

HERMAN PONTZER

Evolutionary Anthropology, Duke University
211 Biological Sciences Bldg. • Durham, NC 27708 • herman.pontzer@duke.edu

Education

2006 Harvard University PhD Biological Anthropology
2003 Harvard University AM Biological Anthropology
1999 Penn State University BA Anthropology *with Honors*

Professional Appointments

2018 – Associate Professor of Evolutionary Anthropology, Duke University
2013 – 18 Associate Professor of Anthropology, Hunter College
Graduate Center Faculty, City University of New York
Faculty Member, New York Consortium for Evolutionary Primatology
2011 – 13 Assistant Professor of Anthropology, Hunter College
2006 – 10 Assistant Professor of Anthropology, Washington University

Education & Outreach

beta version Founder, hominoid.org www.hominoid.org
Resources and data for researchers, zoos, and sanctuaries working with apes
2013 – Founder, Australopithecus.org www.australopithecus.org
Resources and data for researchers, educators, and students in human evolution
2011 – Co-Founder and Co-Director, Hadza Fund www.hadzafund.org
Supporting medical care for the Hadza and providing information on their culture

Grants (external)

2018 – 21 Development & Implementation of a Global Human Metabolic Physiology Database
National Science Foundation. Role: PI
2016 – 18 Tradeoffs in Childhood Energy Allocation & the Impact of Market Integration
NSF SBE Post-Doctoral Fellowship (Samuel Urlacher) Role: Co-PI & Mentor
2014 – 17 The Evolutionary Biology and Health Consequences of Human Inactivity
National Science Foundation. Role: Co-PI (David Raichlen, PI)
2013 – 15 Total Energy Expenditure in Apes Measured Using Doubly Labeled Water
National Science Foundation. Role: PI
2013 – 14 Energy Expenditure and Life History Among Hominoids
Wenner-Gren Foundation. Role: PI
2012 – 13 Hominoid Daily Energy Expenditure
L.S.B. Leakey Foundation Research Grant. Role: PI
2009 – 12 The Metabolic Cost of Living in Human Foragers.
National Science Foundation. Role: PI
2009 – 10 Hominin Gait Optimization & Analysis Using Evolutionary Dynamic Modeling
National Science Foundation. Role: Co-PI (William Smart, PI)

- 2009 – 10 Metabolic Cost of Living in Bonobos.
Wenner-Gren Foundation. Role: PI
- 2005 – 07 Energetics and Evolution of Bipedalism: Chimpanzee Biomechanics.
L.S.B. Leakey Foundation Research Grant. Role: Co-PI (David Raichlen, PI)
- 2004 – 05 The Effect of Hindlimb Length on Running and Walking Performance
NSF Doctoral Dissertation Improvement Grant. Advisor: D.E. Lieberman

Awards and Fellowships

- 2017 Outstanding Scholar Alumni Award, Schreyer Honors College, Penn State Univ.
- 2017 40 Under 40 Rising Stars in New York Food Policy, NYC Food Policy Center
- 2016 Presidential Award for Distinguished Scholarship, Hunter College
- 2008 – 10 Earle H. & Suzanne S. Harbison Faculty Fellowship, Washington Univ.
- 2006 Richard J. Herrnstein Prize, Harvard Univ. Graduate School of Arts & Sciences for “the best dissertation that exhibits excellent scholarship, originality and breadth of thought, and a commitment to intellectual independence”
- 2006 Aleš Hrdlička Prize for Outstanding Student Paper, Am Assoc. Phys. Anthropol.
- 2006 D. Dwight Davis Prize for Outstanding Student Paper, Soc. Integ. & Comp. Biol.
- 2004 – 06 NSF-IGERT Fellowship. Harvard Biomechanics NSF-IGERT Program.
- 2002 – 05 Excellence in Teaching Award, Harvard University.
- 2000 – 03 NSF Graduate Fellowship. Biological Anthropology, Harvard University.
- 1999 Phi Beta Kappa

Publications

Books

- 2012 Conroy, G.C., Pontzer, H. *Reconstructing Human Origins: A Modern Synthesis*. 3rd ed. New York: Norton. 672 pages.

Popular Articles & Commentary

- 2018 Pontzer, H. Alternative energy: Physiological evolution in the human lineage. *Natural History*. September, 37-39.
- 2017 Pontzer, H. The exercise paradox. *Scientific American*. February, 26-31.
- 2016 Pontzer, H. Behavior: Knowing when to walk away, knowing when to run. *Current Biology*. 26, R717-8.
- 2016 Yetish, G., Kaplan, H., Gurven, M., Wood, B., Pontzer, H., Manger, P.R., Wilson, C., McGregor, R., Siegel, J.M. Response to de la Iglesia et al. *Current Biology*. 26, R273-4.
- 2015 Pontzer, H. Calories! Calories! Read all about it! *NYCEP Blog*.
<http://blog.nycep.org/calories-calories-read-all-about-it>
- 2012 Pontzer, H. Debunking the hunter-gatherer workout. *New York Times*. August 24. Sunday Review.
- 2012 Pontzer, H. Lessons from the Hadza: poor diets wreck efforts to prevent obesity and diabetes. *Diabetes Voice*. 57, 26-29.

Research Articles (*students)

- in review* Rosinger, A.Y., Pontzer, H., Raichlen, D.A., Wood, B.M., Tanner, S.N., Sands, J.M. Human age-related decline in urine concentrating ability may not be universal: Hydration biomarkers from the US and two small-scale societies.
- in review* Ocobock, C., Overbeck, A., Carlson, C., Royer, C., Mervenne, A., Thurber, C., Dugas, L., Carlson, B., Pontzer, H. Sustained high levels of physical activity lead to improved performance among "Race Across the USA" athletes.
- in review* *DeCasien, A., Brown, M.H., Ross, S.R., Pontzer, H. Primate energy requirements: brains, babies, or behavior? In: Lambert, J. and Rothman, J.M. (eds). *Primate Diet & Nutrition: Needing, Finding, and Using Food*. Univ. Chicago Press.
- in review* Trumble, B.C, Pontzer, H., Stieglitz, J., Cummings, D.K., ... Gurven, M. Energetic expenditure is positively associated with male but not female testosterone among physically active forager-horticulturalists. *American Journal of Phys. Anthropology*.
- in revision* Pontzer, H. Method and rationale for recalculating dilution spaces to a single, common time point in doubly labeled water studies. *European Journal of Clinical Nutrition*.
- in revision* *Christopher, L., Madimenos, F., Bribiescas, R., Urlacher, S., Snodgrass, J.J., Sugiyama, L., Pontzer, H. High energy requirements and water throughput of adult Shuar forager-horticulturalists of Amazonian Ecuador. *American Journal of Human Biology*.
- in press* Pontzer, H., Raichlen, D.A., Wood, B.M. Hunter-gatherers as models in public health. *Obesity*.
- in press* Pontzer, H. Energy constraint as a novel mechanism linking exercise and health. *Physiology*.
- 2018 *Gagnon, C., Steiper, M., Pontzer, H. Elite swimmers do not exhibit a Body Mass Index (BMI) tradeoff across a wide range of event distances. *Proceedings of the Royal Society B*. 285, 20180684
- 2018 Urlacher, S.S., Ellison, P.T., Sugiyama, L.S., Pontzer, H., Eick, G., ...Snodgrass, J.J. Tradeoffs between immune function and childhood growth among Amazonian forager-horticulturalists. *Proceedings of the National Academy of Sciences USA*. Early view.
- 2018 *Kozma, E.E., *Webb, N.M., Harcourt-Smith, W.E.H., Raichlen, D.A., D'Août, K., ... Pontzer, H. Mechanics of hip extension characterize arboreal-terrestrial trade-offs in hominin evolution. *Proceedings of the National Academy of Sciences USA*. Early view.
- 2018 *Finestone, E.M., Brown, M.H., Ross, S.R., Pontzer, H. Walking kinematics among extant hominoids: are gait and posture conserved? *American Journal of Physical Anthropology*. Early View.
- 2017 Pontzer, H., Raichlen, D.A., *Basdeo, T., Harris, J.A, Mabulla, A.Z.P., Wood, B.M. Mechanics of archery among Hadza hunter-gatherers. *Journal of Archeological Science: Reports*. 16, 57-64.
- 2017 Pontzer, H., Locomotor ecology and evolution in chimpanzees and humans. In: Muller, M., Wrangham, R.W., and Pilbeam, D.R. (eds). *Chimpanzees in Human Evolution*. Harvard Univ. Press.
- 2017 Horiuchi, M., Fukuoka, Y., Handa, Y., Abe, D., Pontzer, H. Measuring the energy of ventilation and circulation during human walking using induced hypoxia. *Scientific Reports*. 7, 4938.

- 2017 Pontzer, H., Economy and endurance in human evolution. *Current Biology*. 27, R613-R621.
- 2017 *Sparrow, L.M., Pellatt, E., Yu, S.S., Raichlen, D.A., Pontzer, H., Rolian, C. Gait changes in a line of mice artificially selected for longer limbs. *PeerJ*. 5:e3008.
- 2017 Pontzer, H. The crown joules: energetics, ecology, and evolution in humans and other primates. *Evolutionary Anthropology*. 26, 12-24.
- 2017 Hora, M., Soumar, L., Pontzer, H., Sládek, V. Body size and lower limb posture during walking in humans. *PLoS ONE*. 12, e0172112.
- 2017 *Edwards, W., Lonsdorf, E.V., Pontzer, H. Total energy expenditure in captive capuchins (*Sapajus apella*). *American Journal of Primatology*. 79, 5.
- 2017 Raichlen, D.A., Pontzer, H., Harris, J.A., Mabulla, A.Z.P., Marlowe, F.M., Snodgrass, J.J., ... Wood, B.M. Physical activity patterns and biomarkers of cardiovascular disease risk in hunter-gatherers. *American Journal of Human Biology*. 29, e22919
- 2016 Pontzer, H., Brown, M.H., Raichlen, D.A., Dunsworth, H., Hare, B., Walker, K.K., Luke, A., Dugas, L.R., Durazo-Arvizu, R., ... Ross, S.R. Metabolic acceleration and the evolution of human brain size and life history. *Nature*. 533, 390-392.
- 2016 Pontzer, H. A unified theory for the metabolic cost of legged locomotion. *Biology Letters*. 12, 20150935.
- 2016 Gurven, M.D., Trumble, B.C., Stieglitz, J., Yetish, G., Cummings, D., ... Pontzer, H. High resting metabolic rate among Amazonian forager-horticulturalists experiencing high pathogen burden. *American Journal of Physical Anthropology*. 161, 414-425
- 2016 Pontzer, H., Durazo-Arvizu, R., Dugas, L., Plange-Rhule, J., Bovet, P., ... Luke, A. Constrained total energy expenditure and metabolic adaptation to physical activity in adult humans. *Current Biology*. 26, 1-8.
- 2016 *Laird, M.F., Vogel, E., Pontzer, H. Chewing efficiency and occlusal functional adaptation. *Journal of Human Evolution*. 93, 1-11.
- 2015 Yetish, G., Kaplan, H., Gurven, M., Wood, B., Pontzer, H., Manger, P.R., Wilson, C., McGregor, R., Siegel, J. Natural sleep and its seasonal variations in three pre-industrial societies. *Current Biology*. 25, 2862-2868.
- 2015 Pontzer, H. Energy expenditure in humans and other primates: a new synthesis. *Annual Review of Anthropology*. 44, 169-187.
- 2015 Pontzer, H. Constrained total energy expenditure and the evolutionary biology of energy balance. *Exercise and Sport Sciences Reviews*. 43, 110-116.
- 2015 Pontzer, H., Raichlen, D.A., Wood, B.M., Emery Thompson, M., Racette, S.B., Mabulla, A.Z.P., Marlowe, F.M. Energy expenditure and activity among Hadza hunter-gatherers. *American Journal of Human Biology*. 27, 628-37.
- 2015 *Warrener, A.G., Lewton, K.L., Pontzer, H., Lieberman, D.E. A wider pelvis does not increase locomotor cost in humans, with implications for the evolution of childbirth. *PLoS ONE*. 10, e0118903.
- 2014 Pontzer, H., Raichlen, D.A., Gordon, A.D. Schroepfer-Walker, K.K., Hare, B., Dunsworth, H.M., Wood, B.M., ... Ross, S.R. Primate energy expenditure and life history. *Proceedings of the National Academy of Sciences USA*. 111, 1433-7.

- 2014 Wood, B.M., Pontzer, H., Raichlen, D.A., Marlowe, F.W. Mutualism and manipulation in Hadza-honeyguide interactions. *Evolution & Human Behavior*. 35, 540-546.
- 2014 Raichlen, D.A., Wood, B.M., Gordon, A.D., Mabulla, A.Z.P., Marlowe, F.W., Pontzer, H. Evidence of Lévy walk foraging patterns in human hunter-gatherers. *Proceedings of the National Academy of Sciences USA*. 111, 728-33.
- 2014 Pontzer, H., *Suchman, K., Raichlen, D.A., Wood, B.M., Mabulla, A.Z.P., Marlowe, F.M. Foot strike patterns and hind limb joint angles during running in Hadza hunter-gatherers. *Journal of Sport and Health Science*. 3, 95-101.
- 2014 Pontzer, H., Raichlen, D.A., Rodman, P.S. Bipedal and quadrupedal locomotion in chimpanzees. *Journal of Human Evolution*. 66, 64-82.
- 2014 Pontzer, H., Antón, S.C., Lordkipanidze, D. Dmanisi hominins and archaeology. In: Smith, C. (ed.) *Encyclopedia of Global Archaeology*. pp 2146-2149.
- 2014 Raubenheimer, D., Rothman, J.M., Pontzer, H. Macronutrient contributions of insects to the diets of hunter-gatherers: a geometric analysis. *Journal of Human Evolution*. 71, 70-76.
- 2013 Raichlen, D.A., Pontzer, H., Shapiro, L.J. A new look at the Dynamic Similarity Hypothesis: the importance of swing phase. *Biology Open*. 0, 1-5.
- 2013 Barak, M.M., Lieberman, D.E., Raichlen, D., Pontzer, H., Warrener, A.G., Hublin, J.J. Trabecular evidence for a human-like gait in *Australopithecus africanus*. *PLoS ONE*. 8, e77687.
- 2013 Foster, A.D., Raichlen, D.A., Pontzer, H. Muscle force production during bent-knee, bent-hip walking in humans. *Journal of Human Evolution*. 65, 294-302.
- 2012 Pontzer, H., Raichlen, D.A., Wood, B.M., Racette, S.B., Mabulla, A.Z., Marlowe, F.W. Hunter-gatherer energetics and modern human obesity. *PLoS ONE*. 7, e40503.
- 2012 Pontzer, H. Relating ranging ecology, limb length, and locomotor economy in terrestrial animals. *Journal of Theoretical Biology*. 296, 6-12.
- 2012 Pontzer, H. Ecological energetics in early *Homo*. *Current Anthropology*. S346-S358.
- 2012 Dunsworth, H.M., *Warrener, A., Deacon, T., Ellison, P., Pontzer, H. Metabolic hypothesis for human altriciality. *Proceedings of the National Academy of Sciences USA*. 109, 15212-15216.
- 2012 Pontzer, H. Overview of hominin evolution. *Nature Education Knowledge*. 3, 8.
- 2011 Pontzer, H., Raichlen, D.A., Sockol, M.D. From treadmill to tropics: calculating ranging cost in chimpanzees. In: D'Aout, K. and Vereecke, E.E. (eds) *Studying Primate Locomotion: Linking Laboratory and Field Research*. Springer. pp 289-309.
- 2011 Pontzer, H., Scott, J.R., Lordkipanidze, D., Ungar, P.S. Dental microwear texture analysis and diet in the Dmanisi hominins. *Journal of Human Evolution*. 61, 683-687.
- 2011 *Orkin, J., Pontzer, H. The Narrow Niche hypothesis: gray squirrels shed new light on primate origins. *American Journal of Physical Anthropology*. 144, 617-24.
- 2010 Pontzer, H., Raichlen, D.A., Shumaker, R.W., *Ocobock, C., Wich, S.A. Metabolic adaptation for low energy throughput in orangutans. *Proceedings of the National Academy of Sciences USA*. 107, 14048-14052.

- 2010 Pontzer, H., Rolian, C., Rightmire, G.P., Jashashvili, T., Ponce de León, M.S., Lordkipanidze, D., Zollikofer, C.P.E. Locomotor anatomy and biomechanics of the Dmanisi hominins. *Journal of Human Evolution*. 58, 492-504.
- 2010 *Cowgill, L.W., *Warrener, A., Pontzer, H., *Ocobock, C. Waddling and toddling: the biomechanical effects of an immature gait. *American Journal of Physical Anthropology*. 143, 52-61.
- 2009 Pontzer, H., Allen, V., Hutchinson, J.R. Biomechanics of running indicates endothermy in bipedal dinosaurs. *PLoS ONE*. 4, e7783.
- 2009 Pontzer, H., Kamilar, J.M. Great ranging associated with greater reproductive investment in mammals. *Proceedings of the National Academy of Sciences, USA*. 106, 192-196.
- 2009 Raichlen, D.A., Shapiro, L.J., Pontzer, H., Sockol, M.D. Understanding increased hind limb weight support in chimpanzees and the evolution of primate kinetics. *American Journal of Physical Anthropology*. 138, 395-402.
- 2009 Pontzer, H., *Holloway, J., Raichlen, D.A., Lieberman, D.E. Control and function of arm swing in human walking and running. *Journal of Experimental Biology*. 212, 523-534
- 2009 Pontzer, H., Raichlen, D.A., Sockol, M.D. The metabolic cost of walking in humans, chimpanzees, and early hominins. *Journal of Human Evolution*. 56, 43-54.
- 2008 Raichlen, D.A., Pontzer, H., Sockol, M.D. The Laetoli footprints and early hominin kinematics. *Journal of Human Evolution*. 54, 112-117.
- 2008 Carter, M.L., Pontzer, H., Wrangham, R.W., Kerbis Peterhans, J. Skeletal pathology in *Pan troglodytes schweinfurthii* in Kibale National Park, Uganda. *American Journal of Physical Anthropology*. 135, 389-403.
- 2007 Sockol, M.D., Raichlen, D.A., Pontzer, H. Chimpanzee locomotor energetics and the origin of human bipedalism. *Proceedings of the National Academy of Sciences, USA*. 30, 12265-12269.
- 2007 Lordkipanidze, D., Jashashvili, T., Vekua, V., Ponce de Leon, M.S., Zollikofer, C.P.E., Rightmire, G.P., Pontzer, H., Ferring, R., Oms, O., Tappen, M., et al. Postcranial evidence from early *Homo* from Dmanisi, Georgia. *Nature*. 449, 305-310.
- 2007 Pontzer, H. Limb length and the scaling of locomotor cost in terrestrial animals. *Journal of Experimental Biology*. 210, 1752-1761.
- 2007 Pontzer, H. Predicting locomotor cost in terrestrial animals: a test of the LiMb model in humans and quadrupeds. *Journal of Experimental Biology*. 210, 484-494.
- 2006 Lieberman, D.E., Raichlen, D.A., Pontzer, H., Bramble, D.M., Cutright-Smith, E. The human gluteus maximus and its role in running. *Journal of Experimental Biology*. 209, 2143-2155.
- 2006 Pontzer, H., Wrangham, R.W., The ontogeny of ranging in wild chimpanzees. *International Journal of Primatology*. 27, 295-309.
- 2006 Pontzer, H., Lieberman, D.E., Momin E., Devlin, M., Polk, J.D., Hallgrimmson, B., Cooper, D.M.L. Trabecular bone in the knee responds with high sensitivity to changes in load orientation. *Journal of Experimental Biology*. 209, 57-65.
- 2005 Pontzer, H. A new model predicting locomotor cost from limb length via force production. *Journal of Experimental Biology*. 208, 1513-1524.

- 2004 Pontzer, H., Wrangham R.W. Climbing and the daily energy cost of locomotion in wild chimpanzees: Implications for hominoid locomotor evolution. *Journal of Human Evolution*. 46, 315-333.

Invited Book Reviews

- 2017 Pontzer, H. Review of *Demography and Evolutionary Ecology of Hadza Hunter Gatherers*. Blurton Jones, N. *American Journal of Human Biology*.
- 2014 Pontzer, H. Review of *Early Hominin Paleoecology*. Sponheimer, M., Lee-Thorp, J.A., Reed, K.E., and Ungar, P.S. (eds). *American Journal of Human Biology*.
- 2010 Pontzer, H. Review of *The Human Lineage*, by M. Cartmill and F.H. Smith. *Quarterly Review of Biology*. 85, 91.

Invited Colloquium Presentations

- 2018 Energetics, Activity, and Health in Hunter-Gatherers and Other Traditional Populations
National Institutes of Health, NIDDK Grand Rounds
- 2018 The Exercise Paradox
Roche Accu-Chek Network Meeting
- 2017 Energetics & Evolution in Humans and other Primates
Rutgers University, Dept. of Ecology, Evolution, and Natural Resources
- 2017 The Crown Joules: Energetics & Evolution in Humans and other Primates
Fairleigh Dickinson University, Biology Dept.
- 2017 Energetics & Evolution in Humans and other Primates
Northeastern Ohio Medical University
- 2017 The Crown Joules: Energetics & Evolution in Humans and other Primates
Duke University, Evolutionary Anthropology Dept.
- 2017 Energetics, Diet & Activity in Living Hunter-Gatherers
University of Colorado, Denver Medical School
- 2017 The Crown Joules: Energetics & Evolution in Humans and other Primates
Harvard University, Human Evolutionary Biology
- 2016 Calories & Consequences: Energetics and Ecology in Primate Evolution
Duke University, Evolutionary Anthropology Dept.
- 2016 Energetics, Diet & Activity in Living Hunter-Gatherers
Purdue University, Dept. of Nutrition Science
- 2016 Calories & Consequences: Energetics and Ecology in Primate Evolution
Northwestern University, Dept. of Anthropology
- 2016 Metabolic Evolution and Adaptive Strategies in Humans and other Primates
SUNY Stony Brook, Behavioral Ecology Group
- 2016 Humans, the high energy ape
CARTA Origins of Homo Symposium
- 2015 Life in slow motion: Energetics, aging, and evolution in humans & other primates
Univ. of Calgary, Dept. of Anthropology
- 2015 Ecological energetics in human evolution
UC Santa Barbara, Dept. of Anthropology

- 2014 Brains, babies and bipedalism: The evolution of the human metabolic strategy
George Washington University, Center for the Advanced Study of Human Paleobiology
- 2014 Healthy as a Hadza: Hunter gatherer energetics and modern human obesity
Loyola University Medical School
- 2014 Hunter gatherer energetics and modern human obesity
Beth Israel Medical Center Division of Endocrinology. Grand Rounds.
- 2014 Brains, babies and bipedalism: The evolution of the human metabolic strategy
Harvard University, Dept. of Human Evolutionary Biology
- 2014 Operating requirements for the human body
Dartmouth College, Dept. of Anthropology
- 2013 Life in slow motion: Energetics, aging, and evolution in humans & other primates
New York Academy of Science
- 2013 Primate energetics and life history
American Museum of Natural History, Comparative Biology Seminar
- 2013 Doubly labeled water measures of energy expenditure in humans & other primates
Albert Einstein College of Medicine
- 2013 Walking tour of human evolution
Max Planck Institute for Evolutionary Anthropology. Leipzig, Germany
- 2013 Primate energetics and life history
Yale University, Dept. of Anthropology
- 2013 Walking tour of human evolution
University of Connecticut, Dept. of Anthropology
- 2012 Hunter-gatherer energetics and modern human obesity
Obesity Research Center, Columbia University & St. Luke's Hospital
- 2012 Life in slow motion: Primate energetics and life history
SUNY Stony Brook, Dept. of Anthropology
- 2012 Metabolism and life history in apes, humans, and fossil hominins
University of New Mexico, Dept. of Anthropology
- 2011 Humans, the high energy ape
Arizona State University, Dept. of Anthropology
- 2011 Hunter gatherer energetics and the evolution of the human metabolic strategy
Rutgers University, Dept. of Anthropology
- 2010 Evolved metabolic strategies in humans and other apes
University of California Davis, Dept. of Anthropology
- 2010 Evolved metabolic strategies in humans and other apes
University of California Santa Cruz, Dept. of Anthropology
- 2009 Ape energetics and the Human Paradox
University of Missouri, Dept. of Anthropology
- 2009 Are orangutans the most efficient ape? Daily energy expenditure in hominoids.
Yale University, Dept. of Anthropology
- 2008 Mechanics and energetics of terrestrial locomotion.
Somatics of Dance Lecture Series, Washington University.

- 2008 Walking energetics in humans and chimpanzees: are humans the only efficient ape?
Washington University Physical Therapy Research Group.
- 2006 The effect of leg length on locomotor performance.
5th World Congress of Biomechanics. Session Chair: Dr. Alberto Minetti
- 2006 Limb design and locomotor performance in humans and other animals.
Stanford NeuroMuscular Biomechanics Lab.
- 2005 Limb length and locomotor cost, from ants to elephants.
SUNY Stony Brook Functional Morphology Group.

Public Lectures & Other Outreach

- 2018 Sole Survivors of a Remarkable Family: Recent Discoveries in Human Evolution
Explorers Club, New York City
- 2018 Metabolic Acceleration in the Genus *Homo*: Brains, Babies, and Bipedalism
Energetics of the Hominins Symposium, Collège de France
- 2017 Adapt to Endure: the Limits of Human Energy Expenditure
Hilliard Discussion 7. Texas A&M University
- 2017 Flame Challenge: What is Energy?
World Science Festival, New York City (with Alan Alda)
- 2016 Brain 101: the Inside Story
American Museum of Natural History.
- 2016 Uncovering the Truth: Burning Calories
Studio 360, Story Collider and WNYC storytelling event. The Greene Space, New York.
- 2016 Where are you from? Exploring our hunter-gatherer past
Rockefeller University, Summer Science Research Program
- 2016 Energetics and the Ecology of Early *Homo*
CARTA Public Lecture, Origins of Homo Symposium.
- 2016 Where are we from?
Presentation on Hadza hunter-gatherers to Léman Manhattan Prep. School, New York.
- 2016 Negative results
Story for Horsetrade STEM Fest & Long Story Long. Kraine Theater, New York.
- 2016 Where are we from?
Presentation on Hadza hunter-gatherers to St. Mary's Area Middle School, PA.
- 2015 Consultant, Pine Grove STEM Magnet School. Jackson, CA
Worked with teacher Tim Keys on semester-long 5th/6th grade human ecology project
- 2015 Design requirements for the human body: Insights from hunter-gatherers
Meet the Scientist, American Museum of Natural History. Sackler Laboratory.
- 2014 Consultant, Boston Museum of Science
Hall of Human Life. Curator: Elizabeth Kong
- 2014 Brain Power: The other 90%. Do we only use 10% of our brain?
American Museum of Natural History. Salon Series.
- 2013 The science behind the seven deadly sins: Sloth
Philadelphia Science Festival, Franklin Institute

- 2013 Featured Scientist, *Against All Odds: Inside Statistics, #27 Comparing Two Means Annenberg Learner*, <http://www.learner.org/resources/series65.html>
- 2010 Out of Africa 1.0: the Dmanisi hominins
Darwin Day Public Address; Univ. of Arkansas, Little Rock
- 2009 Panel Discussant, *Chance Aesthetics Public Exhibition*
Mildred Kemper Art Museum, Washington University. Curator: Meredith Malone
- 2006 The evolution of bipedalism in humans
Science on Tap Public Lecture, Schlafly Bottleworks, St. Louis
- 2006 Consultant, Boston Museum of Science
Human Physiology and Anatomy Exhibit. Curator: Tim Kardatzke
- 2004 Science Advisor, National Geographic Television

Conference Presentations (*student, †invited)

- 2018 Pontzer, H. Why is Exercise Essential? Constrained Energy Expenditure and the Mechanisms of Metabolic Health. *International Society for Evolutionary Medicine & Public Health (ISEMPH)*.
- 2018 Urlacher, S.S., Snodgras, J.J., Dugas, L.R., Sugiyama, L.S., Pontzer, H. Childhood energy expenditure in evolutionary medicine perspective: Direct measures of energy use among Amazonian forager-horticulturalists. *ISEMPH*.
- 2018 Castillo, E.R., Urlacher, S.S., Gurven, M., Pontzer, H. What kills us and why? Comparing age-specific mortality profiles across human populations. *ISEMPH*.
- 2018 †Pontzer, H. Evolutionary origins of obesity. *Keystone Symposium: Bioenergetics and Metabolic Disease*.
- 2017 *Thurber, C., Dugas, L.R., Ocobock, C.J., Carlson, B., Melanson, E., Pontzer, H. Metabolic adaptation and the limits of sustained energy expenditure in humans. *Recent Advances & Controversies in Measuring Energy Metabolism*.
- 2017 †Pontzer, H. Physical activity, energy expenditure, and metabolic adaptation from hunter gatherers and other traditional populations. *The Obesity Society: Obesity Week*.
- 2017 †Pontzer, H. The exercise paradox. *Fribourg Obesity Research Conference, Switzerland*.
- 2017 †Pontzer, H. How much food do animals need to walk, run, and climb? This much. *AAPA Meetings, UpGoer5 Symposium*.
- 2017 *Schneider, A.L., Burghardt, N.S., Pontzer, H. Reduced immune investment with energy stress: evidence from a mouse model. *AAPA Meetings*.
- 2017 *Swanson, Z.S., Webb, N.M., Pontzer, H., DeSilva, J.M., Harcourt-Smith, W.E.H. Finite element modeling of talar loading in modern humans with application to the hominin fossil record. *AAPA Meetings*.
- 2017 Otarola-Castillo, E.R., Castillo E.R., Hora, M., Torquato, M.G., Warrener, A.G., Pontzer, H. walkR: a software package to analyze the biomechanics of human locomotion. *AAPA Meetings*.
- 2017 †*Kozma, E.E., Webb, N.M., Harcourt-Smith, W.E.H., D'Août, K., Brown, M.H., *Finestone, E., ... Pontzer, H. Mechanics of hip extension characterize arboreal-terrestrial trade-offs in hominin evolution. *AAPA Meetings*.

- 2016 Pontzer, H., Brown, M.H., Emery Thompson, M., Ross, S.R. Evolved metabolic strategies in great apes and humans. *International Primatology Society*.
- 2016 *Finestone, E.M., Brown, M.H., Ross, S.R., Pontzer, H. Spatiotemporal characteristics of over-ground walking in zoo-housed great apes. *International Primatology Society*.
- 2016 Pontzer, H., Brown, M.H., Emery Thompson, M., Ross, S.R. Chimpanzee energetics, ecology, and evolution. *Chimpanzees in Context Symposium*.
- 2016 †Pontzer, H. Insights into physical activity and metabolic adaptation from hunter gatherers and other traditional populations. *American College of Sports Medicine. Basic Science World Congress – Symposium*.
- 2016 *Finestone, E.M., Brown, M.H., Ross, S.R., Pontzer, H. Videographic analysis of kinematics in great apes: To what extent are gait and posture conserved? *AAPA Meetings*.
- 2016 *Thurber, C., Carlson, B., Ocobock, C., Dugas, L., Pontzer, H. Metabolic limits and adaptation in humans: daily energy expenditure in *Race Across the USA* athletes. *AAPA Meetings*.
- 2016 *Laird, M.F., Pontzer, H. Gape cycle kinematic variance and occlusal topography in modern humans. *AAPA Meetings*.
- 2016 Raichlen, D.A., Pontzer, H., Harris, J., Zderic, T.W., Hamilton, M.T., Wood, B. Sitting, squatting, and the evolution of human inactivity. *AAPA Meetings*.
- 2016 *Edwards, W., Pontzer, H., Lonsdorf, E. Energy expenditure and physical activity levels in captive tufted capuchins (*Cebus apella*). *AAPA Meetings*.
- 2016 Pontzer, H., Raichlen, D.A., Harris, J.A., Wood, B.M. Energetics and economics of foraging in humans and other apes. *AAPA Meetings*.
- 2016 *Kozma, E.E., Raichlen, D.A., Wood, B.M., Pontzer, H. Energetics and muscle use of human climbing. *AAPA Meetings*.
- 2016 *Thurber, C., Carlson, B., Ocobock, C., Dugas, L., Pontzer, H. Metabolic limits and adaptation in humans: daily energy expenditure in *Race Across the USA* athletes. *Human Biology Association*.
- 2015 *Laird, M.F., Pontzer, H., Vogel, E.R. Chewing efficiency variation with food material properties and masticatory morphology in humans. *AAPA Meetings*.
- 2015 †Pontzer, H. Locomotion in humans and other primates: Endurance, efficiency, and evolution. *International Congress for Physiological Anthropology*. Chiba, Japan.
- 2015 *Laird, M.F., Pontzer, H., Vogel, E.R. Chewing efficiency variation with food material properties and masticatory morphology in humans. *AAPA Meetings*.
- 2015 Trumble, B.C., Cummings, D., Beheim, B., Stieglitz, J., Yetish, G., Pontzer, H., Kaplan, H., Gurven, M. Energetic costs of testosterone: higher testosterone is associated with greater lean muscle mass and total energetic expenditure among Tsimane forager-horticulturalists. *AAPA Meetings*.
- 2015 Pontzer, H., Brown, M.H., Dunsworth, H.M., Ross, S.R. Humans, the high energy ape. *AAPA Meetings*.
- 2014 †Pontzer, H., Wood, B.M., Raichlen, D.A., Mabulla, A.Z.P., Marlowe, F.W. Ranging energetics and foraging strategies among Hadza hunter-gatherers. *Am. Anthro. Assoc.*

- 2014 †Pontzer, H., Brown, M.H., Ross, S.R. Total energy expenditure and life history in humans and other apes. *Recent Advances & Controversies in Measuring Energy Metabolism*.
- 2014 †Pontzer, H. Recent advances & future directions: measuring total energy expenditure in non-human apes. *Int'l Workshop on the Doubly Labeled Water Method*. Tokyo.
- 2014 †Pontzer, H. Recent advances & future directions: measuring total energy expenditure in traditional populations. *Int'l Workshop on the Doubly Labeled Water Method*. Tokyo.
- 2014 †Pontzer, H. A walking tour of human evolution. *World Congress of Biomechanics*.
- 2014 Pontzer, H., Raichlen, D.A., Schroepfer, K.K., Hare, B., Wood, B.M., Dunsworth, H.M., Irwin, M., Lonsdorf, E.V., Shumaker, R.W., Ross, S. Daily water throughput in humans and other primates. *AAPA Meetings*.
- 2013 †Pontzer, H., Raichlen, D.A., Wood, B.M., Mabulla, A.Z., Marlowe, F.W. Ranging costs and foraging strategies in Hadza hunter-gatherers. *10th International Congress on Vertebrate Morphology*.
- 2013 †Pontzer, H., Raichlen, D.A., Wood, B.M., Mabulla, A.Z., Marlowe, F.W. Ranging costs and foraging strategies in Hadza hunter-gatherers. *Conference on Hunting and Gathering Societies*.
- 2013 Pontzer, H., Raichlen, D.A., Gordon, A., Schroepfer, K.K., Hare, B., Wood, B.M., Dunsworth, H.M., Irwin, M., Lonsdorf, E.V., Ross, S. Primate energetics and life history. *AAPA Meetings*.
- 2012 †Pontzer, H. Relating foraging ecology to locomotor economy and limb length in living apes and fossil hominins. *AAPA Meetings*.
- 2012 *Laird, M.F., Pontzer, H. Biomechanical relationships between chewing efficiency and dental morphology in modern humans. *AAPA Meetings*.
- 2012 Schroepfer, K.K., Hare, B., Pontzer, H. Energy expenditure in semi free-ranging chimpanzees measured using doubly labeled water. *AAPA Meetings*.
- 2012 Raichlen, D.A., Pontzer, H., Wood, B.M., Mabulla, A.Z., Marlowe, F.W. Aerobic activity in the Hadza hunter-foragers of Tanzania. *AAPA Meetings*.
- 2011 Pontzer, H., Raichlen, D.A., Wood, B.M., Mabulla, A.Z., Marlowe, F.W. Hadza forager energetics and the evolution of the human metabolic strategy. *AAPA Meetings*. *AJPA*. S52, 242.
- 2011 *Ocobock, C., Pontzer, H., Gookin, J., Baynes, S. Daily energy expenditure in highly active humans in a natural temperate environment. *AAPA Meetings*. *AJPA*. S52, 227.
- 2011 Raichlen, D.A., Wood, B.M., Pontzer, H., Mabulla, A.Z., Marlowe, F.W. Levy walks in hunter-gatherers: when are random walks an optimal search strategy? *AAPA Meetings*. *AJPA*. S52, 246.
- 2011 Dunsworth, H., Pontzer, H., Deacon, T. Energetics—not pelvic constraints—determine human gestation length and altriciality. *AAPA Meetings*. *AJPA*. S52, 129.
- 2011 Wood, B.M., Raichlen, D.A., Pontzer, H., Jones, J.H., Mabulla, A.Z., Marlowe, F.W. Keeping their friends close? Contrasting models of social association in Hadza hunter-gatherers. *AAPA Meetings*. *AJPA*. 314.
- 2010 Pontzer, H., Raichlen, D.A., Wood, B.M. Hominoid daily energy expenditure and the Human Paradox. *AAPA Meetings*. *AJPA*. S50, 91.

- 2010 *Joganic, J.L., Pontzer, H., Verrelli, B.C. The hungry brain: An assessment of liver size correlation with brain size as it relates to energy storage trade-offs across primate evolution. *AAPA Meetings. AJPA. S50, 135.*
- 2010 *Ocobock, C., Pontzer, H., *Erez, T. Climatic and physiological constraints on human body size and shape. *AAPA Meetings. AJPA. S50, 180.*
- 2009 Pontzer, H., *Ocobock, C., Shumaker, R.W., Raichlen, D.A. Daily energy expenditure in orangutans measured using doubly labeled water. *AAPA Meetings. AJPA. S48, 213.*
- 2009 *Erez, T., Smart, W.D., Pontzer, H. A new computational method for simulation and optimization of hominin gait. *AAPA Meetings. AJPA. S48, 125*
- 2009 Foster, A.D., Raichlen, D.A., Pontzer, H., Sockol, M.D. Muscle force production during bent-knee, bent-hip walking in humans. *AAPA Meetings. AJPA. S48, 129.*
- 2009 *Ocobock, C., Pontzer, H., *Atkinson, E., Shumaker, R.W., *Wittman, A.B. Locomotor developmental timing in humans and other apes. *AAPA Meetings. AJPA. S48, 201*
- 2009 Pontzer, H., Kamilar, J.M. Great ranging associated with greater reproductive investment in mammals. *Soc. Integ. Comp. Biol. Meetings.*
- 2008 †Pontzer, H., Raichlen, D.A., Sockol, M.D. Endurance versus efficiency in humans and chimpanzees: a new look at the old problem of becoming bipedal. *Hominin Bipedalism Symposium, AAPA Meetings.*
- 2007 †Pontzer, H., Raichlen, D.A., Sockol, M.D., Locomotor energetics in chimpanzees, humans, and extinct hominins: contributions of muscular and skeletal anatomy. *8th International Congress on Vertebrate Morphology.*
- 2007 Pontzer, H., Raichlen, D.A., Lieberman, D.E. Is arm swing active or passive during human walking and running? *Soc. Integ. Comp. Biol. Meetings.*
- 2007 Pontzer, H., Raichlen, D.A., Sockol, M.D., Contributions of muscular and skeletal morphology to locomotor performance: How much can bones tell us about locomotion? *Primate Locomotion Symposium, American Assoc. Phys. Anthro. Meetings*
- 2006 Pontzer, H. Hominin locomotor energetics and the emergence of the genus *Homo*. *Paleoanthropology Society Meetings.*
- 2006 Pontzer, H. Locomotor energetics and ranging ecology of fossil hominids. *AAPA Meetings. AJPA. S42, 148.* Awarded Aleš Hrdlička Prize.
- 2006 Pontzer, H. Linking locomotor energetics to limb design in terrestrial animals. *Soc. Integ. Comp. Biol. Meetings.* Awarded D. Dwight Davis Prize.
- 2005 Pontzer, H. The effect of limb length on locomotor performance. *Soc. Integ. Comp. Biol. Meetings.*
- 2005 Pontzer, H., Lieberman, D.E., Momin, E.N., et al. The effect of a "bent-knee" gait on trabecular orientation: an experiment test of Wolff's Law. *AJPA. S40, 167.*
- 2004 Pontzer, H. The effect of leg length on human locomotor performance. *AAPA Meetings. AJPA. S38, 161.*
- 2004 Wrangham, R.W., Pontzer, H. Chimpanzee juveniles constrain their mothers' gregariousness. *AAPA Meetings. AJPA. S38, 211.*
- 2003 Pontzer, H. Climbing behavior and locomotor energetics in wild chimpanzees: Implications for hominin locomotor evolution. *AAPA Meetings. AJPA. S36, 170.*

Professional Service

- 2017, '18 Professional Development Committee, *AAPA Meetings*
- 2015, '16 National Science Foundation review panel, Physical Anthropology
- 2014 National Science Foundation review panel, Graduate Research Fellowships
- 2014 Co-Organizer, *Energetics in the Evolution of Human and Non-Human Primate Life Histories Symposium, 2015 AAPA meeting* (with Christopher Kuzawa)
- 2009, 13-16 Scientific Committee, *AAPA meetings*
- 2013, '14 Organizer, K-12 Educator Meet-Up, *AAPA meetings*
- 2011 – 13 Associate Editor, *Journal of Human Evolution*
- 2006 – 11 Student Prize Committee, *AAPA meetings*
- 2007 Co-Organizer, *Principles of Primate Locomotion Symposium, AAPA meetings* (with David Raichlen)
- 2002 – 04 Co-Organizer, New England Biological Anthropology Symposium

Graduate Student Advising

PhD Dissertation Advisor

- Elaine Kozma (City Univ. of New York, NYCEP)
- Cara Ocobock (PhD 2014, Washington Univ. St. Louis)
- Zane Swanson (City Univ. of New York, NYCEP)
- Anna Warrenner (PhD 2011, Washington Univ. St. Louis)

PhD Dissertation Committee

- Libby Cowgill (PhD 2008, Washington Univ. St. Louis)
- Emma Cancelliere (City Univ. of New York, NYCEP)
- Margaret Bryer (City Univ. of New York, NYCEP)
- Rachel Dunn (PhD 2009, Washington Univ. St. Louis)
- Tom Erez (PhD 2011, Washington Univ. St. Louis)
- Emma Finestone (City Univ. of New York, NYCEP)
- Caley Johnson (City Univ. of New York, NYCEP)
- Zachary Klukkert (City Univ. of New York, NYCEP)
- Myra Laird (PhD 2016, New York University)
- Julia Maki (PhD 2013, Washington Univ. St. Louis)
- Wade Ryberg (PhD 2009, Washington Univ. St. Louis)
- Brian Shearer (City Univ. of New York, NYCEP)
- Nicole Webb (City Univ. of New York, NYCEP)

MA Students

- Tricia Basdeo (MA 2014, Hunter College)
- Maria Rose Darr (MA 2013, New York University)
- Wren Edwards (MA 2016, Hunter College)
- Kendall Phelps (MA 2014, Hunter College)
- Alaina Schneider (MA 2017, Hunter College)
- Leah Sparrow (MS 2016, Univ. of Calgary)
- Caitlin Thurber (MA2016, Hunter College)
- Stephen Venner (Hunter College)