



NEWSLETTER



SOMMERSEMESTER 2021 - NR. 2

The second phase of the DFG Center started along with the COVID-19 pandemic. In times of lockdowns, high incidence numbers, home office and the shift to online research formats, we were restricted in inviting scientists to Tübingen to conduct research with us at the Center. Nevertheless, the year 2020 was an academically successful year including received grants and awards and published articles. The year 2021 started with another lockdown which did not prevent us from developing new fellowship formats and integrating new ideas. Finally, we were able to welcome the first fellows in person in spring 2021 and breathe new life into the center. In addition, we welcomed our Junior Research Group Leader Dr. Alexandros Karakostis and our first PhD student Simona Affinito. Since summer times are back, everything in Tübingen is coming back to normal and we are looking forward to a successful second half of 2021 full of research, fellows, and collaborations.

Simona Affinito (PhD Candidate)



Simona has joined the Junior Research Group of our DFG Center as a PhD student in Paleoanthropology. She is interested in the link between anatomy, function and evolution, and in the application of new methodologies to the study of the human fossil record. Simona holds a master's degree in Biodiversity and Evolution at the University of Bologna where she worked on a project involving the study of the bone internal structure to identify pathological alterations in skeletal collections. She then completed an MSc at the Hull York Medical School where she specialized in functional and evolutionary anatomy. Her previous work involves the study of the biomechanics of the mandible in modern humans and great apes using virtual modelling techniques and biomechanical simulations (FEA).

In the context of her PhD project, Simona employs a multidisciplinary experimental approach to explore the evolutionary interplay between tool-use/making and gestural/verbal communication with the goal to provide new insight into the mechanisms underlying the cognitive bases of human tool-use and language.

Awards and Grants

Prof. Dr. Katerina Harvati awarded Leibniz Preis 2021:

<https://uni-tuebingen.de/universitaet/aktuelles-und-publikationen/pressemitteilungen/newsfullview-pressemitteilungen/article/tuebingen-wissenschaftlerin-erhaelt-leibniz-preis/>
<https://www.dfg.de/service/presse/pressemitteilungen/2020/pressemitteilung>

Dr. Sireen El Zaatari received ERC Consolidator Grant:

<https://uni-tuebingen.de/universitaet/aktuelles-und-publikationen/attempto-online/newsfullview-attempto/article/palaeoanthropologin-und-archaeologin-erhaelt-consolidator-grant-des-europaeischen-forschungsrats/>

Dr. Matthias Urban has been elected member of the Yount Academy of Europe.

Media

Prof. Dr. Katerina Harvati contributed in the first volume of the "Conversations in Human Evolution" series published in Archaeopress. Her interview along with the interviews of other established scientists can be found online under:

<https://www.archaeopress.com/ArchaeopressShop/Public/displayProductDetail.asp?id={9EC3227C-1A17-48FB-A713-98E8CDB7BCE1}>



Prof. Dr. Katerina Harvati was interviewed for the new volume of the Magazine Current Biology. In this interview she shares insights on her career and her research ambitions. The interview is available online: [https://www.cell.com/current-biology/fulltext/S0960-9822\(21\)00481-4](https://www.cell.com/current-biology/fulltext/S0960-9822(21)00481-4)

Hannes Rathmann and Hugo Reyes-Centeno published an article (Das menschliche Gebiss als Spiegel unserer Evolution) based on their publication in 2020 online on the platform Archeologie Online:

https://www.archaeologie-online.de/index.php?id=7&L=1&tx_news_pi1%5Bnews%5D=4607&tx_news_pi1%5Bcontroller%5D=News&tx_news_pi1%5Baction%5D=detail&cHash=46975931e87a015b107991e011643f20

Publications 2020

- Arner, A. M., Grogan, K. E., Grabowski, M., Reyes-Centeno, H., & Perry, G. H., 2020. Evolutionary genomic patterns of recent natural selection on loci associated with sexually differentiated human body size and shape phenotypes. bioRxiv.
- Arner, A., Reyes-Centeno, H., Perry, G., & Grabowski, M., 2020, March. Pleiotropic effects on the recent evolution of human hip circumference and infant body size. In AMERICAN JOURNAL OF PHYSICAL ANTHROPOLOGY (Vol. 171, pp. 10-10). 111 RIVER ST, HOBOKEN 07030-5774, NJ USA: WILEY.
- Beier J., Anthes N., Wahl J., Harvati K., 2020. Prevalence of cranial trauma in Eurasian Upper Paleolithic humans. American Journal of Physical Anthropology 174, 268-174 DOI: 10.1002/ajpa.24163
- Bosman, A. M., Reyes-Centeno, H., & Harvati, K., 2020. A virtual assessment of the suprainiac depressions on the Eyasi I (Tanzania) and Aduma ADU-VP-1/3 (Ethiopia) Pleistocene hominin crania. Journal of Human Evolution, 145, 102815.
- Dutkiewicz, E., Russo, G., Lee, S., & Bentz, C., 2020. SignBase, a collection of geometric signs on mobile objects in the Paleolithic. Scientific data, 7 (1), 1-14.
- Evteev, A., Santos, P., Grosheva, A., Ghirotto, S., & Reyes-Centeno, H., 2020, March. Associations between genetic differentiation and craniometric interpopulation distances across North Eurasia. In AMERICAN JOURNAL OF PHYSICAL ANTHROPOLOGY (Vol. 171, pp. 82-82). 111 RIVER ST, HOBOKEN 07030-5774, NJ USA: WILEY.
- Ghirotto, S., Vizzari, M. T., Tassi, F., Barbujani, G., & Benazzo, A., 2020. Distinguishing among complex evolutionary models using unphased whole-genome data through Random-Forest Approximate Bayesian Computation. Molecular Ecology Resources.
- Karakostis F.A., Reyes-Centeno H., Franken M., Hotz G., Rademaker K., Harvati K., 2020. Bio-cultural evidence of precise manual activities in an Early Holocene individual of the high-altitude Peruvian Andes. American Journal of Physical Anthropology 174, 35-48 DOI: 10.1002/ajpa.24160
- Mori T, Profico A, Reyes-Centeno H, and Harvati K., 2020. Virtual reconstruction and geometric morphometric analysis of the mid-Pleistocene hominin KNM-OG 45500 (Olorgesailie, Kenya). Journal of Anthropological Sciences. doi:10.4436/jass.98022
- Rathmann H. and Reyes-Centeno H., 2020. The utility of different dental traits and trait combinations for inferring human population history. 10th Annual Meeting of the European Society for Human Evolution (ESHE). Podium presentation, Worldwide Online, 24.-25. September 2020.
- Rathmann, H., & Reyes-Centeno, H., 2020. Testing the utility of dental morphological trait combinations for inferring human neutral genetic variation. Proceedings of the National Academy of Sciences, 117(20), 10769 -10777.
- Sahle, Y., 2020. Eastern African Stone Age. Oxford Research Encyclopedia of Anthropology. Oxford University Press, Oxford. doi: 10.1093/acrefore/9780190854584.013.53
- Santos, P., González-Fortes, G., Trucchi, E., Ceolin, A., Cordoni, G., Guardiano, C., ... & Barbujani, G, 2020. More rule than exception: Parallel evidence of ancient migrations in grammars and genomes of Finno-Ugric speakers. In GENES, 11(12), 1491.
- Uhl, A., Karakostis, F.A., Wahl, J., Harvati K., 2020 A cross-population study of sexual dimorphism in the bony labyrinth. Archaeol Anthropol Sci 12, 132
- Urban, M., & Barbieri, C., 2020. North and South in the ancient Central Andes: Contextualizing the archaeological record with evidence from linguistics and molecular anthropology. Journal of Anthropological Archaeology, 60, 101233.

Publications 2021

- Arner AM, Grogan KE, Grabowski M, Reyes-Centeno H, Perry GH. 2021. Patterns of recent natural selection on genetic loci associated with sexually differentiated human body size and shape phenotypes. PLOS Genetics 17(6): e1009562. <https://doi.org/10.1371/journal.pgen.1009562>
- Buzi C., Di Vincenzo F., Profico A., Manzi G.. 2021. The Pre-Modern Human Fossil Record in Italy from the Middle to the Late Pleistocene: An Updated Reappraisal. Alpine and Mediterranean Quaternary. <https://doi.org/10.26382/AMQ.2021.03>



- Dediu Dan, Moisik Scott R., Baetsen W. A., Bosman Abel Marinus, and Waters-Rist Andrea L. 2021. The vocal tract as a time machine: inferences about past speech and language from the anatomy of the speech organs. *Phil. Trans. R. Soc. B.* <http://doi.org/10.1098/rstb.2020.0192>
- Karakostis F.A., Haeufle D., Ansatopoulou I., Moraitis K., Hotz G, Tourloukis V., Harvati K., 2021. Biomechanics of the human thumb and the evolution of dexterity. *Current Biology.* <https://doi.org/10.1016/j.cub.2020.12.041>
- Karakostis, F. A. and Harvati, K., 2021, New horizons in reconstructing past human behavior: Introducing the “Tübingen University Validated Entheses-based Reconstruction of Activity” method. *Evolutionary Anthropology* DOI: <https://doi.org/10.1002/evan.21892>
- Yanovich, I. 2021. JOINT MODELLING OF RADIOCARBON DATES FROM ULUCAK V (ANATOLIAN LATE NEOLITHIC). *Mediterranean Archaeology and Archaeometry*, 21(1), 273-280. doi: 10.5281/zenodo.4606805

Call for fellowship application

The Center is a forum of interdisciplinary discussion and research. Its fellowship program is a great opportunity to connect with the core staff and associated members to establish new, interdisciplinary ideas and research projects. We would like to invite you to apply for a fellowship to work together with us in order to gain more insights in the human past from different research perspectives. The core staff and several local members are open to new collaborations as well as the associated Emmy Noether Junior Research Group “The Language Dynamics of the Ancient Central Andeas” lead by Dr. Matthias Urban.

For more information on the Center and the associated members and research groups, please visit our homepage wordsandbones.uni-tuebingen.de

For more information on the fellowship program, please have a look at the description and information on our webpage (<https://uni-tuebingen.de/forschung/forschungsschwerpunkte/forschungsgruppen/words-bones-genes-tools/fellowships/>) or contact our scientific coordinator Dr. des. Marisa Köllner (marisa.koellner@uni-tuebingen.de)

We would love to welcome you here in Tübingen at the Center “Words, Bones, Genes, Tools”.

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