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EDUCATION

1998	National Research Council Postdoctoral Associate. NOAA-NMFS Lab, Beaufort, NC
1996	Ph.D. Department of Geography. University of Colorado, Boulder, Colorado
1991	M.A. Department of Geography. University of North Carolina, Chapel Hill, North Carolina
1988	Cartography Certificate. California State University, Hayward, California
1988	B.A. Department of Geography, University of California, Berkeley, California
1986	Junior Year Abroad. Department of Geography, University of Wales, Aberystwyth

AREAS of RESEARCH and OUTREACH SPECIALIZATION

Our lab's motto is "mapping for a changing California", and we use a range of techniques - remote sensing, object-based image analysis, geospatial modeling, lidar analysis, participatory webGIS and field methods - to answer applied questions about how and why California landscapes are changing, and what that change means for those who live on and manage our lands. I primarily work in California: on wetland, forest and urban landscapes. The geo-informatics field is evolving quickly, and I actively work to build a community interested in applied geospatial research and outreach locally at UC Berkeley and across the state. I am Faculty Director of the UCB Geospatial Innovation Facility, which is dedicated to creating cutting-edge mapping technology, training in geospatial information systems and remote sensing, and applied geospatial research.

APPOINTMENTS

2010-present	Professor in Residence and Specialist in Cooperative Extension. Ecosystem Sciences Division of the Department of Environmental Sciences, Policy and Management. University of California, Berkeley
2014-present	Senior Fellow at the Berkeley Institute for Data Sciences (BIDS)
2012-present	Director, ANR Statewide Program for Informatics and Geographic Information Systems (IGIS)
2003-2010	Associate Specialist in Cooperative Extension and Adjunct Associate Professor. Ecosystem Sciences Division of the Department of Environmental Sciences, Policy and Management. UC Berkeley
2005-present	Faculty Director. Geospatial Innovation Facility (GIF), College of Natural Resources, University of California, Berkeley. http://gif.berkeley.edu
1999-2003	Assistant Specialist in Cooperative Extension and Adjunct Assistant Professor. Department of Environmental Sciences, Policy and Management. University of California, Berkeley
1998-1999	Lecturer. Department of Geography. San Diego State University
1996-1999	Visiting Scholar. San Diego Supercomputer Center
1996-1998	NRC Postdoctoral Associate. NOAA-NMFS Southeast Fisheries Laboratory. Beaufort, NC
1996	Physical Scientist. National Geophysical Data Center, NOAA. Boulder, Colorado
1996	GIS Lab Manager and GIS facilitator. NOAA-NMFS Southeast Fisheries Laboratory. Beaufort, NC
1991-1995	Teaching Assistant and Research Assistant. Geography. University of Colorado, Boulder
1989-1991	Research Assistant and RS/GIS Laboratory Manager. Geography Department. UNC, Chapel Hill

PUBLICATIONS

Accepted or In Press

Eitzel, M V, M Kelly, I Dronova, J Solera, and P de Valpine. In Press. Challenges and opportunities in synthesizing historical geospatial data using statistical models. *Ecological Informatics*

Published

Su, Y, Q Guo, DL Fry, BM Collins, M Kelly, JP Flanagan, and JJ Battles. **2015**. A vegetation mapping strategy for conifer forests by combining airborne lidar data and aerial imagery. *Canadian Journal of Remote Sensing*
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Tempel, D. J., R. J. Gutiérrez, J. J. Battles, D. L. Fry, Y. Su, Q. Guo, M. J. Reetz, S. A. Whitmore, G. M. Jones, B. M. Collins, S. L. Stephens, M. Kelly, W. J. Berigan, and M. Z. Peery. **2015**. Modeling short- and long-term impacts of fuel treatments and wildfire on an old-forest species. *Ecosphere* 6(12) DOI:10.1890/ES15-00234.1

- O'Connell, J., K. Byrd, and M. Kelly. **2015**. A hybrid modeling approach for mapping relative differences in belowground biomass and root:shoot ratios using spectral reflectance, foliar N and plant biophysical data. *Remote Sensing* 7, 16480-16503
- Turpie, K, V V Klemas, K Byrd, M Kelly, J Heon-Young. **2015**. Prospective HypsIRI global observations of tidal wetlands. *Remote Sensing of Environment* 16: 206-217
- Lei, S. and M. Kelly. **2015**. Evaluating adaptive collaborative management in Sierra Nevada forests by exploring public meeting dialogues using Self-Organizing Maps. *Society and Natural Resources* (28)8: 873-890
DOI:10.1080/08941920.2015.1045645
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- Lei, S., A. Iles, and M. Kelly. **2015**. Characterizing the networks of digital information that support collaborative adaptive forest management in Sierra Nevada forests. *Environmental Management* 56(1): 94-109
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- Tsalyuk, M., M. Kelly, K. Koy, Wayne M. Getz, and H. S. Butterfield. **2015**. Monitoring the Impact of Grazing on Rangeland Conservation Easements Using MODIS Vegetation Indices. *Journal of Rangeland Management* 68(2): 173-185
- Li, L., Q. Guo, S. Tao, M. Kelly, and G. Xu. **2015**. Lidar with multi-temporal MODIS provide a means to upscale predictions of forest biomass. *ISPRS Journal of Photogrammetry and Remote Sensing* 102: 198-208
- Butsic, V., M. Kelly, M. Moritz. **2015**. Land use and wildfire: a review of local interactions and teleconnections. *Land* 4(1): 140-156; doi:10.3390/land4010140
- McIntyre, P.J., J.H. Thorne, C.R. Dolanc, A.L. Flint, L.E. Flint, M. Kelly, and D.D. Ackerly. **2015**. 20th century shifts in forest structure in California: denser forests, smaller trees, and increased dominance of oaks. *Proceedings of the National Academy of Sciences* 112(5): 1458-1463
- Lewis, S., S. Gross, A. Visel, M. Kelly, and W. Morrow. **2015**. Fuzzy GIS-based multi-criteria evaluation for U.S. *Agave* production as a bioenergy feedstock. *Global Change Biology Bioenergy* 7: 84-99 doi: 10.1111/gcbb.12116
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- Byrd, K., J. O'Connell, S. Di Tommaso, and M. Kelly. **2014**. Evaluation of sensor types and environmental controls on mapping biomass of coastal marsh emergent vegetation. *Remote Sensing of Environment* 149:166-180
- O'Connell, J. L., K. B. Byrd, and M. Kelly. **2014**. Remotely-sensed indicators of N-related biomass allocation in *Schoenoplectus acutus*. *PLOS One*. 9(3): e90870
- Lewis, S. and M. Kelly. **2014**. Mapping the potential for biofuel production on marginal lands: differences in definitions, data and models across scales. *ISPRS International Journal of Geo-Information* 3(2), 430-459; doi:10.3390/ijgi3020430

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- Blaschke, T., G. J. Hay, M. Kelly, S. Lang, P. Hofmann, E. Addink, R. Queiroz Feitosa, F. van der Meer, H. van der Werff, F. van Coillie, and D. Tiede. **2014**. Geographic Object Based Image Analysis: a Paradigm in Remote Sensing and Geographic Information Science? *ISPRS Journal of Photogrammetry and Remote Sensing* 87(1), 180-191
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- Ferranto, S., L. Huntsinger, C. Getz, W. Stewart, G. Nakamura, and M. Kelly. **2013**. Management without borders? A survey of landowner practices and attitudes towards cross- boundary cooperation. *Society and Natural Resources* 26(9): 1082-1100. DOI: 10.1080/08941920.2013.779343
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- Ferranto, S., L. Huntsinger, C. Getz, W. Stewart, G. Nakamura, and M. Kelly. **2012**. Consider the source: The impact of media and authority in outreach to California's forest and rangeland owners. *Journal of Environmental Management* 97(1): 131-140
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- De Chant, T. and M. Kelly. **2009**. Individual object change detection for monitoring the impact of a forest pathogen

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- Kelly, M., D. Liu, B. McPherson, D. Wood and R. Standiford. **2008**. Spatial pattern dynamics of oak mortality and associated disease symptoms in a California hardwood forest affected by sudden oak death. *Journal of Forest Research* 13:312-319
- Kelly, M., K. Ueda and B. Allen-Diaz. **2008**. Considerations for ecological reconstruction of historic vegetation: Analysis of the spatial uncertainties in the California Vegetation Type Map dataset. *Plant Ecology* 194 (1): 37-49
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Book Chapters

- Blaschke, T., M. Kelly, H. Merschdorf. **2015**. Object Based Image Analysis: Evolution, History, State-of-the-Art and Future Vision. Chapter 14 in: Thenkabail, P.S. (Ed.), *Remote Sensing Handbook; Vol. I Data: Characterization, Classification, and Accuracies*. Taylor & Francis
- Elena-Rosselló, R., M. Kelly, S. González-Avila, A. Martín, D. Sánchez de Ron and J. M. García del Barrio. **2013**. Recent Oak Woodland Dynamics: A Comparative Ecological Study at the Landscape Scale. Chapter 14 in P. Campos et al. (eds.), *Mediterranean Oak Woodland Working Landscapes*, 427 Landscape Series 16, DOI: 10.1007/978-94-007-6707-2_14, Springer Science
- Kelly, M. and K. Tuxen. **2009**. Remote sensing support for tidal wetland vegetation research and management. Invited chapter in: *Remote Sensing and Geographic Information Systems for Coastal Ecosystem Assessment and Management: Principles and Applications*. Pp. 341-364. Xiaojun Yang (Editor). Springer-Verlag
- Tuxen, K. and M. Kelly. **2008**. Multi-scale functional mapping of tidal wetlands: an object-based approach. Chapter in *Object-based Image Analysis: Spatial concepts for knowledge driven remote sensing applications*. Pages 415-442. Thomas Blaschke, Stefan Lang and Geoffrey Hay (Editors). Springer Lecture Notes in Geoinformation and Cartography
- Kelly, M. and Q. Guo. **2007**. Integrated agricultural pest management through remote sensing and related technologies. Invited chapter in: *Integrated Management of Plant Pests and Disease*. Pages 191-226. Aurelio Ciancio and K. G. Mukerji (Editors). Kluwer
- Kelly, N. M., **2001**. Linking biogeography and environmental management in the wetland landscape of coastal North Carolina: the difference between nationwide and individual wetland permits. pp. 281-294 in *GIS and Remote Sensing Applications in Biogeography and Ecology*. A. Millington, S. Walsh and P. Osborne (Editors), Kluwer Academic Press, Boston MA
- Kelly, N. M., F. Cross, D. Field, and R. Emmett, **1999**. Remote sensing of forest clearing effects on essential fish habitat of Pacific salmon. pp. 252-267 in *Fish Habitat: Essential Fish Habitat and Habitat Rehabilitation*, L. Beneka (Editor), American Fisheries Society, Bethesda MD

Selected Reports

- Kelly, M. **2015**. California's majestic trees are declining — a harbinger of future forests. *The Conversation*.
- Kelly, M., J. Connors, S. Lei. **2010**. OakMapper 2.0: Distributed Participatory Sensing for Monitoring and Management of Sudden Oak Death. Gen. Tech. Rep. PSW-GTR-229, Albany, CA: Pacific Southwest Research Station, Forest Service, U.S. Department of Agriculture. Pp. 334-337
- McPherson, B. A., D. L. Wood, M. Kelly, S. R. Mori, P. Svihra, A. J. Storer, and R. B. Standiford. **2010**. Impacts of *Phytophthora ramorum* on Oaks and Tanoaks in Marin County, California Forests Since 20001. Gen. Tech. Rep. PSW-GTR-229, Albany, CA: Pacific Southwest Research Station, Forest Service, U.S. Department of Agriculture. Pp. 210-212

- Tuxen, K. and M. Kelly. **2008**. The OakMapper webGIS: Improved access to sudden oak death spatial data. Gen. Tech. Rep. PSW-GTR-214, Albany, CA: Pacific Southwest Research Station, Forest Service, U.S. Department of Agriculture.
- McPherson, B., D. L. Wood, S. R. Mori, P. Svihra, R. B. Standiford, and M. Kelly. **2008**. Consequences of *Phytophthora ramorum* infection in coast live oaks. Gen. Tech. Rep. PSW-GTR-217. Albany CA: Pacific Southwest Research Station, Forest Service, U.S. Department of Agriculture: 199-208
- DeChant, T., M. Kelly and B. Allen-Diaz. **2008**. Gap dynamics in oak woodlands across a gradient of disturbance. Gen. Tech. Rep. PSW-GTR-217. Albany CA: Pacific Southwest Research Station, Forest Service, U.S. Department of Agriculture: 251-262
- Doherty, T., B. Allen-Diaz and M. Kelly. **2008**. Using Vegetation Type Mapping data to increase our understanding of long-term ecological change in the woodlands surrounding San Francisco bay. Gen. Tech. Rep. PSW-GTR-217. Albany CA: Pacific Southwest Research Station, Forest Service, U.S. Department of Agriculture: 617-624
- Kelly, M. D. Shaari, Q. Guo, and D. Liu. **2006**. Modeling risk for SOD Nationwide: What are the effects of model choice on risk prediction? Gen. Tech. Rep. PSW-GTR-196. Albany, CA: Pacific Southwest Research Station, Forest Service, U.S. Department of Agriculture: 333-344
- McPherson, B. A., S. R. Mori, D. L. Wood, A. J. Storer, P. Svihra, M. Kelly, and R. Standiford. **2006**. Sudden Oak Death disease progression in oaks and tanoaks. Gen. Tech. Rep. PSW-GTR-196. Albany, CA: Pacific Southwest Research Station, Forest Service, U.S. Department of Agriculture: 379-382
- Kelly, N. M. **2002**. Monitoring Sudden Oak Death in California using high-resolution imagery. Gen. Tech. Rep. PSW-GTR-184, Albany CA: Pacific Southwest Research Station, Forest Service, U.S. Department of Agriculture: 799-810
- McPherson, B. A., D. L. Wood, A. J. Storer, N. M. Kelly, and R. B. Standiford. **2002**. Sudden Oak Death: One year of field data. Gen. Tech. Rep. PSW-GTR-184, Albany CA: Pacific Southwest Research Station, Forest Service, U.S. Department of Agriculture: 751-763

In Review

- Byrd, K B, L Windham-Myers and M. Kelly. Root growth rates and nitrogen accumulation in a highly productive temperate peatland. In review in *Wetlands Ecology and Management*
- Tamayo, A, M S Mahasin, B A Laraia, E M Warton, S D Blanchard, N M Kelly, H H Moffet, N Adler, D Schillinger, and A J Karter. Police Recorded Crime and Perceived Stress Among Patients with Type 2 Diabetes: The Diabetes Study of Northern California (DISTANCE). In review in *Social Science & Medicine*
- Downing, J., Y T Zhang, W Dow, M Kelly, S D Blanchard, N Adler, D Schillinger, H H Moffet, M Warton, A J Karter. The effect of food environment on weight change: does residential mobility matter? The Diabetes Study of Northern California (DISTANCE). In review in *American Journal of Preventive Medicine*
- Su, Y, Q Guo, B M Collins, D Fry, M Kelly. Forest fuel treatment detection using multi-temporal airborne Lidar data and high resolution aerial imagery: A case study in the Sierra Nevada, California. In review in *Agriculture and Forest Management*
- Müller, M F, S E Thompson, and M Kelly. Bridging the information gap: A webGIS tool for rural electrification in data-scarce regions. In review in *Environmental Software and Modeling*
- Tsalyuk, M., M. Kelly, and W. Getz. Improving the measurement of African savanna vegetation using time series analysis of MODIS vegetation indices. In review in *Remote Sensing of Environment*

Working Papers

- Kelly M, P J McIntyre, K Easterday, et al. Assessing conservation status of observed and predicted centers of oak diversity in California with a historic dataset. To be submitted to *Landscape and Urban Planning*
- Lei, S and M Kelly. Mapping the dynamics of social resilience in a forest management setting: Use of affiliation network analysis of public meetings and participants in the Sierra Nevada Adaptive Management Project. To be submitted to *Ecology and Society*
- Schile, L M, J C Callaway, K N Suding, and N M Kelly. Can community structure track sea-level rise? Stress and competitive controls in tidal wetlands. To be submitted to the *Journal of Ecology*

AWARDS

2015	Western Extension Directors Association <i>Award of Excellence</i>
2014	* ASPRS ERDAS Award for <i>Best Scientific Paper in Remote Sensing</i> , First Place
2008	<i>Excellence in Education</i> award from the California Geographic Information Association
2008	Inducted into the Berkeley High School Athletic Hall of Fame
2007	Inducted into the University of California Athletic Hall of Fame
2006	Inducted into the United States Water Polo Hall of Fame
2002	NASA New Investigator Program Award
1996	Marine Science Fellowship. North Carolina State University Sea Grant Program
1994	Student Coach of the Year. University of Colorado, Boulder
1995	Lead Graduate Teacher. Department of Geography, CU-Boulder

CURRENT RESEARCH FUNDING

Data Science

NRT-DESE: Environment and Society: Data Science for the 21st century (DS421). 2015-2020. PI: D. Ackerly. Co-I: M. Kelly. National Science Foundation: \$2,998,185

Spatial Components of Public Health

Neighborhood effects on weight change and diabetes risk factors. 2009-2015. PI: B. Laraia, UCSF. Co-I: M. Kelly. National Institutes of Health, Research Project Grant Program (R01): \$784,390

Adaptive Forest Management

Learning how to apply adaptive management in the Sierra Nevada Forest Plan Amendment. 2005-2015. PI: J. Battles, Co-PIs: R. C. Bales (UC Merced), M. Conklin (UCM), L. Huntsinger (UCB), M. Kelly (UCB), Q. Guo (UCM), R. J. Guitierrez (University of Minnesota), K. A. Rodrigues (UC Cooperative Extension), S. Stephens (UCB). USDA Forest Service: \$1,850,666

Climate Change and Landscape Dynamics

Hydrology and fire in the Sierra Nevada: A possible win-win. 2014-2016. PI: S. Stephens. Co-I: M. Kelly. USDA-DOI Joint Fire Sciences Program: \$400,000

Informatics Engine for understanding biotic responses to global change. 2012-2015. PI: C. Marshall and R. Gillespie. Co-I: M. Kelly. William M. Keck Foundation: \$1,500,000

Understanding disturbance and vegetation dynamics in northern California oak woodlands. 2013-2015. PI: Y. Valachovic and R. Standiford. Co-I: M. Kelly. ANR Competitive Grants: \$249,617

Advanced geospatial data delivery and visualization tools for communication about climate change and ecosystem adaptation. 2012-2016. USDI Geological Survey. PI: M Kelly. USGS: \$628,059

Quantifying ecological effects of land use and climate change using historical collections. 2013-2015. PI: K. Will. Co-I: Kelly. ANR Competitive Grants: \$268,038

Participatory webGIS & Data Delivery

The Cal-Adapt Website. 2013-2015. PI: Kelly. CEC California Energy Commission: \$515,000

Maintenance of web-based mapping tools for Sudden Oak Death (SOD) Management. 2008-2015. PI: M. Kelly. USDA Forest Service. \$50,000

Ames Research Center Cooperative for Research in Earth Science and Technology (ARC-CREST). 2015. PI: M. Kelly. NASA Ames Research Center. \$98,412

PAST RESEARCH FUNDING (Previous 5 years)

Advanced Remote Sensing to Quantify Temperate Peatland Capacity for Belowground Carbon Capture. 2011-2013. PI: K. Byrd. NASA: \$232,155

West Coast Carbon Sequestration Partnership: GIS Support, Web Upgrade and Services: California Institute for Energy & Environment: \$24,175

Visualizing Climate Change Risk and Adaptation Options for California: CalAdapt. 2010-2012. PI: M Kelly. California Energy Commission (CEC): \$499,976

WebGIS Development for California Insect and Disease Atlas. 2010-2011. PI: M. Kelly. USDA Forest Service. \$22,620
Mapping the Sudden Oak Death Infestation in Tilden Park and Assessing Future Developments. 2008-2012. PI: Greg Biging, Co-PI: Maggi Kelly. East Bay Regional Park District. \$100,000
Advanced Tools for Consolidation of California's Groundwater Data. 2010-2011. PI: M. Kelly. CITRIS. \$34,560
Climate change impacts to SF Bay-Delta wetlands: Links to pelagic food webs and predictive responses based on landscape modeling. 2007-2011. PI: T. Parker (SFSU), Co-PIs: M. Kelly, J. Callaway, D. Talley. CalFed: \$646,848
Understanding the coupling of greenhouse gases and energy fluxes and scaling them across a spectrum of time and space. 2006-2011. PI: Dennis Baldocchi, Co-PIs: M. Kelly, W. Silver. NSF. \$1,291,162
Distributed participatory sensing for early detection, monitoring and management of Sudden Oak Death. 2008-2009. PI: M. Kelly. USDA CSREES. \$67,597

TEACHING

Academic Courses

GIS for Environmental Science and Management. ESPM 164, UC Berkeley. Fall 2015
GIS for Environmental Science and Management. ESPM 233, UC Berkeley. Sp 2002, Fall 2003, 2005, 2007, 2009-2014
Applications of Remote Sensing. ESPM 290. UC Berkeley. Spring 2009
ELP: Environmental Science Case Studies (with others). ESPM 9. UC Berkeley. Spring 2008, 2009, 2010, 2012
Introduction to Geographical Information Systems (with M. Moritz). ESPM 72, UC Berkeley. Spring 2006
GIS Programming & Advanced Spatial Modeling (with Q. Guo). ESPM 290, UC Berkeley. Fall 2004
Urban Environmental Education. ESPM 190, UC Berkeley. Spring 2004
GIS for Natural Resource Systems. ESPM 290, UC Berkeley. Fall 2000
GIS & Environmental Management. Geography, San Diego State University. Spring 1999
Environmental & Natural Resources Conservation. Geography, SDSU. Fall 1998, Spring 1999
Environmental Conservation. Geography, SDSU. Fall 1998
Environmental Management & GIS. Geography, University of North Carolina, Chapel Hill
Geographic Information Systems. Geography, CU-Boulder
Mapping From Remotely Sensed Imagery. Geography, CU-Boulder
Introductory Cartography. Geography, CU-Boulder

Short Courses/Workshops Series

Google @ the GIF. Google Earth Engine and related tools. UC Berkeley. Aug 20-21, 2015
Introduction to GIS and webGIS. UC Forest Camp. June 4-5, 2015
Spatial Data Science for Professionals. 3-day workshop series hosted by the GIF. May 20-22, 2015
Introduction to GIS, QGIS, webGIS. GIF Workshop series with Sean Hogan. Sep 26, Oct 10, Nov 7, 21 2014
Introduction to GIS and webGIS. UC Forest Camp. June 5-6, 2013
Introduction to GIS and webGIS. UC Forest Camp. June 6-7, 2012
Lidar data and analysis for forestry. Half-day workshops for the GIF. With Marek Jakubowski. April 5, 2010
Intro to GPS/GIS. Full-day workshop for ESPM 107 (Moorea class), with Kevin Koy. August 29, 2008
Intro to GPS/GIS. Full-day workshop for ESPM 107 (Moorea class). August 31, 2007
Intro to GIS/GPS, Advanced GIS. Six full-day Renewable Resources Extension Act (RREA)-sponsored workshops for UCCE colleagues. GIIF, UC Berkeley. Summer 2007
GIIF Geospatial Workshops. GIIF UC Berkeley. Spring 2006, Fall 2006
Intro to GIS/GPS. Four RREA-sponsored workshops for UCCE colleagues. GIF, UC Berkeley. Summer 2006
Introduction to GIS & GPS. Short courses. ESPM, UC Berkeley. Fall 2005
Introduction to ArcView & Arc/INFO. Duke University Marine Lab, Beaufort, NC. Fall 1997

Other Information

Graduate Teacher Program Certificate. 1995. Geography, CU-Boulder. 1995
Lead Graduate Teacher. Geography, CU-Boulder. 1992-1995

PRESENTATIONS (Last 5 Years)

Invited Presentations/Colloquia

New frontiers in mapping for forest science: lidar data and analysis. UC Forestry Camp. June 5 2015
Spatial Data Science. ESPM colloquium. Berkeley CA. November 13 2014
Data Science Environment 2014 Annual Summit. Monterey CA Oct 5-6 2014
CNR Economic Impact of Climate and Energy Policy on Public and Private Sectors. Berkeley CA. October 3 2014
The 21st century mapping toolkit. Center for Effective Global Action panel. Berkeley CA. August 19 2014

NASA OpenNEX Virtual Workshop and Challenge. Menlo Park, CA. August 7 2014
Invited Keynote at 2015 GEOBIA conference in Thessaloniki, Greece. May 22 2014
Mapping forests and conversations about them in SNAMP. Colloquium at UC Davis. April 29 2014
Mapping wetland productivity using remote sensing. Delta Science Program Presentation Series. April 14 2014
Mapping for a changing California: Geoinformatics in support of extension. UC Forestry Camp. June 5 2013
Panelist on the Berkeley Food Institute Discussion: Nutrition and Urban Food. Berkeley CA. April 16, 2013
Panelist, Measuring and Predicting Carbon Absorbed in Reforestation. Santa Cruz, CA. February 26 2013
New frontiers in mapping for forest science: lidar data and analysis. UC Forestry Camp. June 6 2012
Lidar in support of adaptive management in Sierra Nevada forests. USDA Forest Service, Vallejo CA. May 22 2012
Vegetation mapping with OBIA. California Native Plant Society Meeting. San Diego CA. January 2012
Berkeley Science Café: web mapping in the age of information. December 2011
Plenary Paper, Ecosystem Services from Working Landscapes. Sacramento CA. September 2011
University of Salzburg, Austria: Surviving and thriving at a large public university. May 20 2011
University of Heidelberg, Germany: Remote sensing of forest disturbance in California. May 10 2011
USGS Western Region Colloquium: Modeling forest structure with lidar in the Sierra. Menlo Park, CA. June 7 2010.

Conference Presentations

The web for participatory adaptive management. 2014 Wildlife Society Annual Conference. Reno CA
Sustainable ecosystems and the role of private landowners. 2012 Sustainable Natural Ecosystems, Berkeley, CA
Lidar in support of adaptive management in Sierra Nevada forests. 2012 Annual Meeting, ASPRS. Sacramento, CA
Geographic object based multi-scale analysis. With T. Blaschke. GIScience Conf. Columbus, OH September 2012
Modeling historic oak distribution in California using the VTM dataset and Maxent. 2012 AAG Annual Meeting, NY
Social Media. 2011 UCANR Sustainable Food Systems Conference. Sacramento, CA
Mapping spotted owl habitat in the Sierra Nevada using lidar. 2010 AAG Annual Meeting. Washington DC

Guest Lectures in University Courses

Remote sensing of California wetlands and forests. ESPM Ecosystem Ecology (Silver). April 10 2015
Mapping California landscapes. ESPM (Feldman). October 14 2014
The California Delta: Past, Present and Research. ESPM 15 (Firestone and Rhew). April 3, 2013
Our Public Forests: Who makes decisions about the public forest? ESPM 11 (Huntsinger). February 16, 2010

Selected Extension Presentations

SNAMP Final Public Meeting. Sacramento, CA. May 27 2015
SNAMP Annual Public Meeting Webinar. November 6 2014
Introduction to GIS and web mapping. Presentation to International Delegation from Djibouti. August 26 2014
Lidar and spatial analysis in the Sierra Nevada Adaptive Management Project. Webinar. May 1 2014
Public participation in the Sierra Nevada Adaptive Management Project. April 2 2014
Workshop on Mapping for Graduate Students. November 15, 2013
SNAMP Annual Public Meeting. Sacramento, CA. October 29 2013
Finding the trees in the forest: using lidar for forest science and management. Webinar. March 25, 2013
Mapping for a changing California. Redwood Region Forest Management Workshop. Eureka, CA. March 6 2013
SNAMP Annual Public Meeting. Sacramento, CA. October 23 2012
SNAMP Update Public Meeting. Sacramento, CA. June 22 2012
Workshop on Lidar and Sierra Nevada forests. Oakhurst, CA May 17 2012
Workshop on Lidar and Sierra Nevada forests. Forest Hill, CA. May 16, 2012
GeoGirls! Workshops at the 2012 Enhancing Your Horizons conference. Berkeley. March 3 2012
Lidar analysis in support of Adaptive Management. Presentation at the GIF Geolunch series. February 16 2012
SNAMP Annual Public Meeting, Sacramento CA. October 27 2011
SNAMP Public Participation Integration Team Meeting. February 2 2011
SNAMP Annual Public Meeting. Sacramento, CA. October 21 2010
SNAMP Annual Public Meeting. Sacramento, CA. October 20 2009

MENTORING

Current Postdocs (1)

Alice Kelly 2013-2016

Past Postdocs (5)

Patrick McIntyre 2012-2014; Jessica O'Connell 2012-2013; Feng Zhao 2010-2012; Lina Cao 2010-2011; Oliver Sonntag 2008-2011

Current Ph.D. Advisees (3)

Anu Kramer, ESPM-UCB. Co-Advisor (with Scott Stephens). Expected Graduation: Spring 2016
Jenny Palomino, ESPM-UCB. Co-Advisor (with Matthew Potts). Expected Graduation: Spring 2017
Kelly Easterday, ESPM-UCB. Expected Graduation: Spring 2017
Christine Wilkinson, ESPM-UCB. Expected Graduation: Spring 2021

Past Ph.D. Advisees (12)

Shufei Lei, ESPM-UCB. Co-Advisor (with Alastair Illes). Graduated December 2014
Thesis: *"Mapping Webs of Information, Conversation, and Social Connections: Evaluating the Mechanics of Collaborative Adaptive Management in the Sierra Nevada Forests"*
Miriam Tsalyuk, ESPM-UCB. Co-Advisor (with Wayne Getz). Graduated Summer 2014
Thesis: *"The Effect of Landscape Parameters on African Elephants (Loxodonta africana) Movement Decisions"*
Sarah Lewis, ESPM-UCB. Advisor. Graduated Summer 2013
Thesis: *"Geospatial strategies to optimize placement of advanced biofuels in marginal landscapes"*
Marek Jakubowski, ESPM-UCB. Advisor. Graduated December 2012
Thesis: *"Using lidar in wildfire ecology of the California Sierra-Nevada forests"*
Lisa Schile, ESPM-UCB. Advisor. Graduated December 2012
Thesis: *"Tidal Wetland Vegetation in the San Francisco Bay Estuary: Modeling Species Distributions with Sea-Level Rise"*
Shasta Ferranto, ESPM-UCB. Co-Advisor (with Lynn Huntsinger). Graduated Spring 2012
Thesis: *"Land use change in the working landscapes of California"*
Esther Zeledon, ESPM-UCB. Advisor. Graduated Summer 2010
Thesis: *"The Effect of War and Its Aftermath on Land Use and Land Cover in Jinotega Nicaragua"*
Tim DeChant, PhD. ESPM-UCB. Advisor. Graduated Spring 2009
Thesis: *"Merging tree physiology and landscape ecology: examining the effects of urbanization on California's oak woodlands"*
Karin Tuxen, Ph.D. ESPM-UCB. Advisor. Graduated: Spring 2007
Thesis: *"Functional mapping of wetland vegetation for monitoring and management"*
Desheng Liu, Ph.D. ESPM-UCB. Advisor. Graduated Summer 2006
Thesis: *"Spatio-temporal modeling and mapping of Sudden Oak Death in California"*
Qinghua Guo, Ph.D. ESPM-UCB. Co-Advisor (with J. Battles). Graduated Summer 2005
Thesis: *"Development of geospatial techniques for ecological analysis: A case study of Sudden Oak Death in California"*
Kristin Byrd, PhD. ESPM-UCB. Advisor. Graduated Spring 2005
Thesis: *"Temporal and Spatial Linkages between Watershed Land Use and Wetland Vegetation Response in the Elkhorn Slough Watershed, Monterey County, California"*

Past M.A. Advisees (2)

Matt Wacker, M.S. ESPM-UCB. Graduate Advisor. Graduated Fall 2002
Thesis: "Land use vegetation change on El Dorado County, CA rangelands: implications for rangeland conservation." Currently Land Steward at Marin Agricultural Land Trust
Travis Freed, M. S. ESPM-UCB. Co-Advisor (with S. Stephens)

Current M.S., Ph.D. Dissertation, Orals, and/or Guiding Committees (all ESPM unless noted)

Sarah Maclean. Oral committee member. Dissertation orals: 4-2-2015
Kristin Shive. Oral committee member. Dissertation orals: 2-25-2015
Dylan Chapple. Orals committee member. Dissertation orals: 11-18-2014
Kelly Inknyan. Orals committee member. Dissertation orals: 5-6-2014
Mario Klip. Orals committee member. Dissertation orals: 4-30-2014
Brianna Abrahms. Orals committee chair. Dissertation orals: 4-22-2014
Jade Yu. Orals committee chair. Dissertation orals: 4-17-2014
Guillermo Jaimes. Orals committee chair. Dissertation orals: 5-9-2013
Nathan Schmidt. Orals committee member. Dissertation orals: 5-2-2013
Kate Wilkin. Orals committee member. Dissertation orals: 4-27-2013

Lara Cushing. Orals committee member. Dissertation orals: 11-9-2012
 Amy Romanek. Orals committee member. Dissertation orals: 4-27-2012
 Marc Muller. CEE. Orals committee member, Dissertation committee member. Dissertation orals: 3-2-2012
 Sibyl Driver. Orals committee member. Dissertation orals: 5.4.2010
 Kristina Yoshida. Orals committee member. Dissertation orals: 5.3.2010

Past M.A. and Ph.D. Committees

Lisa Marrack, PhD ESPM 2014. Ellen Kersten, PhD ESPM 2014. John Dingman, PhD ESPM 2014. Dorothy Zayde Friday, MLA ENVPLN. 2014. Mary Matella, PhD ESPM 2013. Orien Richmond. PhD ESPM 2010. Tim Bean, MS ESPM 2010. McCrea Cobb, PhD ESPM 2010. Emily Rubridge, PhD ESPM 2009. Kim Rodriguez, PhD ESPM 2009. Suzy McIlroy PhD ESPM 2009. Brandon Collins, PhD ESPM 2008. Qi Chen, PhD ESPM 2007. Brent Pederson, PhD ESPM 2005. Kirk Klausmeyer, MS CRP 2005. David Saah, PhD ESPM 2004. Mark Spencer, PhD ESPM 2004. Faith Kearns, PhD ESPM 2003. Jeff Opperman, PhD ESPM 2002. Stuart Siegel, PhD GEOG 2002. Ben Becker, PhD ESPM 2001.

UNIVERSITY SERVICE

Department

2014 Member, ESPM Ecoinformatics Search Committee
 2012 – 2013 Chair, CE Specialist in Land Change Science Search Committee
 2007 – 2016 Member, ESPM Council
 2012 Member, ESPM Vision Committee
 2007 – 2008 Member, CNR Dean’s Search Committee
 2008 – 2010 Chair, ES Seminar Series
 2008 – 2010 Member, ES Seminar Series
 2002 – 2008 Chair, ESPM Web and Computing Committee
 2005 Member, ESPM Landscape Ecology Search Committee
 2004 – 2005 Member, ESPM Divisional Council
 2004 Member, Watershed Science Assistant Professor Search Committee
 2002 Member, Forest Entomology Assistant Cooperative Extension Search Committee
 2002 Member, ESPM Webmaster Search Committee

College

2005 – present Faculty Director, Geospatial Innovation Facility (GIF)
 2005 – present Chair, Geospatial Innovation Facility (GIF) Oversight Committee
 2012 – present Member, University of California Fire Center Oversight Committee
 2007 Member, Blodgett Forest Manager Search Committee
 1999 – 2005 Co-Director, Center for Assessment and Monitoring of Forest and Environmental Resources
 2003 Member, CNR Directions, Opportunities and Initiatives Subcommittee
 2002 Member, CNR Web Development Committee

University

2015 – 2016 Faculty Co-lead for Climate Change and Sustainability Course Curriculum Workshop
 2015 – 2016 Member, UC Berkeley Faculty Welfare Committee
 2012 – 2015 Member, UC Berkeley Library Committee
 2002 – 2007 Member, Friends of Cal Aquatics
 2002 Member, Women’s Water Polo Coach Search Committee
 1999 Member, Program Committee for GIS at UC-Berkeley Conference

Statewide + UC Department of Agriculture and Natural Resources (ANR)

2015 – 2016 Member, Renewable Resources Extension Act (RREA) Technical Advisory Committee (TAC)
 2015 Chair, Search Committee, Academic Coordinator, California Institute for Water Resources
 2014 Member, Search Committee, ANR Director of Educational and Enterprise Technology
 2010 – 2016 Member, ANR Sustainable Natural Ecosystems Initiative Panel
 2014 Member, California Spotted Owl Assessment Panel
 2014 Member, ANR Graduate Student of Extension Committee
 2014 Exofficio Member, ANR Academic Coordinator II Search Committee
 2012 – 2017 Director, ANR Statewide Program in Informatics and Geographic Information Systems
 2013 Member, ANR Statewide Conference Steering Committee
 2012 Member, California Agricultural Assessment Core Science Team

2011, 2012	Reviewer, ANR Competitive Grants Program
2008	Member, ANR Strategic Planning Committee
2007	Member, ANR Natural Resources and Animal Agriculture Program Leader Position Search
2005	Member, ANR Lake Tahoe Natural Resources Advisor Position Search
2005	Member, ANR Core Issue Grants Proposal Review Board
2005 – 2010	Member, ANR Analytical Laboratory Review Board
2003 – 2005	Berkeley Cooperative Extension representative, Academic Assembly Council
2000 – 2009	Member, Hopland Research and Extension Center Research Advisory Council
2000	Member, Search Committee, Forest Advisor Humboldt/Del Norte Counties
1999 – 2010	Chair, ANR's Monitoring Landscape Change Workgroup

PROFESSIONAL SERVICE

Society Membership & Service

American Society for Photogrammetric Engineering and Remote Sensing (ASPRS)
 Member since 1992, Regional Director, Northern California Division 2008-2010, President, Northern California Division 2004-2006

Association of American Geographers (AAG)
 Member since 1990, Secretary GIS Specialty Group 1996

American Geophysical Union (AGU) member
 Ecological Society of America (ESA) member
 International Association of Landscape Ecology (IALE) member
 NASA Earth Science Scholars Network (ESSN) member

Conference Planning

2015-2016 Local Arrangement Committee: Annual Meeting of the Association of American Geographers
 2008 – 2014 Co-organization of GIS Day on the UC Berkeley campus with GIF, BAAMA and other groups
 2014 Program Committee, GIScience 2014, Vienna, Austria
 2013 Scientific Committee, GEOBIA conference 2014, Thessaloniki, Greece
 2012 Program Committee, GIScience 2012, Columbus, OH
 2012 Scientific Committee, GEOBIA, 2012. Brazil
 2012 Technical Program co-chair, ASPRS 2012 National Conf. Planning Committee, Sacramento, CA
 2011 Program Committee, Sustainable Natural Ecosystems Initiative Conference, Sacramento CA
 2010 Programme Committee, 18th International Conf. on Geoinformatics 2010, Beijing, China
 2008 Technical Planning Committee, IEEE International Geoscience & Remote Sensing Symposium
 2008 Science Committee, GEOBIA Analysis Conference (Univ. Calgary, Canada)
 2007 Chair, Object-based Image Analysis Symposium Planning Committee (Berkeley, CA)
 2007 GIS in Agricultural Symposium (part of CalGIS) Planning Committee (Oakland, CA)
 2006 ANR Orientation Conference Committee (Sacramento, CA)
 2006 ASPRS 2006 National Conference Planning Committee (Reno, NV)

Other Service Activities

2014 – 2015 Member, CA Spotted Owl Conservation Assessment Science Team
 2013 – 2015 Member, Eel River CZO Advisory Board
 2013 – 2014 Member, NASA HypSPIRI Aquatic Studies Group (HASG)
 2012 – 2015 Member, Vegetation Mapping and Remote Sensing Advisory Group, Sonoma County
 2009 Member, Steering Committee of the HABISTAT project, Belgium
 2008 – 2009 Member, Science Review Panel of the Puget Sound Nearshore Ecosystem Restoration Project
 2008 Reviewer, USDA Forest Service, PSW, Sudden Oak Death/*P. ramorum* research
 2007 Member, ASPRS Davidson Awards Committee
 2006 Member, Monitoring Review Team, San Francisco Estuary Invasive *Spartina* Project (ISP)
 2004 – 2006 Member, Wetland Tracker Steering Committee
 2000 – 2005 Member, Monitoring Group of the San Francisco Wetlands Restoration Program
 2004 Chair, Outreach Committee of the Integrated Regional Wetland Monitoring Program

Journal Editorial Boards

2015 – 2018 Associate Editor, *Environmental Management*
 2014 – 2017 Editorial Board, *Journal of Land Use Science*

- 2010 – 2015 Editorial Board, *Annals of the Association of American Geographers: Environmental Sciences* section
- 2007 – 2010 Editorial Board, *Annals of the Association of American Geographers: Methods, Models, and Geographic Information Systems* section
- 2006 – 2008 Associate Editor, *Wetlands*

Journal & Book Reviewer

<i>Agriculture, Ecosystems and Environment</i>	<i>Global Change Biology</i>	<i>Knowledge and Management of Aquatic Systems</i>
<i>Annals of the Association of American Geographers</i>	<i>Bioenergy</i>	<i>Landscape Ecology</i>
<i>Biological Conservation</i>	<i>International Journal of Environment and Pollution</i>	<i>Landscape and Urban Planning</i>
<i>Canadian Journal of Forest Research</i>	<i>International Journal of Geographical Information Sciences</i>	<i>Optics Communications</i>
<i>Carbon Balance and Management</i>	<i>GIScience and Remote Sensing</i>	<i>Photogrammetric Engineering and Remote Sensing</i>
<i>Conservation Biology</i>	<i>International Journal of Remote Sensing</i>	<i>Plant Pathology</i>
<i>Ecological Applications</i>	<i>Journal of Applied Ecology</i>	<i>PLOS Neglected Tropical Diseases</i>
<i>Environmental Modelling and Software</i>	<i>Journal of Biogeography</i>	<i>Remote Sensing</i>
<i>Environment, Development and Sustainability</i>	<i>Journal of Coastal Conservation</i>	<i>Remote Sensing of Environment</i>
<i>Environmental Practice</i>	<i>Journal of Environmental Management</i>	<i>Remote Sensing Letters</i>
<i>Estuaries</i>	<i>Journal of Land Use Science</i>	<i>Restoration Ecology</i>
<i>Estuarine, Coastal and Shelf Science</i>	<i>Journal of Plant Ecology</i>	<i>Science of the Total Environment</i>
<i>Forest Ecology and Management</i>	<i>Journal of Tropical Ecology</i>	<i>Sensors</i>
<i>Forests</i>	<i>Journal of Vegetation Science</i>	<i>Springer Publications</i>
<i>Geocarto International</i>	<i>Journal of Wildlife Management</i>	<i>Wetlands</i>
	<i>Kluwer Academic Publishers</i>	<i>Urban Forestry and Urban Greening</i>

Funding Agency Reviewer

- 2012 Science Foundation Ireland Research Centres
- 2011 National Science Foundation (NSF), Geography and Spatial Sciences
- 2011 NASA, U.S. Geological Survey, National Park Service, U.S. Fish and Wildlife Service, Smithsonian Institution
- 2008 Belgian Earth Observation Program, Support to Exploitation and Research of Earth Observation Data
- 2009 South Bay Salt Pond RFP
- 2009 UC Discovery Grant Program
- 2005 National Science Foundation (NSF), Geography and Regional Science Division
- 2005 Science Foundation of Ireland (SFI)
- 2005 Cooperative Institute for Coastal and Estuarine Environmental Technology (CICEET)
- 2003 International Science and Technology Center (ISTC), Moscow, Russia
- 2003 Moldovan-U.S. Bilateral Grants Program of the U.S. Civilian Research and Development Foundation (CRDF)
- 2003 Natural Environmental Research Council (NERC), London, UK
- 2003 NOW-COUNCIL Earth and Life Sciences, The Netherlands
- 2003 South African National Research Foundation (NRF)

OTHER ACTIVITIES

- 2015 Member, Women's Masters 50+ Water Polo National Championship Team
- 2008, 2011-2013 Member, Women's Masters 40+ Water Polo National Championship Team
- 2009 – 2012 Member, USWP Hall of Fame Committee
- 2008 Inducted into the Berkeley High School Athletic Hall of Fame
- 2007 Inducted into the University of California Athletic Hall of Fame
- 2006 – 2009 Member, USA Water Polo Judicial Committee
- 2006 Member, World Champion Masters 30+ Women's Water Polo Team
- 2006 Inducted into the US Water Polo Hall of Fame
- 2004 – 2008 Coach, Oakland-Mills Masters Women's Water Polo Team
- 1999 – present Member, Oakland-Mills Masters Women's Water Polo Team
- 2002 Member, Team Liquid Trans-Tahoe Relay Swim Team

1999 – 2003 Volunteer Coach, UC Berkeley's Women's Water Polo Team
1999 Scout Coach, United States National Women's Water Polo Team
1997 – 1998 Member, United States National Women's Water Polo Team
1985 – 1994 Member, United States National Women's Water Polo Team
1992 – 2000 Athlete Representative, Executive Council of U. S. Water Polo, Inc
1992 – 1995 Coach, CU Men's and Women's Water Polo Clubs
1985 – 1986 Member, Great Britain National Women's Water Polo Team
