

Sarah E. Freidline

University of Central Florida
Department of Anthropology
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EDUCATION

- 2012 **Ph.D.**, Anthropology
The City University of New York Graduate Center
Dissertation: “Assessing the effects of allometry on Middle to Late Pleistocene human facial morphology using semilandmark geometric morphometrics”
Committee: Eric Delson (chair), Katerina Harvati, Jean-Jacques Hublin, Philipp Gunz, William Harcourt-Smith
- 2002 **B.A.**, Anthropology
New York University

ACADEMIC POSITIONS

- 2020-present **Assistant Professor**, Department of Anthropology
University of Central Florida
- 2012-2020 **Postdoctoral Researcher**, Department of Human Evolution
Max Planck Institute for Evolutionary Anthropology, Leipzig, Germany
- 2007-2012 **Pre-doctoral Fellow**, Department of Human Evolution
Max Planck Institute for Evolutionary Anthropology, Leipzig, Germany
- 2004-2006 **Adjunct Lecturer**, Department of Anthropology
Lehman College, City University of New York

RESEARCH INTERESTS

Paleoanthropology; modern human origins, human evolution; virtual fossil reconstruction; geometric morphometrics; bone histology; growth and development; skeletal morphology; skeletal biology
Neanderthals; Middle Pleistocene; *Homo heidelbergensis*; Denisovan; Africa; Asia

RESEARCH EXPERIENCE

- 2024-present **Secondary Joint Appointment**, National Center for Forensic Science

University of Central Florida

2023-present **Associate Researcher**, Department of Human Origins
Max Planck Institute for Evolutionary Anthropology, Leipzig, Germany

2012-2020 **Postdoctoral Researcher**, Department of Human Evolution
Max Planck Institute for Evolutionary Anthropology, Leipzig, Germany

Supervisor: Jean-Jacques Hublin

Roles and Responsibilities:

- Develop projects and data analysis in virtual reconstruction, geometric morphometrics, and bone histology in Middle to Late Pleistocene fossil hominins
- Supervise Ph.D. students in areas of virtual anthropology, fossil reconstruction and geometric morphometrics
- Publish in peer-reviewed journals and present at international conferences

PUBLICATIONS

Total Number of Citations and h-index¹

- 2671 total citations on Google Scholar
- Google Scholar h-index: 14
- Google Scholar i10-index: 15

Notes about author order for journals in my field of study:

- **Principal authorship** in journal articles should accurately reflect the relative scientific or professional contributions of the individuals involved.
- **Last-author positions** in journal articles are typically designated for the senior scientists on the project, particularly for papers first-authored by their trainees. For papers led by a PI's trainee, the last-authors/senior-authors typically contribute strongly to the project through oversight and collaboration from conceptual development to manuscript writing.

*denotes student co-authorship

#denotes dual first-authorship

Manuscripts in preparation (3)

1. **Freidline, S.E.**, Bailey, S.E., Skinner, M.M., Hublin, J.-J. Undescribed cranial remains from Middle Pleistocene North Africa.
2. *Shipman, C., **Freidline, S.E.** A geometric morphometric study on sexual dimorphism in human juvenile facial morphology.
3. Baab, K., **Freidline, S.E.**, Rogers, M.J., Semaw, S., Kaifu, Y. The changing face of *Homo erectus*: A new reconstruction of the 1.5 Myr DAN5/P1 face.

Manuscripts under review (2)

1. **Freidline, S.E.**, *Hubbart, M., *Shipman, C., Villa, C., Schuh, A. A shared pattern of human facial growth. *The Anatomical Record*.

¹ All impact factors were retrieved from journals' website and all citation scores from Google Scholar in May 2025 unless stated otherwise.

2. Hublin, J.-J., Lefèvre, D., Perini, S., Muttoni, G., Skinner, M.M., Bailey, S.E., **Freidline, S.E.**, Gunz, P., Rué, M., El Graoui, M., Geraads, D., Daujeard, C., Davies, T.W., Kupczik, K., Imbrasas, M.D., Ortiz, A., Falguères, C., Shao, Q., Bahain, J.-J., Queffelec, A., Gómez-Olivencia, A., Benazzi, S., Le Cabec, A., Sorrentino, R., Bergmann, I., Sbihi-Alaoui, F.-Z., Gallotti, R., Raynal, J.-P., Mohib, A. Before *Homo sapiens*: ~770,000-year-old Fossil Evidence from Thomas Quarry I (Morocco). *Nature*.

Published Peer-Reviewed Journal Articles (18, 8 at UCF)

1. Schuh, A., Gunz, P., Villa, C., Maureille, B., Toussaint, M., Abrams, G., Bonjean, D., Hublin, J.-J. **Freidline, S.E.** (2025) Human midfacial growth pattern differs from Neanderthals and chimpanzees. *Journal of Human Evolution*, Vol. 202, 103667.
 - Impact factor: 3.1
 - Ranked as #3 cited journal in Anthropology
2. **Freidline, S.E.**, Gunz, P., Alichane, H., Oujaa, A., Ben-Ncer, A., El Hajraoui, M.A., Hublin, J.-J. (2024) The undescribed juvenile maxilla from Contrebandiers Cave, Morocco – a study on Middle Stone Age facial growth. *Journal of Paleolithic Archaeology* 7, 15. <https://doi.org/10.1007/s41982-024-00181-3>
 - Citations: 2
 - Impact factor: 2.2
 - Part of the collection series: “The Pleistocene Occupation of Contrebandiers Cave (Morocco), and the origins of modern human behavior.”
3. Schuh A., Heuzé, Y., Gunz P., Berthaume, M., Shawn, C., Hublin, J.-J., **Freidline, S.E.** (2024) A shared pattern of midfacial bone modelling in hominids suggests deep evolutionary roots for human facial morphogenesis. *Proc Biol Sci*, 291(2021), 20232738. <https://doi.org/10.1098/rspb.2023.2738>
 - Impact factor: 4.7
 - Ranked 18 out of 109 in Biology (2023 Journal Citation Reports Clarivate Analytics)
4. **Freidline, S.E.**, Westaway, K., Joannes-Boyau, R., Düringer, P., Ponche, J.-L., Morley, M.W., Hernandez, V.P.C., McAllister-Hayward, M.S., McColl, H., Zanolli, C., Gunz, P., *Bergmann, I., Sichanthongtip, P., Sihanam, D., Boualaphane, S., Luangkoth, T., Souksavatdy, V., Dosseto, A., Boesch, Q., Patole-Edoumba, E., Aubaile, F., Crozier, F., Suzzoni, E., Frangeul, S., Bourgon, N., Zachwieja, A., Dunn, T.E., Bacon, A.-M., Hublin, J.-J., Shackelford, L., Demeter, F. (2023) Early presence of *Homo sapiens* by 86-68 kyr in Southeast Asia at Tam Pà Ling cave, Northern Laos. *Nature Communications* 14, 3193. <https://doi.org/10.1038/s41467-023-38715-y>
 - Citations: 23
 - Impact factor: 16.1
 - Ranked as #5 cited journal in the world
5. *McGehee, K., Schultz, J., **Freidline, S.E.** (2023). Analyzing cut mark characteristics on bone from chopping/hacking tools. *Forensic Anthropology*, Vol. 6, No.3. <https://doi.org/10.5744/fa.2022.0023>
 - First author greatest contribution, last author assisted in analysis and interpretation of results.
6. *Bergmann, I., Hublin, J.-J., Sbihi-Alaoui, F.Z., Ben-Ncer, A., Gunz, P., **Freidline, S.E.** (2022). The relevance of late MSA mandibles on the emergence of modern morphology in Northern Africa. *Scientific Reports*, 12, 8841. <https://doi.org/10.1038/s41598-022-12607-5>
 - Citations: 16
 - Impact factor: 4.3
 - Ranked as #34 cited journal in the world

7. *Bergmann, I., Hublin, J.-J., Gunz, P., & **Freidline, S. E.** (2021). How did modern morphology evolve in the human mandible? The relationship between static adult allometry and mandibular variability in *Homo sapiens*. *Journal of Human Evolution*, 157, 103026.
<https://doi.org/10.1016/j.jhevol.2021.103026>
 - Citations: 20
 - Impact factor: 3.1
 - Ranked as #3 cited journal in Anthropology
8. *Schuh, A., Gunz, P., Kupczik, K., Hublin, J.-J., & **Freidline, S. E.** (2021). Quantifying maxillary development in chimpanzees and humans: An analysis of prognathism and orthognathism at the morphological and microscopic scales. *Journal of Human Evolution*, 157, 103031.
<https://doi.org/https://doi.org/10.1016/j.jhevol.2021.103031>
 - Citations: 3
 - Impact factor: 3.1
 - Ranked as #3 cited journal in Anthropology
9. *Schuh, A., Gunz, P., Villa, C., Kupczik, K., Hublin, J. J., & **Freidline, S. E.** (2020). Intraspecific variability in human maxillary bone modeling patterns during ontogeny. *American Journal of Physical Anthropology* 173(4), 655-670. <https://doi.org/10.1002/ajpa.24153>
 - Citations: 12
 - Impact factor: 1.7
 - Ranked as #1 cited journal in Anthropology
10. Chen, F., Welker, F., Shen, C. C., Bailey, S. E., *Bergmann, I., Davis, S., Xia, H., Wang, H., Fischer, R., **Freidline, S. E.**, Yu, T. L., Skinner, M. M., Stelzer, S., Dong, G., Fu, Q., Dong, G., Wang, J., Zhang, D., & Hublin, J. J. (2019). A late Middle Pleistocene Denisovan mandible from the Tibetan Plateau. *Nature*, 569(7756), 409-412. <https://doi.org/10.1038/s41586-011139>
 - Citations: 460
 - Impact factor: 55.4
 - Ranked as #1 cited journal in the world
11. *Schuh, A., Kupczik, K., Gunz, P., Hublin, J. J., & **Freidline, S. E.** (2019). Ontogeny of the human maxilla: a study of intra-population variability combining surface bone histology and geometric morphometrics. *Journal of Anatomy* 235(2), 233-245
<https://doi.org/10.1111/joa.13002>
 - Citations: 15
 - Impact factor: 1.8
12. Hublin, J. J., Ben-Ncer, A., Bailey, **S. E.**, **Freidline, S. E.**, Neubauer, S., Skinner, M. M., *Bergmann, I., Le Cabec, A., Benazzi, S., Harvati, K., & Gunz, P. (2017). New fossils from Jebel Irhoud, Morocco and the pan-African origin of *Homo sapiens*. *Nature*, 546(7657), 289-292.
<https://doi.org/10.1038/nature22336>
 - Citations: 1420
 - Impact factor: 55.4
 - Ranked as #1 cited journal in the world
13. Martinez-Maza, C., #**Freidline, S. E.**, Strauss, A., & Nieto-Diaz, M. (2016). Bone growth dynamics of the facial skeleton and mandible in *Gorilla gorilla* and *Pan troglodytes*. *Evolutionary Biology*, 43, 1-21. <https://doi.org/10.1007/s11692-015-9350-7>
 - Citations: 30
 - Impact factor: 2.2
14. **Freidline, S. E.**, Gunz, P., & Hublin, J. J. (2015). Ontogenetic and static allometry in the human face: contrasting Khoisan and Inuit. *American Journal of Physical Anthropology*, 158(1), 116-131 <https://doi.org/10.1002/ajpa.22759>
 - Citations: 61

- Impact factor: 1.7
 - Ranked as #1 cited journal in Anthropology
15. **Freidline, S. E.**, Gunz, P., Harvati, K., & Hublin, J. J. (2013). Evaluating developmental shape changes in Homo antecessor subadult facial morphology. *Journal of Human Evolution*, 65(4), 404-423. <https://doi.org/10.1016/j.jhevol.2013.07.012>
 - Citations: 76
 - Impact factor: 3.1
 - Ranked as #3 cited journal in Anthropology
 16. **Freidline, S. E.**, Gunz, P., Harvati, K., & Hublin, J. J. (2012). Middle Pleistocene human facial morphology in an evolutionary and developmental context. *Journal of Human Evolution*, 63(5), 723-740. <https://doi.org/10.1016/j.jhevol.2012.08.002>
 - Citations: 83
 - Impact factor: 3.1
 - Ranked as #3 cited journal in Anthropology
 17. **Freidline, S. E.**, Gunz, P., Jankovic, I., Harvati, K., & Hublin, J. J. (2012). A comprehensive morphometric analysis of the frontal and zygomatic bone of the Zuttiyeh fossil from Israel. *Journal of Human Evolution*, 62(2), 225-241. <https://doi.org/10.1016/j.jhevol.2011.11.005>
 - Citations: 105
 - Impact factor: 3.1
 - Ranked as #3 cited journal in Anthropology
 18. Baab, K. L., **Freidline, S. E.**, Wang, S. L., & Hanson, T. (2010). Relationship of cranial robusticity to cranial form, geography and climate in Homo sapiens. *American Journal Physical Anthropology*, 141(1), 97-115. <https://doi.org/10.1002/ajpa.21120>
 - Citations: 98
 - Impact factor: 1.7
 - Ranked as #1 cited journal in Anthropology

Peer-Reviewed Book Chapters (3, 1 at UCF)

1. Gunz, P. & **Freidline, S.E.** (2023) Cranial form of the Hofmeyr skull: comparative 3D geometric Morphometrics. In F. E. Grine (Ed.), *Hofmeyr. A Late Pleistocene Skull from South Africa*. (pp. 143-150). Springer International Publishing. https://doi.org/10.1007/978-3-031-07426-4_8
 - Citations: 8
2. **Freidline, S. E.**, Martinez-Maza, C., Gunz, P., & Hublin, J.-J. (2017). Exploring Modern Human Facial Growth at the Micro- and Macroscopic Levels. In C. J. Percival & J. T. Richtsmeier (Eds.), *Building Bones: Bone Formation and Development in Anthropology* (pp. 104-127). Cambridge University Press. <https://doi.org/10.1017/9781316388907.006>
 - Citations: 15
3. **Freidline, S.E.**, Gunz, P., Hublin, J.J. (2015). Semilandmark geometric morphometric analysis of the Oberkassel faces. In L. Giemsch L. & R. Schmitz (Eds.), *The Late Glacial Burial from Oberkassel Revisited* (pp. 181-195). Darmstadt: Verlag Philipp von Zabern.
 - Citations: 1

CONFERENCES

Refereed Research Presentations at National and International Conferences (53 total, 27 at UCF)

Contributed (48, 26 at UCF)

1. *Chakraborty, T., Arnaud, J., Buzi, C., Hublin, J.-J., **Freidline, S.E.** (2025). Improving Age Estimation Accuracy on Fragmentary Fossil Hominins Using Geometric Morphometrics. Presented at the American Association of Biological Anthropologists – Baltimore, USA.
2. *Cook, C., **Freidline, S.E.**, Williams, L. (2025). Tools and trends: an analysis of Maya dental modification. Presented at the American Association of Biological Anthropologists – Baltimore, USA.
3. *Jasiak, C., Schultz, J., **Freidline, S.E.** (2025). Exploring the Relationship between Osteoarthritis and Spinal Osteophytosis and Advancing Age. Presented at the American Association of Biological Anthropologists – Baltimore, USA.
4. *Marks, M., Williams, L., **Freidline, S.E.** (2025). Sex Estimation Using Metric and Geometric Morphometric Analyses of the Adult Human Talus. Presented at the American Association of Biological Anthropologists – Baltimore, USA.
5. *Marks, M., Williams, L., **Freidline, S.E.** (2025). Refining Metric and Geometric Morphometric Methods of Sex Estimation Using the Adult Human Talus. Presented at the Society for American Archaeology - Denver, USA.
6. *Mercier, P.J., **Freidline, S.E.**, Barber, S., Williams, L. (2025). Using Geometric Morphometrics to Assess Metacarpal Robusticity: a preliminary Evaluation of Sex and Sidedness in Mesoamerica. Presented at the American Association of Biological Anthropologists – Baltimore, USA.
7. Natahi, S., Tsegia, Z.J., Schuh, A., **Freidline, S.E.** (2025). Exploring facial gracilization through an integrated approach of mandibular ontogeny: preliminary results from chimpanzees. Presented at the Société d'Anthropologie in Paris. *Bulletins et mémoires de la Société d'Anthropologie de Paris BMSAP 37 (37 (S))*.
8. Schuh, A., **Freidline, S.E.**, Gunz, P. (2025). New insights into facial bone modeling patterns of *Australopithecus sediba*. Presented at the Société d'Anthropologie in Paris. *Bulletins et mémoires de la Société d'Anthropologie de Paris BMSAP 37 (37 (S))*.
9. **Freidline, S.E.**, *Hubbart, M., Villa, C., Schuh, A. (2024). A shared pattern of facial growth in present-day humans. American Association of Biological Anthropologists, Los Angeles, USA. *American Journal of Biological Anthropology*, 183(S77), 54.
<https://doi.org/https://doi.org/10.1002/ajpa.24928>
10. *Mercier, P., **Freidline, S.E.**, Barber, S., Williams, L., Mayes, A., Joyce, A., King, S. (2024). Using geometric morphometrics to assess labor's impact on metacarpal morphology in ancient Mesoamerica. American Association of Biological Anthropologists, Los Angeles, USA. *American Journal of Biological Anthropology*, 183(S77), 118.
<https://doi.org/https://doi.org/10.1002/ajpa.24928>
11. *Shipman, C., **Freidline, S.E.** (2024). A geometric morphometric study on sexual dimorphism in human juvenile facial morphology. American Association of Biological Anthropologists – Los Angeles, USA. *American Journal of Biological Anthropology*, 183(S77), 166.
<https://doi.org/https://doi.org/10.1002/ajpa.24928>
12. Schuh, A., **Freidline, S.E.**, Viallet, A. (2023) Analyse morphométrique et microscopique du maxillaire de la grotte de Coupe-Gorge (350 ka) à Montmaurin (Haute-Garonne, France). Presented at the Société d'Anthropologie in Paris. *Bulletins et mémoires de la Société d'Anthropologie de Paris BMSAP 36 (36 (S))*
13. Baab, K.L., Kaifu, Y., **Freidline, S.E.**, Rogers, M.J., Semaw, S. (2023). A new face for an old species: Virtual reconstruction of the DAN5/P1 *Homo erectus* cranium. European Society for the Study of Human Evolution – Aarhus, Denmark. *PaleoAnthropology* 2023:2:280.
<https://doi.org/10.48738/2023.iss2.1093>
14. **Freidline, S. E.**, Schuh, A., Tsegai, Z. J., & Natahi, S. (2023). Integrating shape, cortical thickness, and bone modeling data: ontogeny and robusticity in the chimpanzee mandible. American Association of Biological Anthropologists, Reno, USA. *American Journal of Biological Anthropology*, 180(S75), 56. <https://doi.org/10.1002/ajpa.24731>

15. *Hubbart, M., Schuh, A., **Freidline, S.E.** (2023). Bone modeling pattern variability in the human mandible. American Association of Biological Anthropologists – Reno, USA. *American Journal of Biological Anthropology*, 180(S75), 80. <https://doi.org/10.1002/ajpa.24731>
16. *McGehee, K., Schultz J.J., **Freidline, S. E.** (2023). Analyzing Chopping/Hacking Cut Mark Characteristics on Bone: Implications for Forensic Analysis. American Academy of Forensic Sciences Annual Scientific Meeting – Orlando, USA. *Proceedings of the American Academy of Forensic Sciences* 29:45.
17. Natahi, S., Tsegai, Z., Schuh, A., **Freidline, S.E.** (2023). Understanding growth through integration of geometric morphometrics, bone modeling, and cortical thickness: methodological details and application to an ontogenetic sample of chimpanzee mandibles. American Association of Biological Anthropologists – Reno, USA. *American Journal of Biological Anthropology*, 180(S75), 125. <https://doi.org/10.1002/ajpa.24731>
18. Schuh, A., Gunz, P., Villa, C., Maureille, B., Toussaint, M., Abrams, G., Bonjean, D., Hublin, J.-J., **Freidline, S.E.** (2023). Ontogeny and evolution of midface gracilization in humans. European Society for the Study of Human Evolution – Aarhus, Denmark. *PaleoAnthropology* 2023:2:387. <https://doi.org/10.48738/2023.iss2.1093>
19. Schuh, A., Heuzé, Y., **Freidline, S.E.** (2023). Hominids share similar bone modeling pattern of maxillary development. Paper presented at the American Association of Biological Anthropologists – Reno, USA. *American Journal of Biological Anthropology*, 180(S75), 158. <https://doi.org/10.1002/ajpa.24731>
20. Delson, E., Baab, K.L., Capellini, T.D., Cooke, S., **Freidline, S.E.**, Frost, S., Garrett, E.C., Harcourt-Smith, W., Hogg, R., McNulty, K., Peburn, T., Singleton, M., St. John, K., Steiper, M., Van Couvering, J. (2022). Dating and site formation of the Late Villafranchian mammals of Senèze, France. American Association of Biological Anthropologists – Denver, USA. *American Journal of Biological Anthropology* 177(S73): 45.
21. **Freidline, S.E.**, Bergmann, I.*, Gunz, P., Schuh, A., Alichane, H., Oujaa, A., Sbihi-Alaoui, F.Z., El-Hajraoui, M., Hublin, J.-J. (2022). The Aterian hominin fossils from Contrebandiers Cave, Morocco: a study of morphological continuity in Northern Africa. Paleoanthropology Society – Denver, USA.
22. **Freidline, S.E.**, Bruner, E., Gunz, P., Hublin, J.-J. (2022). The Neanderthal-like upper facial morphology of the Chinese late Middle Pleistocene fossil Maba. European Society for the Study of Human Evolution – Tübingen, Germany (Virtual Presentation). *PaleoAnthropology* 2022:2:477.
23. Schuh, A., Heuzé, Y., Gunz, P., Hublin, J.-J., **Freidline, S.E.** (2022). Midfacial ontogeny in extant hominids: shared and unique aspects. European Society for the Study of Human Evolution – Tübingen, Germany. *PaleoAnthropology* 2022:2:579.
24. Weaver, T.D., Gunz, P., **Freidline, S.E.** (2022). Comparing two episodes of divergence in human evolution: Between Neandertals and humans and between *Paranthropus* and early *Homo*. American Association of Biological Anthropologists – Denver, USA. *American Journal of Biological Anthropology* 177(S73): 193.
25. **Freidline, S.E.**, *Schuh, A., Gunz, P., Alichane, H., Oujaa, A., El-Hajraoui, M., Hublin, J.-J. (2021). The undescribed juvenile maxilla from Grotte des Contrebandiers, Morocco – a study on Aterian facial growth. European Society for the Study of Human Evolution – Worldwide (Virtual). *PaleoAnthropology* 2021:1:180.
26. *Schuh, A., Kupczik, K., Berthaume, M.A., Shaw, C., **Freidline, S.E.** (2021). A microscopic analysis of bone development of the aiorhynch orangutan midface. European Society for the Study of Human Evolution – Worldwide (Virtual). *PaleoAnthropology* 2021:1:246.
27. **Freidline, S.E.**, Chen, F., Welker, F., Shen, C.-C., Bailey, S.E., *Bergmann, I., Davis, S., Xia, H., Wang, H., Fischer, R., Yu, T.-L., Skinner, M.M., Stelzer, S., Dong, G., Fu, Q., Dong, G., Wang, J., Zhang, D., Hublin, J.-J. (2020). The Xiahe mandible: Denisovan morphology revealed

The International Symposium on Paleoanthropology in Commemoration of the 90th Anniversary of the Discovery of the First Skullcap of Peking Man – Beijing, China.

28. *Schuh A., **Freidline S.E.** (2020). High-resolution imaging of bone formation and resorption on the surface of fossilized bones. European Association of Archaeologists.
 - Cancelled due to COVID
29. **Freidline, S.E.**, Hublin, J.-J., *Bergman, I., Westaway, K., Düringer, P., Joannes-Boyau, R., Ponche, J.L., Boetsch, Q., Sayavongkhamdy, T., Sichanthongtip, P., Duangthongchit, S., Sihanam, D., Bouaraphan, S., Patole-Edoumba, E., Coppens, Y., Willerslev, E., Zachwieja, A., Dunn, T., Bacon, A.M., Shackelford, L., Demeter, F. (2019). Reexamination of the cranial and mandibular *Homo sapiens* fossils including a new frontal bone from Tam Pa Ling (Laos). European Society for the Study of Human Evolution – Liege, Belgium.
30. Gunz, P., **Freidline, S.E.**, Hublin, J.J. (2019). *Homo heidelbergensis* is not your ancestor. European Society for the Study of Human Evolution – Liege, Belgium.
31. Hublin, J.J., Chen, F., Welker, F., Shen, C.C., Bailey, S.E., *Bergmann, I., Davis, S., Xia, H., Wang, H., Fischer, R., **Freidline, S.E.**, Yu, T.L., Skinner, M.M., Stelzer, S., Dong, G., Fu, Q., Dong, G., Wang, J., Zhang, D. (2019). Away from Denisova. European Society for the Study of Human Evolution – Liege, Belgium.
32. *Schuh, A., Kupczik K., Hublin J.-J., **Freidline S.E.** (2019). Variabilité intra-spécifique des processus de modelage osseux durant la croissance de l'os maxillaire chez *H. sapiens*. 1The 844th Annual meetings of the Anthropological Society of Paris, Paris, France.
33. *Schuh, A., Maureille, B., Toussaint, M., Abrams, G., Bonjean, D., Gunz, P., Hublin, J.-J., **Freidline, S.E.** (2019). Neanderthal maxillary ontogeny at the micro- and macroscopic scales: an integrative approach. European Society for the Study of Human Evolution – Liege, Belgium.
34. **Freidline, S.E.**, *Schuh, A., Martinez-Maza, C., Gunz, P., Hublin, J.J. (2018). Modern human facial and mandibular growth at the micro and macroscopic levels: marrying bone modeling and geometric morphometric techniques. European Society for the Study of Human Evolution – Faro, Portugal.
35. *Schuh A., Villa C., Kupczik K., **Freidline S.E.** (2018). Ontogeny of the human maxilla: a study of intra specific variation using surface histology and geometric morphometrics. European Society for the Study of Human Evolution Society for the study of Human Evolution, Faro, Portugal.
36. *Schuh A., **Freidline S.E.** (2018). Bone modeling patterns in the midface of modern humans during ontogeny: a study of intraspecific variability. American Association of Physical Anthropologists – Austin, USA.
37. *Schuh, A., Kupczik, K., **Freidline, S.E.** (2017). The relationship between maxillary bone growth and dental eruption in humans. International Symposium on Dental Morphology, Bordeaux, France.
38. *Schuh, A., Kupczik, K., **Freidline, S.E.** (2017). Ontogeny of the midface in *H. sapiens*: building an integrative growth model for paleoanthropological studies using bone modeling and geometric morphometrics. Paper presented at the European Society for the Study of Human Evolution – Leiden, Netherlands.
39. *Bergmann, I., **Freidline, S.E.**, Gunz, P., Hublin, J.J. (2016). Variability and Evolution of mandible morphology in *Homo sapiens* and its ancestors in Europe, Africa and Western Asia. European Society for the Study of Human Evolution – Madrid, Spain.
40. Gunz, P., Harvati, K., **Freidline, S.E.**, Hublin, J.J., Grine, F.E. (2014). Khoe-San retain a gracilized version of the ancestral modern human phenotype. European Society for the Study of Human Evolution – Florence, Italy.
41. Cooke, S.B., Villaseñor, A., Boyd, K.L., Astorino, C.A., **Freidline, S.E.**, Hublin, J.J. (2014). Palate shape and diet in *Homo sapiens*. American Association of Physical Anthropologists – Calgary, Canada. *American Journal of Physical Anthropology* S58: 96.

42. **Freidline, S.E.**, Gunz, P., Hublin, J.J. (2013). The impact of geographic variation and allometry on the postnatal development of modern human facial features. European Society for the Study of Human Evolution – Vienna, Austria.
43. **Freidline, S.E.**, Gunz, P., Harvati, K., Hublin, J.J. (2012). Middle Pleistocene human facial morphology. American Association of Physical Anthropologists – Portland, USA. *American Journal of Physical Anthropology* S54: 147.
44. **Freidline, S.E.**, Gunz, P., Harvati, K., Hublin, J.J. (2012). Middle Pleistocene human facial morphology in an evolutionary and developmental context. European Society for the Study of Human Evolution Inaugural Meeting – Leipzig, Germany.
45. **Freidline, S.E.**, Gunz, P., Harvati, K., Hublin, J.J. (2011). Allometry and evolution of the face in mid-Pleistocene *Homo*. American Association of Physical Anthropologists – Minneapolis, USA. *American Journal of Physical Anthropology* S52: 138.
46. **Freidline, S.E.**, Gunz, P., Harvati, K., Hublin, J.J. (2010). 3D semilandmark geometric morphometric quantification of modern human facial development. American Association of Physical Anthropologists – Albuquerque, USA. *American Journal of Physical Anthropology* S50: 107.
47. **Freidline, S.E.**, Gunz, P., Harvati, K., Jankovic, I., Delson, E., Hublin, J.J. (2009). 3D Landmark and semilandmark geometric morphometric analysis of the Zuttiyeh fronto-zygomatic fragment. Paper presented at the American Association of Physical Anthropologists –Chicago, USA. *American Journal of Physical Anthropology* S48:129-130.
48. **Freidline, S.E.**, Gunz, P., Harvati, K., Delson, E., Hublin, J.J. (2008). How three-dimensional surface data can be used to reconstruct fragmentary fossils. Paper presented at the American Association of Physical Anthropologists – Philadelphia, USA. *American Journal of Physical Anthropology* S46: 99.

Invited (5, 1 at UCF)

1. Weaver, T., **Freidline, S.E.**, Gunz, P. (2024). Reconstructing the evolutionary processes that produced cranial differences between Neandertals and humans. To be presented at the American Association of Biological Anthropologists, Los Angeles, USA. *American Journal of Biological Anthropology*, 183(S77), 194. <https://doi.org/https://doi.org/10.1002/ajpa.24928>
2. Baab, K.L., Harvati, K., **Freidline, S.E.** (2020). Contributions of high dimensional shape analysis to paleoanthropology. American Association of Biological Anthropologists – Denver, USA. *American Journal of Biological Anthropology* 171(S69): 14.
3. *Bergmann, I., Hublin, J.-J., Gunz, P., **Freidline, S.E.** (2020). How did mandibular morphology evolve in *H. sapiens*? A geometric morphometrics approach to the role of allometry during the emergence of our species. American Association of Biological Anthropologists – Los Angeles, USA. *American Journal of Physical Anthropology* 171(S69): 25.
 - Cancelled due to COVID
4. **Freidline, S.E.**, Martinez-Maza, C., Hublin, J.J. (2014). An integrative approach to studying craniofacial development in Great apes and humans. Invited presentation – “Building Bones: Studies of Bone Growth in Anthropology.” American Association of Biological Anthropologists – Calgary, Canada. *American Journal of Biological Anthropology* S58: 121
5. **Freidline, S.E.**, Gunz, P., Harvati, K., Jankovic, I., Delson, E., Hublin, J.J. (2009). 3D landmark and semilandmark geometric morphometric analysis of the Zuttiyeh fronto-zygomatic fragment. Invited Presentation at the Symposium on “The Transition from Archaic to Modern: Quantitative Approaches” – Leipzig, Germany.

Research Presentations at UCF

1. *Burgos, N., **Freidline, S.E.** (2024). Zygomatic bones in human populations: a comparative study of ontogenetic modeling patterns. Student Scholar Symposium at UCF.

2. *Burgos, N., **Freidline, S.E.** (2024). Zygomatic bones in human populations: a comparative study of ontogenetic modeling patterns. UCF Summer Research Showcase.
3. *Stroup, M., **Freidline, S.E.** (2023). Changing faces, changing places: examining variability in zygomatic bone modeling patterns across development and population groups. Student Scholar Symposium at UCF.

RESEARCH GRANTS, FELLOWSHIPS, AND AWARDS

- 2025 UCF Seed Funding Program: 2024-2025
Project Title: 3D Modeling and CT Analysis of Facial Growth in Fossil Humans
Total: \$10,246
PI: **Sarah Freidline**, Percentage: 100%
- 2023 FAACTS (France & Chicago Collaborating in the Sciences); administered through the University of Chicago and the Collège de France, no money administered through UCF
Project title: Evolution of the human skull: Exploring gracilization and robusticity of the lower jaw in humans and chimpanzees (Role: Collaborator, leading investigator on geometric morphometric analysis)
Collaborators: Zewdi Tsegai, Selim Natahi, Alexandra Schuh

Research grants under review (UR)

- UR NSF Doctoral Dissertation Research Improvement Grants (DDRIG) (Funding Project: 00010809)
Project Title: Occupational Stress and Economic Change in Ancient Oaxaca, Mexico: An Assessment of Internal and External Upper Limb Robusticity
Total: \$21,693
PI: **Sarah Freidline**, Percentage: 25%
Co-PI: Sarah Barber, Percentage: 15%
Co-PI: Peter Mercier, Percentage: 60%

Research Grants in Preparation (IP)

- IP Wenner-Gren Post-Ph.D. Research Grant
Project Title: Subsistence Strategies in the Lagoa Santo Paleoamericans: Implications for Human Evolution and Adaptation
PI: **Sarah Freidline**
Co-PI: Andre Strauss

Research Grants, Fellowships, and Awards Prior to UCF

- 2007–2011 Pre-doctoral Fellowship, Department of Human Evolution, Max Planck Institute, Leipzig, Germany
 Four-year funding stipend
- 2009 Leakey Foundation General Research Grant
 PI: \$10,970
- 2009 National Science Foundation Doctoral Dissertation Improvement Grant

Co-PI: \$10,825

2007 Sigma Xi Grant in Aid of Research
PI \$500

2007 Graduate Research Grant, City University of New York Graduate School
PI: \$1000

2004–2006 Sue Rosenberg Zalk Travel and Research Grant, CUNY Graduate School
PI: \$300

TEACHING

2021–Present

University of Central Florida

Assistant Professor, Department of Anthropology

Undergraduate Courses

- Human Species ANT2511
- Human Origins ANT4586C
- Quantitative Methods in Biological Anthropology ANT4591
- Directed Independent Study ANT3905
- Directed Independent Research ANT4912

Graduate Courses

- Advanced Quantitative Methods in Anthropology ANG7496
- Independent Study ANG6908
- Directed Research ANG6918

2012 – 2020

Leipzig School of Human Origins, Max Planck Institute for Evolutionary Anthropology

Postdoctoral Researcher

Graduate Course

- Middle to Late Pleistocene Human Evolution

2004 – 2006

Lehman College, City University of New York

Adjunct Lecturer

Undergraduate Courses

- Introduction to Human Evolution
- Introduction to Human Variation

2005

Sophie Davis School of Biomedical Education, City University of New York

Teaching Assistant

Pre-med Course

- Medical Gross Anatomy and Embryology

Teaching Grants

2023 Digital Curriculum Innovation Initiative Award

Project title: Bones, Stones, and Virtual Labs: Human Species in 3D and 360 Degrees

Team Leader: Amanda Groff

Team Member: Sarah Freidline
Total: \$21,500

Teaching Awards

2025 The Outstanding Names in Instruction (TONI), College of Sciences, University of Central Florida

2025 General Education Program Innovation Award, University of Central Florida

Teaching Development

2023-24 Participant, Digital Curriculum Innovation Initiative
10 meetings over two-year period

2023 Participant, Digital Learning Day

2023 Participant, Summer Faculty Development Institute
High Impact Practice Track

2021 Participant, IDL 6543: Online Course Development
Center for Distributed Learning, University of Central Florida

RESEARCH ADVISING AND MENTORING

Chair, Ph.D. Dissertation

Inga Bergmann Ph.D. in Anthropology, Leipzig School of Human Origins, Max Planck Institute for Evolutionary Anthropology
Defended Spring 2023
Co-Chairs: J.-J. Hublin, P. Gunz
Dissertation Title: *Variability and Evolution of Mandibular Form in Homo sapiens*

Tannistha Chakraborty Ph.D. in Integrative Anthropological Sciences, University of Central Florida
In progress, degree anticipated 2028
Dissertation Title: TBD

Caroline Jasiak Ph.D. in Integrative Anthropological Sciences, University of Central Florida
In progress, degree anticipated 2026
Dissertation Title: *Improving Osteological Age Estimation Methods Using Degenerative Joint Diseases: Combining Osteoarthritis and Spinal Osteophytosis Morphometric Analysis Utilizing Statistical Processes*

Kelly McGehee Ph.D. in Integrative Anthropological Sciences, University of Central Florida
In progress, degree anticipated 2026
Dissertation Title: *Forensic Analysis of Sharp Force Trauma: Macroscopic and Microscopic Examination of Chopping/Hacking Cut Marks on Bone and Taphonomic Considerations*

- Alexandra Schuh Ph.D. in Anthropology, Leipzig School of Human Origins, Max Planck Institute for Evolutionary Anthropology
Defended Summer 2021
Co-Chairs: J.-J. Hublin, P. Gunz, K. Kupczik
Dissertation Title: *Quantification of maxillary ontogenetic processes using surface histology and geometric morphometrics*
- Catherine Shipman Ph.D. in Integrative Anthropological Sciences, University of Central Florida
In progress, degree anticipated 2028
Dissertation Title: TBD

Co-Chair, Ph.D. Dissertation

- Peter Mercier Ph.D. in Integrative Anthropological Sciences, University of Central Florida
In progress, degree anticipated 2026
Chair: S. Barber
Dissertation Title: *Occupational Stress and Economic Change in Ancient Oaxaca, Mexico: An Assessment of Internal and External Upper Limb Robusticity*

Chair, M.A. Thesis

- Madison Hubbart M.A. in Anthropology, University of Central Florida
Defended Spring 2023
Thesis Title: *Ontogenetic Bone Modeling Variability of the Human Mandible*
- Jared Jordan M.A. in Anthropology, University of Central Florida
In progress, degree anticipated 2026
Thesis Title: TBD
- Katherine Nussbaum M.A. in Anthropology, University of Central Florida
Completed Spring 2025
Non-thesis track
- Catherine Shipman M.A. in Anthropology, University of Central Florida
Defended Fall 2023
Thesis Title: *Evaluating Developmental Changes in Modern Human Juvenile Facial Morphology for Sex Estimation*
- Jessica Suberly M.A. in Anthropology, University of Central Florida
In progress, degree anticipated 2026
Thesis Title: TBD
- Emily Tinsley M.A. in Anthropology, University of Central Florida
In progress, degree anticipated 2027
Thesis Title: TBD

Co-Chair, M.A. Thesis

- Melissa Marks M.A. in Anthropology, University of Central Florida
In progress, degree anticipated 2025

Chair: L. Williams

Thesis Title: *Refining Metric and Geometric Morphometric Methods of Sex Estimation Using the Adult Human Talus*

Jennifer Barritt

M.A. in Anthropology, University of Central Florida
Defended Fall 2024

Chair: J. Schultz

Thesis Title: *Evaluating Sexual Dimorphism in Occipital Morphological Shape through Modern Human Ontogenetic Changes*

Committee Member, Ph.D. Dissertation

Morgan Ferrell

Ph.D. in Integrative Anthropological Sciences, University of Central Florida
Defended Summer 2024

Chair: J. Schultz

Dissertation Title: *Sex Estimation Methods in Forensic Anthropology*

Committee Member, M.A. Thesis

Michelle Txarola

M.A. in Anthropology, University of Central Florida
In progress

Chair: S. Wheeler

Thesis Title: TBD

Brianna Muir

M.A. in Anthropology, University of Central Florida
Defended Spring 2023

Chair: J. M. Toyne

Thesis Title: *Investigating Mobility Across the Life Course Through Stable Isotope Analysis at the Early Medieval Site of Berettyóújfalu Somata, Hungary*

Kelly McGehee

M.A. in Anthropology, University of Central Florida
Defended Spring 2022

Chair: J. Schultz

Thesis Title: *Identifying Chopping/Hacking Marks Made on Bones*

Chair, Honors Undergraduate Thesis

Channing Cook

B.A. in Anthropology, University of Central Florida
In progress, degree anticipated 2025

HUT Title: *Tools and Trends: An Analysis of Maya Dental Modification*

Committee Member, Honors Undergraduate Thesis

Dylan Ornot

B.A. in Anthropology, University of Central Florida
Defended Fall 2024

HUT Title: *Assessment of Forensic and Clinical Criteria of Orbital Blowout Fractures for use in Bioarchaeological Analysis*

Prior to UCF

Advisor, M.A. Thesis

Judith Hasel M.S. in Anthropology, Johannes Gutenberg University, Mainz, Germany
 Defended 2018
Thesis Title: *Maxillary bone modeling patterns during ontogeny in the Tai
 Chimpanzees with a focus on the nasoalveolar clivus*

SERVICE

Service to Department

2024-Present Member, Anthropology Search Committee
 Department of Anthropology, University of Central Florida

2024-Present Member, Anthropology Undergraduate Program Committee
 Department of Anthropology, University of Central Florida

2023-Present Member, Graduate Program Committee
 Department of Anthropology, University of Central Florida

2022-Present Member, Annual Evaluation Standards and Procedures Ad Hoc Committee
 Department of Anthropology, University of Central Florida

2022-2024 Member, Colloquium Committee
 Department of Anthropology, University of Central Florida

2022- 2023 Member, Master's Curriculum Committee
 Department of Anthropology, University of Central Florida

2022 2023 Member, Instructor/Lecturer Promotion Committee
 Department of Anthropology, University of Central Florida

2021–2022 Member, Inclusion & Diversity Committee
 Department of Anthropology, University of Central Florida

Service to College

Present Member, Teaching Incentive Program (TIP) Selection Committee
 College of Sciences, University of Central Florida

2024 Member, Research Incentive Award (RIA) Selection Committee
 College of Sciences, University of Central Florida

2021–2023 Member, Recognition and Scholarship Committee
 College of Sciences, University of Central Florida

Service to Profession

2023-present Elected regular board member for the European Society for the Study of Human
 Evolution (ESHE)

2022-2024 Associate Editor of the *Journal of Human Evolution*

2016 – 2019 Associate Editor of the *Journal of Human Evolution*

Grant Proposal Peer-Reviews (Invited)

2022 Reviewed one proposal for the National Science Foundation Senior Research Award

Journal Manuscript & Book Chapter Peer-Reviews (Invited)

2024 *PaleoAnthropology* (1)
Springer: Vertebrate Paleobiology and Paleoanthropology Series (1)

2023 *PaleoAnthropology* (1)

2022 *Journal of Human Evolution* (2)
American Journal of Biological Anthropology (2)
Journal of Anatomy (1)

2021 *Journal of Human Evolution* (1)

2020 *American Journal of Biological Anthropology* (1)
Journal of Human Evolution (2)

2019 *Archaeological and Anthropological Sciences* (1)
Journal of Human Evolution (2)

2018 *Journal of Human Evolution* (3)

2017 *Journal of Human Evolution* (1)

2016 *Journal of Human Evolution* (1)

2015 *Evolutionary Biology* (1)
Journal of Human Evolution (4)
Journal of African Earth Sciences (1)
Argentinian Journal of Biological Anthropology (1)
Springer: Anthropology and Archaeology Series (1)

2014 *Journal of Human Evolution* (3)
Springer: Anthropology and Archaeology Series (1)

2013 *Journal of Human Evolution* (2)

2012 *Journal of Human Evolution* (1)

Invited Lectures and Presentations

- 2025 "Integrating shape, cortical thickness, and bone modeling data: ontogeny and robusticity in the hominin face" University of Illinois Chicago Craniofacial Research Group Seminar Series.
- 2024 "Evolution and gracilization of the human face: An ontogenetic perspective" Comprehensive Approaches to the Evolution of Craniomandibular Morphologies hosted by the University of Chicago.
- 2024 "Recent advances in human origins research: new insights from Northern Africa to Southeast Asia" Archaeological Institute of American - Jacksonville Society
- 2024 "Recent advances in human origins research" Time Sifters Archeology Society of Sarasota, FL.
- 2024 "Human origins and dispersals: new insights from Northern Africa and Southeast Asia" UCF Learning Institute for Elders – LIFE
- 2022 "Modern Human Origins and Dispersals: Insights from Northern African and Southeast Asia" Lunch and Learn, Department of Anthropology, University of Central Florida

Conference Organization and Workshops

- 2024 Organized workshop "*Comprehensive Approaches to the Evolution of Craniomandibular Morphologies*" at the University of Chicago.
- 2023 Poster session chair "*Paleoanthropology: Hominid cranial morphology and systematics*" at the 2023 AABA Annual Meeting in Reno, Nevada
- 2011 Organized and co-chaired a podium symposium
American Association of Physical Anthropologists
Title: *Muddles in the Middle: Current Perspectives on Middle Pleistocene Human Evolution*
- 2005 Student Planning Committee,
New York Consortium for Evolutionary Anthropology "*Monkeys Old and New*"
Symposium

Professional Memberships

Member, European Society for the Study of Human Evolution
 Member, American Association of Biological Anthropologists
 Member, Paleoanthropology Society

Fieldwork

- 2008 Gran Dolina, Sierra de Atapuerca, Spain, a Pleistocene hominin site
- 2005 Sima de Las Palomas, Murcia, Spain, Pleistocene hominin site
- 2005 Seneze, France, a Pliocene fossil mammal site
- 2003 Field school at Makapansgat, South Africa, a Plio-Pleistocene hominin site

2000 Field School in mortuary archaeology at Khuzir-Nuge XIV, Lake Baikal, Siberia

MEDIA COVERAGE

Interviews

- 2023 Interviewed by UCFTODAY for my paper “Early presence of *Homo sapiens* by 86-68 kyr in Southeast Asia at Tam Pà Ling cave, Northern Laos”. (Freidline et al., 2023) “Human Migration Timeline Redrawn by Fresh Fossil Analysis” <https://www.ucf.edu/news/human-migration-timeline-redrawn-by-fresh-fossil-analysis/>
- 2021 Interviewed by Maya Wei-Haas for: “*Dragon Man*” may be new species, shaking up human family tree.” National Geographic Magazine. <https://www.nationalgeographic.com/science/article/dragon-man-fossil-skull-may-represent-new-human-species-in-china?loggedin=true>
- 2021 Interviewed by COSNEWS “New Faculty Member Brings Human Origins Expertise To Classroom This Fall” <https://sciences.ucf.edu/news/new-faculty-member-brings-human-origins-expertise-to-classroom-this-fall/>