Proposal

My mentee for the African futures program will focus on enhancing her scholarly capacity to conduct scientific research and disseminate these findings to both academic and policy audiences. It will also focus on the networking and management aspects of scholarly work.

Research Activities: In terms of research activities, my mentee will be involved in writing peer-reviewed scholarly journal articles and white papers to disseminate findings to the policy community. I am a co-PI on a Socio-Environmental Synthesis Center (SESYNC) grant with Dr. Erin Bunting about water scarcity and conflict in Africa which provides funding for a network of U.S. and African-based scholars and policymakers to work collaboratively. The research activities associated with the SESYNC grant fall into multiple AAP priority areas through most prominently: water, energy, and environment. The objectives of the SESYNC grant would be the focal point of research with my mentee. She will synthesize, analyze and write publications and related grants on the themes listed below:

- Multi-scalar analysis of drivers of water scarcity (e.g. physical, political, socioeconomic, and demographic factors).
- Strategies for mitigating the risk of conflict in times of water scarcity

Grants, Collaboration, and Travel: I will also work with her to present work at academic conferences and write major grant proposals to entities including the National Science Foundation (NSF) and USAID. I have connections to scholarly organizations (e.g. the Regional Studies Association and the Association of American Geographers) who have scholarships and funding for scholars from this region of the world.

Networking: Via work on the SESYNC grant, which has a specific mentoring element for post-doctoral scholars and graduate students, my mentee will be able to participate in cross-disciplinary research and build her network of collaborators.

Training: During visits to MSU, she will receive training about responsible research conduct, data management practices, and the daily operations of a research laboratory. In this latter respect, she will learn about budgeting and managing lab personnel. She will have the opportunity to participate in lab meetings and other lab activities.

Mentor meetings: Meetings with my mentee will be noted in terms of frequency and general meeting topics. These meetings will be to discuss research goals and results and her career trajectory. Advice will be provided about pursuing desired careers and achieving specific research outcomes (publications and grants).

In summary, my goal as a mentor will be to provide my mentee with a well-rounded experience in research, collaboration, and lab management activities that will enhance her scholarly capacity in the research area of water, energy, and environment.
Teaching and Research Interests

Topical: sustainability, telecommunications policy, entrepreneurship and regional innovation systems, urban water systems, water affordability, water access

Methodological: spatio-temporal methods, spatial analysis, econometrics, geographic information systems (GIS), input-output analysis

Education

2010 Ph.D. Department of Geography, Indiana University, Bloomington, Indiana. (Minor: Economic Development, School of Public and Environmental Affairs)

2006 M.A Department of Economics, University of Cincinnati, Cincinnati, Ohio.

2002 B.S Department of Finance, Virginia Polytechnic Institute and State University, Blacksburg, Virginia.

2002 B.A Department of Spanish, Virginia Polytechnic Institute and State University, Blacksburg, Virginia.

Academic Appointments

Associate Professor- Department of Geography, Environment and Spatial Sciences (July 2018-present)
Michigan State University

Adjust Faculty Center for Global Change and Earth Observations (CGCEO), (Nov 2015-present)
Michigan State University

Assistant Professor-Department of Geography, Environment and Spatial Sciences (August 2015-June 2018)
Michigan State University

Affiliate/Adjunct Faculty School of Geographical Sciences and Urban Planning, (November 2015-present)
Arizona State University

Assistant Professor-School of Geographical Sciences and Urban Planning (August 2011-June 2015)
Arizona State University

Arizona State University

Students Advised

Doctoral (Advisor)

- Laura Medwid, Michigan State University, (2019-present)
- Kyle Redican, Michigan State University, (2016-present)
- Lisa Marie Pierre, Michigan State University, (2014-present)
- Kevin Credit, Michigan State University, (2014-2018)
Doctoral (committee member)

- Yifan Zhang, School of Computing Information and Decision Systems Engineering, Arizona State University. (2014-2016)

Masters thesis advisor


Masters thesis reader


Applied project advisor


Honors thesis (chair)


Honors thesis (reader)


Undergraduate research

- Isabella Catalano (2019-present)
- Zack Argo, Michigan State University (2018)
- Samyuktha Iyer, Michigan State University (2018)
- Alex Brown, Michigan State University (2018)
- Matt Chiavatta, Michigan State University (2018)
- Alex Lafler, Michigan State University (2018)
- Tatum Cho, Michigan State University (2018-present)
- Madison Wimberly, Michigan State University (2018-present)
- Vincent Black, Michigan State University (2017-2018)
- Mikaela Czupski, Michigan State University (2017-present)
- Benjamin Dougherty, Michigan State University (2017-2018)
- Marlene Guzman, Lewis and Clark College (Summer 2017)
- Sarah Wrase, Michigan State University Honors Program (2016-present)
- Babs Hough, Michigan State University Honors Program (2016-2017)
- Matthew Suandi, Michigan State University Honors Program (2015-2017)

Faculty Mentor

- Hannah Szabo (MUEP Student Arizona State University (2012-2014)
- Amanda Straight (MUEP Student): Arizona State University (2012-2013)
MUEP Advising Activities Arizona State University

-5 students (Ariane Burson, Yichuan Shi, Kelly Kirtley, Kimberly Feldbauer, Lauren Campbell). (2013-2014)
-2 students (Hannah Szabo and Andrew Ruegg). (2012-2013)

External Grants Received

8. A socio-environmental synthesis of the linkages between water scarcity induced conflict and land use/land cover change in Africa to enhance multi-scalar decision making. National Socio-Environmental Synthesis Center (SESYNC) under funding received from the National Science Foundation DBI-1639145 PI: E. Bunting. Mack Co-PI

Grant Number: Supplement #1444758
Funding Period: November 1, 2016-December 31, 2019
Role: Institutional PI (E.A Mack), lead PI (Mazdak Arabi, Colorado State University), Institutional PI (Sharon Harlan, Northeastern University)

6. A Comparative Analysis of Firm Dynamics in Rustbelt and Sunbelt Entrepreneurial Ecosystems. Funding Agency: Ewing Marion Kauffman Foundation for Entrepreneurship Grant Number: 20150940
Funding Period: October 1, 2015-December 1, 2018 (in no cost extension until October 2019)
Total Amount: $87,400
Role: PI (E.A Mack), Co-PI (Heike Mayer, University of Bern, Switzerland)

Grant Amount: ~$12,000,000, ASU estimated share: $1,191,572. Mack share $345,556
Funding Period: 2015-2020
Role: ASU Institutional Co-PI (E.A.Mack); ASU PI Matei Georgescu; Lead PI Mazdak Arabi, Colorado State University

4. EASM-3: Collaborative Research: Physics-Based Predictive Modeling for Integrated Agricultural and Urban Applications Funding Agency and Program: National Science Foundation, Earth Systems Models Program/United States Department of Agriculture, National Institute of Food and Agriculture (NIFA) program Grant Number: NSF # 1419593/ USDA# 2015-67003-23508
Grant Amount: $2,204,667 Mack share $396,840 from NSF; $135,336 from USDA
Role: Co-PI (E.A. Mack), PI (Alex Mahalov, Arizona State University), Co-PIs (Matei Georgescu, Billie Lee Turner, Mohamed Moustaua, Carola Grebitus, Arizona State University)

Grant Number: 20130782
Grant Amount: $31,479
Funding Period: July 18, 2013-May 31, 2015
Role: PI (E.A Mack)

2. Entrepreneurship and Technological Change: Understanding Entrepreneurial Usage of the Internet, Social Media, and Virtual Reality Technologies. Funding Agency: Regional Studies Association (RSA)
Grant Number: 13054132
Grant Amount: $13,657

Funding Period: February 22, 2013-September 1, 2014
Role: PI (E.A Mack)

Funding Agency: Time Warner
Grant Number: N/A
Grant Amount: $5,000
Funding Period: January 7, 2013-March 31, 2013
Role: PI (E.A Mack)

**Internal Grants Received**
- Science, Society, and State (S3) Grant “Technostress and the Health of Working Older Adults”. Michigan State University. (Amount $10,000). Role PI, co-PIs Shelia Cotton, Daisy Chang, and Amber Pearson.

- International Business Center (MSU-CIBER) “Identifying industrial complexes in Mexico: Implications for regional industrial policy.” Date: July 2015 (Amount $1,500)

- Institute for Social Science Research (ISSR). Arizona State University Date: 2011 (Amount: $36,000)

**Books**


**Papers in Review** (student co-authors underlined)

White, J. and E.A. Mack. The Geographic Context of Institutional Mix: Exploring the Links between University Types and Regional Employment Growth. Submitted to *International Regional Science Review*


**Peer-Reviewed Journal Articles**
- First or corresponding author indicates the majority contribution in the discipline of geography
- Student co-authors are underlined
- **Indicates corresponding author


**Book Chapters and Other Non-Refereed Publications**

*Indicates a peer-reviewed book chapter


Invited Talks (last 3 years)

2018


2017


2016

20. The Broadband-Entrepreneurship Nexus. Regional Research Institute (RRI), West Virginia University. February 18, 2016


Professional Presentations (last 3 years)

2018


49. Serial Entrepreneurs in Small Entrepreneurial Ecosystems. Global Conference on Economic Geography Cologne, Germany (July 24-28)


2016

44. New Venture Activity and Broadband Provision. *North American Regional Science (NARSC)*) Minneapolis, Minnesota. (November 9-12).


TEACHING

**Student Awards**

2018

2017

10. Michigan State Graduate School Dissertation Completion Fellowship. Student Supported: Kevin Credit. Amount: $7,000.00


8. National Science Foundation Graduate Fellowship: Matthew Suandi


6. Cole Excellence Award. Michigan State University. Student: Sarah Wrase Amount: $2,500

2016


4. First Place Graduate Research Presentation Competition. Department of Geography, Michigan State University: Kevin Credit

3. Dean’s Assistantship. Michigan State University. Student supported: Grace Hough. Amount: $4,000

2015

1. Provost Undergraduate Research Initiative (PURI). Michigan State University. Student supported: Matthew Suandi. Amount: $1,000

**Undergraduate and Graduate Credit Instruction**

Introduction to Economic Geography: GEO 113
Global Diversity: ISS 315
Location Theory and Land Use Analysis: GEO 415
Urban and Regional Analysis: PUP 642
Socio-Economic Impact Analysis: PUP 571
Economic Development Planning: PUP 434/598
Economic Impact Analysis: PUP 598
Quantitative Methods in Geography: GCU 495 (Spring)

**SERVICE**

**Editorial Appointments**

*Associate Editor*
Telematics and Informatics (2019-presenter)

*Editorial Board Member*
-Review of Regional Studies (2018-presenter)
-Regional Science Policy and Practice (2017-presenter)

*Guest Editor*
-Guest Editor, Special Issue of Environmental Research Letters: Urban Sustainability and Desired Outcomes (2018-2019)

-Guest Editor, Special Issue of International Regional Science Review: Universities and Regional Development (2018-2019)


-Guest Editor, Special Issue of Growth and Change: Regional Development In-Metropolitan and Non-Metropolitan Regions Volume 46 Issue 3 (2015)

-Guest Editor, Special Issue of the International Regional Science Review: Current Issues in Regional Development Volume 36 Issue 3 (2013)

**Professional Society Service**

-Councilor, North American Regional Science Association Council (Fall 2017-presenter)
-Benjamin Stevens Fellowship Selection Committee, North American Regional Science Association (Spring 2017-presenter)
-Regional Studies Association (RSA) Ambassador to the United States (2016-presenter)
-Network on European Communications and Transport Activities Research (NECTAR) ICT Cluster Co-Chair (2014-presenter)
-Regional Science Academy Service, chair Support Activities Task Force (2015-2016)
-Student Paper Competition Co-Chair, North American Regional Science Conference (NARSC). Atlanta, Georgia (2013)