **Lugli F***, Nava A, Bondioli L, Müller W (2024) The ‘exposome’ and the ‘metallome’ of (fossil) dental enamel: the contribution of spatially-resolved trace elemental signals. *Isotope Metallomics Workshop*, ISMAR, Venice, Italy [talk].
2. **Lugli F***, Müller W, Cipriani A (2024) Sr isotopes spatial distribution in Italy: geocomputational tools to track the geographical origin of humans and animals. *European Association of Archaeologists (EAA) 2024*, Roma, Italy [talk].
3. Vidas L, Silvestrini S, **Lugli F**, Romandini R, Real C, Radović S, Janković I, Benazzi S (2024) Filling in the blanks: the application of palaeoproteomics in faunal analysis. *Proceedings from the 10th Scientific Conference Methodology and Archaeometry*, doi: 10.17234/METARH.2023.2 [published conference proceedings].
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5. Esposito CM, Bondioli L, Coppa A, Sperduti A, Madgwick R, Müller W, Trucco F, **Lugli F**, Stoddart S, Benazzi S (2023) TULAR: Transculturality and social innovation in Villanovan areas of pre-Roman Italy. *29th Annual Meeting of the European Association of Archaeologists EAA – Belfast (Ireland)* [talk].
6. Oldershaw L, **Lugli F**, Boczkowska M, Kożuch M, Sperduti A, Coppa A, Guatelli-Steinberg D, Bondioli L, Anczkiewicz R, Nava A (2023) Infant feeding practices in Roman Italy: Weaning variation and its relationship to the lived experiences of women in the past. *29th Annual Meeting of the European Association of Archaeologists EAA – Belfast (Ireland)* [poster].
7. Capasso G, de Lotto MB, **Lugli F**, Sperduti A, Bondioli L, Cupitò M, Vidale M (2022) Unburnt bodies amongst cremated people. First elements to define the identity of the inhumed individuals from the necropolis CUS-Piovego, Padua. *28th Annual Meeting of the European Association of Archaeologists in Budapest, Hungary 2022* [talk].
8. **Lugli F**, Giovanardi T, Di Giuseppe D, Gualtieri AF, Cipriani A (2022) Boron isotope analysis in silicate and carbonate matrix. *SIG-SIMP Congress 2022 – Turin (Italy)* [poster]. *
9. Iacovelli MV, Crobe V, **Lugli F**, Cilli E, Ferrari A, Ferretti F, Frijia G, Iacumin P, Leone A, Tinti F, Benazzi S, Cariani A (2022) Past species diversity and zoogeography of historical sawfishes from the Mediterranean area. *Shark International 2022 Conference – Valencia (Spain)* [talk].
10. **Lugli F**, Silvestrini S, Benazzi S (2022). Fossil enamel proteomics: the role of amelogenin peptides in sexing ancient humans and animals. *International Symposium on Dental Morphology & Congress of International Association of Paleodontology – Frankfurt (Germany)* [poster]. *
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12. Kazlagic A, Rosner M, Cipriani A, Frick DA, Glodny J, Hoffmann JE, Hora JM, Irrgeher J, **Lugli F**, Magna T, Meisel T. C, Meixner A, Possolo A, Pramann A, Pribil M, Prohaska T, Retzmann A, Rienitz O, Rutherford D., Paula-Santos G, Tatzel M, Widhalm S, Willbold M, Zuliani T, Vogl J (2022) Investigating the differences between MC-ICP-MS and MC-TIMS using conventional $^{87}\text{Sr}/^{86}\text{Sr}$ isotope ratios in limestone and slate reference materials. *Geoanalysis 2022 – Freiberg (Germany)* [poster].
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14. Nava A, **Lugli F**, Mahoney P, McFarlane G, Higgins OA, Coppa A, Dean MC, Bondioli L, Muller W, Benazzi S (2022) A new look at old teeth: Cutting-edge methodologies applied to the maternal-infant nexus in prehistory. *40 years of Casal de' Pazzi: The site within the Pleistocene archaeo-paleontological framework between 400.000 and 40.000 years BP - Current knowledge and new research perspectives – Rome (Italy)*. [talk]

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16. Capasso G, **Lugli F**, Sperduti A, Manzo A (2022) Tracing human mobility in Late Prehistoric Eastern Sudan (V-II millennium BCE). *91st Annual Meeting AABA – Denver (Colorado)*. [poster]
17. **Lugli F**, Silvestrini S, Romandini M, Di Rocco G, Benazzi S (2021) Palaeoproteomics of tooth enamel: new frontiers in sex determination. *10th Italian Association of Zooarchaeology (AIAZ) conference – Siena (Italy)*. [poster] *
18. **Lugli F**, Silvestrini S, Romandini M, Weber M, Marciani G, Collina G, Piperno M, Tütken T, Benazzi S (2021) No collagen? No problem. Reconstruction of fossil food chains through non-traditional isotopes and trace elements of tooth enamel. *10th Italian Association of Zooarchaeology (AIAZ) conference – Siena (Italy)*. [talk] *
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