

ANNA J. RAGNI

Institute of Human Origins
Arizona State University
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Tempe, Arizona 85281
Anna.Ragni@asu.edu

OVERVIEW

My research uses skeletal anatomy, biomechanics, and cutting-edge visualization methods to investigate key evolutionary transitions in the human lineage

PROFESSIONAL APPOINTMENTS

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| Arizona State University Tempe, AZ Postdoctoral Research Scholar, Institute of Human Origins | 2022-present |
| California State University, Los Angeles Los Angeles, CA Lecturer, Department of Biological Sciences | Fall 2021-Spring 2022 |
| California State University, Los Angeles Los Angeles, CA NSF Postdoctoral Researcher, Department of Biological Sciences | 2020-2022 |
| National Museum of Natural History Washington, DC Peter Buck Postdoctoral Fellow, Department of Anthropology | 2019-2020 |

EDUCATION

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| Ph.D., Comparative Biology Richard Gilder Graduate School, American Museum of Natural History New York, NY Department of Vertebrate Paleontology. Chairs: John Flynn & William Harcourt-Smith | 2019 |
| M.A., Anthropology University of Arkansas Fayetteville, AR Department of Anthropology. Chair: Peter Ungar | 2014 |
| B.A., Anthropology Hendrix College Conway, AR Department of Sociology/Anthropology | 2012 |

PEER-REVIEWED PUBLICATIONS

Ragni, A. J. 2020. Trabecular architecture of the capitate and third metacarpal through ontogeny in chimpanzees (*Pan troglodytes*) and gorillas (*Gorilla gorilla*). *Journal of Human Evolution* 128:e102702. <https://doi.org/10.1016/j.jhevol.2019.102702>

Ragni, A. J., Teaford, M., Ungar, P.S. 2017. A comparative study of pitheciid dental microwear. *American Journal of Primatology* 79(12):e22697. <https://doi.org/10.1002/ajp.22697>

MANUSCRIPTS IN PREPARATION OR REVIEW

Ragni, A. J. *In Review*. Trabecular ontogeny of the hand and foot in a primate sample. *Journal of Anatomy*.

Ragni, A. J. *In Prep*. The ontogeny of shape and integration in primate hands and feet. To be submitted to the *Anatomical Record*, Winter 2023.

Ragni, A. J. *In Prep*. Trabecular bone and shape analysis of the *Homo naledi* third metatarsal. To be submitted to the *Journal of Human Evolution*.

GRANTS, HONORS, & AWARDS

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| NSF SBE Postdoctoral Research Fellowship, “Musculoskeletal modeling and simulation of hominin bipedal locomotion” \$138,000 | 2020 |
| Peter Buck Postdoctoral Fellowship, “Life history and environmental correlates to mammalian trabecular bone” \$100,800 | 2019 |
| AABA Anatomy in Anthropology Prize for Exemplary Student Research, \$250 | 2019 |
| NSF DDRIG Fellowship, “Ontogenetic changes in primate manual and pedal trabecular architecture” \$19,432 | 2018 |
| Richard Gilder Graduate School Sydney Anderson Travel Grant, \$1000 | 2018 |
| Richard Gilder Graduate School Graduate Fellowship | 2015 |
| RGGS NSF Integrative Graduate Education and Research Traineeship Fellowship | 2015-2017 |
| University of Arkansas Graduate Fellowship | 2012 |
| Hendrix College Dean’s List | 2008-2012 |

TEACHING EXPERIENCE:

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| Lecturer , California State University, Los Angeles Los Angeles, CA Anatomy and Physiology | Fall 2021-Spring 2022 |
| Instructor , Youth Initiatives Program, American Museum of Natural History New York, NY Walk This Way – Science visualization course on hominin bipedalism | Spring 2018 |
| Teaching Assistant , Icahn School of Medicine, Mt. Sinai New York, NY Human Structures – Gross Anatomy | Fall 2017 |
| Teaching Assistant , University of Arkansas Fayetteville, AR Introduction to Biological Anthropology | 2012-14 |

PUBLISHED ABSTRACTS

- Ragni, A.J.** 2022. Mammalian trabecular bone patterns through ontogeny in relation to life history traits. *American Journal of Biological Anthropology* 177:S73.
- Chirchir, H., Cartwright, C., **Ragni, A.J.**, Hublin, J-J. 2022. Trabecular bone morphology in Holocene and late Pleistocene modern humans. *American Journal of Biological Anthropology* 177:S73.
- Ragni, A. J.** 2020. The ontogeny of shape and integration in the hands and feet of catarrhine primates. *American Journal of Biological Anthropology* 171:S69.
- Ragni, A. J.** 2019. Locomotor ontogeny and trabecular architecture within the hands and feet of great apes. *American Journal of Biological Anthropology* 166:S68.
- Kasl, C., **Ragni, A. J.**, Harcourt-Smith, W. E.H. 2019. An analysis of the trabecular morphology of the *Homo naledi* talus, and its inferred functional implications. *American Journal of Biological Anthropology* 166:S68.
- Palmer, J. E., **Ragni, A. J.**, Chirchir, H. 2019. Effect of volume of interest placement and size in trabecular bone quantification. *Federation of American Societies for Experimental Biology* 33:1.
- Ragni, A. J.** 2018. Chimpanzee (*Pan troglodytes*) and gorilla (*Gorilla gorilla*) manual trabecular architecture over ontogeny. *American Journal of Biological Anthropology* 165:S66.
- Ragni, A. J.**, Webb, N. M., Harcourt-Smith, W.E.H. 2017. Ontogenetic changes in trabecular architecture: A pilot study of chimpanzee (*Pan troglodytes*) manual and pedal elements. *American Journal of Biological Anthropology* 162:S64.
- Ragni, A. J.**, Teaford, M., Ungar, P. S. 2014. A molar microwear texture analysis of pitheciid primates. *American Journal of Biological Anthropology* 153:S58.

Ungar, P. S, **Ragni, A. J.**, DeSantis, L.. 2014. Comparability of dental microwear texture data between studies. *Journal of Vertebrate Paleontology, Program and Abstracts 2014*: 244.

INVITED LECTURES:

Ragni, A. J. (2022, September) “Geometric morphometrics – A primer.” Institute of Human Origins, Arizona State University, AZ.

Ragni, A. J. (2022, September) “A case study in geometric morphometrics.” Institute of Human Origins, Arizona State University, AZ.

Ragni, A. J. (2021, October) “Babies, bones, and biomechanics: Ontogenetic and evolutionary insights from the primate skeleton.” Virtual presentation at California State University, Los Angeles, CA.

Ragni, A. J. (2021, March) “The evolution of human locomotion: explorations in the primate skeleton” Virtual presentation for the CSULA Anthropology Club for Academic Success – California State University, Los Angeles, CA.

Ragni, A. J. (2018, March) “The evolution of hominin bipedalism.” Podium presentation at the New York Paleontological Society, New York, NY.

Ragni, A. J. (2017, March) “Human evolution and bipedalism.” Podium presentation at Fairleigh Dickinson University, Madison, NJ.

Ragni, A. J. (2016, February) “Dental microwear texture analysis: A method for understanding primate paleodiet.” Podium presentation at the Metropolitan Society of Natural Historians, New York, NY.

Ragni, A. J., Ungar, P. S., DeSantis, L., Armand, S. (2014, October) “Dental microwear texture analysis and issues of instrumentation.” Podium presentation at the American Society of Mechanical Engineers meetings, Gaithersburg, MD.

CONFERENCE PRESENTATIONS:

Ragni, A. J. (2022, March) Mammalian trabecular bone patterns through ontogeny in relation to life history traits. Podium presentation at the American Association of Biological Anthropology meeting, Denver, CO.

Ragni, A. J. (2020, March) The ontogeny of shape and integration in the hands and feet of catarrhine primates. Podium presentation at the American Association of Physical Anthropology meeting, Virtual. https://www.youtube.com/watch?v=m9yGRm8_u6c&t=2s

Ragni, A. J. (2019, March) Locomotor ontogeny and trabecular architecture within the hands and feet of great apes. Podium presentation at the American Association of Physical Anthropology meeting, Cleveland, OH.

Ungar, P. S, **Ragni, A. J.**, DeSantis, L. (2014, November) Comparability of dental microwear texture data between studies. Podium presentation at the Society of Vertebrate Paleontology Annual Meeting, Berlin, Germany.

GUEST LECTURER:

Ragni, A. J. (2021, May) Australopith locomotion and biomechanics – CSULA research on *Australopithecus afarensis*. Department of Anthropology, California State University, Los Angeles, CA.

Ragni, A. J. (2020, October) Evolutionary Human Anatomy. Department of Biology, California State University, Los Angeles, CA.

RELEVANT TRAINING:

Inclusive Teaching Program, California State University Los Angeles
Led by the Center for Effective Teaching & Learning

Fall 2021

μCT Data Workshop, University of Texas Summer 2017
 Led by Dr. Jessie Maisano

Wind River Basin 2016 Fieldwork Expedition, American Museum of Natural History Summer 2016
 Led by Dr. Steven Chester and Dr. Chris Gilbert

Program Assistant, Smithsonian Institution National Museum of Natural History 2014-15
 Mentor: Dr. Briana Pobiner

RECENT SYNERGISTIC ACTIVITIES:

- Mentored a student-led organization while they created and hosted the first Anthropology Student Research Conference, spanning the California State University System – California State University, Los Angeles, April 2022
- Served as an organizing advisor and panel member for the student-led event, “Let’s talk about grad school” – California State University, Los Angeles April 2021
- Shared my research and current understanding of human evolution with visitors in the Hall of Human Origins – Scientist Is In Program, National Museum of Natural History March 2020
- Co-taught an eight-week course on data visualization techniques in biological anthropology to underrepresented high schoolers – Youth Initiatives Program, American Museum of Natural History January-April 2018
- Spoke to elementary students about how scientists study bones and fossil trackways – Adventures in Science program, American Museum of Natural History August 2018

MENTORSHIP

Sarah Elston, Columbia University Summer 2018-Spring 2019
 Tessa Garces, Tufts University Summer 2018
 Emma Bates, Stanford University Spring 2016-Fall 2017

ACADEMIC SERVICE

Founder – 3D Data Working Group, Institute of Human Origins, Arizona State university 2022

American Association of Biological Anthropologists, Annual Meeting Session Chair 2022
 Functional Anatomy: Structural correlates of locomotion

Amir Siminou, Biology Master’s Thesis Committee Member 2022
 California State University, Los Angeles

Leila Hatier, Biology Honors Senior Thesis Committee Member 2021-22
 California State University, Los Angeles

Jeremiah Cabrera, Biology Honors Senior Thesis Committee Member 2021-22
 California State University, Los Angeles

Reviewer, *Palaeogeography Palaeoclimatology Palaeoecology*

MEMBERSHIPS & ORGANIZATIONS:

New York Consortium in Evolutionary Primatology
 American Association of Anatomists
 Anthropological Honor Society
 American Anthropological Association
 American Association of Biological Anthropologists
 Association for Women in Science
 Phi Beta Kappa

PROGRAMS AND APPLICATIONS

Volume Graphics StudioMax
FIJI/ImageJ
R
OpenSim
SIMM
Maya
Geomagic
MorphoJ
Avizo

REFERENCES

Dr. Ashley Heers

Assistant Professor
Department of Biological Sciences
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Dr. John Flynn

Frick Curator of Fossil Mammals, Division of Paleontology
Principal Investigator, Sackler Institute for Comparative Genomics
Dean & Professor, Richard Gilder Graduate School
American Museum of Natural History
200 Central Park West
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Dr. William E.H. Harcourt-Smith

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Department of Anthropology, Lehman College, City University of New York
Department of Anthropology, Graduate Center, City University of New York
Research Associate, Division of Paleontology
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