# 2016 Publications, Conference Presentations, Theses and Dissertations by FAC Faculty and Students and Research Involving FAC Resources

## Publications

Altes, Kristina B. 2016. Feature proportion accuracy of hand-drawn facial approximation. *Science & Justice* 56(6):443-452.

Bolme, D.S., R. A. Tokola, C. B. Boehnen, T. B. Saul, K. A. Sauerwein and D.W. Steadman. 2016. Impact of environmental factors on biometric matching during human decomposition. 2016 IEEE 8th International Conference on Biometrics Theory, Applications and Systems (BTAS), Niagara Falls, NY, September 5, 2016, pp. 1-8.

doi: 10.1109/BTAS.2016.7791177. (Winner Best Paper)

Bongiovanni, R. 2016. Effects of parturition on pelvic age indicators. *Journal of Forensic Sciences*, 61: 1034–1040.

Colarusso, Tara. 2016. A test of the Passalacqua age at death estimation method using the sacrum. *Journal of Forensic Sciences* 61(S1):S22-S29.

Hadi, H., and C. Wilkinson. 2016. Estimation and reconstruction of facial creases based on skull crease morphology. *Australian Journal of Forensic Sciences* June 21 2016:1-15.

Hayashi A, Emanovsky PD, Pietrusewsky M, Holland TD. 2016. A Procedure for calculating the vertical space height of the sacrum when determining skeletal height for use in the anatomical method of adult stature estimation. *Journal of Forensic Sciences* 61: 415–423.

Hens, Samantha M., and Kanya Godde. 2016. Auricular surface aging: comparing two methods that assess morphological change in the ilium with Bayesian analyses. *Journal of Forensic Sciences* 61(S1): S30-S38.

Jeong, Yangseung. 2016. A pilot study investigating tooth wear as a possible aging indicator in a modern population. *International Journal of Forensic Sciences* 1(2): 000111.

Jeong, Yangseung, and Lee Meadows Jantz. 2016. Developing Korean-specific equations of stature estimation. *Forensic Science International* 260:105-e1.

Jeong, Yangseung and Lee Meadows Jantz. 2016. Caveats in using Trotter and Gleser’s (1958) Asian equations for stature estimation. *Korean Journal of Physical Anthropology* Vol. 29, No. 3 (2016) pp. 81-91. <http://dx.doi.org/10.11637/kjpa.2016.29.3.81>

Jeong, Yangseung, Lee Meadows Jantz, and Jake Smith. 2016. Investigation into seasonal scavenging patterns of raccoons on human decomposition. *Journal of Forensic Sciences* 61(2):467–471.

Johnson, Hunter R., Donovan D. Trinidad, Stephania Guzman, Zenab Khan, James

V. Parziale, Jennifer M. DeBruyn, Nathan H. Lents. 2016. A machine learning approach for using the postmortem skin microbiome to estimate the postmortem interval. *Plos One*. DOI:10.1371/journal.pone.0167370

Jung, Hyunwoo, and Eun Jin Woo. 2016. Evaluation of mastoid process as sex indicator in modern white Americans using geometric morphometrics. *Journal of Forensic Sciences* 61(4):1029-1033.

Klales, Alexandra R. 2016. Secular change in morphological pelvic traits used for sex estimation. *Journal of Forensic Sciences* 61(2):295-301.

Krishan, Kewal, Tanuj Kanchan, and Magdy A. Kharoshah. 2016. Advances in Forensic Anthropology–Creation of skeletal databases for forensic anthropology research and casework. *Egyptian Journal of Forensic Sciences* 6(2):29-30.

Langley, Natalie R., Lee Meadows Jantz, Stephen D. Ousley, and Richard L. Jantz. 2016. *Data Collection Procedures for Forensic Skeletal Material 2.0.* University of Tennessee.

Langley, Natalie R., Richard L. Jantz, and Stephen D. Ousley. 2016. The effect of novel environments on modern American Skeletons. *Human Biology* 88(1): 5-13.

Lesciotto, K. M., L. L. Cabo, and H. M. Garvin. 2016. A morphometric analysis of prognathism and evaluation of the gnathic index in modern humans. *HOMO-Journal of Comparative Human Biology*. Homo 2016 Apr 21. Epub 2016 Apr 21.

Listi, Ginesse A. 2016. The use of entheseal changes in the femur and os coxa for age assessment. *Journal of Forensic Sciences* 61(1): 12-18.

Maijanen, Heli, Rebecca J. Wilson‐Taylor, and Lee Meadows Jantz. 2016. Storm‐related postmortem damage to skeletal remains. *Journal of Forensic Sciences* 61(3):832-837.

Miranker, Molly. 2016. A comparison of different age estimation methods of the adult pelvis. *Journal of Forensic Sciences* 61(5):1173-1179.

Reinitz SD, Slocum AH, Magoon CJ, Van Citters DW. 2016. A device for enabling placement of intra-osseous infusion tools. *Journal of Medical Devices*. 10(2):020943.

Spradley, Katherine M., and Richard L. Jantz. 2016. Ancestry estimation in forensic anthropology: geometric morphometric versus standard and nonstandard interlandmark distances. *Journal of Forensic Sciences* 61(4):892-897.

Steadman, Dawnie Wolfe, William Basler, Michael J. Hochrein, Dennis F. Klein, and Julia C. Goodin. Investigative and legal aspects of a U.S. federal death penalty case. 2016. In *The Handbook of Forensic Anthropology and Archaeology, 2nd ed.* edited by Soren Blau and Douglas Ubelaker. Walnut Creek, CA: Left Coast Press. pp 447-462.

Worne, Heather, Giovanna M. Vidoli, and Dawnie Wolfe Steadman. 2016. Bioarchaeological analysis of the WPA Mound Bottom Skeletal Sample.  In *New Deal Archaeology in the Tennessee Valley: 1933-1942*, edited by David A. Dye.  Tuscaloosa: University of Alabama Press.

## Conference Presentations

Andronowski, Janna. Normal variation in osteocyte lacunar parameters between human skeletal elements in cortical and cancellous bone from adult males - a synchrotron micro-CT approach. Poster presented at the American Association of Physical Anthropologists, Atlanta, Georgia, April 14, 2016.

Bailey, Christine, Kristen A. Broehl and Amy Z. Mundorff. The use of the sustentaculum tali in estimating sex. Poster presented at the American Academy of Forensic Sciences, Las Vegas, NV. February 25, 2016.

Bolme D.S., R. A. Tokola, C. B. Boehnen, T. B. Saul, K. A. Sauerwein and D. Wolfe Steadman. 2016. Impact of environmental factors on biometric matching during human decomposition.  IEEE 8th International Conference on Biometrics Theory, Applications and Systems (BTAS), September 5, 2016, Niagara Falls, NY, pp. 1-8.

doi: 10.1109/BTAS.2016.7791177.

Brown, Michael A., Charles Froome, Shawn Hennessy, Rebecca Gerling, Jeffrey Ellison and Ann W. Bunch. An external validation of the citrate content postmortem interval (PMI) method. Paper presented at the American Academy of Forensic Sciences, Las Vegas, NV. February 26, 2016.

Byrnes, Jennifer F., Michael W. Kenyhercz, Samantha C. Torres and Gregory E. Berg. Examining inter-observer reliability of metric and morphoscopic characteristics of the mandible. Paper presented at the American Academy of Forensic Sciences, Las Vegas, NV. February 25, 2016.

Castells Navarro, Laura and Jo Buckberry. Diagnosing Diffuse Idiopathic Skeletal Hyperostosis (DISH) before vertebral ankyloses. Poster presented at the Paleopathology Association, Atlanta, Georgia, April 13, 2016.

Congram, Derek and Kernyhercz, Michael. Thinking spatially: Human behavioral ecology and forensic anthropology. Poster presented at the American Association of Physical Anthropologists, Atlanta, Georgia, April 14, 2016.

Corcoran Katie, Amy Z. Mundorff, Devin White and Whitney Emch. Remote sensing of human burials. Paper presented at the American Academy of Forensic Sciences, Las Vegas, NV. February 25, 2016.

Costello, Amanda K. An analysis of sexual dimorphism using geometric morphometrics (GM) of the femur and tibia: The use of GM in assessing sex of fragmented remains. Poster presented at the American Academy of Forensic Sciences, Las Vegas, NV. February 26, 2016.

Dautartas, Angela, Dawnie W. Steadman, Amy Z. Mundorff, Lee Meadows Jantz and Giovana M. Vidoli. A Comparison of seasonal decomposition patterns between human and non-human animal models. Paper presented at the American Academy of Forensic Sciences, Las Vegas, NV. February 26, 2016.

[**Dudzik Beatrix, Heli Maijanen, and Kathleen Hauther. The mental eminence as a marker of sexual dimorphism in dentate and edentulous individuals: An analysis using geometric morphometry**](http://meeting.physanth.org/program/2016/session45/dudzik-2016-the-mental-eminence-as-a-marker-of-sexual-dimorphism-in-dentate-and-edentulous-individuals-an-analysis-using-geometric-morphometry.html)**.** Poster presented at the American Association of Physical Anthropologists, Atlanta, Georgia, April 14, 2016.

Eleazer, Courtney, Rebecca Skopa Kelso and Frankie West. Getting the shaft? Investigating midshaft location in immature femora. Poster presented at the American Association of Physical Anthropologists, Atlanta, Georgia, April 14, 2016.

Emmons, Alexandra, DeBruyn, Jennifer, Mundorff, Amy, Cobaugh, Kelly, and Cabana, Graciela. Cadaver decomposition and the persistence of human DNA in the underlying soil. Poster presented at the American Association of Physical Anthropologists, Atlanta, Georgia, April 14, 2016.

Emmons, Alexandra, Jennifer M. DeBruyn, Amy Z. Mundorff, K.L. Cobaugh, and Graciela S. Cabana. Examining the persistence of human DNA in soil during cadaver decomposition. Poster presented at 68th annual meeting of the American Academy of Forensic Sciences, Las Vegas NV, February 25, 2016.

Fleming, Jamie N. Hilda S. Castillo, Ernest J. Drummond, Rabih Jabbour, Samir Deshpande, Dawnie W. Steadman, Lee Meadows Jantz, Kathleen Hauther, Jack Hieptas, Stephen D. Shaw, JoAnn Buscaglia, Brian Eckenrode, and Joseph Donfack. *In Vitro* Experiments Using Human Cadaver Head Hairs to Investigate the Formation Mechanism of Postmortem Hair Root Bands (PMRBs). Poster presented at the American Academy of Forensic Sciences, Las Vegas, NV. February 25, 2016.

Fojas, Christina. Physiological stress in the Middle Cumberland Region of Tennessee: Mortality and survivorship differences during the Mississippian Period. Poster presented at the American Association of Physical Anthropologists, Atlanta, Georgia, April 15, 2016.

Garvin, Heather M, Kate M. Lesciotto, Heather M., and Luis L. Cabo. The influence of sex and allometry on subnasal prognathism in modern humans. Poster presented at the American Association of Physical Anthropologists, Atlanta, Georgia, April 15, 2016.

Gooding, Alice, McClung M, Smith SK. Thoracic fracture patterning as a result of blast trauma. Poster presented at the American Association of Physical Anthropologists, Atlanta, Georgia, April 14, 2016.

Hepner, Tricia and Dawnie Steadman. Sowing the Dead: Massacres and the Missing in Northern Uganda. Poster presented at the American Association of Physical Anthropologists, Atlanta, Georgia, April 16, 2016.

Kenyhercz, Michael W. Molar morphometric variation within modern US Populations. Poster presented at the American Association of Physical Anthropologists, Atlanta, Georgia, April 16, 2016.

Kenyhercz, Michael W., Nicholas V. Passalacqua and Joseph T. Hefner. Missing data imputation methods using morphoscopic traits and their performance in the estimation of ancestry. Poster presented at the American Academy of Forensic Sciences, Las Vegas, NV. February 26, 2016.

Kim, Jieun. Multiple population-specific age estimation methods or one-size-fits-all single age estimation method: which approach works best? Poster presented at the American Association of Physical Anthropologists, Atlanta, Georgia, April 15, 2016.

Klales, Alexandra R., Michael W. Kenyhercz, Kyra E. Stull, Kyle A. McCormick, and S.J. Call. Worldwide population variation in pelvic sexual dimorphism. Poster presented at the American Association of Physical Anthropologists, Atlanta, Georgia, April 16, 2016.

L’Abbe. Ericka N., Steven A. Symes, Michael W. Kenyhercz, Kyra E. Stull, Gabriele C. Kruger, Marie Christine Dussault, Leandi Liebenberg, Erin Chapman and Jolandie Myburgh. Reliability of biomechanical descriptors to assess blunt force injuries in the cranium. Poster presented at the American Academy of Forensic Sciences, Las Vegas, NV. February 26, 2016.

Langley, Natalie R. The transformation of data collection procedures for forensic skeletal material: Evaluating osteometric data in forensic anthropology. Paper presented at the National Institute of Justice Forensic Science Research and Development Symposium, Las Vegas, NV. February 23, 2016.

Langley, Natalie R., Alesia Cloutier, Cade Lampley and Beatrix Dudzik. Decision trees and non-metric traits: A more accurate approach for sex estimation of the skull. Paper presented at the American Academy of Forensic Sciences, Las Vegas, NV. February 25, 2016.

Langley, Natalie R., Lee Meadows Jantz, Shauna McNulty, Heli Maijanen, Stephen D. Ousley and Richard Jantz. DCP 2.0: Changes in data collection procedures for forensic skeletal material. Poster presented at the American Academy of Forensic Sciences, Las Vegas, NV. February 25, 2016.

Maijanen, Heli, Beatrix Dudzik and Kathleen Hauther. Sexual dimorphism in mandibular morphology between dentate and edentate individuals – Implications for sex estimation. Poster presented at the American Academy of Forensic Sciences, Las Vegas, NV. February 24, 2016.

McCormick, Kyle A. Osteometric reassociation through quantifying long bone size and shape and predicting using Bayesian regression via Hamiltonian Markov Chain Monte Carlo (MCMC). Paper presented at the American Academy of Forensic Sciences, Las Vegas, NV. February 25, 2016.

Milner, George R., Jesper L. Boldsen, Stephen D. Ousley, Svenja Weise, Sara M. Getz, and Peter Tarp. Improved adult age estimation using new skeletal traits and transition analysis. Poster presented at the American Academy of Forensic Sciences, Las Vegas, NV. February 24, 2016.

Ousley, Stephen D., Richard Jantz, Natalie R. Langley, Kate Spradley and Beatrix Dudzik. Thirty years of the Forensic Data Bank and Data Collection Procedures (DCP) 2.0: Continuity and transformation. Poster presented at the American Academy of Forensic Sciences, Las Vegas, NV. February 26, 2016.

Price, Meghan, James Pokines and Jonathan D. Bethard. Age estimation using the sternal end of the clavicle: A test of the Falys and Prangle archaeological method for forensic application. Poster presented at the American Academy of Forensic Sciences, Las Vegas, NV. February 24, 2016.

Saul, Tiffany, Kelly Sauerwein, Dawnie W. Steadman and Chris Boehnen. Postmortem identification from physiological biometrics: A study of fingerprints, irises and facial images. Poster presented at the American Academy of Forensic Sciences, Las Vegas, NV. February 24, 2016.

Steadman, Dawnie W., Angela M. Dautartas, Amy Z. Mundorff, Giovanna M. Vidoli, Lee Meadows Jantz. Differential raccoon scavenging among pig, rabbit, and human subjects. Paper presented at the American Academy of Forensic Sciences, Las Vegas, NV. February 27, 2016.

Steadman, Dawnie W., Angela Dautartas, Lee Jantz, Amy Mundorff, Giovanna Vidoli. A multidisciplinary validation study of non-human animal models for human decomposition research. Paper presented at the National Institute of Justice Forensic Science Research and Development Symposium, Las Vegas, NV. February 23, 2016.

Steadman, Dawnie W. Discussant, Toward a Holistic Forensic Anthropology. Discussion of invited poster session presented at the American Association of Physical Anthropologists, Atlanta, GA. April 14, 2016.

Steadman, Dawnie, and Heli Maijanen. Recidivism of traumatic injury in the Bass Donated Skeletal Collection. Poster presented at the American Association of Physical Anthropologists, Atlanta, Georgia, April 16, 2016.

Steadman, Dawnie Wolfe. Workshop: Recovery Practices in Forensic Casework. Kentucky Coroners Association, Louisville, KY. April 27, 2016

Steadman DW. Bodies of evidence: Science and politics in human rights investigations. Paper presented as part of the Executive Symposium, Bioarchaeologists Speak Out: Challenging the Pundits with Evidence and New Discoveries from the Past. American Anthropological Association, November 19, 2016. Minneapolis, Minnesota.

Upson-Taboas, Charity F. Musculoskeletal manifestations of diabetes mellitus in the William M. Bass Donated Skeletal Collection. Poster presented at the American Association of Physical Anthropologists, Atlanta, Georgia, April 15, 2016.

Villareal, Margarita M. Estimation of stature from the foramen magnum region in an American population: A validation study. Poster presented at the American Academy of Forensic Sciences, Las Vegas, NV. February 26, 2016.

## Theses and Dissertations

Ammer, Saskia. The Effect of Body Composition on Human Decomposition Variables. Master’s Thesis. The Sir Michael Cobham Library Bournemouth University, 2016.

Andronowski, Janna.  Evaluating Differential Nuclear DNA Yield Rates Among Human Bone Tissue Types: A Synchrotron Micro-Ct Approach. Ph.D. Dissertation, Department of Anthropology, University of Tennessee, 2016.

Corcoran, Katie Ann. A Characterization of Human Burial Signatures using Spectroscopy and LIDAR. Ph.D. Dissertation, Department of Anthropology, University of Tennessee, 2016.

Fojas, Christina Laiz. Modeling Prehistoric Health in the Middle Cumberland Region of Tennessee: Mississippian Populations on the Threshold of Collapse. Ph.D. Dissertation, Department of Anthropology, University of Tennessee, 2016.

Kim, Ji Eun. Understanding Population-Specific Age Estimation Using Multivariate Cumulative Probit Regression for Asian Skeletal Samples. Ph.D. Dissertation, Department of Anthropology, University of Tennessee, 2016.

McCormick, Kyle. A Biologically Informed Structure to Accuracy in Osteometric Reassociation. Ph.D. Dissertation, University of Tennessee, 2016.

McNulty, Shauna Lynn. An Analysis of Skeletal Trauma Patterning of Accidental and Intentional Injury. Ph.D. Dissertation, Department of Anthropology, University of Tennessee, 2016.

Minsky-Rowland, Jocelyn. The Effect of Social and Environmental Stresses Among the Historic Arikara Native Americans. Ph.D. Dissertation, Department of Anthropology, University of Tennessee, 2016.

Parsons, Hillary. The Accuracy of the Biological Profile in Casework: An Analysis of Forensic Anthropology Reports in Three Medical Examiners’ Offices. Ph.D. Dissertation, Department of Anthropology, University of Tennessee, 2016.

Tallman, Sean D. The Evaluation and Refinement of Nonmetric Sex and Ancestry Assessment Methods in Modern Japanese and Thai Individuals. Ph.D. Dissertation, Department of Anthropology, University of Tennessee, 2016.

Watson, Ashleigh. The Efficacy of Carpal Bones in Sex Estimation of American Whites. Honors Thesis, Department of Anthropology, University of Tennessee, 2016.