

## CURRICULUM VITAE

### Personal

Paul Thomas Schoenemann    Department of Anthropology    812-855-8800  
 Citizenship: U.S.A.    Indiana University    [toms@indiana.edu](mailto:toms@indiana.edu)  
    Student Building 130  
    701 E. Kirkwood Avenue  
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Museum of Archaeology and Anthropology    [orsa@iu.edu](mailto:orsa@iu.edu)  
 University of Pennsylvania  
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### Education

*University of California, Berkeley*    Ph.D. in Anthropology  
 May 1997

*University of California, Berkeley*    M.A. in Anthropology  
 May 1993

*University of California, Berkeley*    B.A. in Anthropology  
 May 1986    Magna Cum Laude

### Academic Positions

August 2009 to present    *Associate Professor of Anthropology*, Department of Anthropology  
    Indiana University

August 2009 to present    *Research Scientist*, The Stone Age Institute  
    Bloomington, Indiana

December 2009 to present    *Faculty member*, Cognitive Science Program  
    Indiana University

June 2011 to present    *Faculty member*, Center for the Integrative Study of Animal Behavior  
    Indiana University

July 2005 to present    *Consulting Scholar*, Physical Anthropology Section  
    University of Pennsylvania Museum of Archaeology and Anthropology

June 2005 to present    *Director*, Open Research Scan Archive (ORSA)  
    University of Pennsylvania Museum of Archaeology and Anthropology

September 2014 to January 2015    *Fulbright Scholar*, Centre for Translation, Interpreting and Cognition  
    University of Macao, China

May to June, 2014 and 2015    *Visiting Scholar*, Center for the Study of Language and Cognition  
    Zhejiang University (浙江大学), Hangzhou, China

August 2007 to August 2009    *Assistant Professor of Anthropology*, Department of Sociology and Anthropology  
    James Madison University

July 2005 to August 2007	<i>Assistant Professor of Anthropology</i> , Department of Behavioral Sciences University of Michigan-Dearborn
July 1998 to June 2005	<i>Assistant Professor</i> , Department of Anthropology University of Pennsylvania
May 1997 to July 1998	<i>Post-Doctoral Fellow</i> , NIH National Research Service Award Center for Functional Imaging, Lawrence Berkeley National Laboratory
Fall 1996	<i>Instructor</i> , Department of Oral Biology University of California, San Francisco
Spring 1995	<i>Instructor</i> , Department of Anthropology University of California, Berkeley
Summer to Fall 1991	<i>Clinical Instructor</i> . Department of Anatomy University of the Pacific School of Dentistry
Fall 1987 to Spring 1993 (13 classes)	<i>Graduate Student Instructor</i> , Department of Anthropology University of California, Berkeley

## **Publications**

### *Refereed Articles*

Dale, Rick, Christopher T Kello, **P. Thomas Schoenemann**, (in press) “Synergy, Syntax, and Language Evolution” *Topics in Cognitive Science*

**Schoenemann, P. Thomas**, 2009, “Evolution of Brain and Language,” *Language Learning*, v. 59(Suppl. 1):162–186

Beckner, Clay, Richard Blythe, Joan Bybee, Morten H. Christiansen, William Croft, Nick C. Ellis, John Holland, Jinyun Ke, Diane Larsen-Freeman, **Tom Schoenemann**, 2009, “Language Is a Complex Adaptive System: Position Paper,” *Language Learning*, v. 59(Suppl. 1):1-26. (Spanish translation available: <http://www.linred.es>)

**Schoenemann, P. Thomas**, James Gee, Brian Avants, Ralph L. Holloway, Janet Monge, and Jason Lewis, 2007, “Validation of Plaster Endocast Morphology Through 3D CT Image Analysis” *American Journal of Physical Anthropology* v. 132:183-192

**Schoenemann, P. Thomas**, 2006, “Evolution of the Size and Functional Areas of the Human Brain” *Annual Review of Anthropology* v. 35:379-406

Avants, Brian B., **P. T. Schoenemann**, and J. C. Gee, 2006, “Lagrangian frame diffeomorphic image registration: Morphometric comparison of human and chimpanzee cortex” *Medical Image Analysis* v. 10(3):397-412

**Schoenemann, P. Thomas**, Michael Sheehan, and L. Daniel Glotzer, 2005, “Prefrontal white matter volume is disproportionately larger in humans than in other primates” *Nature Neuroscience* v. 8(2):242-252

**Schoenemann, P. Thomas**, 2004, “Brain size and body composition in mammals,” *Brain Behavior and Evolution* v. 63(1):47-60

- Schoenemann, P. Thomas**, Thomas F. Budinger, Vincent M. Sarich, William S.-Y. Wang, 2000, "Brain size does not predict general cognitive ability within families," *Proceedings of the National Academy of Sciences*. v. 97(9):4932-4937
- Schoenemann, P. Thomas**, 1999, "Syntax as an emergent characteristic of the evolution of semantic complexity," *Minds and Machines*, v. 9:309-346.

### *Book Chapters*

- Schoenemann, P. Thomas**, in press, "A complex adaptive systems approach to language and brain," in *Complexity in Language: Developmental and Evolutionary Perspectives*, edited by Salikoko S. Mufwene, Jean-Marie Hombert, François Pellegrino, Christophe Coupé, and Egidio Marsico
- Schoenemann, P. Thomas**, 2013, "Searching for language origins," In P. Gang & S. Feng (Eds.), *Eastward flows the great river: Festschrift in honor of professor William S.-Y. Wang on his 80th birthday*. Hong Kong: City University of Hong Kong Press, pp. 229-254
- Schoenemann, P. Thomas**, 2013, "Hominid brain evolution." In D. R. Begun (Ed.), *A companion to paleoanthropology*, Chichester, UK: Wiley-Blackwell, pp. 136-164
- Schoenemann, P. Thomas**, 2012, "Evolution of Brain and Language" in *Evolution of the Primate Brain: From Neuron to Behavior*, edited by Michel A. Hofman and Dean Falk, series title: *Progress in Brain Research*, series editors: Stephen Waxman, Donald G. Stein, Dick Swaab and Howard Fields. Amsterdam: Elsevier, pp. 443-459
- Monge, Janet and **P. Thomas Schoenemann**, 2011, "The Open Research Scan Archive (Orsa): A massive open-access archive of research quality computed tomography (CT) scans," in *Pleistocene Databases: Acquisition, Storing, Sharing* edited by Roberto Macchiarelli & Gerd-Christian Weniger, Mettmann, Germany: Wissenschaftliche Schriften des Neanderthal Museums V. 4, p. 61-67
- Schoenemann, P. Thomas**, 2010, "The meaning of brain size: the evolution of conceptual complexity" in *Human Brain Evolving: Papers in Honor of Ralph Holloway* edited by Douglas Broadfield, Michael Yuan, Kathy Schick, and Nicholas Toth. Bloomington, Indiana: Stone Age Institute Press, pp. 37-50
- Schoenemann, P. Thomas**, 2009, "Brain evolution relevant to language" in *Language, Evolution, and the Brain* edited by Minett, James W. & Wang, William S.-Y., Hong Kong: City University of Hong Kong Press, pp. 191-223
- Schoenemann, P. Thomas**, 2005, "Conceptual complexity and the brain: Understanding language origins" in *Language Acquisition, Change and Emergence: Essays in Evolutionary Linguistics* edited by William S.-Y. Wang and James W. Minett. Hong Kong: City University of Hong Kong Press, pp. 47-94

### *Letters And Commentaries*

- Schoenemann, P. Thomas**, L. D. Glotzer, And Michael Sheehan, 2005. "Reply To "Is Prefrontal White Matter Enlargement A Human Evolutionary Specialization?"" *Nature Neuroscience* 8(5):538 (Referred Letter)
- Schoenemann, P. Thomas**, 2003, "Commentary On 'Genes And Cultures: What Creates Our Behavioral Phenome' By Ehrlich And Feldman" *Current Anthropology*, V. 44(1):101

- Schoenemann, P. Thomas**, 2002, "Putting Meat On The Bones: The Necessity Of Empirical Tests Of Hypotheses About Cognitive Evolution," *Behavioral And Brain Sciences*, V. 25:416-417
- Schoenemann, P. Thomas**, 2001, "Brain Scaling, Behavioral Ability, And Human Evolution," *Behavioral And Brain Sciences*, V.24(2):293-295
- Schoenemann, P. Thomas**, And William S.-Y. Wang, 1996, "Evolutionary Principles And The Emergence Of Syntax," *Behavioral And Brain Sciences.*, V.19(4):646-647
- Schoenemann, P. Thomas**, and John S. Allen, 1991, Comment on "New models and metaphors for the Neanderthal debate," by Paul Graves, *Current Anthropology*, v.32(5):530-532. (invited commentary)

### *Refereed Abstracts*

- Schoenemann, P. Thomas**, 2015, "Estimated Total Time Spent In Social Play Prior To Adulthood Is Strongly Associated With Brain Size In Primates." *American Journal Of Physical Anthropology*, V. 156, Supplement S60: 279
- Holloway, Ralph L., Shawn D. Hurst, D. C. Broadfield, **Tom Schoenemann**, 2015, "The New And Old In Hominid Brain Evolution: Why Paleoneurology Needs The Lunate Sulcus." *American Journal Of Physical Anthropology*, V. 156, Supplement S60: 167-168
- Shawn D. Hurst, Ralph L. Holloway, **Tom Schoenemann**, Doug C. Broadfield, Kevin D. Hunt, 2015, "The New And The Old In Hominid Brain Evolution, Part II: Why Paleoneurology Needs A Chimpanzee Brain Atlas." *American Journal Of Physical Anthropology*, V. 156, Supplement S60: 173-174
- Schoenemann, P. Thomas**, 2014, "Inferences About Prefrontal Cortex Size In Humans From Motor And Premotor Area Scaling Relationships." *American Journal Of Physical Anthropology*, V. 153, Supplement 58: 232
- Holloway, Ralph L., **Tom T. Schoenemann**, 2014, "The Occipital Lobes Of Neandertal Brains, Orbit Size, And Cognition: What Is The Evidence For Neandertal Cognitive Inferiority?" *American Journal Of Physical Anthropology*, V. 153, Supplement 58: 143-144
- Shumaker, Robert W., David R. Samson, **Tom P. Schoenemann**, 2014 "The Effects Of Sleeping Platforms On Next Day Cognition In Captive Orangutans (Pongo Spp.)" *American Journal Of Physical Anthropology*, V. 153, Supplement 58: 238
- Kitchell, Lindsey M., **P. Thomas Schoenemann**, 2014, "Functional Correlates Of Structural Asymmetries In The Human Brain." *American Journal Of Physical Anthropology*, V. 153, Supplement 58: 158
- Hurst, Delanie R., Audrey R. Brittingham, **P. Thomas Schoenemann**, 2014, "Endocranial Regions Associated With Deception In Nonhuman Primates." *American Journal Of Physical Anthropology*, V. 153, Supplement 58: 147-148
- Schoenemann, P. Thomas**, Ralph Holloway, 2013, "Skhul V Segmentation And Broca's Region Asymmetries In Neandertal Endocasts." *American Journal Of Physical Anthropology*, V.150, Supplement 52:244
- Kitchell, Lindsey M., **P. Thomas Schoenemann**, Mackenzie Loyet, 2013, "Structural Asymmetries In The Human Brain Assessed Via Mri." *American Journal Of Physical Anthropology*, V.150, Supplement 56:167

- Hurst, Delanie R., **P. Thomas Schoenemann**, Brian Avants And James C. Gee, 2013, “Assessing Site Specific Changes In Endocranial Shape Associated With Frugivory In Primates..” *American Journal Of Physical Anthropology*, V.150, Supplement 56:156
- Brittingham, Audrey R., Delanie R. Hurst, **P. Thomas Schoenemann**, Brian Avants And James C. Gee, 2013, “Impact Of Tool Use On Brain Development Of Non-Human Primates.” *American Journal Of Physical Anthropology*, V.150, Supplement 56:88
- Loyet, Mackenzie M., **P. Thomas Schoenemann**, Brian B. Avants And James C. Gee, 2012, “Associations Between Localized Variation In Brain Anatomy And Social Behavior In Healthy Human Subjects.” *American Journal Of Physical Anthropology*, V.147, Supplement 54:196
- Hurst, Delanie R., **P. Thomas Schoenemann**, Mackenzie M. Loyet, Brian B. Avants And James C. Gee, 2012, “How Well Does Endocranial Morphology Predict Behavior Differences In Primates?” *American Journal Of Physical Anthropology*, V.147, Supplement 54:171
- Schoenemann, P. Thomas**, Ralph Holloway, Janet Monge, Brian Avants, And James Gee, 2011, “Differences In Endocranial Shape Between Homo And Pongids Assessed Through Non-Rigid Deformation Analysis Of High-Resolution Ct Images.” *American Journal Of Physical Anthropology*, V.144, Supplement 52:265-266
- Holloway, R.L., J. Monge, **T. Schoenemann**, 2011 “The Lb1 Endocast: Un-Adorned, Un-Smoothed, A Replication Study Based On The Original Ct Scan Data”, *American Journal Of Physical Anthropology*, V. 144, Supplement 52: 165-166.
- Prima, S., R. Holloway, G.Subsol, B.Combes, **T. Schoenemann**, J. Braga And J.Monge, 2011 “New 3D Automatic Methods For The Analysis Of The Endocranial Shape And Its Relationship With Ectocranial Structures: Assessment And Preliminary Experiments”, *American Journal Of Physical Anthropology*, V. 144, Supplement 52: 243-244.
- Schoenemann, P. Thomas**, 2010, “The Importance Of Exploring Non-Linguistic Functions Of Human Brain Language Areas For Explaining Language Evolution.” *The Evolution Of Language; Proceedings Of The 8Th International Conference (Evolang8)*. Andrew D. M. Smith, Marieke Schouwstra, Bart De Boer, And Kenny Smith, Eds., London: World Scientific Publishing, Pp. 485-486
- Schoenemann, P.T.**, J. Monge, B.B. Avants, J.C. Gee, 2010 “Creating Statistical Atlases Of Modern Primate Endocranial Morphology Using Non-Rigid Deformation Analysis Of High-Resolution Ct Images.” *American Journal Of Physical Anthropology*, V. 141, Supplement 50:208-209
- Holloway, R. L., J. Monge, **T. Schoenemann**, 2010 “The Hobbit Brain: Some Questions About Its ‘Derived’ Features.” *American Journal Of Physical Anthropology*, V. 141, Supplement 50:130
- Schoenemann, P.T.**, J. Monge, B.B. Avants, J.C. Gee, 2009 “An Atlas Of Modern Human Cranial Morphology Constructed Via Non-Rigid Deformation Analysis Of High-Resolution Ct Images.” *American Journal Of Physical Anthropology*, V. 138, Supplement 48:231
- Schoenemann, P. T.**, R. L. Holloway, B. B. Avants, J. C. Gee, 2008, “Endocast Asymmetry In Pongids Assessed Via Non-Rigid Deformation Analysis Of High-Resolution Ct Images.” *American Journal Of Physical Anthropology*, V. 135, Supplement 46:187-188
- Schoenemann, P. T.**, J. Monge, B. B. Avants, D. Glotzer, J. C. Gee, 2007, “Sex Differences In Cranial Form Assessed Via Non-Rigid Deformation Analysis Of High-Resolution Ct Images” *American Journal Of Physical Anthropology*, V. 132, Supplement 44:209

- L.D. Glotzer, **P. T. Schoenemann**, 2007, “4-Dimensional Diffeomorphic Modeling: A Novel Approach For Investigating Human Embryonic Brain Development” *American Journal Of Physical Anthropology*, V. 132, Supplement 44:115
- Schoenemann, P. T.**, J. S. Allen, 2006, “Scaling Of Brain And Body Weight Within Modern And Fossil Hominids: Implications For The Flores Specimen” *American Journal Of Physical Anthropology*, V. 129, Supplement 42:159-160
- Holloway, R.L., P. Brown, **P.T. Schoenemann**, J. Monge, 2006 “The Brain Endocast Of Homo Floresiensis: Microcephaly And Other Issues...” *American Journal Of Physical Anthropology*, V. 129, Supplement 42:105
- Avants, Brian B., J. C. Gee, **P. T. Schoenemann**, J. Monge, J. E. Lewis And Ralph L. Holloway, 2005, “A New Method For Assessing Endocast Morphology: Calculating Local Curvature From 3D Ct Images” *American Journal Of Physical Anthropology*, V. 126, Supplement 40:67
- Schoenemann, P. T.**, B. B. Avants, J. C. Gee, L. D. Glotzer, And M. J. Sheehan, 2004, “Analysis Of Chimp-Human Brain Differences Via Non-Rigid Deformation Of 3D Mr Images” *American Journal Of Physical Anthropology*, V. 123, Supplement 38:174-175
- Avants, B., J. Gee, **P. T. Schoenemann**, J. Monge, J. E. Lewis, R. L. Holloway, 2004, “Validation Of Plaster Endocast Morphology Through 3D Ct Image Analysis” *American Journal Of Physical Anthropology*, V. 123, Supplement 38:56
- Lewis, J. E., **P. T. Schoenemann**, And J. Monge, 2004, “Endocranial Capacity Estimated From 3-D Ct: Methodological Issues” *American Journal Of Physical Anthropology*, V. 123, Supplement 38:135
- Monge, J., **P. T. Schoenemann**, J. Lewis, And D. Glotzer, 2004, “The Ct Database At The University Of Pennsylvania Museum” *American Journal Of Physical Anthropology*, V. 123, Supplement 38:149
- Meyer, M., J. Blumenfeld, And **P. T. Schoenemann**, 2004, “Geographic Patterns Of Nasal Morphology In *Homo*” *American Journal Of Physical Anthropology*, V. 123, Supplement 38:146-147
- Schoenemann, P. Thomas**, And L. Daniel Glotzer, 2003, “Evolution Of The Prefrontal Cortex: A Stereological Analysis Of Primate Brain Mri Scans” *American Journal Of Physical Anthropology*, V.120, Supplement 36:185-186
- Schoenemann, P. Thomas**, 2000, “The effects of different brain indices on brain/behavior relationships: a within-species study of humans,” *American Journal of Physical Anthropology*, Supplement 30:273
- Schoenemann, P. Thomas**, 1999, “Relationships between prefrontal volume and behavior in normal human females,” *American Journal of Physical Anthropology*, Supplement 28:244
- Schoenemann, P. Thomas**, 1998, “Relationships between corpus callosum morphology and behavior in normal human females,” *American Journal of Physical Anthropology*, Supplement 26:196-197
- Schoenemann, P. Thomas**, 1995, “Brain size scaling and body composition in mammals: Implications for the sex difference in brain size in *Homo sapiens*,” *American Journal of Physical Anthropology*, Supplement 19:298
- Schoenemann, P. T.**, 1989, “Comparison of intraspecific craniometric variability in *Homo*, *Pan*, and *Gorilla*,” *American Journal of Physical Anthropology*, v.78(2):298

*Book Reviews*

**Schoenemann, Tom**, 2006, "Review Of: From Monkey Brain To Human Brain: A Fyssen Foundation Symposium" *American Journal Of Human Biology* V. 18(5):722-724.

**Schoenemann, P. Thomas**, 2001, "Review Of *Molecular Biology Of The Brain*, Edited By S. J. Higgins," *Human Biology*. V.73(4):614-617

*Other Publications*

Beckner, Clay, Richard Blythe, Joan Bybee, Morten H. Christiansen, William Croft, Nick C. Ellis, John Holland, Jinyun Ke, Diane Larsen-Freeman, **Tom Schoenemann**, 2011, "La lengua es un sistema adaptativo complejo," [http://www.linred.es/articulos\\_pdf/LR\\_articulo\\_04092011.pdf](http://www.linred.es/articulos_pdf/LR_articulo_04092011.pdf). Spanish translation of "Language Is a Complex Adaptive System: Position Paper" published in 2009 in *Language Learning* (see above)

**Schoenemann, P. Thomas**, Janet Monge, L. Daniel Glotzer, Michael Campana, 2008, "The open research CT scan archive," *British Institute of Radiology Newsletter*, Spring Issue:13-15

Klein, Gregory J, Xia Teng, **P. Thomas Schoenemann** And Thomas F. Budinger, 1998, "A Sensitivity Analysis Of Brain Morphometry Based On Mri-Derived Surface Models", In *Medical Imaging 98: Physiology And Function From Multidimensional Images, Proceedings Of The Society Of Photo-Optical Instrumentation Engineers*, E Hoffman, Editor, V.3337:294-303.

*Web Resources*

Podcast of invited conference lecture: "Evolution of Brain and Language," Language as a Complex Adaptive System Conference, 60th Anniversary Celebration of the journal *Language Learning*, University of Michigan-Ann Arbor, November 2008: <http://www.wiley.com/bw/podcast/lang.asp>

Open Research Scan Archive Research Scan website: <http://plum.museum.upenn.edu/~orsa/ORSA/Welcome.html/>

Open Research Scan Archive Educational Website: <http://www.indiana.edu/~orsa/> Contains high resolution interactive 3D movies of 30 fossil Hominin specimens, basic information about these fossils, and maps them on Google Earth. This has been co-developed with Janet Monge (University of Pennsylvania), Cameron Griffith (Indiana University), Delanie Hurst (Indiana University).

Human Brain Evolution Laboratory website: <http://mypage.iu.edu/~toms/lab.html>

**Publications in Preparation**

"Acoustic Communities: Vocal Repertoire Size Predicts Brain Size in Primates" co-authored with Delanie R. Hurst (about to be submitted)

"Asymmetry in the Human Brain Assessed via non-rigid diffeomorphic MRI registration" co-authored with Lindsey Kitchell

- “Relationships between Corpus Callosum Morphology and Behavior in Normal Human Females Using Voxel-Based Deformable Registration Analysis”, coauthored with James Gee, Abraham Dubb, Jian Hu, Jason Lewis
- “Scaling of brain and body weight within modern and fossil hominids: implications for the Flores specimen,” co-authored with John S. Allen.
- “Methodological Issues in Estimation of Endocranial Capacity from 3-D CT.”, coauthored with Jason E. Lewis & Janet M. Monge; revise and resubmit to *Journal of Human Evolution*
- “Initial Word Learning in Children: A Neural Net Model that Does Not Require Language-Specific Innate Constraints”
- “A Test of the Social Intelligence Hypothesis in Healthy Individuals”

### **Media Reports**

- Kate Wong, 2014. “Human or Hobbit?” *Scientific American*, 311(5), 28–29. Includes quotes from me about why the Hobbit is so odd from a brain evolution standpoint.
- NOVA ScienceNow documentary, October 10, 2012, “What makes us human?”, <http://www.pbs.org/wgbh/nova/evolution/what-makes-us-human-pro.html>. I CT scanned stone tools and created video images of these for use in this documentary.
- Kerry Grens, WHYY Radio, December 15 2008, “Scanning skulls for their secrets”, story on scanning the Hyrtl Collection of skulls from the Mütter Museum in Philadelphia by our Open Research Scan Archive, text, podcast and slideshow available online at <http://why.org/cms/news/health-science/2008/12/15/scanning-skulls-for-their-secrets/1582/>
- Anonymous, April 2007, Penn Museum press release (picked up by the Associated Press and various other local media): “Two 4600 Year Old Skulls from Famous Excavations at Royal Tombs of Ur, Iraq Traveled to the Hospital of the University of Pennsylvania For CAT Scans Sunday morning, April 15”, <http://www.museum.upenn.edu/new/news/fullrelease.php?which=274>; also: <http://www.stonepages.com/news/archives/002342.html>, <http://historyhuntersinternational.org/index.php/topic,1774.0.html>, <http://www.freerepublic.com/focus/f-news/1817303/posts>
- Kate Wong, 2006, “Hobbit News,” in Blog: Sciam Observations: Opinions, arguments and analyses from the editors of *Scientific American*, <http://www.sciam.com/podcast/episode.cfm?id=00064EE1-06EB-1417-86EB83414B7F0000>
- BBC Horizon documentary, 2005, “The Mystery of the Human Hobbit”. I facilitated the scanning of an endocast of the Flores LB1 specimen for the documentary, and contributed 3D reconstructions of the scan for the filming.
- Haseltine, Eric, 2001, “Does your brain measure up? When it comes to smarts, size matters,” *Discover Magazine* v.22(9):88.
- Olmstead, Susan C., 2000, “Is a bigger brain a better brain?” *Advance for Imaging and Radiation Therapy Professionals*, July 17, 2000 issue, p. 18.



**Research Grants**

\$6,000 from Indiana University: Research Leave Supplement for Fulbright Fellowship to Macau, Fall 2014

\$8,000 from Indiana University: Summer Faculty Fellowship. Summer 2011

\$8,000 from Indiana University: Summer Faculty Fellowship. Summer 2010

\$238,664 from NSF: “Expansion and Improvement of the Penn Cranial CT Database,” PI. June 2005 – June 2009

\$33,600 from University of Pennsylvania Research Foundation. Grant title: “High-resolution computed tomography (CT) of human and non-human crania from the University Museum: Collection archiving, and analysis”. Co-PI with Dr. Janet Monge. June 2002 - June 2005

\$29,933 from the National Science Foundation, Grant title: “Monkey life histories and dental hard tissue development”. Co-PI with Dr. Jacqueline E. Bowman. July 2002-December 2004

\$45,000 from the Alexis de Tocqueville Institution. Grant title: “MRI study of brain and behavior.” April 1993 - September 1996

Grants awarded to my advisees:

\$7,546 from the National Science Foundation: “Defining Evolutionary Units in the Neocortex: A Quantitative Assessment of Morphogenetic Patterns in the Embryonic Human Brain,” Dissertation Improvement Grant to Daniel Glotzer. Co-PI. December 2006

\$18,068 from the Wenner-Gren Foundation for Anthropological Research: “Diffeomorphic Analysis of Human Pre- natal Neuroanatomy: A Quantitative Assessment of Morphogenetic Patterns in the Developing Neocortex,” Dissertation Fieldwork Grant to Daniel Glotzer, November 2006

**Honors and awards**

- May-June 2015 *Visiting Scholar*, Center for the Study of Language and Cognition, Zhejiang University, (浙江大学), Hangzhou, China
- September-2014 - January 2015 *Fulbright Scholar*, Centre for Translation, Interpreting and Cognition, Department of English, and the Centre for Teaching and Learning Excellence, University of Macau, Macau, China
- May-June 2014 *Visiting Scholar*, Center for the Study of Language and Cognition, Zhejiang University, (浙江大学), Hangzhou, China
- Summer 2011 *Summer Faculty Fellowship*, Indiana University
- March 2011 *Trustee’s Teaching Award*, Indiana University
- Summer 2010 *Summer Faculty Fellowship*, Indiana University
- May 1997-July 1998 *NIH National Research Service Award*, Post-doctoral fellowship in brain imaging
- June 1996 *Human Behavior and Evolution Society Young Investigator Award* for a talk entitled: “Is Brain Size a Causal Influence on IQ?” presented at the 8th Annual Meeting
- Fall 1994 *Robert H. Lowie Graduate Scholarship* research grant, U. C. Berkeley

- Spring 1994            *Robert H. Lowie Graduate Scholarship* research grant, U. C. Berkeley
- 1993-1994            *Charles Atwood Kofoid Fellowship* for graduate study in Anthropology at the University of California at Berkeley
- Spring 1991            *1990-1991 Outstanding Graduate Student Instructor*, University of California at Berkeley
- 1989-1990            *University of California at Berkeley Regents Fellowship*
- Spring 1989            *Robert H. Lowie Graduate Scholarship* research grant, U. C. Berkeley
- Spring 1988            *Graduate Student Instructor Course Improvement Grant* from the U.C. Berkeley Committee on Teaching
- May 1986              *High Honors* conferred on B.A. for work on the delineation, origin and evolutionary implications of modern human geographic variation in sexual dimorphism

### **Lectures and Papers Presented**

#### *Sponsored Lectures And Workshops*

- CIEL7 - Conference Commentary and Overview*, Summary presentation at the Seventh International Conference in Evolutionary Linguistics (CIEL7), Nankai University, Tianjin, China, June 14, 2015
- The interplay of culture and biology in the evolution of language*, Keynote lecture for the Seventh International Conference in Evolutionary Linguistics (CIEL7), Nankai University, Tianjin, China, June 13, 2015
- Models of language evolution*, invited lecture, Xi'an Jiaotong University, Xi'an, China, May 22, 2015
- The evolution of brain, language, and conceptual complexity*, 3 lectures, visiting scholar, Shaanxi Normal University, Xi'an, China, May 20-22, 2015
- The evolution of conceptual complexity and its role in language evolution*, Keynote lecture for the Sixth International Conference in Evolutionary Linguistics (CIEL6), Xiamen University, Xiamen, China, November 21, 2014
- The evolution of language*, Faculty of Arts and Humanities - Department of English Lecture Series, at the University of Macau, November 12, 2014
- Brain, language, and the evolution of human behavioral complexity*, Keynote lecture at the First Annual Meeting of the Joint Research Center for Language and Human Complexity, The Chinese University of Hong Kong, November 8, 2014
- The evolution of brain and language*, Department of Linguistics and Modern Languages, The Chinese University of Hong Kong, October 7, 2014
- Evolution of Brain and Language* (8 lectures), Center for the Study of Language and Cognition, Zhejiang University, (浙江大学), Hangzhou, China, May 2014-June 2014
- Brain evolution and human uniqueness*, 2013-14 Evolution and Human Adaptation (EHAP) lecture series at the University of Michigan, Ann Arbor, February 4, 2014

- Sequential processing in humans and apes*, invited talk at Professor Morten Christiansen's Lab, Cornell University, Ithaca, New York, October 7, 2013
- Thoughts on the Evolution of the Brain and Language*, invited talk at Professor Morten Christiansen's Language Evolution Class, Cornell University, Ithaca, New York, October 7, 2013
- Broca's Area and the Evolution of Language*, invited talk at the Cognitive Science Colloquium Series, Cornell University, Ithaca, New York, October 4, 2013
- The use of CT and MRI for exploring the evolution of the brain*, sponsored talk at the Laboratory for Ambient Intelligence and Multimodal Systems of Shenzhen Institutes of Advanced Technology, Chinese Academy of Sciences, Shenzhen, China, August 16, 2013
- The Evolution of the Brain*, sponsored talk at the Complex Systems Research Center, Academy of Mathematics and Systems Science, Beijing, China, May 15 2013
- The evolution of brain and language*, sponsored public talk, 2013 Symposium on L1 Reading Across Different Languages & L2 Literacy Acquisition, Institute of Cognitive Neuroscience, National Central University and Laboratories for Cognitive Neuroscience, National Yang Ming University, Taipei, Taiwan, May 10-12, 2013
- Some thoughts from an evolutionary perspective*, invited panelist comments for the 500 Billion Words Workshop at Indiana University, April 19-20, 2013
- Broca's area and the evolution of language*, Keynote speech at the Conference in Evolutionary Linguistics, Peking University, Beijing, China, November 9-12, 2012
- Language evolution: The role of Broca's area*. sponsored talk at the U.C. Merced Cognitive and Information Sciences group, April 16, 2012
- Research on the evolution of brain and language*. DePauw University Psychology Department Invited Speaker Series, DePauw University, November 15, 2011
- A complex adaptive systems approach to language and brain*. Workshop on Complexity in Language: Developmental and Evolutionary Perspectives, sponsored by the Collegium de Lyon and Ecole Normale Supérieure de Lyon, organized by Salikoko Mufwene, Lyon, France, May 23-24, 2011
- Evolution of language and the brain*. Workshop on the Evolution of Human Cognition, sponsored by the Interdisciplinary Program in Cognitive Science, Georgetown University, March 18, 2011
- Official discussant for *Human Biology and the Origins of Homo*, a Wenner-Gren Foundation conference organized by Susan Antón and Leslie Aiello, Sintra, Portugal, March 4-11, 2011,
- Creating an online archive of high-resolution CT images of museum specimens: The Open Research Scan Archive (ORSA)*. Co-delivered with Janet Monge; NESPOS (Pleistocene People and Places) symposium: "Pleistocene Databases: Acquisition, Storing, Sharing", Neanderthal Museum, Mettmann, Germany, June 10, 2010
- Evolution of the Brain*. 2nd Annual Neuroscience Graduate Group Student Retreat, Academy of Natural Sciences, Philadelphia, October 30, 2009
- Evolution of Brain and Language*. Language as a Complex Adaptive System Conference, 60th Anniversary Celebration of the journal *Language Learning*, University of Michigan-Ann Arbor, November 2008. Podcast available online at: <http://www.wiley.com/bw/podcast/lang.asp>

*The evolution of the brain and the evolution of language.* Department of Anthropology, Bloomington, Indiana, March 2008

*The meaning of brain size: the evolution of conceptual complexity.* The Human Brain Evolving: Papers in Honor of Ralph L. Holloway, Indiana University, Bloomington, Indiana, April 2007

*Evolution of the brain with relevance to language.* Seminar on Language, Evolution, and the Brain, International Institute of Advanced Studies, Kyoto, Japan, April 2007

*What grammatical rules are least likely to emerge solely from social interactions among domain-general learning mechanisms?* Language Evolution Workshop, Santa Fe Institute, Santa Fe, New Mexico, March 2007

*Research on brain and behavior from an evolutionary perspective.* Department of Sociology and Anthropology, James Madison University, Harrisonburg, Virginia, January, 2007.

*Research on brain and behavior from an evolutionary perspective.* Stone Age Institute, Bloomington, Indiana, September 2006

*The evolution of brain and language.* University of Michigan, Dearborn, March 2005

*An Evolutionary Perspective On Language And Brain.* Language Evolution Workshop, Santa Fe Institute, Santa Fe, New Mexico, March 2005

*Assessing The Relevance Of Homo Floresiensis For The Evolution Of Hominin Brain And Behavior.* Language Evolution Workshop, Santa Fe Institute, Santa Fe, New Mexico, March 2005

*Research on brain and behavior from an evolutionary perspective.* Department of Anthropology, University of California, Davis, March 2005

*The evolution of conceptual complexity and its relevance to language.* International Workshop on the Evolution of Cognition, University of Delaware, February 2005

*The Evolution of Semantic Complexity,* Workshop on Language Acquisition, Change, and Emergence, City University of Hong Kong, November 2001

*Evolutionary principles and the emergence of language,* Department of Psychology, Cornell University, October 2001

*Neuroanatomical associations with behavior from an evolutionary perspective,* Center for Cognitive Neuroscience, University of Pennsylvania, September 2001

*The Emergence of Syntax in Language Evolution,* Workshop on Language Acquisition and Change, City University of Hong Kong, May-June 2001

*Evolutionary principles and the evolution of language,* Language Emergence and Mathematical Modeling Working Group, Santa Fe Institute, Santa Fe, New Mexico, February 2001

*Brain and Behavior from an Evolutionary Perspective,* Connecticut College, October 28, 1999

### *Invited Lectures*

*A review of the neuroscience of language,* 1st International Symposium on Cognitive Research on Translation and Interpreting, Centre for Studies of Translation, Interpreting and Cognition, University of Macau, December 12, 2014

- Animal Communication and the Evolution of Human Language*, Choi Kai Yau College, University of Macau, November 13, 2014
- Evolution of the Human Brain*, Neuroscience Club, Indiana University, Bloomington, February 12, 2014
- Sequential pattern learning and the evolution of Broca's area*, Cognitive Neuroscience Seminar, Cognitive Science Program, Indiana University, Bloomington, January 13, 2014
- The Use of Neuroimaging for Studies of Brain Evolution*, Third Indiana Neuroimaging Symposium, Indiana University, Bloomington, Indiana, October 25, 2013
- Conceptual complexity as a driver of language evolution*, invited talk at Professor William S.-Y. Wang's Research Group, Department of Electronic Engineering and Department of Linguistics and Modern Languages, Chinese University of Hong Kong, Hong Kong, China, December 17, 2013
- Eulogy for Professor Vincent Sarich*, invited talk at U.C. Berkeley, April 27, 2013
- The Origin and Evolution of the Modern Human Brain. Origins: The Evolution of the Universe, the Earth, Life, and the Human Species*, The Stone Age Institute and Indiana University, October 23, 2013
- Research on Brain Evolution, guest lecture in "Proseminar in Bioanthropology," Prof. Della Cook, Indiana University, September 21, 2012*
- Evolution of Language*, IU Secular Alliance Club, February 12, 2012
- Evolution of the Human Brain*, IU Undergraduate Neuroscience Club, February 9, 2012
- Early Hominin Evolution, with a Focus on China*, guest lecture in "Chinese Archaeology," Prof. Ling-yu, Indiana University, January 24, 2012
- The evolution of language*, guest lecture in "Bioanthropology," Prof. Michael Muehlenbein, Indiana University, December 1, 2011
- The Evolutionary History of the Brain*, Cafe Inquiry, Center for Inquiry Indiana, Indianapolis, November 3, 2011
- The Origin and Evolution of the Modern Human Brain. Origins: The Evolution of the Universe, the Earth, Life, and the Human Species*, The Stone Age Institute and Indiana University, October 23, 2011
- The Evolution of the Human Brain*. Indianapolis Zoo, October 4, 2011
- The Origin of the Modern Human Brain and Consciousness. Origins: The Evolution of the Universe, the Earth, Life, and the Human Species*, The Stone Age Institute and Indiana University, October 10, 2009
- Human Evolution*, guest lecture in "Buried Cities" Prof. Julie Solometo, James Madison University, January 26, 2009
- Anthropological Considerations in Language Acquisition*. Workshop: Levels of Consciousness in Language Acquisition, Center for the Study of Complex Systems and the Cognition and Perception Division of the Department of Psychology at the University of Michigan, June 2008
- Evolution of the prefrontal cortex implications for human behavioral evolution*. Department of Biology, James Madison University, April 2008
- Research on the evolution of brain and language*. Brain and Language Lecture Series, University of Pennsylvania, February 2002
- Applied correlational techniques*, guest lecture, U.C. Berkeley, April 1, 1997.

*Correlational techniques in bio-behavioral research*, guest lecture, U.C. Berkeley, April 16, 1996.

*Brain structure, function, and evolution*, guest lecture, U. C. Berkeley, April 15, 1993.

*Recombinant DNA technology, blood groups, and natural selection*, guest lecture, U. C. Berkeley, February 13, 1992.

*Linguistic paleontology: the linguistic reconstruction of prehistoric culture*, guest lecture, U. C. Berkeley, November 29, 1989.

### *Conference Papers*

*Inferences about prefrontal cortex size in humans from motor and premotor area scaling relationships*, 83rd Annual Meeting of the American Association of Physical Anthropologists, Calgary, Canada, April 2014

*The occipital lobes of Neandertal brains, orbit size, and cognition: What is the evidence for Neandertal cognitive inferiority?* co-authored with Ralph L. Holloway (senior author), 83rd Annual Meeting of the American Association of Physical Anthropologists, Calgary, Canada, April 2014

*The effects of sleeping platforms on next day cognition in captive orangutans (Pongo spp.)*, coauthored with Robert W. Shumaker (senior author) and David R. Samson, 83rd Annual Meeting of the American Association of Physical Anthropologists, Calgary, Canada, April 2014

*Functional correlates of structural asymmetries in the human brain*, co-authored with Lindsey Kitchell (senior author), 83rd Annual Meeting of the American Association of Physical Anthropologists, Calgary, Canada, April 2014

*Endocranial regions associated with deception in nonhuman primates*, co-presented with Delanie R. Hurst (senior author) and Audrey R. Brittingham, 83rd Annual Meeting of the American Association of Physical Anthropologists, Calgary, Canada, April 2014

*The Origins Of Language In Human Evolution*, Presented At The 5Th International Conference In Evolutionary Linguistics, Chinese University Of Hong Kong, Hong Kong, China, August 17, 2013

*Skhul V segmentation and Broca's region asymmetries in Neandertal endocasts*, co-presented with Ralph Holloway, 82nd Annual Meeting of the American Association of Physical Anthropologists, Knoxville, Tennessee, April 2013

*Structural asymmetries in the human brain assessed via MRI*, co-presented with Lindsey M. Kitchell, and Mackenzie Loyet, 82nd Annual Meeting of the American Association of Physical Anthropologists, Knoxville, Tennessee, April 2013

*Assessing site specific Changes in endocranial shape associated with frugivory in primates*, poster co-presented with Delanie R. Hurst, Brian Avants and James C. Gee, 82nd Annual Meeting of the American Association of Physical Anthropologists, Knoxville, Tennessee, April 2013

*Impact of tool use on brain development of non-human primates*, co-presented with Audrey R. Brittingham, Delanie R. Hurst, Brian Avants and James C. Gee, 82nd Annual Meeting of the American Association of Physical Anthropologists, Knoxville, Tennessee, April 2013

*Research at the Brain Evolution Lab*, presentation at the Center for the Integrative Study of Animal Behavior undergraduate research opportunities evening, December 5, 2012

- Associations between localized variation in brain anatomy and social behavior in healthy human subjects*, poster co-presented with Loyet, Mackenzie M., Brian B. Avants and James C. Gee, 81<sup>st</sup> Annual Meeting of the American Association of Physical Anthropologists, Portland, Oregon, April 2012
- How well does endocranial morphology predict behavior differences in primates?* talk co-presented with Delanie R. Hurst, Mackenzie M. Loyet, Brian B. Avants and James C. Gee, 81<sup>st</sup> Annual Meeting of the American Association of Physical Anthropologists, Portland, Oregon, April 2012
- Differences in endocranial shape between Homo and Pongids assessed through non-rigid deformation analysis of high-resolution CT images*, talk co-authored with Ralph Holloway, Janet Monge, Brian Avants, and James Gee, 80<sup>th</sup> Annual Meeting of the American Association of Physical Anthropologists, Minneapolis, Minnesota, April 2011
- The LBI endocast: un-adorned, un-smoothed, a replication study based on the original CT scan data*, talk co-authored with R.L. Holloway (senior author) and J. Monge, 80<sup>th</sup> Annual Meeting of the American Association of Physical Anthropologists, Minneapolis, Minnesota, April 2011
- New 3D automatic methods for the analysis of the endocranial shape and its relationship with ectocranial structures: assessment and preliminary experiments*, poster co-authored with S. Prima, R. Holloway, G.Subsol, B.Combes, J. Braga and J.Monge, 80<sup>th</sup> Annual Meeting of the American Association of Physical Anthropologists, Minneapolis, Minnesota, April 2011
- The importance of exploring non-linguistic functions of human brain language areas for explaining language evolution*. Poster presented at EVOLANG8: The 8th International Conference on the Evolution of Language, Utrecht, Netherlands, April 2010.
- Creating statistical atlases of modern primate endocranial morphology using non-rigid deformation analysis of high-resolution CT images*. Talk co-authored with J. Monge, R. L. Holloway, B.B. Avants, and J.C. Gee, 79<sup>th</sup> Annual Meeting of the American Association of Physical Anthropologists, Albuquerque, New Mexico, April 2010
- The Hobbit Brain: some questions about its 'derived' features*. Talk co-authored with R. L. Holloway (senior author) and J. Monge, 79<sup>th</sup> Annual Meeting of the American Association of Physical Anthropologists, Albuquerque, New Mexico, April 2010
- An atlas of modern human cranial morphology constructed via non-rigid deformation analysis of high-resolution CT images*. Poster co-presented with J. Monge, B.B. Avants, and J.C. Gee, 78<sup>th</sup> Annual Meeting of the American Association of Physical Anthropologists, Chicago, Illinois, April 2009
- Endocast asymmetry in pongids assessed via non-rigid deformation analysis of high-resolution CT images*. Poster co-presented with R. L. Holloway, B. B. Avants, and J. C. Gee, 77<sup>th</sup> Annual Meeting of the American Association of Physical Anthropologists, Columbus, Ohio, April 2008
- Sex differences in cranial form assessed via non-rigid deformation analysis of high-resolution CT images*. Poster co-presented with J. Monge, B. B. Avants, D. Glotzer, J. C. Gee, 76<sup>th</sup> Annual Meeting of the American Association of Physical Anthropologists, Philadelphia, Pennsylvania, March 2007
- 4-dimensional diffeomorphic modeling: A novel approach for investigating human embryonic brain development*. Poster co-presented with L.D. Glotzer, 76<sup>th</sup> Annual Meeting of the American Association of Physical Anthropologists, Philadelphia, Pennsylvania, March 2007

- Scaling of brain and body weight within modern and fossil hominids: implications for the Flores specimen.* Talk co-authored with John S. Allen, 75<sup>th</sup> Annual Meeting of the American Association of Physical Anthropologists, Anchorage, Alaska, March 2006
- The brain endocast of Homo floresiensis: microcephaly and other issues...* Talk co-authored with R. L. Holloway, P. Brown, J. Monge, 75<sup>th</sup> Annual Meeting of the American Association of Physical Anthropologists, , Anchorage, Alaska, March 2006
- A new method for assessing endocast morphology: calculating local curvature from 3D CT images.* Talk co-authored with B. B. Avants, J. C. Gee, J. Monge, J. E. Lewis, and R. L. Holloway, 74<sup>th</sup> Annual Meeting of the American Association of Physical Anthropologists, Milwaukee, Wisconsin, April 2005
- Analysis of chimp-human brain differences via non-rigid deformation of 3D MR images.* Talk co-authored with B. B. Avants, J. C. Gee, L. D. Glotzer, and M. J. Sheehan, 73<sup>rd</sup> Annual Meeting of the American Association of Physical Anthropologists, Tampa, Florida, April 2004
- Validation of plaster endocast morphology through 3D CT image analysis.* Talk co-authored with B. Avants, J. Gee, J. Monge, J. E. Lewis, and R. L. Holloway, 73<sup>rd</sup> Annual Meeting of the American Association of Physical Anthropologists, Tampa, Florida, April 2004.
- Endocranial capacity estimated from 3-D CT: Methodological issues.* Talk co-authored with J. E. Lewis and J. Monge, 73<sup>rd</sup> Annual Meeting of the American Association of Physical Anthropologists, Tampa, Florida, April 2004
- The CT Database at the University of Pennsylvania Museum.* Talk co-authored with J. Monge, J. E. Lewis and D. Glotzer, 73<sup>rd</sup> Annual Meeting of the American Association of Physical Anthropologists, Tampa, Florida, April 2004
- Geographic patterns of nasal morphology in Homo.* Talk co-authored with M. Meyer and J. Blumenfeld, 73<sup>rd</sup> Annual Meeting of the American Association of Physical Anthropologists, Tampa, Florida, April 2004
- The Penn Cranial CT project: creating an online archive of high-resolution CT images of museum specimens.* Poster co-presented with Janet Monge, Annual Meeting of the Natural Science Collections Alliance, Berkeley, California, June 2003
- Evolution of the prefrontal cortex: A stereological analysis of primate brain MRI scans.* Poster co-presented with L. Daniel Glotzer, 72<sup>nd</sup> Annual Meeting of the American Association of Physical Anthropologists, Tempe, Arizona, April 2003
- The relevance of brain size for understanding the evolution of semantic complexity,* 4<sup>th</sup> Annual Evolution of Language Conference, Harvard University, March 2002
- Modeling evolution of language without “mind reading”,* Co-authored with Craig Martell, Human Behavior and Evolution Society Annual Meeting, London, U.K., June 2001
- A neural net model of word learning in children that does not require language-specific innate constraints,* Co-authored with Craig Martell, Human Behavior and Evolution Society Annual Meeting, London, U.K., June 2001
- The effects of different brain indices on brain/behavior relationships: a within-species study of humans,* 69<sup>th</sup> Annual Meeting of the American Association of Physical Anthropologists, San Antonio Texas, April 2000



*Relationships between corpus callosum morphology and behavior in normal human females*, 67<sup>th</sup> Annual Meeting of the American Association of Physical Anthropologists, Salt Lake City, Utah, April 1998.

*Brain Anatomy and Behavior in an Evolutionary Perspective*, 9<sup>th</sup> Annual Meeting of the Human Behavior and Evolution Society, University of Arizona, Tucson, June 1997.

*Is Brain Size a Causal Influence on IQ?* 8<sup>th</sup> Annual Meeting of the Human Behavior and Evolution Society, Northwestern University, Evanston, Illinois, June 28 - July 2, 1996.

*Is syntax simply an emergent characteristic of the evolution of semantic complexity?* 7<sup>th</sup> Annual Meeting of the Human Behavior and Evolution Society, University of California, Santa Barbara, June 28 - July 2, 1995.

*Brain size scaling and body composition in mammals: Implications for the sex difference in brain size in Homo sapiens*, 64<sup>th</sup> Annual Meeting of the American Association of Physical Anthropologists, Oakland, California, April 1995.

*Comparison of intraspecific craniometric variability in Homo, Pan, and Gorilla*, 58<sup>th</sup> Annual Meeting of the American Association of Physical Anthropologists, California, April 1989.

#### *Service And Outreach Lectures*

*Using computers to teach physical anthropology: the Blind Watchmaker evolution simulation software*, Topics on Teaching: Displaying Computer Text and Images, U.C. Berkeley Office of Educational Development, April, 1989.

**Teaching**

- Fall 2009 to present Indiana University, Department of Anthropology: *Graduate courses*: “Evolution of Cognition,” “Brain Evolution,” “Language Evolution,” “Evolutionary Theory.” *Undergraduate courses*: “Introduction to Evolution of the Brain,” “Human Origins and Prehistory,” “Evolution of Human Behavior”
- Fall 2007 to 2009 James Madison University, Department of Sociology and Anthropology: *Undergraduate courses*: “Introduction to Biological Anthropology,” “Human Evolution,” “Evolution of the Brain,” “Human Variation and Adaptation,” “The Discipline of Anthropology” (team-taught collaborative effort among all the anthropology faculty at JMU)
- Fall 2005 to Summer 2007 University of Michigan-Dearborn, Department of Behavioral Sciences: *Undergraduate courses*: “Introduction to Anthropology,” “Human Evolution,” “Language and Society,” “Evolution of the Brain,” “Race and Evolution,” “Psychological Anthropology”
- Fall 1998 to Spring 2005 University of Pennsylvania, Department of Anthropology: *Graduate courses*: “Evolution of Brain and Behavior,” “Perspectives on the Evolution of Human Behavior.” *Undergraduate courses*: “Introduction to Evolution of the Brain,” “Evolution of Behavior,” “Human Biology,” “Introduction to Human Evolution.”
- Fall 1996 University of California, San Francisco: *Instructor* for graduate level “Gross Anatomy and Embryology” under the direction of Dr. Diane Barber, Department of Oral Biology
- Spring 1995 University of California, Berkeley, Department of Anthropology: *Instructor* (GSI IV) for undergraduate course “Evolution of Human Behavior”
- Summer and Fall 1991 University of the Pacific School of Dentistry, Department of Anatomy: *Clinical Instructor* for graduate level “Gross Anatomy” under the direction of Dr. Jack Chamberlain.
- Fall 1987 to Spring 1993 University of California, Berkeley, Department of Anthropology: *Graduate Student Instructor* for 11 undergraduate classes including: “Introduction to Physical Anthropology” and “Current Issues in Anthropological Thought”

**Student Advising***Dissertation Chair:*

Marc Meyer, 2005, “Functional biology of the Homo erectus axial skeleton from Dmanisi, Georgia,” 2005, University of Pennsylvania

Delanie Hurst, in progress, “Endocranial morphology in primates and its relationship to behavior”

Dan Glotzer, in progress, “4-D diffeomorphic modelling of pre-natal morphogenesis”

*Dissertation & Masters thesis committee member:*

Indiana University:

Robert Mahaney, Shawn Hurst, Delanie Hurst, Mackenzie Loyet

University of Pennsylvania:

James Gallagher (Master of Liberal Arts), Dan Glotzer, Susan Haun, Jason Lewis, Jane Kauer, Marc Meyer, Melissa Murphy, Seran Schug, Steven Schwartz, Susan Staggs

*Graduate student advisor:*

## Indiana University:

Sheila Blanchard, Delanie Hurst, Shawn Hurst, Robert Mahaney, Mackenzie Loyet, Kimberly Simmons

*Independent research projects:*

## Graduate students

## Indiana University:

Robert Mahaney, Spring 2010: "Analysis of Tabun lithics"

Delanie Hurst, Spring 2012: "Vocalization repertoire size and endocranial morphology in primates"

Delanie Hurst, Spring 2011: "Vocalization repertoire size and brain size in primates"

Mackenzie Loyet, Summer 2011 - Spring 2012: "Sociality and brain morphology in modern humans"

## University of Pennsylvania:

Melanie Chang, 2003: "3D analysis of frontal bone morphology"

Jason Lewis, Summer 2003-present: "Acquisition and analysis of 3D laser scans of 3.2 MYA hominid fossils"

Jason Lewis, Fall 2002-present: "CT analysis of cranial morphology"

Marc Meyer, Spring 2002: "Cerebellum morphology and behavior: and MRI study of healthy subjects"

Marc Meyer, Fall 2001: "Evolution of the cerebellum"

Dan Glotzer, Spring 2001-present: "Comparative analysis of prefrontal cortex surface area and volume in primates"

James Gallagher, Spring 2001, "Evolution of Language"

Seran Schug, Spring 2001, "Neurobiology of Body Image"

## Undergraduate students:

## Indiana University:

Lindsey Kitchell, Anthropology, Spring 2012: "Left-right asymmetry of the brain assessed through deformation mapping"

Audrey Brittingham, Anthropology, Fall 2011-Spring 2012: "Possible signatures of tool use on primate endocrania"

Katharine Babcock, Anthropology, Spring 2012: "Assessing the extent of overlap of brain activation during tool use with other cognitive functions reported in the literature"

## James Madison University:

Joanna Bickham, Anthropology honor's thesis, Spring 2008: "Origin and Evolution of the White Sclera of the Human Eye"

## University of Michigan-Dearborn:

Leah Canvasser, Fall 2006-Spring 2007: "Hand Preference in Orangutans, Allen Swamp Monkeys, and Tamarins"

Kayla DeMarco, Fall 2006-Spring 2007: "Effects of Facial Preferences on the Likelihood of Infants Eliciting Care from Adults"

## University of Pennsylvania:

R. Erik Malmgren-Samuel, independent research, Fall 2003 – Spring 2004: "An Evolutionary Perspective on ADHD: A Cross-Cultural Study of Associations with Degrees of Media Exposure"

Yuri Kruman, Anthropology honor's thesis, Fall 2003-Spring 2004: "Comparative analysis of primate corpus callosum sexual dimorphism: An MRI study"

Michael Sheehan, independent research, Summer 2003-present: "Prefrontal cortex size in primates: 3D image analysis"

- Jason Lewis, independent research, Fall 2002 – Spring 2003: “Endocranial morphology derived from high-resolution CT”
- Jasmine Maldonado, Anthropology honor’s thesis, Fall 2001-Spring 2002: “Mate Jealousy: Comparison of Heterosexual and Homosexual Attitudes”
- Rachel Reader, Anthropology honor’s thesis, Fall 2001-Spring 2002: “The evolution of language and music”
- Elana Leventhal, Anthropology honor’s thesis, Fall 2001-Spring 2002: “Perspectives on death and dying”
- Rachel Sherman, Cognitive Science major honor’s thesis, Fall 2001-Spring 2002: “How dolphins see the world: perception and cognition in a large-brained aquatic mammal”
- Maia Jachimowicz, independent research, Fall 2001-Spring 2002: “Detailed analysis of gestures in chimps: an empirical study”
- Piper Silverman, independent research, Fall 2001-Spring 2002: “Prefrontal cortex surface area in a comparative perspective”
- Stephanie Langin-Hooper, independent research, Spring 2001-Spring 2002: “Investigations into prefrontal surface area and volume in human and non-human primate brains”
- Neil Sanuck, Biological Basis of Behavior major thesis, Spring 2001-Spring 2002 “Corpus callosum morphology and behavior: advances in analysis”
- Jamie Pinto, Anthropology honor’s thesis, Fall 2000-Spring 2001: “Risk taking and mate selection: An evolutionary approach”
- Daniel Finkel, independent research, Spring 2000, “Evolution of the Visual Cortex: An Investigation of Associations with External Orbit Size”

## **Service**

### *Service to the profession:*

Co-director of the Open Research Scan Archive at Penn, which provides access to over 5400 high resolution research scans of skeletal material free to researchers worldwide (<http://www.indiana.edu/~orsa/>; <http://plum.museum.upenn.edu/~orsa/Welcome.html>)

Peer-reviewer for articles submitted to:

*Proceedings of the National Academy of Sciences, USA*

*American Journal of Physical Anthropology*

*Journal of Human Evolution*

*European Journal of Neuroscience*

*Neuroscience & Biobehavioral Reviews*

*Neuroimage*

*Cognitive Science*

*Brain, Behavior and Evolution*

*Homo: Journal of Comparative Human Biology*

*Complexity*

*Interaction Studies: Social Behaviour and Communication in Biological and Artificial Systems*

Peer-reviewer for grants submitted to:

*National Science Foundation* (including Dissertation Improvement Grant panel Fall of 2014)

*Leakey Foundation*

American Association of Physical Anthropologists:  
 Annual Meeting Program Committee member (2012)  
 Chair of a session at the Annual Meeting (2006, 2007, 2012)

*Organizations and committees at Indiana University:*

Cognitive Science Program, 2010-present; Anthropology liaison 2012-present  
 Center for Integrative Study of Animal Behavior, member 2011-present; Steering Committee member 2013-present  
 Center for Biological Research Collections, advisory committee member, 2013-present  
 Interdepartmental Search Committee, 2010-2011  
 Chair: Student & AI Review & Award Committee, Department of Anthropology, 2012-2013  
 Student & AI Review & Award Committee, Department of Anthropology, 2009-2010, 2011-2012  
 Faculty Salary and Awards Committee, Department of Anthropology, 2011-2012  
 Graduate Admissions Committee, Department of Anthropology, 2010-2011  
 Graduate Affairs Committee, Department of Anthropology, 2009-2011  
 Darwin Club faculty sponsor and organizer, Department of Anthropology, 2010-present

*Organizations and committees at James Madison University:*

Human Science Minor Coordinator, 2008-2009  
 Human Science Minor organizing committee, 2007-2008  
 JMU Institutional Animal Care and Use Committee (IACUC), 2008-2009  
 Anthropology Program Committee, 2007-2009  
 Dept. of Sociology & Anthropology co-representative on the General Education - Cluster Three (Natural World) University Committee, , 2008-2009  
 Anthropology Committee on the Madison College Reorganization Proposal, 2008-2009  
 3 search committees, 2007-2009  
 Lambda Alpha Faculty Representative, 2008-2009  
 Anthropology Club faculty co-sponsor, , 2007-2009

*Organizations and committees at the University of Michigan-Dearborn:*

Library liaison for Anthropology Discipline  
 Undergraduate Anthropology Association - faculty advisor  
 Anthropology Summer Field School Scholarship Competition Committee  
 Student Intern Advisor (Winter 2006, Fall 2006, and Winter 2007)

*Organizations and committees at the University of Pennsylvania:*

Consulting Scholar, Physical Anthropology Section, University of Pennsylvania Museum of Archaeology and Anthropology, 2005-present  
 Anthropology Graduate Group member  
 Biological Basis of Behavior Major member  
 Institute for Research in Cognitive Science member  
 Center for Cognitive Neuroscience member  
 Museum Web Development Committee  
 Museum Web Advisory Committee  
 Anthropology Field Funds Committee  
 Anthropology Award Committee (selection of best senior theses)  
 Four separate search committees within Anthropology

**Professional Memberships**

American Association of Physical Anthropologists

**References**

Professor Nicholas Toth, Department of Anthropology, Indiana University, co-director of the Stone Age Institute, 1392 West Dittmore Rd., Gosport Indiana 47433; email: [toth@indiana.edu](mailto:toth@indiana.edu)

Professor Morten H. Christiansen, Department of Psychology, Cornell University, Ithaca, NY 14853, email: [christiansen@cornell.edu](mailto:christiansen@cornell.edu)

Professor William S.-Y. Wang, Department of Electronic Engineering, Room 404, Ho Sin Hang Engineering Building, Chinese University of Hong Kong, Shatin, N.T., Hong Kong; and the Department of Linguistics, 2222 Piedmont Avenue, University of California, Berkeley, 94720, USA; email: [wsywang@ee.cuhk.edu.hk](mailto:wsywang@ee.cuhk.edu.hk)

Professor Kevin Hunt, Department of Anthropology, Indiana University, Student Building 130, 701 E. Kirkwood Avenue, Bloomington IN 47405-7100, USA; e-mail: [kdhunt@indiana.edu](mailto:kdhunt@indiana.edu)

Professor Ralph L. Holloway, Department of Anthropology, Columbia University, 452 Schermerhorn Extension, 1200 Amsterdam Avenue, MC 5523, New York, NY 10027; email: [rlh2@columbia.edu](mailto:rlh2@columbia.edu)

Dr. Barry Bogin, Centre for Human Development and Ageing, Department of Human Sciences, Loughborough University, Leicestershire, LE11 3TU, United Kingdom; email: [B.A.Bogin@lboro.ac.uk](mailto:B.A.Bogin@lboro.ac.uk) Adjunct Assistant

Professor Kathy Schick, Department of Anthropology, Indiana University, co-director of the Stone Age Institute, 1392 West Dittmore Rd., Gosport Indiana 47433; email: [kaschick@indiana.edu](mailto:kaschick@indiana.edu)

Dr. Janet Monge, Department of Anthropology, University of Pennsylvania, Room 323 Museum, 3260 South St., Philadelphia, PA, 19104-6398, USA. Phone: (215) 898-4503; e-mail: [jmonge@sas.upenn.edu](mailto:jmonge@sas.upenn.edu)