Current Employment

since 01/2024 Postdoctoral Researcher, Department of Geology & Geophysics, University of Utah, USA

California StalFire project, PI Gabe Bowen

• implementing Bayesian proxy system models for reconstructing climate change and wildfire history of Pleistocene California using stable isotope and biomarker proxies

Academic Education and Employment

2022 – 2024 German National Academy of Sciences Leopoldina Postdoctoral Fellow

Archaeological Micromorphology and Biomarker (AMBI) Research Lab, University of La Laguna, Tenerife, Spain

"Developing a multi-proxy stable isotope approach to demonstrating the climatic preferences of site-use of Late Pleistocene humans"

2020 – 2021 Postdoctoral researcher, Department of Human Evolution, Max-Planck-Institute for

Evolutionary Anthropology Leipzig, Germany

"Reconstructing site specific palaeoclimate and –environment at Pleistocene archaeological sites using isotope geochemistry proxies"

2016 – 2021 PhD in Archaeology

Department of Human Evolution, Max-Planck-Institute for Evolutionary Anthropology, Leipzig, Germany

Department of Archaeology, School of Geoscience, University of Aberdeen, UK

"Exploring Late Pleistocene intra- and inter-site climate variability and seasonality using isotope zooarchaeology"

2014 – 2016 MA in Prehistoric and Historic Archaeology

Christian-Albrechts-University Kiel, Germany

- Graduate Research Assistant for stable isotope preparation of collagen and bioapatite
- 2010 2014 BSc in Prehistoric and Historic Archaeology and Chemistry (minor) Christian-Albrechts-University, Kiel, Germany

- Undergraduate Research Assistant for stable isotope preparation of bioapatite

Awards and Funding

2024 Irene Levi-Sala CARE Archaeological Foundation Research Grant

"Site-specific hydroclimatic and palaeoenvironmental markers at B60, an Upper Paleolithic site in the lower Besor Basin" (5,000 \$). Co-PI with Mae Goder-Goldberger

2022 – 2024 German National Academy of Sciences Leopoldina Postdoctoral Fellowship

"Developing a multi-proxy stable isotope approach to demonstrating the climatic preferences of site-use of Late Pleistocene humans" (77,000 \$)

2011 – 2016 German National Academic Foundation (Studienstiftung des Deutschen Volkes) scholarship (20,000 \$)

Publications

Key publications: ★

Citations: 410 | H-index: 9

- ★ 1. **Pederzani, S.**, Britton, K. Trost, M., Fewlass, H., Bourgon, N., McCormack, J., Jaouen, K., Dietl, H., Döhle, H.-J., Kirchner, A., Lauer, T., Le Corre, M., McPherron, S. P., Meller, Mylopotamitaki, D., H., Orschiedt, J., Rougier, Ruebens, K., H., Schüler, Sinet-Mathiot, V., T., Smith, G. M., Talamo, S. Tütken, T., Welker, F., Zavala, E. I., Weiss, M., Hublin, J.-J., **2024** Early *Homo sapiens* dispersed into cold steppes in central Europe. **Nature Ecology & Evolution**. https://doi.org/10.1038/s41559-023-02318-z Data & Code available at: https://osf.io/wunfd/
 - Mylopotamitaki, D., Weiss, M., Fewlass, H., Zavala, E. I., Rougier, H., Sümer, A. P. Hajdinjak, M., Smith, G. M., Ruebens, K., Sinet-Mathiot, V., **Pederzani, S.**, Essel, E., Harking, F., Xia, H., Hansen, J., Kirchner, A., Lauer, T., Stahlschmidt, M., Hein, M., Talamo, S., Wacker, L., Meller, H., Dietl, H., Orschiedt, J., Olsen, J. V., Zeberg, H., Prüfer, K., Krause, J., Meyer, M., Welker, F., McPherron, S. P., Schüler, T., Hublin, J.-J., **2024**. *Homo sapiens* reached the higher latitudes of Europe by 45,000 years ago. **Nature**. https://doi.org/10.1038/s41586-023-06923-7
 - 3. Smith, G. M., Ruebens, K., Zavala, E. I., Sinet-Mathiot, V., Fewlass, H., **Pederzani, S.**, Jaouen, K., Mylopotamitaki, D., Britton, K., Rougier, H., Stahlschmidt, M., Meyer, M., Meller, H., Dietl, H., Orschiedt, J., Krause, J., Schüler, T., McPherron, S. P., Weiss, M. Hublin, J.-J., Welker, F., **2024**. The ecology, subsistence and diet of ca. 45,000-year-old *Homo sapiens* at Ilsenhöhle in Ranis, Germany. **Nature Ecology & Evolution**. https://doi.org/10.1038/s41559-023-02303-6
 - 4. Fernández-Garcia, M., **Pederzani, S.**, Britton, K., Agudo-Pérez, L., Cicero, A., Geiling, J., Daura, J., Sanz-Borrás, M., Marín-Arroyo, A. B., **in revision**. Ecological evolution in northern Iberia (SW Europe) during the Late Pleistocene through isotopic analysis on ungulate teeth. **Biogeosciences**. https://doi.org/10.5194/bg-2023-128
 - 5. **Pederzani, S.**, Britton, K., Jones, J. R., Agudo Pérez, L., Geiling, J. M., Marín-Arroyo, A. B., **2023** Late Pleistocene Neanderthal exploitation of stable ecosystems in northern Iberia shown by multi-isotope evidence. **Quaternary Research**.
 - 6. **Pederzani, S.**, **2023**. Stable Isotope Analyses of Organic Remains. In: Rehren, T., Nikita, E. (Eds.), Encyclopedia of Archaeology, Second Edition. Elsevier.
 - 7. Britton, K., Jimenez, E.-L., Le Corre, M., **Pederzani, S.**, Daujeard, C., Jaouen, K., Vettese, D., Tütken, T., Hublin, J.-J., Moncel, M.-H., **2023**. Multi-isotope zooarchaeological investigations at Abri du Maras: The paleoecological and paleoenvironmental context of Neanderthal subsistence strategies in the Rhône Valley during MIS 3. **Journal of Human Evolution** 174, 103292. https://doi.org/10.1016/j.jhevol.2022.103292
 - 8. McCormack, J., Griffiths, M.L., Shimada, K., Kim, S., Karnes, M., Maisch, H., **Pederzani, S.**, Bourgon, N., Jaouen, K., Becker, M.A., Jöns, N., Sisma-Ventura, G., Straube, N., Pollerspöck, J., Hublin, J.-J., Eagle, R.A., and Tütken, T., **2022.** Competition between Neogene *Otodus megalodon* and great white sharks revealed by zinc isotopes. **Nature Communications** 13, 2980. https://doi.org/10.1038/s41467-022-30528-9
- ★ 9. **Pederzani, S.**, Britton, K., Aldeias, V., Bourgon, N., Fewlass, H., Lauer, T., McPherron, S. P., Rezek, Z., Sirakov, N., Smith, G. M., Spasov, R., Tran, N.-H., Tsanova, T., Hublin, J.-J., **2021**. Subarctic climate for the earliest *Homo sapiens* in Europe. **Science Advances** 7, eabi4642 (2021).

https://doi.org/10.1126/sciadv.abi4642 Data and code available at: https://osf.io/tk9dc/

- Smith, G.M., Spasov, R., Martisius, N.L., Rezek, Z., Aldeias, V., Ruebens, K., Pederzani, S., McPherron, S.P., Sirakova, S., Sirakov, N, Tsanova, T., Hublin, J.J., 2021. Subsistence behaviour during the Initial Upper Palaeolithic in Europe: Site use, dietary practice, and carnivore exploitation at Bacho Kiro Cave (Bulgaria). Journal of Human Evolution 161, 103074. https://doi.org/10.1016/j.jhevol.2021.103074
- ★ 11. **Pederzani, S.**, Aldeias, V., Dibble, H.L., Goldberg, P., Hublin, J.J., Madelaine, S., McPherron, S.P., Sandgathe, D., Steele, T.E., Turq, A., Britton, K., **2021**. Reconstructing Late Pleistocene paleoclimate at the scale of human behavior: an example from the Neandertal occupation of La Ferrassie (France). **Scientific Reports** 11, 1419. https://doi.org/10.1038/s41598-020-80777-1 Data and code available at: https://osf.io/sfnb8/
 - 12. **Pederzani, S.**, Snoeck, C., Wacker, U., Britton, K., **2020**. Anion exchange resin and slow precipitation preclude the need for pretreatments in silver phosphate preparation for oxygen isotope analysis of bioapatites. **Chemical Geology** 534, 119455. https://doi.org/10.1016/j.chemgeo.2019.119455 Data and code available at: https://osf.io/ug5k4/
 - Britton, K., **Pederzani, S.**, Kindler, L., Roebroeks, W., Gaudzinski-Windheuser, S., Richards, M.P., Tütken, T., **2019**. Oxygen isotope analyses of Equus teeth evidences early Eemian and early Weichselian palaeotemperatures at the Middle Palaeolithic site of Neumark-Nord 2, Saxony-Anhalt, Germany.
 Quaternary Science Reviews 226, 106029. https://doi.org/10.1016/j.quascirev.2019.106029
 - 14. **Pederzani, S.**, Britton, K., **2019**. Oxygen isotopes in bioarchaeology: Principles and applications, challenges and opportunities. **Earth-Science Reviews**. 188, 77–107. https://doi.org/10.1016/j.earscirev.2018.11.005
 - 15. Makarewicz, C.A., **Pederzani, S.**, **2017**. Oxygen (δ^{18} O) and carbon (δ^{13} C) isotopic distinction in sequentially sampled tooth enamel of co-localized wild and domesticated caprines: Complications to establishing seasonality and mobility in herbivores. **Palaeogeography, Palaeoclimatology, Palaeoecology**. 485, 1–15. https://doi.org//10.1016/j.palaeo.2017.01.010
 - 16. Hermes, T., **Pederzani, S.**, Makarewicz, C.A., **2017**. Ahead of the curve? Implications for isolating vertical transhumance in seasonal montane environments using sequential oxygen isotope analyses of tooth enamel, in: Ventresca-Miller, A.R., Makarewicz, C.A. (Eds.), Isotopic Investigations of Pastoralism in Prehistory. Routledge. https://doi.org/10.4324/9781315143026

All recent publications (2019 onwards) are open access or made available online as post-prints within 3 months of acceptance. All first author publications have openly accessible data and analysis code.

Teaching and Supervision Experience

Programming and Reproducible Science

2022 Scientific Analysis using R

3-day introductory level R programming course for undergraduate and graduate students and postdocs of the University of La Laguna

Complete course design, preparation of materials, and instruction

- 2021 Reproducible Workflows for Scientific Computing
 5-day introductory level Software Carpentry programming course
 Instructor for data visualization and RMarkdown portions
 Contribution to course design, lecture design for 2 course days
- Writing Research Articles using R and RMarkdown
 Half-day programming course for graduate students and researchers, MPI-EVA, Leipzig
 Complete course design, preparation of materials, instruction over Zoom
- Reproducible Workflows for Scientific Computing
 5-day introductory level Software Carpentry programming course
 Instructor for data visualization and RMarkdown portions (2 days)
 Lecture design based on existing materials, participation in overall course design

Lectures and Tutorials

2023 TIFA short course Advanced Methods in Zooarchaeology for PhD students and Postdocs, ICArEHB, Faro, Portugal

Designing, preparing and delivering original lectures and practicals in

- "Stable isotopes and spatial ecology"
- "Non-traditional stable isotopes"
- "Introduction to lipid biomarkers in archaeology and zooarchaeology"
- 2019 MSc module "Palaeoenvironmental Research", University of Leipzig, Germany
 Designing, preparing and delivering original lecture on environmental reconstruction with stable isotopes
- 2019 International Max Planck Research School, MPI-EVA, Leipzig, Germany
 Designing, preparing and delivering original lecture on stable isotopes and mobility lecture, and preparation of exam questions
- 2015 BSc module "Introduction to Archaeological Science", University of Kiel, Germany Design and delivery of zooarchaeology lecture
- 2014 BSc module "Introduction to Zooarchaeology", University of Kiel, Germany
 Teaching Assistant for Introductory Zooarchaeology modules, including assisting students during
 practical sessions, providing practice materials, implementing assessment exercises

<u>Laboratory Instruction and Supervision</u>

- Instruction of visiting students, researchers and technicians in principles of analytical chemistry, IRMS use, data quality control and trouble-shooting
- Instruction of students, researchers and technicians commonly without prior laboratory experience in stable isotope and biomarker wet chemistry techniques and laboratory health and safety
- 2017 Laboratory instruction and supervision of 3-month placement PhD student Jeanne Marie Geiling (University of Cantabria); Instruction in laboratory protocols, TC/EA-IRMS measurements, stable isotope data processing and quality control. Assisting with interpretation of stable isotope results and giving feedback on dissertation chapters

Institutional Service and DEI work

- 2018 Scientific coordination of the MPI-EVA light stable isotope IRMS facility including oversight of two technicians, data quality control, instrument troubleshooting and management of maintenance and instrument repairs
 2018 Co-organizer 'Gender Equality Symposium', MPI-EVA, Leipzig 2-day program of invited lectures and workshops
 2018 Co-organizer of a half-day workshop "Gender inequality in negotiations"
 2018 Co-organizer of a half-day implicit bias training by EAF Berlin, MPI-EVA, Leipzig
 2018 PhD student representative of the Department of Human Evolution, MPI-EVA, Leipzig

 Co-coordinating of graduate student progress evaluation that established regular feedback meetings and a formalized documentation of progress
- 2018 Student member of the election board for the institute works council, MPI-EVA, Leipzig
- 2017 DEI training for Graduate Students "Racial stereotypes in research", full-day workshop, MPI-EVA

Academic Service

Journal Article Peer Review: Science Advances, Nature Scientific Reports, Journal of Archaeological Science, PlosOne, Journal of Archaeological Science: Reports, Quaternary International, Rapid Communications in Mass Spectrometry, Archaeological and Anthropological Sciences, International Journal of Osteoarchaeology, Environmental Archaeology, Journal of Asian Earth Sciences, Ecology and Evolution, Humanities and Social Sciences Communications, Frontiers in Environmental Archaeology

Grant Peer Review: The Leakey Foundation

Since 2023	Co-maintainer of the Archaeology CRAN task view
Since 2023	Review Editor for Frontiers in Environmental Archaeology
2023	Session Chair – Meeting of the ICAZ Stable Isotopes in Zooarchaeology Working Group, "Beyond the baseline: Broadening stable isotopic horizons in zooarchaeology, Freie Universität Berlin, Berlin, Germany.

Technical and Analytical Experience

Analytical and Organic Geochemistry

- 10 years of experience in geochemistry and archaeological chemistry laboratories
 - In-depth experience with stable isotope and lipid biomarker wet chemistry procedures for skeletal, sediment and plant samples including work in clean-room environments
 - Laboratory health and safety management and user training
 - In-depth experience with laboratory inventory and consumable order management

- 10 years of experience with IRMS and GC-MS instrumentation
 - Extensive experience operating, maintaining and repairing gas-source IRMS, GC-MS, and a broad range of peripherals (TC/EA, EA, KIEL device, IsoLink)
 - experience operating MC-ICPMS instruments
 - 7-years experience managing IRMS instrument performance and maintenance including quality control testing, technician supervision, scheduling preventative maintenance and coordinating repairs

Scientific Programming

GitHub: https://github.com/scpederzani

- 10 years of experience with scientific programming and reproducible workflows
 - R programming and building statistical models including simulations
 - Git version control and Bash scripting
 - Scientific manuscripts and automated reports in RMarkdown and Quarto
 - Reproducible workflows and open science practices including extensive data and code sharing

Fieldwork Experience

15 years of experience in archaeological excavation and field survey (Late Pleistocene, Holocene, Early Pleistocene) at field sites in France, Spain, Germany, Jordan, Israel, Bulgaria and Mongolia. Extensive fieldwork experience collecting archaeological skeletal samples, archaeological sediments, modern plant, water, and animal samples in the field and in museum collections for a variety of biomolecular analyses including stable isotopes, lipid biomarker analysis and paleoproteomics.

Invited Talks

- 2023 "Detecting climatically-mediated site occupation patterns using stable isotopes and biomarkers: A proof-of-concept study from La Ferrassie, France". TRACES, CNRS, University of Toulouse, France.
- 2023 "Making the most of archaeological collections". Brownbag lecture, Department of Anthropology, University of Minnesota, Minneapolis, USA.
- 2023 "Oxygen stable isotopes and palaeoclimatic reconstruction". iNEAL workshop on "Integrative palaeoecology: multiproxy analyses to reconstruct Neanderthal palaeoecology, seasonality and mobility based on mammal assemblages", IPHES, Tarragona, Spain.
- 2023 "Writing clean and reproducible analyses and manuscripts using Quarto". Australian Centre for Archaeological Science online webinar, "Good statistical practice in Archaeology".
- 2022 "Exploring climatic patterns in site-occupation and movement of Palaeolithic humans using biomolecular methods". Analytical, Environmental and GeoChemistry (AMGC) Seminar Series, Vreije Universiteit Brussel, Belgium.
- 2022 "'Palaeoclimatology on the scale of human behaviour stable isotope approaches to site-specific climatic reconstruction". One Health Archaeology Seminar, School of History, Classics & Archaeology, University of Edinburgh, UK.

- 2021 "Molekulares Ausgraben Isotopenwerkzeuge zur Rekonstruktion von Klima und Umwelt im Pleistozän" (in German; Eng.: "Molecular digging stable isotope tools for reconstructing Pleistocene climate and environment"). Archaeological Colloquium, Institute for Prehistoric and Protohistoric Archaeology, Friedrich-Alexander-University Erlangen, Germany.
- 2020 "Cold climatic conditions during an early occurrence of Upper Palaeolithic Homo sapiens in Europe stable isotope evidence from Bacho Kiro Cave, Bulgaria". Seminar Series, London Geochemistry and Isotope Centre, University College London, UK.
- 2017 "Reconstructing Pleistocene Palaeoclimate and Palaeoseasonality using Oxygen Isotope Zooarchaeology". Northern Archaeological Seminar Series, University of Aberdeen, UK.
- 2017 "Reconstructing palaeoclimate and palaeoseasonality using oxygen isotope analyses of faunal remains possibilities, problems, and method development". AHRC funded network project "Coping with climate: the legacy of Homo heidelbergensis", University of Brighton, UK.

Selected Conference Presentations

- 1. **Pederzani, S.**, Britton, K. Trost, M., Fewlass, H., Bourgon, N., McCormack, J., Jaouen, K., Dietl, H., Döhle, H.-J., Kirchner, A., Lauer, T., Le Corre, M., McPherron, S. P., Meller, Mylopotamitaki, D., H., Orschiedt, J., Rougier, Ruebens, K., H., Schüler, Sinet-Mathiot, V., T., Smith, G. M., Talamo, S. Tütken, T., Welker, F., Zavala, E. I., Weiss, M., Hublin, J.-J., 2023. An early dispersal of Homo sapiens into cold-arid steppes of the North European Plain. Oral presentation at the 13th Annual ESHE meeting, Aarhus, Denmark.
- 2. **Pederzani, S.**, Aldeias, V., Herrera-Herrera, A. V., Britton, K., McPherron, S. P., Goldberg, P., Hublin, J.-J., Madelaine, S., Sandgathe, D., Steele, T. E., Turq, A., Mallol, C., 2023. A biomarker and stable isotope approach to detecting climate-mediated site occupation patterns a proof-of-concept study from La Ferrassie, France. Oral presentation at the 21st INQUA Congress, Rome, Italy.
- 3. **Pederzani, S.**, Liu, Z., Prendergast, A., Drysdale, R., Belmaker, M., 2023. Macrofaunal stable isotopes from 'Ubeidiya, Israel, shed light on environmental setting of an early presence of Homo in the Levant. Poster presentation at the 21st INQUA Congress, Rome, Italy.
- 4. **Pederzani, S.**, Britton, K. Trost, M., Fewlass, H., Bourgon, N., McCormack, J., Dietl, H., Döhle, H.-J., Jaouen, K., Kirchner, A., Lauer, T., McPherron, S. P., Meller, H., Orschiedt, J., Rougier, H., Schüler, T., Smith, G. M., Talamo, S., Tütken, T., Weiss, M., Hublin, J.-J., A multi-isotope record of climate and ecosystem change during the Middle to Upper Palaeolithic transition at Ranis Ilsenhöhle, Germany. Oral presentation at the Hugo Obermaier Society 63 Annual meeting, Aarhus, Denmark.
- 5. **Pederzani, S.**, Trost, M., Bourgon, N., McCormack, J., Britton, K., Fewlass, H., Hublin, J.-J., McPherron, S. P., Schüler, T., Smith, G. M., Talamo, S., Weiss, M., Tütken, T., Jaouen, K., **2023**. Shining a light on C3 environments? New data on δ^{66} Zn as a proxy for herbivore grazing and plant ecosystem change in the European Pleistocene. Oral presentation at the meeting of the ICAZ Stable Isotopes in Zooarchaeology Working Group, "Beyond the baseline: Broadening stable isotopic horizons in zooarchaeology, Berlin, Germany.
- 6. **Pederzani, S.,** Herrera-Herrera, A. V., Kleijne, J.P., Simões, C. D., Lenting, R., Elvira, A., Mallol, C., **2022**. Climate under the microscope retrieving n-alkane biomarkers from micromorphology blocks. Poster presentation at the 12th Annual ESHE meeting, Tübingen, Germany.

- 7. **Pederzani, S.**, Britton, K., Jones, J. R., Agudo Pérez, L., Geiling, J. M., Marín-Arroyo, A. B., **2022**. A multi-isotope study of palaeoenvironment and herbivore palaeoecology during the late Neanderthal occupation of Axlor Cave, Spain. Oral presentation of the 2022 UK Archaeological Science conference (UKAS), Aberdeen, UK.
- 8. **Pederzani, S.**, Britton, K., Aldeias, V., Bourgon, N., Fewlass, H., Lauer, T., McPherron, S. P., Rezek, Z., Sirakov, N., Smith, G. M., Spasov, R., Tran, N.-H., Tsanova, T., Hublin, J.-J., **2021**. Cold climatic conditions for *Homo sapiens* in the Initial Upper Palaeolithic direct evidence from Bacho Kiro Cave, Bulgaria. Oral presentation at the Hugo Obermaier Society 62 Annual meeting (virtual).
- 9. **Pederzani, S.**, Britton, K., Aldeias, V., Lauer, T., McPherron, S. P., Rezek, Z., Sirakov, N., Smith, G. M., Spasov, R., Tsanova, T., Hublin, J.-J., **2020**. Direct evidence for climatic conditions experienced by Initial Upper Palaeolithic *Homo sapiens* at Bacho Kiro Cave, Bulgaria. Oral presentation at the 26th EAA Annual Meeting (virtual).
- 10. Pederzani, S., Aldeias, V., Goldberg, P., Hublin, J.-J., Madelaine, S., McPherron, S., Sandgathe, D., Steele, T. E., Turq, A., Britton, K., 2019. Contextualising Neanderthal behaviour during MIS 3 and 4 at La Ferrassie, France: Seasonal palaeotemperature reconstructions from oxygen stable isotopes. Pecha Kucha presentation at the 9th Annual ESHE meeting, Liège, Belgium.
- 11. **Pederzani, S.**, Aldeias, V., Goldberg, P., Hublin, J.-J., Madelaine, S., McPherron, S., Sandgathe, D., Steele, T. E., Turq, A., Britton, K., **2019**. Reconstructing patterns of palaeoseasonality during the Weichselian: Sub-annual palaeotemperatures from the La Ferrassie rock shelter. Oral presentation at the 20th INQUA Congress, Dublin, Ireland.
- 12. **Pederzani, S.**, Aldeias, V., Goldberg, P., Hublin, J.-J., Madelaine, S., McPherron, S., Sandgathe, D., Steele, T. E., Turq, A., Britton, K., **2019**. Using isotope zooarchaeology to reconstruct late Pleistocene climate and seasonality: new evidence from La Ferrassie, France. Oral presentation at the 2019 UK Archaeological Science conference (UKAS), Manchester, UK.
- 13. **Pederzani, S.**, Hublin, J.-J., Britton, K., **2018**. Reconstruction of local palaeoseasonality and palaeoclimate at Middle Palaeolithic sites in Western Europe: Sampling, data handling, and temperature conversion in oxygen isotope seasonality models. Poster presentation at the 8th International Symposium on Biomolecular Archaeology (ISBA), Jena, Germany.
- 14. **Pederzani, S.**, Wacker, U., Hublin, J.-J., Britton, K., **2017**. Method development in palaeoclimate and palaeoseasonality reconstruction using oxygen isotopic analyses of bioapatite phosphate of faunal remains. Poster presentation for the 2017 UK Archaeological Science conference (UKAS), London, UK.
- 15. **Pederzani, S.**, Wacker, U., Hublin, J.-J., Britton, K., **2017**. Reconstructing palaeoclimate and palaeoseasonality using oxygen isotope analyses of faunal remains possibilities, problems, and method development. Oral presentation for "Coping with climate: the legacy of Homo heidelbergensis" workshop, Brighton, UK.
- 16. **Pederzani, S.**, Makarewicz, C.A., **2016**. Pasteurization, Processing, Palaeoenvironment Applicability of modern dairy reference fats in archaeological lipid residue analysis using δ^{13} C of single fatty acids. Oral Presentation for 7th International Symposium on Biomolecular Archaeology (ISBA7), Oxford, UK.

Professional Society Membership

European Society for the Study of Human Evolution (ESHE)

German Chemical Society (Gesellschaft Deutscher Chemiker, GdCh)

References

Gabriel Bowen

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