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## DAVID S. STRAIT

### Contact Information

Department of Anthropology  
Washington University in St. Louis  
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### Personal

Citizenship: U.S. (born New York, NY)  
Date of Birth: July 2, 1969

### Education

1998 Ph.D. State University of New York at Stony Brook, Doctoral Program in Anthropological Sciences  
1995 M.A. State University of New York at Stony Brook, Anthropological Sciences  
1991 B.A. Harvard College, Biological Anthropology, *magna cum laude*.

### Academic Appointments

2015-present Professor, Department of Anthropology, Washington University in St. Louis  
2019-present Senior Research Associate, Palaeo-Research Institute, University of Johannesburg  
2014-present Adjunct Professor of Arts and Sciences, Chin Christian University (in Hakha, Myanmar)  
2013-2015 Professor, Department of Anthropology, University at Albany  
2009-2015 Director, Human Biology, University at Albany  
2009-2010 Associate Chair, Department of Anthropology, University at Albany  
2006-2013 Associate Professor, Department of Anthropology, University at Albany  
2004-2009 Co-Director, Human Biology, University at Albany  
2004-2006 Assistant Professor, Department of Anthropology, University at Albany  
2000-2004 Assistant Professor, Department of Anatomy, New York College of Osteopathic Medicine  
1997-2000 Postdoctoral Fellow, Department of Anthropology, The George Washington University

### Editorial Boards

2009-2011 Academic Editor, *PLoS ONE (Public Library of Science)*  
2008-2011 Associate Editor, *American Journal of Physical Anthropology*.  
2008-2014 Topic Editor of *Blackwell's Encyclopedia of Human Evolution*

### Awards & Honors

College of Arts & Sciences Student Union Excellence in Teaching in the Social Sciences, Washington University in St. Louis, 2021.

University Chancellor's Award for Excellence in Teaching, SUNY, 2014  
 University President's Award for Excellence in Teaching, U. Albany, 2014  
 President's Award for Distinguished Doctoral Research, SUNY Stony Brook, 1998  
 Honorable Mention National Science Foundation Graduate Fellowship, 1992  
 Harvard College Scholarship for Academic Distinction, 1990  
 Westinghouse Science Talent Search Semi-Finalist, 1987

## External Grants & Fellowships

<b>Summary:</b>	Total external funds: \$3,485,488 (including collaborative awards on grants for which Strait is the lead investigator) 9 National Science Foundation awards 3 private foundation awards Continuously funded since 2003
2021-2023	National Science Foundation. \$28,998 (NSF-BCS-2051014). <i>Doctoral Dissertation Research: Paleontological and population genetics approaches for reconstructing hominin evolutionary history.</i> Uses landmark data and principles of population genetics to reconstruct population history in paleodemes of <i>Homo erectus</i> . PI: <b>Strait</b> . Co-PI Kuzma.
2021-2023	National Science Foundation. \$31,275 (NSF-BCS-2051326). <i>Doctoral Dissertation Research: Tooth biomechanics in hominins and extant primates.</i> Uses finite element analysis to assess the mechanical consequences of variation in premolar form in early hominins and capuchins. PI: <b>Strait</b> . Co-PI: Baumgarten.
2017-2021	National Science Foundation. \$324,970 of which \$64,655 is allocated to Wash U (NSF-BCS-1717250). <i>Collaborative Research: Experimental assessment of dental microwear formation.</i> <i>In vivo</i> experiments designed to assess the effect of food material properties and particle material properties on dental microwear textures. PI: <b>Strait</b> . This grant is the lead grant in a consortium of collaborative grants from three institutions.
2015-2016	The Wenner-Gren Foundation. \$6,135 (Gr. 9120). <i>The phylogenetic relationships of Australopithecus sediba.</i> PI: <b>Strait</b> . Funds travel to examine fossils of extinct humans.
2014-2017	National Science Foundation. \$349,911 of which \$81,176 is allocated to UAlbany/WashU (NSF-BCS-1440516; NSF-BCS-1627206). <i>Collaborative Research: Integrative analysis of ingestive biomechanics using capuchins as a model organism.</i> Integrates field ecology with experimental and engineering methods to investigate the biomechanics of ingestive food processing behaviors in South American primates. PI: <b>Strait</b> . This grant is the lead grant in a consortium of collaborative grants from four institutions.
2012-2013	America for Bulgaria Foundation. \$49,963 (12ICAB2). The Balkan Valley Project (BVP): Excavation at Magura Cave. Excavation of

- Pleistocene deposits at Magura Cave, and survey of paleontological sites in northwest Bulgaria. PI: **Strait**. Co-PI: Ivanova.
- 2011-2012 National Science Foundation. \$19,994 (NSF-BCS-1060835). Doctoral dissertation improvement: *Biomechanical and behavioral significance of the Neanderthal femur*. Uses comparative, quantitative genetic and engineering methods to test hypotheses related to femoral function in Neanderthals. PI: **Strait**. Co-PI: Tamvada.
- 2010-2012 America for Bulgaria Foundation. \$49,845 (10ICAB1). *The Balkan Valley Project (BVP) Phase II: Survey of the Tundja Valley*. Exploratory survey for and excavation of Pleistocene archaeological and paleontological sites in southwestern Bulgaria. PI: **Strait**. Co-PI: Ivanova.
- 2010-2011 National Science Foundation. \$19,027 (NSF-BCS-1028815). Doctoral dissertation improvement: *Ecological determinants of morphological integration in the primate face*. Examines the role of mechanical constraints related to feeding in shaping the evolution of craniofacial integration. PI: **Strait**. Co-PI: Makedonska.
- 2007-2015 National Science Foundation HOMINID program. \$2,499,485, of which \$940,559 is allocated to U Albany (NSF-BCS-0725126). *Integrative analysis of hominid feeding biomechanics*. Uses a combination of engineering, ecological and experimental techniques to examine feeding adaptations in extinct humans. PI: **Strait**. This grant is the lead grant in a consortium of collaborative grants from ten institutions.
- 2003-2007 National Science Foundation. \$165,590 (NSF-BCS-0240865, 0527026). *Masticatory biomechanics and the primate face*. Uses a combination of engineering and experimental techniques to examine how the facial skeleton withstands the loads imposed by chewing. PI: **Strait**. Co-PIs: Dechow, Richmond, Ross, Spencer.
- 1996-1998 National Science Foundation. \$10,252. *Dissertation Improvement Grant*. Examined patterns of morphological integration in the cranial base of humans, non-human primates and fossil hominids. PI: Grine. Co-PI: **Strait**.

### **Internal Grants & Fellowships**

- 2015 Faculty Research Award Program, U. Albany. \$9,970. *Archaeological excavation at Arma Veirana*. PI: **Strait**.
- 2009 Faculty Research Award Program, U. Albany. \$9,951. *Biogeography and evolutionary history of archaic humans in Europe: excavations in Bulgaria*. PI: **Strait**.
- 2005 Faculty Research Award Program, U. Albany. \$9,172. *Paleoanthropological exploration in Zambia*. Survey for fossil-bearing sites in Zambia. PI: **Strait**.
- 2005 College of Arts and Sciences Research Development award, U. Albany. \$5,100. *Paleoanthropological exploration in Zambia*. Survey for fossil-bearing sites in Zambia. PI: **Strait**.

2000-2004 Annual Research Stipend from NYCOM. \$2,500  
 1997-2000 Annual Research Stipend from the Henry R. Luce Professorship, GWU. \$2,500

## Teaching Experience

2015-present Course Director, *Principles of Anatomy & Development*, Wash. U.  
 Course Director, *Introduction to Human Evolution*, Wash. U.  
 Course Director, *Primate Ecomorphology*, Wash U.  
 Course Director, *Evolution of Non-human Primates*, Wash. U.  
 Course Director, *The Origin of Evolutionary Thought*, Wash. U.  
 Course Director, *Topics in Human Evolution*, Wash. U.

2004-2015 Course Director, *Senior Seminar in Anthropology*, U. Albany  
 Course Director, *Special Topics in Anthropology: Communicating Concepts of Culture*, U. Albany  
 Course Director, *Human Evolutionary Anatomy*, U. Albany  
 Course Director, *Paleolithic Humans*, U. Albany  
 Course Director, *The Modern Evolutionary Synthesis and Human Evolution*, U. Albany.  
 Course Director, *Introduction to Human Evolution*, U. Albany  
 Co-Course Director, *Anatomy & Physiology I*, U. Albany  
 Co-Course Director, *Anatomy & Physiology II*, U. Albany  
 Course Director, *Human Paleontology*, U. Albany  
 Course Director, *Introduction to the Primates*, U. Albany  
 Course Director, *Human Functional Anatomy*, U. Albany  
 Course Director, *Selected Topics in Anthropology*, U. Albany  
 Course Director, Graduate seminar in *Paleoanthropology*, U. Albany.

2000-2004 Instructor, *Human Anatomy*, NYCOM

1997-2000 Course Director, *Human Functional Anatomy*, GWU  
 Instructor, *Human Anatomy*, GWU Medical School  
 Course Director, *Primate Biology*, GWU  
 Co-Course Director, *Biological Anthropology Seminar*, GWU  
 Course Director, *Introduction to Biological Anthropology*, GWU  
 Instructor, *Human Anatomy*, GWU Medical School  
 Instructor, *Human Anatomy*, GWU Physician's Assistant Program  
 Instructor, *Human Anatomy*, GWU Physical Therapy Program

1991-1997 Coordinator, *Teaching Assistant Training Program*, sponsored by the Dean of the Graduate School, SUNY at Stony Brook  
 Lecturer, *Human Anatomy*, Biomedical Program of the Sophie Davis Medical School, City College of New York.  
 Lecturer, *Human Anatomy*, Physician's Assistant Program of the Sophie Davis Medical School, City College of New York  
 Course Director, *Human Evolution*, SUNY at Stony Brook  
 Teaching Assistant, *Dental Anatomy*, SUNY at Stony Brook  
 Teaching Assistant, *Regional Human Anatomy*, SUNY at Stony Brook  
 Teaching Assistant, *Primate Evolution*, SUNY at Stony Brook

Teaching Assistant, *Lithic Technology*, SUNY at Stony Brook  
Teaching Assistant, *Introduction to Physical Anthropology*, SUNY at  
Stony Brook

## Professional Memberships

American Association of Biological Anthropologists

## Field Experience

2017 – present	Director, Drimolen Field School, run by Wash. U. in collaboration with the Drimolen Research Project run by U. Johannesburg and LaTrobe U.
2016 – present	Senior collaborator, Drimolen Research Project, South Africa
2015 – 2019	Co-Director, Ingestive Biomechanics Project, Brazil, Suriname
2014 – present	Co-Director, Arma Veirana Project, Italy.
2009 – 2015	Director, Balkan Valley Project, Bulgaria
2005 – 2008	Co-Director, Zambia Paleokarst Research Project, Zambia.
1998	Ondurakarume Paleontological Survey, Namibia
1995	Die Kelders Cave Archaeological Expedition, South Africa
1993	'Ubeidiya Archaeological Expedition, Israel
1992	Hayonim Cave Archaeological Expedition, Israel
1990	Kebara Cave Archaeological Expedition, Israel
1989	Verberie Archaeological Expedition, France

## Summary of Publications / Citation Statistics

77 published/in press/accepted peer-reviewed journal articles.

11 published/in press chapters in edited volumes.

4 published book reviews.

5 non-peer-reviewed articles.

64 published abstracts.

5,673 citations indexed in the Google Scholar database.

*h*-index = 39 (i.e., 39 articles or book chapters cited more than 39 times; data from Google Scholar).

*i*10-index = 68 (i.e., 68 articles or book chapters cited more than 10 times; data from Google Scholar).

## Classification and context of publications

All publications listed below are coded according to the following system:

<sup>[C]</sup> = Publication on which Strait is the corresponding author.

<sup>[G]</sup> = Publication derived directly from a grant on which Strait is the lead investigator.

<sup>[S]</sup> = Publication written with one of Strait's students.

<sup>[I]</sup> = Publication on which Strait is an important contributor independent of corresponding authorship, mentoring of students, or grants.

Unclassified publications are those on which Strait played a complementary role.

## Articles Published In Peer-reviewed Journals

- Accepted Hodgkins, J., Orr, C.M., Gravel-Miguel, C., Riel-Salvatore, J., Miller, C.E., Bondioli, L., Nava, A., Lugli, F., Talamo, S., Hajdinjak, M., Cristiani, E., Romandini, M., Meyer, D., Drohobysky, D., Kuester, F., Pothier Bouchard, G., Buckley, M., Mancini, L., Baruffalsi, F., Silvestrini, S., Arrighi, S., Keller, H., Belén Griggs, R., Peresani, M., **Strait, D.S.**, Benazzi, S., Negrino, F. An infant burial from Arma Veirana in northwestern Italy provides insights into funerary practices and female personhood in early Mesolithic Europe. *Scientific Reports*.
- 2021 <sup>[C]</sup> Martin, J.M., Leece, A.B., Neubauer, S., Baker, S.E., Mongle, C.S., Boschian, G., Schwartz, G.T., Smith, A.L., Ledogar, J.A., **Strait, D.S.**, Herries A.I.R. Drimolen cranium DNH 155 documents microevolution in an early hominin species. *Nature Ecology & Evolution* 5: 38-45. <https://doi.org/10.1038/s41559-020-01319-6>
- Cook, R., Vazzana, A., Sorrentino, R., Benazzi, S., Smith, A.L., **Strait, D.S.**, Ledogar, J. The craniofacial feeding biomechanics of *Homo floresiensis*. *Interface Focus* 11: 20200083.
- Pickering, R., Herries, A.I.R., Woodhead, J.D., Hellstrom, J.C., Green, H.E., Paul, B., Ritzman, T., **Strait, D.S.**, Potze, S., Kgasi, L., Schoville, B., Hancox, J. Reply to: Clusters of flowstone ages are not supported by statistical evidence. *Nature* 594: E11-E11.
- 2020 <sup>[I]</sup> Herries, I.R., Adams, J.W., Baker, S., Joannas-Boyau, R., Boschian, G., Mallet T., Murszewski, A., Pickering, R., Caruana, M., Denham, T., Edwards, T.R., Hellstrom, J., Leece, A., Martin, J., Moggi-Cecchi, J., Mokobane, S., Penzo-Kajewski, P., Rovinsky, D., Stammers, R., **Strait, D.S.**, Wilson, C., Woodhead, J., Menter, C. Contemporaneity of *Australopithecus*, *Paranthropus* and early *Homo erectus* in South Africa. *Science* 386: eaaw7293.
- <sup>[I]</sup> Schwartz, G.T., McGrosky, A., **Strait, D.S.** Fracture mechanics, enamel thickness and the evolution of molar form in hominins. *Biology Letters* 16: 20190671.
- <sup>[I]</sup> Van Casteren, A., **Strait, D.S.**, Swain, M.V., Michael, S., Thai, L.A., Philip, S.M., Saji, S., Al-Fadhlah, K., Almusallam, A.S., Shekeban, A., McGraw, W.S., Kane, E.E., Wright, B.W., Lucas, P.W. Hard plant tissues do not contribute meaningfully to dental microwear: evolutionary implications. *Scientific Reports* 10:582.
- Hriniak, J.N., Smith, E., Johnsen, R., Ren, M., Hodgkins, J., Orr, C., Negrino, F., Riel-Salvatore, J., Fitch, S., Miller, C.E., Zerboni, A., Mariani, G.S., Harris, J.A., Gravel-Miguel, C., **Strait, D.S.**, Peresani, M., Benazzi, S., Marean, C.W. Discovery of cryptotephra at Middle-Upper Paleolithic sites Arma Veirana and Riparo Bombrini, Italy: A new link for broader geographic correlations. *Quaternary Intl.* 35:199-212.

- Laird, M.F., Wright, B.W., Rivera, A.O., Fogaça, M.D., van Casteren, A., Fragaszy, D.M., Izar, P., Visalberghi, E., Scott, R.S., **Strait, D.S.**, Ross, C.F., Wright, K.A. Ingestive behaviors in bearded capuchins (*Sapajus libidinosus*). *Scientific Reports* 10: 20850.
- 2019 <sup>[G, I]</sup> Mongle C., **Strait, D.S.**, Grine, F.E. Expanded character sampling underscores phylogenetic stability of *Ardipithecus ramidus* as a basal hominin. *J. Hum. Evol.* 131: 28-39.
- Pickering, R., Herries, A.I.R., Woodhead, J.D., Hellstrom, J.C., Green, H.E., Paul, B., Ritzman, T., **Strait, D.S.**, Potze, S., Kgasi, L., Schoville, B., Hancox, J. U-Pb dated flowstones restrict South African early hominin record to dry climate phases. *Nature* 565:226-229.
- <sup>[I]</sup> Van Casteren, A., Lucas, P.W., **Strait, D.S.**, Michael, S., Bierwisch, N., Schwarzer, N., Al-Fadhlah, K., Almusallam, A.S., Thai, L.A., Saji, S., Shekeban, A., Swain, M. Metallic proxies remain unsuitable for assessing the mechanics of microwear formation: reply to comment on van Casteren *et al.* (2018). *Roy. Soc. Open Sci.* 6:190572.
- <sup>[G]</sup> Wright, B.W., Wright, K.A., **Strait, D.S.**, Ross, C.F., Laird, M.F., van Casteren, A., Scott, R. Taking a big bite: working together to better understand the evolution of feeding in primates. *Am. J. Primatol.* 81:e22981.
- 2018 <sup>[I]</sup> Van Casteren, A., Lucas, P.W., **Strait, D.S.**, Swain, M., Michael, S., Bierwisch, N., Schwarzer, N., Al-Fadhlah, K., Almusallam, A.S., Thai, L.A., Saji, S., Shekeban, A., Swain, M. Evidence that metallic proxies are unsuitable for assessing the mechanics of microwear formation and a new theory of the meaning of microwear. *Roy. Soc. Open Sci.* 5:171699.
- 2017 <sup>[G, S]</sup> Ledogar, J.A., Benazzi, S., Smith, A.L, Weber, G.W., Carlson K.B., Dechow, P.C., Grosse, I.R., Ross, C.F., Richmond, B.G., Wright, B.W., Wang, Q., Byron, C., Carlson, K.J., deRuiter, D.J., Pryor, L.C., **Strait, D.S.** The biomechanics of bony facial “buttresses” in South African australopiths: an experimental study using finite element analysis. *Anat. Rec.* 300:171-195.

- Lucas, P.W., Ridwan, O., Al-Fadhalah, K., Almusallam, A.S., Henry, A.G., Michael, S., Thai, L.A., Watzke, J., **Strait, D.S.**, van Casteren, A., Atkins, A.G. Tooth Wear: A response to “Scratching the surface: A critique of Lucas et al. (2013)’s conclusion that phytoliths do not abrade enamel” [J. Hum. Evol. (2014) 130-134]. *J. Hum. Evol.* 102:74-77.
- 2016 <sup>[G,S]</sup> Pryor, L.C., **Strait, D.S.**, Ledogar, J., Smith, A.L., Ross, C.F., Wang, Q., Opperman, L.A., Dechow, P.C. Internal bone architecture in the zygoma of human and *Pan*. *Anat. Rec* 299:1704-1717.
- <sup>[G,S]</sup> Gharpure, P., Kontogiorgos, E., Pryor, L., Opperman, L., Ross, C.F., **Strait, D.S.**, Smith, A.L., Wang, Q., Dechow, P.D. Elastic properties of chimpanzee craniofacial bone. *Anat. Rec.*299:1718-1733.
- <sup>[S]</sup> Prado, F.B., **Strait, D.S.**, Freire, A.R., Rossi, A.C., Voigt, T., Ross, C.F., Ledogar, J. Review of *in vivo* bone strain studies and finite element models of the zygomatic complex in humans and non-human primates: implications for clinical research and practice. *Anat. Rec.* 299:1753-1778.
- <sup>[C,G,S]</sup> Ledogar, J.A., Smith, A.L., Benazzi, S., Weber, G.W., Spencer, M.A., Carlson K.B., McNulty, K.P., Dechow, P.C., Grosse, I.R., Ross, C.F., Richmond, B.G., Wright, B.W., Wang, Q., Byron, C., Slice, D.E., Carlson, K.J., deRuiter, D.J., Berger, L.R., Tamvada, K., Pryor Smith, L.C., Berthaume, M.A., **Strait, D.S.** Mechanical evidence that *Australopithecus sediba* was limited in its ability to eat hard foods. *Nature Communications* 7: 10596.
- <sup>[G,S]</sup> Ledogar, J.A., Dechow, P.C., Wang, Q., Gharpure, P., Gordon, A.D., Baab, K.L., Smith, A.L., Weber, G.W., Grosse, I.R., Ross, C.F., Richmond, B.G., Wright, B.W., Byron C., **Strait, D.S.** Human feeding biomechanics: mechanical performance and shape-related intraspecific variation. *Peer J* e2242.
- Lucas, P.W., Wagner, M., Al-Fadhalah, K., Almusallam, A., Shaji, M., Arockia Thai, L., **Strait, D.S.**, Swain, M., van Casteren, A., Renno, W., Shekeban, A., Philip, S., Saji, S., Atkins, A. Dental abrasion as a cutting process. *J. Roy. Soc. Interface Focus* 6: 2016008.
- 2015 <sup>[C,G,S]</sup> Smith, A.L., Benazzi, S., Ledogar, J.A., Tamvada, K., Smith, L.C., Weber, G.W., Spencer, M.A., Lucas, P.W., Michael, S., Shekeban, A., Al-Fadhalah, K., Almusallam, A.S., Dechow, P.C., Grosse, I.R., Ross, C.F., Madden, R., Richmond, B.G., Wright, B.W., Wang, Q., Byron, C., Slice, D.E., Wood, S., Dzialo, C., Berthaume, M., van Castern, A., **Strait, D.S.** The feeding biomechanics and dietary ecology of *Paranthropus boisei*. *Anat. Rec.* 298: 145-167.



- <sup>[G,S]</sup> Smith, A.L., Benazzi, S., Ledogar, J.A., Tamvada, K., Smith, L.C., Weber, G.W., Spencer, M.A., Dechow, P.C., Grosse, I.R., Ross, C.F., Richmond, B.G., Wright, B.W., Wang, Q., Byron, C., Slice, D.E., **Strait, D.S.** Biomechanical implications of intraspecific shape variation in chimpanzee crania: moving towards an integration of geometric morphometrics and finite element analysis. *Anat. Rec.* 298: 122-144.
- 2014 <sup>[G,S]</sup> Dzialo, C., Wood, S.A., Smith, A.L., Dumont, E.R., Berthaume, M., Benazzi, S., Weber, G.W., **Strait, D.S.**, Grosse, I.R. Functional implications of squamosal suture size in *Paranthropus boisei*. *Am. J. Phys. Anthropol.* 153: 260-268.
- <sup>[G,S]</sup> Jade, S., Tamvada, K.H., **Strait, D.S.**, Grosse, I.R. Finite element analysis of a femur to deconstruct the design paradox of bone curvature. *J. Theor. Biol.* 341: 53-63.
- Benazzi, S., Gruppioni, G., **Strait, D.S.**, Hublin, J.-J. Virtual reconstruction of KNM-ER 1813 *Homo habilis* cranium. *Am. J. Phys. Anthropol.* 153: 154-160.
- Lucas, P.W., van Casteren, A., Al-Fadhalah, K., Abdulwahab, S., Henry, A.G., Michael, S., Watzke, J., Reed, D.A., Diekwisch, T.G.H., **Strait, D.S.**, Atkins, A.G. The role of dust, grit and phytoliths in tooth wear. *Ann. Zool. Fennici* 51: 143-152.
- 2013 Lucas, P.W., Omar, R., Al-Fadhalah, K., Abdulwahab, S., Henry, A.G., Michael, S., Thai, L.A., Watzke, J., **Strait, D.S.**, Atkins, A.G. Mechanisms and causes of wear in tooth enamel: implications for hominin diets. *J. Roy. Soc. Interface* 10: 20120923.
- <sup>[C,G,S]</sup> **Strait, D.S.**, Constantino, P., Lucas, P.W., Richmond, B.G., Spencer, M.A., Dechow, P.C., Ross, C.F., Grosse, I.R., Wright, B.W., Wood, B.A., Weber, G.W., Wang, Q., Byron, C., Slice, D.E., Chalk, J., Smith, A.L., Smith, L.C., Wood, S., Berthaume, M., Benazzi, S., Dzialo, C., Tamvada, K., Ledogar, J.A. Viewpoints: Diet and dietary adaptations in early hominins: the hard food perspective. *Am. J. Phys. Anthropol.* 151: 339-355.
- 2012 <sup>[C,G,S]</sup> **Strait, D.S.**, Weber, G.W., Richmond, B.G., Lucas, P.W., Spencer, M.A., Wright, B.W., Ross, C.F., Dechow, P.C., Wang, Q., Grosse, I., Byron, C., Wood, B.A., Constantino, P., Slice, D.E. Microwear, mechanics and the feeding adaptations of *Australopithecus africanus*. *J. Hum. Evol.* 62: 165-168.
- <sup>[G]</sup> Grosse, I.R., Wood, S.A., **Strait, D.S.**, Dumont, E.R., Ross, C.F. Response to the Comment by Gröning and Fagan on “The effects of modeling simplifications on craniofacial finite element models: The alveoli (tooth sockets) and periodontal ligaments” (volume 44, issue 10, pages 1831-1838. *J. Biomech.* 45: 1750-1751.
- <sup>[G]</sup> Berthaume, M., Dechow, P.C., Iriarte-Diaz, J., Ross, C.F., **Strait, D.S.**, Wang, Q., Grosse, I. Probabilistic finite element analysis of a craniofacial finite element model. *J. Theor. Biol.* 300: 242-253.

- <sup>[G]</sup> Wang, Q., Wood, S., Grosse, I.R., Ross, C.F., Zapata U., Byron C., Wright, B.W., **Strait, D.S.** The biomechanical impact of sutures assessed in a finite element model of a macaque cranium using dynamic simulation: implications for the evolution of craniofacial form. *Anat. Rec.* 295: 278-288.
- <sup>[G,S]</sup> Makedonska, J.M., Wright, B.W., **Strait, D.S.** The effect of dietary adaptation on cranial morphological integration in capuchins (order Primates, genus *Cebus*). *PLoS ONE* e40398.
- <sup>[C,G]</sup> Ivanova, S., Gurova, M., Spassov, N., Popov, V., Makedonska, J., Tzankov, T., **Strait, D.S.** Preliminary findings of the Balkan Paleo Project: evidence of human activity at the “gateway” of Europe during the late Pleistocene. *Be-JA* 2/2012.
- 2011 <sup>[G]</sup> Wood, S.A., Grosse, I.R., **Strait, D.S.**, Ross, C.F., Dumont, E.R. Assessing the effect of alveoli (tooth sockets) and periodontal ligaments in finite element analyses of crania. *J. Biomech* 44: 1831-1838.
- <sup>[C,G]</sup> Weber, G.W., Bookstein, F.L., **Strait, D.S.** Virtual Anthropology meets biomechanics. *J. Biomech.* 44: 1429-1432.
- <sup>[C,G,S]</sup> Nakashige, M., Smith, A.L., **Strait, D.S.** Biomechanics of the anthropoid postorbital septum investigated using finite element analysis. *J. Anat.* 218: 142-150.
- <sup>[G]</sup> Davis, J.L., Dumont, E.R., **Strait, D.S.**, Grosse, I.R. An efficient method of modeling material properties using a thermal diffusion analogy: An example based on craniofacial bone. *PLoS One* 6: e17004.
- <sup>[G]</sup> Benazzi, S., Bookstein, F., **Strait, D.S.**, Weber, G.W. A new OH 5 reconstruction with an assessment of its uncertainty. *J. Hum. Evol.* 61: 75-88.
- <sup>[G]</sup> Chalk, J., Richmond, B.G., Ross, C.F., **Strait, D.S.**, Wright, B.W., Spencer, M.A., Wang, Q., Dechow, P.C. A finite element analysis of masticatory stress hypotheses. *Am. J. Phys. Anthropol.* 145: 1-10.
- <sup>[G]</sup> Ross, C.F., **Strait, D.S.**, Dechow, P.C., Richmond, B.G., Spencer, M.A., Iriarte-Diaz, J. *In vivo* bone strain and finite-element modeling of the craniofacial haft in catarrhine primates. *J. Anat.* 218: 112-141.
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- Richmond, B.G. and **Strait, D.S.** Knuckle-walking traits retained in the wrists of early hominids. *Am. J. Phys. Anthropol. suppl.* 28: 232.
- 1998 **Strait, D.S.** Morphological integration in the hominid cranial base: implications for early hominid phylogeny. *Am. J. Phys. Anthropol. suppl.* 26: 212.
- 1997 **Strait, D.S.** and Ross, C.F. Head posture, neck posture, and primate basicranial evolution. *Am. J. Phys. Anthropol. suppl.* 24: 221.
- 1996 **Strait, D.S.**, Grine, F.E. and Moniz, M.A. A reappraisal of early hominid phylogeny. *Am. J. Phys. Anthropol. suppl.* 22: 223-224.
- 1995 **Strait, D.S.** and Moniz, M. A. Finite mixture coding: a new approach to coding continuous characters. *Am. J. Phys. Anthropol. suppl.* 20: 206.
- 1994 **Strait, D.S.** The functional morphology of the cranial base in living anthropoids and fossil hominids: an analysis using matrix correlations. *Am. J. Phys. Anthropol. suppl.* 18: 189-190.
- 1993 **Strait, D.S.** and Grine, F.E. The relationship between diet, facial prognathism, posture and basicranial variation in extant primates and its significance for interpreting the Plio-Pleistocene hominid fossil record. *Am. J. Phys. Anthropol. suppl.* 16: 190.

### **Significant Public Lectures:**

- Feb. 7, 2019 University of Chicago Evolutionary Morphology Seminar “Integrative Analysis of Hominin Feeding Biomechanics.”
- Oct. 16, 2017 University of Missouri Integrative Anatomy “Integrative Analysis of Hominin Feeding Biomechanics.”
- Dec. 7, 2012 University of Tuebingen’s Paleoanthropology at the Gates of Europe symposium. “The human fossil record of Bulgaria and recent activities of the Balkan Paleo Project.”

- Oct. 21, 2010 University of Vienna's Virtual Anthropology Meets Biomechanics Symposium. "Synergistic applications of geometric morphometrics and finite element analysis."
- Feb. 4, 2010 New York State Museum Teacher's Workshop on Evolution in the Classroom: "The evolutionary significance of *Ardipithecus ramidus*"
- Aug. 10, 2009 Turkana Basin Institute 50 Years of Zinj: "The feeding biomechanics and dietary ecology of *Paranthropus boisei*."
- March 1, 2009 American Museum of Natural History; Darwin's Legacy: Early Human Evolution in Africa. "Biogeography and human origins."
- Feb. 7, 2009 New York State Museum Teacher's Workshop on Evolution in the Classroom: "The functional anatomy and evolution of bipedalism."
- Feb. 2, 2008 New York State Museum Teacher's Workshop on Evolution in the Classroom: "Climate Change and Human Evolution."
- Feb. 3, 2007 New York State Museum Teacher's Workshop on Evolution in the Classroom: "The Human Adventure."
- Feb. 21, 2007 New York State Museum Lecture Series: "Something to chew on: masticatory biomechanics and its relevance to human evolution."
- Feb. 4, 2006 New York State Museum Teacher's Workshop on Evolution in the Classroom: "The Human Adventure."
- Dec. 10, 2005 Denver Museum of Natural History Paleontology 10<sup>th</sup> Anniversary Symposium: "Walking Tall: Human Origins and the Evolution of Bipedalism."
- Feb. 23, 2005 New York State Museum Lecture Series: "Walking Tall: Human Origins and the Evolution of Bipedalism."

### **Synergistic Activities:**

- 2018 Developed the Drimolen Field School, operated through Overseas Studies at Washington University in St. Louis.
- 2017-present Mentor for students at the Center for Excellence in Paleosciences, South Africa. Providing professional advice for South African students pursuing careers in paleoanthropology, paleontology and evolutionary biology.
- 2009-2015 Mentored seven high school students (Mika Nakashige, Christopher Janishak, Peiyun Ni, Samantha Sohnen, Ji Won Ryoo, Skylar Luu; AJ Kamath) in Evolutionary Biomechanics. The students competed in the Intel Science Talent Search and other, smaller science competitions. One student (Ni) was named an

- Intel STS Semifinalist. Student research has been published thus far in one journal article (Nakashige *et al.*, 2011; see above) and another journal manuscript is in preparation.
- 2010 Participated in workshop with European Virtual Anthropology Network Society focusing on how to integrate geometric morphometrics with finite element analysis.
- 2004 Provided computer model of *Macaca fascicularis* to neurobiologists at the University of Montana and the Smith-Kettewell Eye Research Institute for use in designing cranial implants.
- 2000-present Developing methodologies for creating computer models of real skeletal geometries (e.g., skulls) for use in finite element analysis to study biomechanical problems.
- 1998-2000 Participated in designing Hominid Paleobiology Doctoral Program at The George Washington University.

### **Graduate Advisors:**

Frederick E. Grine, Dept. Anthropology, SUNY at Stony Brook  
 A. Brigitte Demes, Dept. Anatomical Sciences, SUNY at Stony Brook  
 William L. Jungers, Dept. Anatomical Sciences, SUNY at Stony Brook  
 Bernard A. Wood, Dept. of Anthropology, George Washington University

### **Postdoctoral Advisor:**

Bernard A. Wood, Dept. Anthropology, George Washington University.

### **Postdoctoral Fellows Mentored:**

Amanda Smith (now at University of Chicago)  
 Michelle Drapeau (now at University of Montreal)  
 Stephen Frost (now at University of Oregon)  
 Kamla Ahluwalia (now at Samuel Merritt University)  
 Christopher Heesy (now at Midwestern University)

### **Graduate Students Advised (2004 – present):**

Rachel Sender (PhD thesis advisor, Wash U)  
 Yeganeh Sekhavati (PhD thesis advisor, Wash U)  
 Catherine McLean (PhD thesis advisor, Wash U)  
 Rachel Kuzma (PhD thesis advisor, Wash U)  
 Sarah Baumgarten (PhD thesis advisor, Wash U)  
 Jacqueline Garnett (PhD thesis advisor, Wash U)  
 Lana Kerker Oliver (PhD committee member, Wash U)  
 Crystal Riley (PhD committee member, Wash U)  
 Efstathia Robakis (PhD committee member, Wash U)  
 Amanda Smith (PhD thesis advisor, UAlbany)  
 Kelli Tamvada (PhD thesis advisor, UAlbany)  
 Jana Makedonska (PhD thesis advisor, UAlbany)  
 Justin Ledogar (PhD thesis advisor, UAlbany)  
 Keenya Oliver (MA thesis advisor, UAlbany)  
 Mwaka Nachilongo (MA thesis advisor, UAlbany)

Olga Panagiotopoulou (PhD thesis reader, U of York)  
 Amir Barani (PhD thesis reader, U Western Australia)  
 Rob McCarthy (PhD thesis reader, George Washington U)  
 Matt Taylor (PhD thesis reader, UAlbany)  
 Sarah Reedy (MA committee member, UAlbany)  
 Melissa Kiyamu (PhD committee member, UAlbany)  
 Lisa Anderson (PhD committee member, UAlbany)

### **University and Departmental Service:**

2020-2022 Chair, Search Committee (Paleoanthropology), Anthropology, Wash. U.  
 2019 Panelist, Meet the Faculty, Arts & Sciences, Wash U.  
 2019-present Committee on Research Integrity, Arts & Sciences, Wash U.  
 2019-present Curriculum Committee, Arts & Sciences, Wash U.  
 2019 Ad hoc Committee on Departmental Climate, Anthropology, Wash U.  
 2019 Faculty guest, Minority Association of Pre-medical Students (MAPS), Wash U.  
 2018 Ad hoc Committee on Graduate Funding, Anthropology, Wash U.  
 2018 Panelist, Weidenbaum Center NSF grant writing workshop, Wash U.  
 2018 Ad Hoc Committee on Graduate Funding, Anthropology, Wash. U.  
 2018 Committee of 3 (i.e., Executive Committee), Anthropology, Wash. U.  
 2017-2018 Search Committee (Hydrology), Earth and Planetary Sciences, Wash. U.  
 2017-2018 Panelist, Teaching Center, Wash. U., Workshop on interviewing/hiring  
 2017-2018 Faculty guest, Pre-Med Society dinner, Wash. U.  
 2018 Faculty speaker, Mixed Student Association, Wash. U.  
 2017 Ad hoc faculty consultant to Library  
 2017 Faculty participant, Dinner With The Dean, hosted by Dean Jennifer Smith.  
 2016-2017 Chair, Search Committee (Genetics), Department of Anthropology, Wash. U.  
 2016-2017 Search Committee (Primatology), Department of Anthropology, Wash. U.  
 2016 Tenure and Promotion Subcommittee, Department of Anthropology, Wash. U.  
 2008-2015 Executive Committee, Department of Anthropology, U. Albany  
 2004-2015 Co-Director / Director, Human Biology Program, U. Albany  
 Undergraduate Affairs Committee, Dept. of Anthropology, U. Albany  
 Ad Hoc Committee on Assessment and Strategic Planning, Dept. of Anthropology, U. Albany  
 Presenter, Prospective Student Open House, U. Albany  
 2014 University Teaching Awards Committee.  
 2013-2014 Provost's Committee on Allied Health, U. Albany  
 2013 Presenter, Celebrate & Advance, U. Albany  
 2012-13 Chair, Search Committee, Biological Anthropology (Lecturer), U. Albany  
 2012-13 Search Committee, Biological Anthropology (Asst. Prof.), U. Albany  
 2012 Chair, Search Committee, Biological Anthropology, U. Albany  
 2011 Chair, Search Committee, Biological Anthropology, U. Albany  
 2009-2012 Chair, Faculty Retention Committee, U. Albany  
 2010, 2012 Discussant, Grant Workshop, Tenure Trek  
 2009-2010 Associate Chair, Department of Anthropology  
 2006-2009 Participant, Food for Thought, U. Albany

2008-2009 Discussant, New Faculty Orientation / Tenure Trek  
 2004-2008 Pre-Health Committee, U. Albany  
 2007 Chair, Biological Anthropology Search Committee, U. Albany  
 2006 Participant, Roads Scholar program, U. Albany  
 Participant, Albany High School Teach-Out, U. Albany  
 2005 Participant, Roads Scholar program, U. Albany  
 Chair, Biological Anthropology Search Committee, U. Albany  
 Coordinator, Human Biology Compact Planning Initiative, U. Albany  
 2003-2004 Dean's Task Force on Curriculum Reform, NYCOM  
 Nominations and Elections Committee, NYCOM Academic Senate  
 2002-2004 Senator, NYCOM Academic Senate  
 Chairman, Grievance Committee, NYCOM Academic Senate  
 2000-2004 Interviewer, NYCOM Admissions Committee

### **Service to field**

2018-present Ethics Committee, AAPA  
 2016 Review panel, AAPA Professional Development Grant Program  
 2012 Review panel, National Science Foundation  
 2009 Review panel, National Science Foundation  
 2009-2011 Editorial Board, *PLoS ONE (Public Library of Science)*  
 2008-2011 Associate Editor, *American Journal of Physical Anthropology*.  
 1997-present Reviewer for *Nature, Science, Proceedings of the National Academy of Sciences of the USA, American Journal of Physical Anthropology, Journal of Human Evolution, The Anatomical Record, Journal of Anatomy, PLoS ONE, Evolutionary Anthropology, Evolution, Journal of Morphology, Journal of Biomechanics, Proceedings of the Royal Society B, Journal of the Royal Society Interface, Transactions of the Royal Philosophical Society, Journal of Theoretical Biology, Journal of Archaeological Science, Journal of Zoology, PeerJ, The Louis Leakey Foundation, The National Science Foundation, National Research Foundation (South Africa)*.

### **Service to Community**

2018-present School Outreach through the American Association of Biological Anthropologists. Presentations to students at schools and/or museums in the cities hosting the annual meeting of the AAPA.