

Sean G. Young

COPH 1219

(501) 526-6606

SGYoung@UAMS.edu

<http://sgyoung.me>

EDUCATION

- 2017** **PhD in Geography**
University of Iowa (Iowa City, IA)
Dissertation: “Landscape Genetics of Avian Influenza (H5N1 and H9N2) in Egyptian Poultry from 2006-2015: Co-Infection, Key Substitutions, and Viral Diffusion”
Advisor: Dr. Margaret Carrel
- 2013** **MA in Geography**
University of Arkansas (Fayetteville, AR)
Thesis: “Landscape Epidemiology and Machine Learning: A Geospatial Approach to Modeling West Nile Virus Risk in the United States”
Advisor: Dr. Jason A. Tullis
- 2011** **BS in Geography – Magna Cum Laude**
Brigham Young University (Provo, UT)
Emphasis in GIS

ACADEMIC POSITIONS

- 2017 - present **Assistant Professor**, Dept. of Environmental and Occupational Health,
University of Arkansas for Medical Sciences
- 2015 **Instructor**, Dept. of Geographical and Sustainability Sciences, University of
Iowa

AWARDS, HONORS & GRANTS/FELLOWSHIPS

- 2013 - 2017 GEEMaP (Geoinformatics for Environmental and Energy Modeling and Prediction) NSF IGERT Traineeship, University of Iowa
- 2013 - 2017 Presidential Graduate Research Fellowship, University of Iowa
- 2016 Travel Grant, GEEMaP (Geoinformatics for Environmental and Energy Modeling and Prediction) NSF IGERT Traineeship, University of Iowa
- 2016 Travel Grant, Department of Geographical and Sustainability Sciences, University of Iowa
- 2015 Travel Grant, GEEMaP (Geoinformatics for Environmental and Energy Modeling and Prediction) NSF IGERT Traineeship, University of Iowa
- 2015 CGRER (Center for Global & Regional Environmental Research) Graduate Student Travel Award, University of Iowa
- 2014 Jacques May Thesis Prize (Master’s Division), Health and Medical Geography Specialty Group of the AAG
- 2013 Travel Grant, Graduate School, University of Arkansas
- 2012 Student Assistantship, MAPPS/ASPRS 2012 Fall Conference in Tampa, FL
- 2011 Valedictorian, Geography Department, Brigham Young University

PUBLICATIONS

Peer Reviewed Journal Articles

- 2018 **Young, S. G.**, Kitchen, A., Kayali, G., & Carrel, M. Unlocking pandemic potential: prevalence and spatial patterns of key substitutions in avian influenza H5N1 in Egyptian isolates. *BMC Infectious Diseases*, 18(1). doi: 10.1186/s12879-018-3222-6
- 2017 Martin, B.E., Carrel, M., Baroch, J.A., **Young, S.G.**, Schmit, B., Nolting, J., Yoon, K.-J., Lutman, M.W., Pedersen, K., Bowman, A., Slemmons, R., Smith, D.R., DeLiberto, T., & Wan, X.-F. US feral swine were exposed to both avian and swine influenza A viruses. *Applied and Environmental Microbiology*, 01346-17. doi: 10.1128/AEM.01346-17
- 2017 Carrel, M., Zahrieh, D., **Young, S.G.**, Oleson, J., Ryckman, K.K., Wels, B., Simmons, D.L., & Saftlas, A. High prevalence of elevated blood lead levels in both rural and urban Iowa newborns: spatial patterns and area-level covariates. *PLOS ONE*, 12(5), e0177930. doi: 10.1371/journal.pone.0177830
- 2017 **Young, S.G.**, Carrel, M., Kitchen, A., Tamerius, J., Malanson, G.P., Ali, M.A., & Kayali, G. How's the flu getting through? Landscape genetics suggests both humans and birds spread H5N1 in Egypt. *Infection, Genetics and Evolution*, 49, 293-299. doi: 10.1016/j.meedgid.2017.02.005
- 2016 **Young, S.G.**, Carrel, M., Malanson, G.P., Ali, M.A., & Kayali, G. Predicting avian influenza co-infection with H5N1 and H9N2 in northern Egypt. *International Journal of Environmental Research and Public Health*, 13(9), 886. doi: 10.3390/ijerph13090886
- 2016 Carrel, M., **Young, S.G.**, & Tate, E. Pigs in space: Determining the environmental justice landscape of swine concentrated animal feeding operations (CAFOs) in Iowa. *International Journal of Environmental Research and Public Health*, 13(9), 849. doi:10.3390/ijerph13090849
- 2013 **Young, S.G.**, Tullis, J.A., & Cothren, J. A remote sensing and GIS-assisted landscape epidemiology approach to West Nile virus. *Applied Geography*, 45, 241-249. doi:10.1016/j.apgeog.2013.09.022
- 2012 **Young, S.G.** & Jensen, R.R. Statistical and visual analysis of human West Nile virus infection in the United States, 1999-2008. *Applied Geography*, 34, 425-431. doi:10.1016/j.apgeog.2012.01.008

Papers in Progress

- Gruca, T.S., Nelson, G.C., & **Young, S.G.** Reevaluating primary care Health Professional Shortage Areas in Iowa.
- Young, S.G., Hayes, C., Aram, J., Tait, M. A spatial estimate of doctor hopping for prescription opioids in Arkansas.

Book Chapters

- 2015 Tullis, J.A., Alsumaiti, T.S., Cothren, J.D., Lanter, D.P., Limp, W.F., Linck, R.F., Shi, X., & **Young, S.G.** Geoprocessing, workflows, and provenance. In P. S. Thenkabail (Ed.), *Remote sensing handbook, vol 1, Data: characterization, classification, and accuracies (1st ed.)*. Taylor & Francis.

SELECTED PRESENTATIONS

Speaker underlined

Invited Talks

- 2018 Young, S.G. Geospatial technologies for public health: Moving beyond mapping. Public Health Grand Rounds. Arkansas Department of Health, Little Rock, Arkansas

Seminars

- 2017 Young, S.G. Medical geography and GIS for public health. Research & Application Seminar. Department of Biomedical Informatics, UAMS, Little Rock, Arkansas
- 2017 Young, S.G. More than maps: GIS in public health. Public Health Seminar. College of Public Health, UAMS, Little Rock, Arkansas

Conferences & Symposia

- 2017 Young, S.G. Animal rabies in Arkansas, 1995-2016. 2017 Arkansas GIS Users Forum Training and Symposium. Eureka Springs, Arkansas
- 2017 Young, S.G., Carrel, M., Kitchen, A. Unlocking pandemic potential: key substitutions in avian influenza H5N1 in Egyptian isolates. International Medical Geography Symposium. Angers, France
- 2017 Young, S.G., Gruca, T.S., Nelson, G.C. Re-evaluating Primary Care Health Professional Shortage Areas in Iowa. American Association of Geographers Annual Meeting. Boston, Massachusetts
- 2016 Young, S.G., Carrel, M., Kitchen, A., Kayali, G. The 11th Egyptian plague: A landscape genetics analysis of avian influenza in Egyptian poultry. American Association of Geographers Annual Meeting. San Francisco, California
- 2016 Carrel, M., Young, S.G., Tate, E. Pigs in space: Determining the environmental justice landscape of swine Concentrated Animal Feeding Operations (CAFOs) in Iowa. American Association of Geographers Annual Meeting. San Francisco, California
- 2015 Young, S.G. Avian influenza in Egypt: ecological niche modeling and co-infection risk. International Medical Geography Symposium. Vancouver, BC, Canada
- 2015 Young, S.G., Carrel, M., Kayali, G. Landscape genetics of avian influenza in Egypt. Association of American Geographers Annual Meeting. Chicago, Illinois
- 2015 Young, S.G., Carrel, M., Kayali, G. Mapping co-infection risk for avian influenza in Egypt. Great Plains Emerging Infectious Diseases Conference. Iowa City, Iowa
- 2014 Bales, Z., Landgren, J., Muñoz, C., Smith, A., Young, S.G., Santos, K., Cowles, M.K. Modeling and predicting mine sites for hydraulic fracking silica sand in north eastern Iowa. Annual GEEMaP Workshop. Iowa City, Iowa
- 2013 Young, S.G. Landscape epidemiology: West Nile virus in the US. American Society for Photogrammetry and Remote Sensing Annual Meeting. Baltimore, Maryland

- 2012 **Young, S.G.**, Tullis, J., Mpedi, O. Remote sensing-assisted landslide detection after the 2007 Pisco, Peru earthquake. Association of American Geographers Annual Meeting. New York City, New York

POSTERS AND OTHER

- 2018 **Young, S.G.**, Aram, J., Hayes, C., Tait, M. Doctor shopping and high-risk use of opioid prescriptions in Arkansas. Poster presentation. American Association of Geographers Annual Meeting. New Orleans, Louisiana
- 2014 **Young, S.G.**, Carrel, M., Young, R., & Lynch, C. Cutaneous melanoma in Iowa exhibits spatial clustering by stage and sex. Poster presentation. 15th Annual Student Interdisciplinary Health Research Poster Session. Iowa City, Iowa
- 2009 Wilson, E., Distelhorst, K., Hughes, M., **Young, S.G.**, Griffith, S., Nygaard, T., Voyich, J. Expression and function of bovine CCL28. Poster presentation. American Association of Immunologists Annual Meeting. Seattle, Washington

TEACHING EXPERIENCE

- 2018 -** **Instructor, Department of Environmental and Occupational Health, University of Arkansas for Medical Sciences**
Environmental and Occupational Health (ENVH 5102; Spring 2018)
- 2015** **Instructor, Department of Geographical and Sustainability Sciences, University of Iowa**
Health and Environment: GIS Applications (GEOG 4150; Fall 2015)
- 2014 - 2016** **Guest Lecturer, University of Iowa**
Epidemiology of Infectious Diseases (EPID 6550; Fall 2016)
Health and Environment: GIS Applications (GEOG 4150; Fall 2014, Fall 2016)
- 2012 - 2013** **Lead Content Developer, Department of Geosciences, University of Arkansas**
Intro to Geographic Information Sciences (GEOS 3543, Online)
Intro to Geospatial Analysis Using ArcGIS (GEOS 3553, Online)
- 2011 - 2013** **Teaching Assistant, Department of Geosciences, University of Arkansas**
Intro to Geographic Information Sciences (GEOS 3543; Fall 2011, Fall 2012)
Intro to Geographic Information Sciences (GEOS 3543 Online; Fall 2012, Spring 2013)
Vector GIS (GEOS 4583; Spring 2012)
Advanced Vector GIS (GEOS 5033; Spring 2012)
- 2009 - 2011** **Teaching Assistant, Department of Geography, Brigham Young University**
Intro to GIS (GEOG 212; Fall 2009, Winter 2010, Fall 2010)
Global Environment (GEOG 101; Fall 2010, Winter 2011)

PROFESSIONAL MEMBERSHIPS

Association of American Geographers (AAG)
Geographic Information Systems and Science Specialty Group
Health and Medical Geography Specialty Group (HMGS)G)
Remote Sensing Specialty Group
Spatial Analysis and Modeling Specialty Group (SAM)
American Society of Photogrammetry and Remote Sensing (ASPRS)
International Society for Infectious Diseases (ISID)

SERVICE

Graduate Student Mentoring

- 2018 *Krista Garner* (PhD), “An examination of Arkansas ticks, their associated pathogens, and human disease risks and a survey of school-aged children to assess their knowledge, perceived risk, and protective behaviors in regards to ticks” (Dissertation Committee Member)
- 2017 *Carl Richard Taffner* (MPH), “Development of a methodologically sound and statistically valid Ixodes species tick surveillance plan for defined geographic areas of Arkansas” (MPH Culminating Experience Project Advisory Committee Member)

Editorial Freelancing and Consulting

- 2017 Textbook: “Introduction to Geospatial Technologies” (4th ed), Brad Shellito
- 2016 Textbook: “Discovering GIS and ArcGIS” (2nd ed), Brad Shellito
- 2015 Textbook: “Introduction to Geospatial Technologies” (3rd ed), Brad Shellito
- 2014 Textbook: “Discovering GIS and ArcGIS” (1st ed), Brad Shellito
- 2013 Textbook: “Introduction to Geospatial Technologies” (2nd ed), Brad Shellito
- 2013 Consulting: Milburn, A. (PI), Rainwater, C. (Co-PI). Models for disaster relief shelter location and supply routing. Final Report for MBTC DOT 3028.

Peer Review

- 2018 3 Articles: Landscape Ecology; International Journal of Environmental Research and Public Health; Genes
- 2017 3 Articles: International Journal of Environmental Research and Public Health; Landscape Ecology
- 2016 Article: Sustainability
- 2013 2 Articles: Applied Geography
- 2011 Article: Geography Compass

Departmental & Professional Society Service

- 2015 - 2016 Graduate Student Representative to Faculty Meetings, Geographical and Sustainability Sciences, University of Iowa
- 2016 Conference Volunteer, AAG Annual Meeting in San Francisco, CA
- 2014 - 2015 Graduate Committee, Geographical and Sustainability Sciences, University of Iowa
- 2012 - 2013 President, UA Student Chapter of the ASPRS, Fayetteville, AR
- 2013 Moderator, "Disasters - Mapping" Technical Session, ASPRS Annual Meeting in Baltimore, MD
- 2012 ASPRS Student Assistant, MAPPS-ASPRS Fall Specialty Conference in Tampa, FL

2012 ASPRS Volunteer, The Glossary of Mapping Sciences 2nd Edition

Other Service

2015 - 2017 Pack Committee Chair, Cub Scout Pack 220, Iowa City, IA

2013 - 2014 Den Leader, Cub Scout Pack 220, Iowa City, IA

2010 - 2011 Geography Tutor, BYU

2009 - 2011 Volunteer Research Assistant, BYU

2005 - 2007 Full-Time Missionary, Church of Jesus Christ of Latter-day Saints, Maryland
Baltimore Mission

2004 - 2005 Mentor, Provo Youth Mentoring Program, Provo, UT

Community Outreach

2015 “Examining radon levels in Woodbury County, Iowa” - Health and Environment: GIS Applications course in partnership with Siouxland Interstate Metropolitan Planning Council, the City of Sioux City, and the Siouxland District Health Department, supported by the Iowa Initiative for Sustainable Communities (IISC)

2015 “Mapped sources of Sioux City Farmers’ Market 2015 products: analysis of individual health outcomes and accessibility to healthy food choices” - Health and Environment: GIS Applications course in partnership with Siouxland Interstate Metropolitan Planning Council, the City of Sioux City, and the Sioux City Farmers’ Market, supported by the IISC

2015 Presentations to AP Geography classes at Washington High School in Cedar Rapids, IA

2014 - 2015 “Modeling and predicting potential frac sand mine locations” - Interdisciplinary project with GEEMaP and Winneshiek County, IA, supported by the IISC

CERTIFICATIONS & TRAINING

Graduate Certificate in Informatics (Geoinformatics), University of Iowa

Esri ArcGIS Desktop Associate 10.1 Certification

CITI Human Research Curriculum: Biomedical (IRB-01)

CITI Human Research Curriculum: Social & Behavioral (IRB-02)

CITI Human Research Curriculum: VA Human Subjects Protection