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DAVID S. STRAIT

Contact Information

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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

2013-present Professor, Department of Anthropology, University at Albany
2009-present 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

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

Summary:	Total external funds: \$3,094,110 (including collaborative awards on grants for which Strait is the lead investigator) 6 National Science Foundation awards 2 private foundation awards Continuously funded since 2003
Pending	The Wenner-Gren Foundation. \$6,135. <i>The phylogenetic relationships of Australopithecus sediba</i> . PI: Strait .
2014-2017	National Science Foundation. \$349,911 of which \$81,176 will be allocated to UAlbany. <i>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: Strait . 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: <i>Biomechanical and behavioral significance of the Neanderthal femur</i> . 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). <i>The Balkan Valley Project (BVP) Phase II: Survey of the Tundja Valley</i> . 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: <i>Ecological determinants of morphological integration in the primate face</i> . 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). <i>Integrative analysis of hominid feeding biomechanics</i> . 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). <i>Masticatory biomechanics and the primate face</i> . 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 Vairana*. 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

Note: courses listed below that are taught at U Albany are not taught by Strait every year.

- 2014 Course Director, *Senior Seminar in Anthropology*, UAlbany
Course Director, *Special Topics in Anthropology: Communicating Concepts of Culture*, U. Albany
- 2013-present Course Director, *Human Evolutionary Anatomy*, U. Albany
- 2011-present Course Director, *Paleolithic Humans*, U. Albany
- 2009-present Course Director, *The Modern Evolutionary Synthesis and Human Evolution*, U. Albany.
- 2004-present 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
- 1999 Course Director, *Human Functional Anatomy*, GWU
Instructor, *Human Anatomy*, GWU Medical School
- 1998 Course Director, *Primate Biology*, GWU
Co-Course Director, *Biological Anthropology Seminar*, GWU

	Course Director, <i>Introduction to Biological Anthropology</i> , GWU
	Instructor, <i>Human Anatomy</i> , GWU Medical School
	Instructor, <i>Human Anatomy</i> , GWU Physician's Assistant Program
	Instructor, <i>Human Anatomy</i> , GWU Physical Therapy Program
1996–1997	Coordinator, <i>Teaching Assistant Training Program</i> , sponsored by the Dean of the Graduate School, SUNY at Stony Brook
1994–1997	Lecturer, <i>Human Anatomy</i> , Biomedical Program of the Sophie Davis Medical School, City College of New York.
	Lecturer, <i>Human Anatomy</i> , Physician's Assistant Program of the Sophie Davis Medical School, City College of New York
1995	Course Director, <i>Human Evolution</i> , SUNY at Stony Brook
1994	Teaching Assistant, <i>Dental Anatomy</i> , SUNY at Stony Brook
1993	Teaching Assistant, <i>Regional Human Anatomy</i> , SUNY at Stony Brook
	Teaching Assistant, <i>Primate Evolution</i> , SUNY at Stony Brook
1992	Teaching Assistant, <i>Lithic Technology</i> , SUNY at Stony Brook
1991–1994	Teaching Assistant, <i>Introduction to Physical Anthropology</i> , SUNY at Stony Brook

Professional Memberships

American Association of Physical Anthropologists

Field Experience

2014 – present	Co-Director, Arma Vairana Project, Italy.
2009 – present	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

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

8 published/in press chapters in edited volumes.

4 published book reviews.

2 non-peer-reviewed journal articles.

49 published abstracts.

2,581 citations of 79 cited publications indexed in the Google Scholar database.

h-index = 27 (i.e., 27 articles or book chapters cited more than 27 times; data from Google Scholar).

*i*10-index = 44 (i.e., 44 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:

^[C] = Publication on which Strait is *either* the corresponding author *or* an equally important contributor.

^[G] = Publication derived directly from a grant on which Strait is the lead investigator.

^[S] = Publication written with one of Strait's students.

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

In-progress Articles To Be Published In Peer-reviewed Journals

In prep. ^[C,G,S] 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.** Constraints on feeding in *Australopithecus sediba*: implications for the origin of *Homo*. *Nature Communications*.

Articles Published In Peer-reviewed Journals

2015 ^[C,G,S] 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.

^[C,G,S] 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 ^[G,S] 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.

^[G,S] 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 dist, 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.
- ^[C,G,S] **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 ^[C,G,S] **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.
- ^[G] 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.
- ^[G] 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.
- ^[G] 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.
- ^[G,S] 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.
- ^[C,G] 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 ^[G] 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.
- ^[C,G] Weber, G.W., Bookstein, F.L., **Strait, D.S.** Virtual Anthropology meets biomechanics. *J. Biomech.* 44: 1429-1432.
- ^[C,G,S] Nakashige, M., Smith, A.L., **Strait, D.S.** Biomechanics of the anthropoid postorbital septum investigated using finite element analysis. *J. Anat.* 218: 142-150.
- ^[G] 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.
- ^[G] 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.
- ^[G] 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.
- ^[G] 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.
- 2010 ^[C,G,S] **Strait, D.S.**, Grosse, I.R., Dechow, P.C., Smith, A.L., Wang, Q., Weber, G.W., Neubauer, S., Slice, D.E., Chalk, J., Richmond, B.G., Lucas, P.W., Spencer, M.A., Schrein, C., Wright, B.W., Byron, C. The structural rigidity of the cranium of *Australopithecus africanus*: implications for the allometry of feeding biomechanics. *Anat. Rec.* 293: 583-593.
- ^[C] **Strait, D.S.** The evolutionary history of the australopiths. *Evolution: Education and Outreach* 3: 341-352.
- ^[G,S] Wang, Q., Smith A.L., **Strait, D.S.**, Wright, B.W., Richmond, B.G., Grosse, I.R., Byron, C.D. The global impact of sutures assessed in a finite element analysis of a macaque cranium. *Anat. Rec.* 293: 1477-1491.
- ^[G] Berthaume, M., Grosse, I.R., Patel, N.D., **Strait, D.S.**, Wood, S. Richmond B.G. The effect of early hominin occlusal morphology on the fracturing of hard food items. *Anat. Rec.* 293: 594-606.
- 2009 ^[C,G,S] **Strait, D.S.**, Weber, G.W., Neubauer, S., Chalk, J. Richmond, B.G., Lucas, P.W., Spencer, M.A., Schrein, C., Dechow, P.C., Ross, C.F., Grosse, I., Wright, B.W.,

- Constantino, P., Wood, B.A., Lawn B., Hylander, W.L., Wang, Q., Byron, C., Slice, D.E., Smith, A.L. The feeding biomechanics and dietary ecology of *Australopithecus africanus*. *Proc. Natl. Acad. Sci. USA* 106: 2124-2129.
- Gilbert, C.C., Frost, S.R., **Strait, D.S.** Allometry, sexual dimorphism and phylogeny: A cladistic analysis of extant African papionins using craniodental data. *J. Hum. Evol.* 57: 298-320.
- 2008 ^[G] Patel, N.D., Grosse, I., Sweeny, D., **Strait, D.S.**, Lucas, P.W., Wright, B., Godfrey, L. An efficient method for predicting fracture of hard food source. *Proc. IMECE2008* 2: 521.
- 2007 Begun, D.R, Richmond, B.G., **Strait, D.S.** Comment on “Origin of human bipedalism as an adaptation for locomotion on flexible branches”. *Science* 318: 1066d.
- ^[C,G] **Strait, D.S.**, Richmond, B.G., Spencer, M.A., Ross, C.F. and Wood, B.A. Masticatory biomechanics and its relevance to early hominid phylogeny: an examination of palate thickness using finite element analysis. *J. Hum. Evol.* 52: 589-599.
- 2006 McNulty, K.P., Frost S.R., and **Strait, D.S.** Examining affinities of the Taung child by developmental simulation. *J. Hum. Evol.* 51: 274-296.
- ^[G] Wang, Q., **Strait, D.S.**, and Dechow, P.C. A comparison of cortical elastic properties in the craniofacial skeletons of three primate species and its relevance to human evolution. *J. Hum. Evol.* 51: 375-382.
- ^[G] Wang, Q., **Strait, D.S.**, and Dechow, P.C. Fusion patterns of craniofacial sutures in rhesus monkey skulls of known age and sex from Cayo Santiago. *Am. J. Phys. Anthropol.* 131: 469-485.
- 2005 Grine, F.E., Spencer, M.A., Demes, B., Smith, H.F., **Strait, D.S.**, and Constant, D.A. Molar enamel thickness in the chacma baboon, *Papio ursinus* (Kerr 1792). *Am. J. Phys. Anthropol.* 128: 812-822.
- ^[C,G] **Strait, D.S.**, Wang, Q., Dechow, P.C., Ross, C.F., Richmond, B.G., Spencer, M., Patel, B.A. Modeling elastic properties in finite element analysis: how much precision is needed to produce an accurate model? *Anat. Rec. (A)*: 275-287.
- ^[G] Ross, C.F., Patel, B.A., Slice, D.E., **Strait, D.S.**, Dechow, P.C., Richmond, B.G., Spencer, M. Modeling masticatory muscle force in finite-element analysis: sensitivity analysis using principal coordinates analysis. *Anat. Rec. (A)*: 288-299.
- ^[G] Richmond, B.G., Wright, B., Grosse, I., Dechow, P.C., Ross, C.F., Spencer, M.A., **Strait, D.S.** Finite element analysis in functional morphology. *Anat. Rec. (A)*: 259-274.

- 2004 ^[C] **Strait, D.S.** and Grine, F.E. Inferring hominoid and early hominid phylogeny using craniodental data: the role of fossil taxa. *J Hum Evol.*47: 399-452.
- ^[C] Wood, B.A. and **Strait, D.S.** Patterns of resource use in early *Homo* and *Paranthropus*. *J Hum Evol.* 46: 119-162.
- 2001 ^[C] **Strait, D.S.** Integration, phylogeny, and the hominid cranial base. *Am. J. Phys. Anthropol.* 114: 273-297.
- Richmond, B. G., Begun, D.R. and **Strait, D. S.** The origin of human bipedalism: the knuckle-walking hypothesis revisited. *Yrbk Phys. Anthropol.* 44: 70-105.
- Richmond, B.G. and **Strait, D.S.** Les hommes ont-ils eu un ancêtre knuckle-walker? *Primatologie* 3 : 555-570.
- Richmond, B.G. and **Strait, D.S.** Lorsque les caracteres ont une signification fonctionnelle. *Primatologie* 3: 577-582.
- ^[C] Richmond, B.G. and **Strait, D.S.** Knuckle-walking hominid ancestor: A reply to Corruccini & McHenry. *J. Hum. Evol.*40: 513-520.
- ^[C] Richmond, B.G. and **Strait, D.S.** Did our ancestors knuckle-walk? *Nature* 410: 326.
- 2000 ^[C] Richmond, B.G. and **Strait, D.S.** Evidence that humans evolved from a knuckle-walking ancestor. *Nature* 404: 382-385.
- 1999 ^[C] **Strait, D.S.** and Grine, F.E. Cladistics and early hominid phylogeny. *Science* 285: 1210.
- ^[C] **Strait, D.S.** The scaling of basicranial flexion and length. *J. Hum. Evol.* 37: 701-719.
- ^[C] **Strait, D.S.** and Wood, B.A. Early hominid biogeography. *Proc. Nat. Acad. Sci.*. 96: 9196-9200.
- ^[C] **Strait, D.S.** and Ross, C.F. Kinematic data on primate head and neck posture: implications for the evolution of basicranial flexion, and an evaluation of registration planes used in paleoanthropology. *Am. J. Phys. Anthropol.* 108: 205-222
- 1998 ^[C] **Strait, D.S.** and Grine, F.E. Trait list bias? A reply to Skelton and McHenry. *J. Hum. Evol.* 34: 115-118.
- 1997 ^[C] **Strait, D.S.**, Grine, F.E. and Moniz, M.A. A reappraisal of early hominid phylogeny. *J. Hum. Evol.* 32: 17 - 82.

- 1996 ^[C] **Strait, D.S.**, Moniz, M. A. and Strait, P.T. Finite Mixture Coding: a new approach to coding continuous characters. *Syst. Biol.* 45(1): 67-78.
- 1994 Grine, F.E. and **Strait, D.S.** New hominid fossils from the Swartkrans Member I Hanging Remnant. *J. Hum. Evol.* 26: 57 - 76.

Articles / Chapters Published In Edited Volumes

- 2015 ^[C] **Strait, D.S.**, Grine, F.E., and Fleagle, J.G. Analyzing hominin phylogeny: cladistic approach. In W. Henke and I. Tattersall (Eds.) *Handbook of Paleoanthropology vol. 3, 2nd edition*. Berlin: Springer, pp. 1989-2014
- 2013 ^[C] **Strait, D.S.** The biogeographic implications of early hominin phylogeny. In Fleagle J.G., Reed, K., Leakey, R.E.F. (eds.) *Diversity in Australopithecus: Tracking the Earliest Bipeds*. Heidelberg: Springer, pp. 183-194
- ^[C] **Strait, D.S.** Human systematics. In Begun, D.R. (ed.) *A Companion to Paleoanthropology*. Chichester: Wiley-Blackwell, pp. 37-54.
- 2008 ^[C,G] **Strait, D.S.**, Wright, B., Richmond, B.G., Ross, C.F., Dechow, P.C., Spencer, M.A., Wang, Q. Craniofacial strain patterns during premolar loading: implications for human evolution. In C.J. Vinyard, M.J. Ravosa and C.E. Wall (eds.) *Primate Craniofacial Function and Biology*. New York: Springer, pp. 173-198.
- ^[G] Wang, Q., Dechow, P.C., Wright, B., Ross, C.F., **Strait, D.S.**, Richmond, B.G., Spencer, M.A., Surface strain on bone and sutures in a monkey facial skeleton: an *in vitro* approach and its relevance to Finite Element Analysis. In C.J. Vinyard, M.J. Ravosa and C.E. Wall (eds.) *Primate Craniofacial Function and Biology*. New York: Springer, pp. 149-172.
- 2007 ^[C] **Strait, D.S.**, Grine, F.E., and Fleagle, J.G. Analyzing hominid phylogeny. In W. Henke and I. Tattersall (Eds.) *Handbook of Paleoanthropology vol. 3*. Berlin: Springer, pp. 1781-1806.
- 2001 ^[C] **Strait, D.S.** and Grine, F.E. The systematics of *Australopithecus garhi*. *Ludus Vitalis* 9: 109-135.
- 2000 ^[C] **Strait, D.S.** and Grine, F.E. La sistemática filogenética d'*Australopithecus garhi*. *Cota Zero* 16: 159-174.

Book Reviews

- 2010 ^[C] **Strait, D.S.** The Human Lineage. By Matt Cartmill and Fred H. Smith. Hoboken, NJ; Wiley-Blackwell. 2009. 609 pp. ISBN 978-0-471-41491-5. \$99.95. *Am. J. Phys. Anthropol.*

- 2006 ^[C] **Strait, D.S.** The Human Fossil Record. Volume 4. Craniodental Morphology of Early Hominids (Genera *Australopithecus*, *Paranthropus*, *Orrorin*) and Overview. By Jeffery H. Schwartz and Ian Tattersall. Xii + 561 pp. Hoboken, NJ: John Wiley & Sons. 2005. \$195.00 (cloth). *J. Hum. Biol.* 18: 229-230.
- 2005 ^[C] **Strait, D.S.** Getting a head in paleoanthropology. *Evol. Anthropol.* 14: 80-82.
- 2002 ^[C] **Strait, D.S.** Phylogeny of the Neogene hominoid primates of Eurasia. *Quart. Rev. Biol.* 77: 193-194.

Other Articles / Chapters (non-peer-reviewed):

Accepted ^[S] Makedonska, J., **Strait, D.S.** Are humans descended from a knuckle-walking ancestor? *eLS*.

^[S] Makedonska, J., **Strait, D.S.** Hypothesis testing in paleoanthropology. *eLS*.

Published Abstracts

2014 **Strait, D.S.**, Parisi, D., Sohnen, S., Gundel, A., Smith, A.L., Tamvada, K.H., Ledogar, J.A., Ross, C.F., Ryan, T.M. Biomechanics of the postorbital bar of *Eulemur fulvus* examined using finite element analysis. *Am. J. Phys Anthropol. Suppl.S56*: 247-248.

Villmoare, B.A., Ledogar, J.A., Smith, A.L., **Strait, D.S.**, Senck, S., Weber, G.W., Benazzi, S., Spencer, M.A., Dechow, P.C., Grosse, I., Ross, C.F., Wright, B.W., Wang, Q., Byron, C., Slice, D., Richmond, B.G. Facial biomechanics of *Australopithecus afarensis* based on AL 444-2. *Am. J. Phys Anthropol. Suppl.S56*: 262.

Ledogar, J.A., Smith, A.L., Benazzi, S., Weber, G.W., Spencer, M.A., Carlson, K., 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.** Constraints on feeding biomechanics in *Australopithecus sediba*. *Am. J. Phys Anthropol. Suppl.S56*: 166-167.

2013 Smith, A.L., **Strait, D.S.** Integrating geometric morphometrics and biomechanics. *Am. J. Phys Anthropol. Suppl. S54*: 256-257.

Strait, D.S. Geometric morphometrics as a tool in evolutionary biomechanics. *Am. J. Phys. Anthropol. Suppl. S54*: 265.

Wang, Q., Makedonska, J., **Strait, D.S.** The placement of the maxillo-zygomatic suture in primate midfacial skeleton: An investigation on Old World Monkeys and New World Monkeys. *Am. J. Phys. Anthropol. Suppl. S54*: 284.

- 2012 **Strait, D.S.**, Smith, A.L., Zapata, U., Dechow, P.C. *In vitro* validation of a finite element model of a chimpanzee cranium. *Am. J. Phys. Anthropol. Suppl. S52*: 279.
- Smith, A.L., Benazzi, S., Weber, G.W., Ross, C.F., Dechow, P.C., Grosse I.R., Spencer, M.A., Richmond, B.G., Wang, Q., Wright, B.W., Slice, D.E., Byron, C.D., **Strait, D.S.** Feeding biomechanics of OH 5 assessed using finite element analysis. *Am. J. Phys. Anthropol. Suppl. S52*: 272.
- Tamvada, K.H., **Strait, D.S.** Comparisons of strength and predictability of Neanderthal and modern human femora using finite element analysis. *Am. J. Phys. Anthropol. S52*:282-283.
- Wang, Q., Grosse, I.R., Wright, B.W., Byron, C.D., **Strait, D.S.** Sensitivity of nonlinear elastic properties of zygomaticotemporal sutures in a macaque cranial Finite Element Model. *Am. J. Phys. Anthropol. Suppl. S52*: 297.
- 2011 **Strait, D.S.**, Oliver, K. The phylogeny of *Homo* and its implications for biogeography. *Am. J. Phys. Anthropol. Suppl. S50*: 286.
- 2010 **Strait, D.S.** A tough nut to crack: Reconstructing diet and interpreting feeding adaptations in early hominins. *Am. J. Phys. Anthropol. Suppl. S48*: 291.
- Makedonska, J., Wright, B.W., **Strait, D.S.** Ecological determinants of morphological integration in the capuchin face. *Am. J. Phys. Anthropol. Suppl. S 48*: 184.
- Wang, Q, Smith, A.L., **Strait, D.S.**, Byron, C.D., Grosse, I.R., Wright B.W. The global impact of sutures assessed in a Finite Element Model of a macaque cranium. *Am. J. Phys. Anthropol. Suppl. S 48*: 314-315.
- Benazzi, S., Bookstein, F., **Strait, D.S.**, Richmond, B.G., Lucas, P., Dechow, P.C., Ross, C.F., Grosse, I.R., Weber, G.W. A symmetric virtual reconstruction of OH5. *Am. J. Phys. Anthropol. Suppl. S46*: 23.
- 2009 **Strait, D.S.**, Weber, G.W., Neubauer, S., Chalk, J. Richmond, B.G., Lucas, P.W., Spencer, M.A., Schrein, C., Wright, B.W., Ross, C.F., Dechow, P.C., Wang, Grosse, I., Q., Byron, C., Wood, B.A., Lawn B., Constantino, P., Slice, D.E., Smith, A.L. Facial biomechanics in *Australopithecus africanus*: implications for feeding ecology. *Am. J. Phys. Anthropol. Suppl. S46*: 358.
- Smith, A.L., Kupczik, K., Fagan, M.J., Roo, L., **Strait, D.S.**, Grosse, I.R., O'Higgins, P. Changing faces: an examination of robust craniofacial features in *Macaca majori* and implications for the hominid fossil record. *Am. J. Phys. Anthropol. Suppl. S46*: 347.

- Ross, C.F., **Strait, D.S.**, Dechow, P.C., Richmond, B.G., Spencer, M.A., Schrein, C., Weber, G., Slice, D.E. *In vivo* bone strain and finite-element modeling of the craniofacial haft in cararrhine primates. *Am. J. Phys. Anthropol. Suppl. S46*: 319.
- 2008 Wang, Q., **Strait, D.S.**, Smith, A.L., Chalk, J., Wright, B.W., Dechow, P.C., Richmond, B.G., Ross, C.F., Spencer, M.A., Byron C.D., Lucas, P.W., Grosse, I., Dlice, D.E., Weber, G. Modeling the elastic properties of sutures in finite element analysis. *Am. J. Phys. Anthropol. Suppl. S46*: 217-218.
- Hamm, K.M., Gordon, A.D., McCarthy, R.C., Lucas, L., **Strait, D.S.** Metric variation in the genus *Homo*. *Am. J. Phys. Anthropol. Suppl. S46*: 112.
- 2007 **Strait, D.S.**, Weber, G.W., Neubauer, S., Chalk, J., Richmond, B.G., Wright, B.W., Smith, A.L., Wang, Q., Dechow, P.C., Ross, C.F., Spencer, M.A. Masticatory biomechanics in *Australopithecus africanus* examined using finite element analysis: a preliminary study based on Sts 5. *Am. J. Phys. Anthropol. suppl. 44*: 227.
- Smith, A.L., **Strait, D.S.**, Chalk, J., Wright, B.W., Wang, Q., Dechow, P.C., Richmond, B.G., Ross, C.F., Spencer, M.A. Fill in the blanks: trabecular bone and the biomechanics consequences of having paranasal sinuses. *Am. J. Phys. Anthropol. suppl. 44*: 220.
- Wang, Q., **Strait, D.S.**, Smith, A.L., Chalk, J., Wright, B.W., Dechow, P.C., Richmond, B.G., Ross, C.F., Spencer, M.A. Crossing the lines: Suture biomechanics in the primate craniofacial skeleton examined using finite element analysis. *Am. J. Phys. Anthropol. suppl. 44*: 243.
- Chalk, J., Richmond, B.G., **Strait, D.S.**, Wright, B.W., Wang, Q., B.G., Ross, Dechow, P.C., Spencer, M.A. Finite element analysis of masticatory stress hypotheses. *Am. J. Phys. Anthropol. suppl. 44*: 85.
- Stewart, C.-B., Miller, H.M., **Strait, D.S.** The biogeography and genomic patterns of primate endogenous retroviruses support a long Asian sojourn of the ancestral human lineage. *Am. J. Phys. Anthropol. suppl. 44*: 225.
- 2006 **Strait, D.S.**, Wright, B.W., Richmond, B.G., Ross, C.F., Dechow, P.C., Spencer, M.A., Wang, Q. Craniofacial strain patterns during premolar loading: implications for australopith feeding. *Am. J. Phys. Anthropol. suppl. 42*: 118.
- 2005 McNulty, K.P., Frost, S.R., and **Strait, D.S.** Examining affinities of the Taung cranium based on morphometric ontogenetic simulation. *Am. J. Phys. Anthropol. suppl. 40*: 154.
- McCarthy, R.C. and **Strait, D.S.** Morphological constraints on hominin speech production. *Paleoanthropol. 3*: A02.

- 2004 **Strait, D.S.**, Dechow, P.C., Richmond, B.G., Ross, C.A., Spencer, M.A. Assessing the role of biomechanical variables during primate mastication using finite element analysis. *Am. J. Phys. Anthropol. suppl. 38*: 189.
- Strait, D.S.** Origins and adaptations of early hominids. *J. Morph. 260*: 332.
- Strait, D.S.**, Dechow, P.C., Richmond, B.G., Ross, C.F., Spencer, M.A. Primate masticatory biomechanics examined using finite element analysis. *J. Morph. 260*: 332.
- Ross, C.F., **Strait, D.S.**, Dechow, P.C., Richmond, B.G., Spencer, M.A., Patel, B.A. Modeling muscle function in finite-element analysis: what matters most? *J. Morph. 260*: 324.
- 2003 **Strait, D.S.**, Dechow, P.C., Richmond, B.G., Ross, C.A., Spencer, M.A. Finite element analysis applied to masticatory biomechanics. *Am. J. Phys. Anthropol. suppl. 36*: 202.
- 2002 **Strait, D.S.**, Richmond B.G., Ross, C.F., Spencer, M.A. Finite element analysis of a macaque skull: applications for functional morphology. *Am. J. Phys. Anthropol. suppl. 34*: 149.
- Ross, C.F., **Strait, D.S.**, Richmond B.G., Spencer, M.A. *In vivo* bone strain and finite-element modeling of the anterior root of the zygoma in *Macaca*. *Am. J. Phys. Anthropol. suppl. 34*: 133.
- McCarthy, R., **Strait, D.S.**, Kirk, C. Soft tissue constraints on basicranial flexion and length. *Am. J. Phys. Anthropol. suppl. 34*: 109.
- 2001 **Strait, D.S.**, Richmond B.G., Spencer, M.A., Wood, B.A. Finite element analysis of a partial macaque skull. *Am. J. Phys. Anthropol. suppl. 32*: 144.
- Richmond, B.G. and **Strait, D. S.** Knuckle-walking and the midcarpal joint. *Am. J. Phys. Anthropol. suppl. 32*: 126.
- 2000 **Strait, D.S.**, Richmond B.G. and Polk, J.D. The locomotor anatomy of hominoid and hominid ancestors. *Am. J. Phys. Anthropol. suppl. 30*: 294.
- Grine, F.E. and **Strait, D.S.** The phylogenetic relationships of recently described early hominid species. *Am. J. Phys. Anthropol. suppl. 30*: 167.
- Wood, B.A. and **Strait, D.S.** *Paranthropus boisei*: a derived eurytope? *Am. J. Phys. Anthropol. suppl. 30*: 326.
- 1999 **Strait, D.S.** and Wood, B.A. Biogeographic implications of early hominid phylogeny. *Am. J. Phys. Anthropol. suppl. 28*: 259.

- 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 (excluding departmental seminars):

- 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 10th 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:

- 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.
- 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*, *Transactions of the Royal Philosophical Society*, *The Louis Leakey Foundation*, *The National Science Foundation*.
- 1998-2000 Participated in preparing grant proposals to NSF IGERT program at The George Washington University.
- 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 (2000 – 2004):

Michelle Drapeau
Stephen Frost
Kamla Ahluwalia
Christopher Heesy

Graduate Students Advised (2004 – present):

Amanda Smith (PhD thesis advisor)
Kelli Tamvada (PhD thesis advisor)
Jana Makedonska (PhD thesis advisor)
Justin Ledogar (PhD thesis advisor)
Keenya Oliver (MA thesis advisor)
Mwaka Nachilongo (MA thesis advisor)
Olga Panagiotopoulou (PhD thesis reader)
Amir Barani (PhD thesis reader)
Rob McCarthy (PhD thesis reader)
Matt Taylor (PhD thesis reader)
Sarah Reedy (MA committee member)
Melissa Kiyamu (PhD committee member)
Lisa Anderson (PhD committee member)

University Service:

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
2008-present Executive Committee, Department of Anthropology, U. Albany
2004-present 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
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

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*, *The Louis Leakey Foundation*, *The National Science Foundation*.