

KELLY KAPSAR

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(314) 413-3271

EDUCATION

- 2022 **Ph.D. in Fisheries & Wildlife**
Center for Systems Integration & Sustainability, Michigan State University
University Distinguished Fellow
Advisor: Dr. Jianguo (Jack) Liu
Thesis: The metacoupled Arctic and north Pacific: Analyzing the spatiotemporal patterns and impacts of marine vessel traffic in coupled human and natural systems
- 2014 **B.A. Biology, Certificate of Advanced Studies in Spanish**
Carleton College, Northfield, MN
Distinction in major, Magna Cum Laude
Thesis: Who's afraid of the big bad wolf? Trait-mediated interactions among sympatric carnivores and their effect on behaviorally-mediated trophic cascades.

RESEARCH INTERESTS

Coupled human and natural systems, telecoupling, spatial ecology, movement ecology, human-wildlife conflict, spatial data analysis, big data, data management, remote sensing, free and open-source software, community-engagement, science communication

PEER-REVIEWED PUBLICATIONS

- Kapsar, K.**, Frans, V., Brigham, L., and Liu, J. (2022). The metacoupled Arctic: Human-nature interactions across local to global scales as drivers of sustainability. *Ambio*, 1-18.
- Sullender, B., **Kapsar, K.**, Poe, A., and Robards, M. (2021). Spatial management measures alter vessel behavior in the Aleutian Archipelago. *Frontiers in Marine Science*, 7, 579905.
- Chung, M.G., **Kapsar, K.**, Frank, K., and Liu, J. (2020). The spatial and temporal dynamics of global meat trade networks. *Scientific Reports*, 10(1), 16657.
- Kapsar, K.**, Hovis, C., Bicudo da Silva, R., Buchholtz, E., Carlson, A., Dou, Y., ... Liu, J. (2019). Telecoupling Research: The First Five Years. *Sustainability*, 11(4), 1033. <https://doi.org/10.3390/su11041033>

- Herzberger, A., Chung, M. G., **Kapsar, K.**, Frank, K. A., and Liu, J. (2019). Telecoupled Food Trade Affects Pericoupled Trade and Intracoupled Production. *Sustainability* 11(10), 2908.
- Xu, Z., Li, Y., Herzberger, A., Chen, X., Gong, M., **Kapsar, K.**, ... & Liu, J. (2019). Interactive national virtual water-energy nexus networks. *Science of The Total Environment*, 673: 128-135.
- Du, Y., Wan, Q., Liu, H., **Kapsar, K.**, Peng, J. (2019). How does urbanization influence PM2.5 concentrations? Perspective of spillover effect of multi-dimensional urbanization impact. *Journal of Cleaner Production*, 220: 974-983.
- Liu, J., Herzberger, A., **Kapsar, K.**, Carlson, A., and Connor, T. (2019). "What is telecoupling?". In J. Østergaard Nielsen and C. Friis (Eds.), *Telecoupling: Exploring Land Use Change in a Globalized World* (pp. 19-48). London: Palgrave MacMillan.
- Cerezo, A., & **Kapsar, K. E.** (2018). Zoo Conservation Disembarks: Stepping off the Ark and into Global Sustainable Development. In B. A. Minteer, J. Maienschein, & J. P. Collins (Eds.), *The Ark and Beyond: The Evolution of Zoo & Aquarium Conservation* (pp. 344–359). Chicago: University of Chicago Press.

JOURNAL AFFILIATIONS

Reviewer: Ambio
 Reviewer: Ecology & Society
 Reviewer: Journal of Cleaner Production

GRANTS, FELLOWSHIPS, & AWARDS

| | |
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| 2021 | College of Agriculture and Natural Resources Dissertation Completion Fellowship |
| 2021 | NSF Arctic System Science. <i>Collaborative Research: Complex Effects of Telecoupled Activities in the Changing Environment of the Arctic (Award #2033507)*</i> |
| 2021 | College of Agriculture and Natural Resources Summer Fellowship |
| 2021 | College of Agriculture and Natural Resources Alumni Association Scholarship |
| 2021 | Ambrose Patullo Graduate Fellowship in Literary Works |
| 2020 | American Geophysical Union (AGU) Virtual Student Travel Grant |
| 2019 | Gilbert W. Mouser Scholarship in Conservation & Environmental Education |
| 2018 | William W. and Evelyn M. Taylor Endowed Fellowship for International Engagement in Coupled Human and Natural Systems |
| 2018 | MSU Graduate School Travel Funding |
| 2018 | MSU Fisheries and Wildlife Graduate Student Organization Travel Grant |

2017 Vera M. Wallach Graduate Fellowship
2016 University Distinguished Fellowship, Michigan State University

*Principal contributor to Project Description and Data Management Plan.

CONFERENCES & INVITED PRESENTATIONS

- 2022 **Alaska Marine Policy Forum**
Virtual
Presentation: Quantifying the spatio-temporal dynamics of vessel traffic in a rapidly changing maritime bottleneck
- 2022 **USFWS Oil Spill Team Meeting**
Virtual
Presentation: A new, publicly available marine vessel traffic data set for the north Pacific and southern Arctic Oceans, 2015-2020
- 2022 **Northern Latitudes Partnership**
Virtual
Presentation: A new, publicly available marine vessel traffic data set for the north Pacific and southern Arctic Oceans, 2015-2020
- 2022 **Alaska Marine Science Symposium**
Virtual
Presentation: A new, publicly available marine vessel traffic data set for the north Pacific and southern Arctic Oceans, 2015-2020
- 2021 **Arctic Vessel Traffic Working Group**
Virtual
Presentation: Building a public vessel traffic data set (Co-presented)
- 2021 **Graduate Women in Science Research Seminar**
Virtual
Presentation: Fish and ships: Evaluating the influence of commercial fishing on Steller sea lion habitat selection
- 2020 **5th Distributed Biological Observatory (DBO) Data Meeting**
Seattle, Washington
Presentation: Linking coupled human and natural systems approaches with the Distributed Biological Observatory
- 2018 **US Chapter of the International Association of Landscape Ecology**
Chicago, Illinois
Telecoupling symposium organizer

Presentation: Quantifying the spatio-temporal distribution of marine vessel traffic in the Bering Strait

- 2017 **CN Forum: Putting the Arctic in Plain Sight**
Lansing, Michigan
Poster: The Telecoupled Arctic: Marine Vessel Traffic in the Bering Strait Region
- 2017 **Smithsonian National Museum of the American Indian**
Washington, D.C.
Presentation: Zebras in the Arctic: Branching out from the McDonnell Polar Bear Point Project (Recording:
https://www.youtube.com/watch?v=YrOVJQPDNEQ&ab_channel=SmithsonianNMAI)

INVITED PANELS

- 2018 **Women in Nature Network**
Lake Mainstay, Guyana
Invited Panelist
- 2017 **MSU Summer Intensive on Community Engagement**
Lansing, Michigan
Invited Panelist

TEACHING & MENTORSHIP EXPERIENCE

- 2018 – 2020 **Undergraduate Mentor**
Center for Systems Integration & Sustainability, Michigan State University, East Lansing, MI
- 2019 **Instructor**
Organismal and Population Biology Laboratory (BS172L)
Biological Sciences Department, Michigan State University, East Lansing, MI
- 2019 **Instructor**
Applications in Biological Science Laboratory (ISB208L)
Center for Integrative Studies in General Science, Michigan State University, East Lansing, MI
- 2013 - 2014 **Teaching Assistant**
Population Ecology (BIOL352); Climate Change Geology (GEOL115)
Carleton College, Northfield, MN

RESEARCH & FIELD EXPERIENCES

- 2022 – pres. **Postdoctoral Research Associate**
Center for Systems Integration & Sustainability, Michigan State University,
East Lansing, MI
Location: Remote
Supervisor: Dr. Jianguo (Jack) Liu
- 2015 – pres. **Research Associate, Community Engagement in Conservation**
Saint Louis Zoo Arctic Socio-Environmental WildCare Program, St. Louis,
MO
Location: Nome, Gambell, Savoonga, Little Diomed, AK (4 trips; ~5
weeks total)
Supervisor: Lisa Lidgus
- 2019 **Research Assistant**
Healy Research Cruise 1901
Location: Bering & Chukchi Seas (3 weeks)
Supervisor: Dr. Jackie Grebmeier
- 2017 - 2018 **Research Assistant**
Center for Systems Integration & Sustainability, Michigan State University,
East Lansing, MI
Location: East Lansing, MI
Supervisor: Dr. Jianguo (Jack) Liu
- 2016 & 2017 **Dissertation Development Travel**
Center for Systems Integration & Sustainability, Michigan State University
Location: Anchorage, Fairbanks, and Utqiagvik (Barrow), AK (2 trips; ~4
weeks total)
Supervisor: Dr. Jianguo (Jack) Liu

PROFESSIONAL APPOINTMENTS

- 2018 - 2019 **Social Media Associate**
Engagement Scholarship Consortium, East Lansing, MI
- 2014 - 2016 **Outreach Instructor**
Saint Louis Zoo Education Department, Saint Louis, MO
- 2014 **Conservation Education Research Extern**
Saint Louis Zoo Education Department, Saint Louis, MO

PROFESSIONAL PUBLICATIONS

Kapsar, K. (2021). Breaking the Ice: Connecting data and reality on an Arctic research cruise. Spotlight Magazine. <https://spotlight-msu.medium.com/breaking-the-ice-connecting-data-and-reality-on-an-arctic-research-cruise-a8f8028ff7f4>

Kapsar, K. (2018). Zoos should leave the ark metaphor behind. Blog post for Nature Ecology and Evolution blog. <https://natureecoevocommunity.nature.com/users/178448-kelly-kapsar/posts/39133-zoos-should-embrace-the-un-sustainable-development-goals-to-achieve-their-wildlife-conservation-missions>

Kapsar, K., P. McCord, F. Tonini. (2018). The Bering Sea International Commodity Transport. Case study for Telecoupling GeoApp. <https://telecoupling.msu.edu/geo-app/commodity-transport/>

DEPARTMENTAL & PROFESSIONAL SERVICE

2018 –2021 **Women in Nature Network – MSU Chapter**, East Lansing, MI

- Founding Member
- Social Media Associate (2019-2020)
- Secretary (2018-2019)

2020 **Outreach & Engagement Reopening Subcommittee**, Michigan State University, East Lansing, MI

- Graduate Student Representative

2017 - 2020 **Fisheries & Wildlife Department Graduate Student Organization**, Michigan State University, East Lansing, MI

- Symposium Co-Chair (2019-2020)
- Symposium Committee (2017-2019)
- Spotlight Magazine Editor (2017-2020)
- Curriculum Committee (2017-2018)
- Outreach Committee (2017-2018)

2018 – 2020 **Wildside Wildlife Rehabilitation Center**, Eaton Rapids, MI

- Volunteer Wildlife Rehabilitator
- Environmental Educator

2019 - 2020 **Association of Polar Early Career Scientists (APECS)**

- Council Member

PROFESSIONAL SKILLS & MEMBERSHIPS

Software R, Rspatial, Python, Git, GitHub, ArcGIS, Erdas Imagine, Stata, Microsoft Office Suite (incl. Excel, Access, PowerPoint, Word)

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| Languages | English (fluent), Spanish (proficient) |
| Visual media | Basic videography and graphics generation skills (R, PowerDirector, Adobe Photoshop) |
| Memberships | MSU Fisheries and Wildlife Graduate Student Organization, Graduate Women in Science, Women in Nature Network, Association of Polar Early Career Researchers |
| Certifications | NSF Arctic Data Center Training (2019) SCUBA (PADI Open Water) Ready for Media Training (2016) |