

# ANNA J. RAGNI

Institute of Human Origins  
Arizona State University  
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## OVERVIEW

My research uses skeletal anatomy and biomechanics to investigate ontogenetic and evolutionary transitions in locomotion

## PROFESSIONAL APPOINTMENTS

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

## EDUCATION

<b>Ph.D., Comparative Biology</b> Richard Gilder Graduate School, American Museum of Natural History   New York, NY Department of Vertebrate Paleontology. Chairs: John Flynn & William Harcourt-Smith	2019
<b>M.A., Anthropology</b> University of Arkansas   Fayetteville, AR Department of Anthropology. Chair: Peter Ungar	2014
<b>B.A., Anthropology</b> 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*, Fall 2022.
- 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

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

## 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.** (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) The evolution of human 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](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.** (2022, September) Geometric Morphometrics – A Primer. Institute of Human Origins, Arizona State University

**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.

#### **TEACHING EXPERIENCE:**

**Lecturer**, California State University, Los Angeles | Los Angeles, CA Fall 2021-Spring 2022  
Anatomy and Physiology

**Instructor**, Youth Initiatives Program, American Museum of Natural History | New York, NY Spring 2018  
Walk This Way – Science visualization course on hominin bipedalism

**Teaching Assistant**, Icahn School of Medicine, Mt. Sinai | New York, NY Fall 2017  
Human Structures – Gross Anatomy

**Teaching Assistant**, University of Arkansas | Fayetteville, AR 2012-14  
Introduction to Biological Anthropology

#### **RELEVANT TRAINING:**

**Inclusive Teaching Program**, California State University Los Angeles Fall 2021  
Led by the Center for Effective Teaching & Learning

**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  
Mentor: Dr. Briana Pobiner

2014-15

### **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  
Tessa Garces, Tufts University  
Emma Bates, Stanford University

Summer 2018-Spring 2019  
Summer 2018  
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	OpenSim	Geomagic
FIJI/ImageJ	SIMM	MorphoJ
R	Maya	Avizo