

CURRICULUM VITAE

Dr. Kyle Frankel Davis ORCID: 0000-0003-4504-1407

Assistant Professor
Geography and Spatial Sciences
University of Delaware

Phone: (302)-831-8733
Email: kfdavis@udel.edu
Office: 206 Pearson Hall

EDUCATION

University of Virginia	Environmental Sciences (Hydrology concentration)	Ph.D., 2016
University of Delaware	Biochemistry	B.S., 2010

APPOINTMENTS

Assistant Prof., Dept. Geography and Spatial Sciences, University of Delaware	2019-present
Assistant Prof., Dept. Plant and Soil Sciences, University of Delaware	2019-present
Resident Faculty, Data Science Institute, University of Delaware	2019-present
Data Science Institute Fellow, Columbia University	2018-2019
Earth Institute Fellow, Columbia University	2016-2018
NatureNet Science Fellow, The Nature Conservancy	2016-2018

RELEVANT PUBLICATIONS

1. Xie W, Zhu A, Ali T, Zhang Z, Chen X, Wu F, Huang J, **Davis KF** (2023) Crop switching can enhance environmental sustainability and farmer incomes in China. *Nature* (In Press).
2. **Davis KF**, Müller MF, Rulli MC, Tathego M, Ali S, Baggio JA, Dell'Angelo J, Jung S, Kehoe L, Niles MT, Eckert S (2023) Transnational agricultural land acquisitions threaten biodiversity in the Global South. *Environmental Research Letters* **18**, 024014.
3. **Davis KF**, Dalin C, Kummu M, Marston L, Pingali P, Tuninetti M (2022) Beyond the Green Revolution: A roadmap for sustainable food systems research and action. *Environ. Res. Lett.* **17**, 100401.
4. Lesk C, Anderson W, Rigden A, Coast O, Jägermeyr J, McDermid S, **Davis KF**, Konar M (2022) Impacts of compound heat and moisture extremes on global crop yields under climate change. *Nature Reviews Earth & Environment* **3**, 872–889.
5. Ray DK, Sloat L, Garcia A, **Davis KF**, Ali T, Xie W (2022) Crop harvests for direct food use insufficient to meet the UN's food security goal. *Nature Food* **3**, 367–374.
6. **Davis KF**, Downs S, Gephart JA (2021) Towards food supply chain resilience to environmental shocks. *Nature Food* **2**, 54–65.
7. **Davis KF**, Koo HI, Dell'Angelo J, D'Odorico P, Estes L, Kehoe LJ, Kharratzadeh M, Kuemmerle T, Machava D, Pais AJR, Ribeiro N, Rulli MC, Tathego M (2020) Tropical forest loss enhanced by large-scale land acquisitions. *Nature Geoscience* **13**, 482–488.
8. **Davis KF**, Chhatre A, Rao ND, Singh D, Ghosh-Jerath S, Mridul A, Pobleto-Cazenave M, Pradhan N, DeFries R (2019) Assessing the sustainability of post-Green Revolution cereals in India. *Proceedings of the National Academy of Sciences USA* **116**, 25034-25041.
9. **Davis KF**, Chiarelli DD, Rulli MC, Chhatre A, Richter B, Singh D, DeFries R (2018) Alternative cereals can improve water use and nutrient supply in India. *Science Advances* **4**, eaao1108.
10. **Davis KF**, Rulli MC, Seveso A, D'Odorico P (2017) Increased food production and reduced water use through optimized crop distribution. *Nature Geoscience* **10**, 919–924.
11. **Davis KF**, Gephart JA, Emery K, Leach A, Galloway JN, D'Odorico P (2016) Meeting future food demand with current agricultural resources. *Global Environmental Change* **39**, 125-132.

RECENT FUNDED PROJECTS

2022-2026	Targeted conservation: A coupled hydro-economic modeling approach to maximizing water availability across the Mississippi River Basin – United States Department of Agriculture National Institute of Food and Agriculture (\$749,572) – Lead PI
2021-2022	Global crop-specific irrigation mapping – University of Alabama Global Water Security Center (\$15,000; Lead PI)
2021-2022	Global mapping of crop climate resilience – University of Delaware (\$15,000; Lead PI)
2021-2026	D-ISON: TRACK 1: Characterizing the Global Illicit Trade in Energy-Critical Materials using Machine Learning, Remote Sensing, and Qualitative Research – National Science Foundation (\$999,984) – Co-PI (Lead PI: Dr. Julie Klinger)
2021-2022	Crop field delineation in Nigeria through deep learning – Oracle (\$60,000) – Lead PI

RECENT HONORS AND AWARDS

USDA National Institute of Food and Agriculture New Investigator	2022
<i>IOP Publishing</i> Outstanding Reviewer Award	2020
<i>Water</i> Young Investigator Award, <i>Water</i> (MDPI journal)	2019
<i>Science for Solutions</i> Award, American Geophysical Union	2018
National Science Foundation Graduate Research Fellowship	2013-2016

RECENT MENTORING

2023-present	Afia Sarwar (University of Delaware, PhD)
2022-present	Endalkachew Kebede (University of Delaware, PhD)
2021-present	Carissa Johnson (University of Delaware, BS)
2021-2022	Alexander Checchi (University of Delaware, BS)
2021-present	Michael Eruaga (University of Delaware, MS)
2021	Spencer Hanggodo (University of Delaware, BS)
2021-present	Bhoktear Khan (University of Delaware, PhD)
2021-present	Kevin Ong'are Oluoch (University of Delaware, PhD)
2020-present	Kopo Oromeng (University of Delaware, PhD)
2020-present	Hanan Abou Ali (University of Delaware, PhD)
2019-2021	Tyler Sharretts (University of Delaware, MS)
2019-present	Dongyang Wei (University of Delaware, PhD)
2019-present	Piyush Mehta (University of Delaware, PhD)

TEACHING

University of Delaware (2020-present)
Humans and Environmental Sustainability, GEOG236/PLSC236 (instructor of record)
GIS for Environmental Research, GEOG604 (instructor of record)

ACADEMIC AND PUBLIC SERVICE

2021-present	Expert Advisory Board, Ullens Education Foundation (Nepal)
2021-present	Editorial Board Member, <i>Environmental Research Letters</i>
2021-present	Scientific Committee, IMAGES Initiative (Nigeria)
2019-2021	Editorial Board Member, <i>Environmental Research Communications</i>
2017-present	Editor, <i>Frontiers in Sustainable Food Systems</i>
2016-present	Session Convener, <i>American Geophysical Union</i> Fall Meeting