

## CURRICULUM VITAE

### NAME

Kelly, Eugene F

### ADDRESS

Soil and Crop Sciences  
College of Agricultural Sciences

Plant Sciences

### PHONE

(970) 491-6501

### EDUCATION

1989 Ph D, UNIV OF CALIFOR

1984 MS, COLO STATE UNIV

1980 BS, COLO STATE UNIV

### OTHER POSITIONS

2011 - Present Department Head and Professor, Dept of Soil and Crop Sciences.

2008 - Present Associate Director for Research and Development, SoGES.

2001 - 2011 Professor of Pedology,, Dept of Soil and Crop Sciences.

1995 - 2001 Assoc Professor of Pedology,, Dept of Soil and Crop Sciences.

(2008 - Present) Director

### PUBLISHED WORKS

#### **Books**

(2011). *Environmental Impacts from Recreation on Colorado Fourteeners*. VDM, Verlag Dr Müller Aktiengesellschaft & Co Publishers, ISBN: 978-3- 844-388091.

#### **Refereed Journal Articles**

Crausbay, S. D., Martin, P. H., Kelly, E. F. (2015). Tropical montane vegetation dynamics near the upper cloud belt strongly associated with a shifting ITCZ and fire. *Journal of Ecology*, 103(4), 891–903.

Salley, S. W., Sleezer, R. O., Bergstrom, R., Martin, P. H., Kelly, E. F. Long-term perspective of the dry boundary for the Great Plains of North America: Implications of climatic variability and climatic change induced temporal and spatial soil moisture patterns on soil genesis and agriculture. *Geoderma*.

Kelly, E. F. (2014). Lithologic regulation of long term soil biogeochemistry. *Geoderma*.

Giuliani, A. L., Kelly, E. F. (2013). Geographic variation in growth and. *Plant Ecology*.

- (2011). Environmental Impacts from Recreation on Colorado Fourteeners. *VDM, Verlag Dr Müller Aktiengesellschaft & Co Publishers, ISBN: 978-3- 844-388091*.
- (2011). Lithologic Controls on Biogenic Silica Cycling in South African Savanna Ecosystems. *Biogeochemistry*, DOI: 10.1007/s10533-011-9602-2.
- (2010). Biodiversity in the dark. *Nat Geosci*, 3, 297-298.
- (2010). Fire and grazing impacts on silica production and storage in grass dominated ecosystems. *Biogeochemistry*, 97, 263-278.
- (2010). Oxygen isotope ratios in Holocene carbonates across a climatic gradient, eastern Washington State, USA. *Holocene*, 20, 575-583.
- (2010). Phosphorus biogeochemistry across a precipitation gradient in grasslands of central North America. *J Arid Environ*, 74, 954-961.
- (2009). Contingent productivity responses to more extreme rainfall regimes across a grassland biome. *Global Change Biol*, 15, 2894-2904.
- (2009). Response of the shortgrass steppe plant community to fire. *J Arid Environ*, 73, 1136-1143.
- (2009). The role of mining and agricultural activity in creating coexisting but divergent soils, San Luis Valley, Colorado, USA. *Geoderma*, 148, 384-391.
- (2008). Increasing precipitation event size increases aboveground net primary productivity in a semi-arid grassland. *Oecologia*, 158, 129-140.
- (2007). Assessing the extraction and quantification of amorphous silica in soils of forest and grassland ecosystems. *Eur J Soil Sci*, 58, 1446-1459.
- (2007). Precontact vegetation and soil nutrient status in the shadow of Kohala Volcano, Hawaii. *Geomorphology*, 89, 70-83.
- (2007). The ratio of germanium to silicon in plant phytoliths. *Biogeochemistry*, 86, 189-199.
- (2006). Biologic cycling of silica across a grassland bioclimosequence. *Global Biogeochem Cy*, 20.
- (2006). Chemical-structural information from solid-state C-13 NMR studies of a suite of humic materials from a lower montane forest soil, Colorado, USA. *Geoderma*, 130, 124-140.
- (2005). Natural variations of delta Si-30 ratios during progressive basalt weathering, Hawaiian Islands. *Geochim Cosmochim Ac*, 69, 4597-4610.
- (2005). Regional patterns in carbon cycling across the Great Plains of North America. *Ecosystems*, 8, 106-121.
- (2005). The stable carbon isotope composition of soil organic carbon and pedogenic carbonates along a bioclimatic gradient in the Palouse region, Washington State, USA. *Geoderma*, 124, 37-47.
- (2004). Effects of afforestation of a paramo grassland on soil nutrient status. *Forest Ecol Manag*, 195, 281-290.
- (2004). Silica biogeochemistry in grasslands of mid-continent North America. *Geochim Cosmochim Ac*, 68, A414-A414.

- (2004). Soil organic carbon and water retention following conversion of grasslands to pine plantations in the Ecuadoran Andes. *Ecosystems*, 7, 729-739.
- (2003). Halloysite as a kinetically controlled end product of arid-zone basalt weathering. *Chem Geol*, 202, 461-478.
- (2003). Solubilization of manganese and trace metals in soils affected by acid mine runoff. *J Environ Qual*, 32, 1323-1334.
- (2003). The impact of climate on the biogeochemical functioning of volcanic soils. *Chem Geol*, 202, 195-223.
- (2002). The delta Si-30 values of soil weathering profiles. *Geochim Cosmochim Acta*, 66, A881-A881.
- (1999). Carbon isotope systematics of monoaromatic hydrocarbons. *Org Geochem*, 30, 765-775.
- (1998). Biogeochemistry of isotopes in soil environments. *Geoderma*, 82, 3-Jan.
- (1998). Measurement of soil-water delta O-18 values by direct equilibration with CO<sub>2</sub>. *Geoderma*, 82, 255-268.
- (1998). Oxygen isotopic composition of soil water. *Geoderma*, 82, 269-293.
- (1998). Stable isotope composition of soil organic matter and phytoliths as paleoenvironmental indicators. *Geoderma*, 82, 59-81.
- (1998). The effect of plants on mineral weathering. *Biogeochemistry*, 42, 21-53.
- (1997). Paleopedologic and geomorphic evidence for Holocene climate variation, Shortgrass Steppe, Colorado, USA. *Geoderma*, 76, 113-130.
- (1994). Carbon-Dioxide Consumption during Soil Development. *Biogeochemistry*, 24, 115-127.
- (1993). A Pedologist Perspective on Soils as Biotic Constructs Favoring Net Primary Productivity - Response. *Geoderma*, 57, 217-221.
- (1991). Stable Carbon Isotopic Composition of Carbonate in Holocene Grassland Soils. *Soil Sci Soc Am J*, 55, 1651-1658.
- (1988). Profile Reconstruction - a Method to Quantify Changes in Soil Properties Resulting from Cultivation. *Agr Ecosyst Environ*, 21, 153-162.

### **Non-Refereed Journal Articles**

- Ramirez, K. S., Leff, J. W., Barberán, A., Bates, S. T., Betley, J., Crowther, T. W., Kelly, E. F., Oldfield, E. E., Shaw, E. A., Steenbock, C., Bradford, M. A., Wall, D. H., Fierer, N. (2014). Biogeographic patterns in below-ground diversity in New York City's Central Park are similar to those observed globally. *Proceedings. Biological sciences / The Royal Society*, 281(1795).
- (2012). Reservoir of Biogenic Silica Under Grassland Ecosystems: A Key Storage Component in the Global Silica Cycle. *Nature*.
- Heisler-White, J. L., Knapp, A. K., Kelly, E. F. (2008). Increasing precipitation event size increases aboveground net primary productivity in a semi-arid grassland. *Oecologia*, 158(1), 129-40.

Kelly, E. F., Kaplan, N., Derner, J. D., Antolin, M. F., Moore, J. C., others (2007). SGS-LTER 2010 proposal. *Colorado State University. Libraries.*

Green, C. H., Heil, D. M., Cardon, G. E., Butters, G., Kelly, E. F. (2003). Solubilization of manganese and trace metals in soils affected by acid mine runoff. *Journal of environmental quality*, 32(4), 1323-34.

(2011). *Brown is the New Green*. Ft Collins Coloradoan, April.

(2011). *Green Guilt is Good*. Ft Collins Coloradoan, March.

(2011). *Living Green, Aiming for Sustainability*. Ft Collins Coloradoan, February.

#### **PAPERS PRESENTED/SYMPOSIA/INVITED LECTURES/PROFESSIONAL MEETINGS/WORKSHOPS**

October 9, 2013, "Panelist", Thriving Beyond Sustainability, School of Global Environmental Sustainability, Avogadro's Number, Fort Collins, CO.

July 22, 2013, "Landscape Resilience: The Vulnerability of Soils to Changing Climatic and Land Use Conditions", The 68th International Conference of the Soil and Water Conservation Society, Conference Keynote and 2013 Pritchard Lecturer, Reno, Nevada.

June 17, 2013, "Visions for Soil and Critical Zone Monitoring With a Systems Approach", Keynote for "Soil Survey — Planning for Soil Health in the Critical Zone, National Conference for The National Cooperative Soil Survey, Annapolis, MD.

2012, "Crossing Evolutionary and Contemporary Scales: The Critical Importance of Grassland Expansion and Contraction to Global Silica Cycling, Department of Soil Science, North Carolina State University."

2012, "Global Change and Soil Degradation, Russian State Agrarian University, Moscow Russia."

2012, "Soil landscape development in the short-grass steppe ecosystem- assessing the vulnerability of soils to climate change. Ecological Society of America, 97th Annual Meeting. Abstract # PS 60-187."

2012, "The Necessity of and Opportunities for Collaborative US-Russia Pedology Research in Network-Level Science, Russian State Agrarian University, Moscow Russia."

2012, "The Potential Impacts of Global Change Drivers On the Terrestrial Silica Cycle Department of Soil Science, North

Carolina State University".

2010, "An ecological assessment of core and edge populations of two dominant Great Plains grasses: Implications for climate change, Ecological Society of America, Aug 2010".

2010, "Climate Change impacts on Colorado Ecosystems. REI Denver Colorado, for CSU Alumni Association, Sept 2010".

2010, "Crossing evolutionary and contemporary scales: the critical importance of grassland expansion to global silica cycling, Ecological Society of America, Aug 2010", peer-reviewed/refereed.

2010, "The Impact of Native Grassland Conversion to Cultured Systems On the Terrestrial Silica Cycle, SSSA, Nov 2010", peer-reviewed/refereed.

2010, "The necessity of and opportunities for Pedology in network-level science, SSSA National Meeting, Nov, 2010", peer-reviewed/refereed.

2010, "The use of soils to construct ancient climates, American Chemical Society, Colorado Local Section, Sept 2010".

## **OTHER ACTIVITIES/ACCOMPLISHMENTS – PUBLICATIONS/SCHOLARLY RECORD**

### **TEACHING:**

<b><u>Year</u></b>	<b><u>Semester</u></b>	<b><u>Course No./Title</u></b>	<b><u>Cr. Hrs.</u></b>	<b><u>Enrollment</u></b>
2016	Spring	SOCR799 - Dissertation	18	12
2015	Fall	SOCR799 - Dissertation	18	11
2015	Fall	SOCR440 - Pedology	4	21
2015	Fall	SOCR440 - Pedology - Recitation	0	21
2015	Fall	SOCR440 - Pedology -Lab	0	11
2015	Fall	SOCR440 - Pedology -Lab	0	10
2015	Fall	SOCR492 - Seminar	1	35
2015	Fall	SOCR792 - Seminar	1	4
2015	Spring	SOCR799 - Dissertation	18	12
2015	Spring	SOCR442 - Forest and Range Soils	3	8
2015	Spring	GES101 - Foundations of Environmental Sustainability	3	126
2015	Spring	SOCR571 - Foundations of Soil Science	2	13
2015	Spring	SOCR792 - Seminar	1	10
2015	Spring	SOCR784 - Supervised College Teaching	18	2
2014	Fall	SOCR799 - Dissertation	18	15
2014	Fall	SOCR492 - Seminar	1	30
2014	Fall	SOCR792 - Seminar	1	5
2014	Fall	SOCR784 - Supervised College Teaching	18	3

2014	Fall	ECOL699 - Thesis	18	10
2014	Spring	SOCR799 - Dissertation	18	15
2014	Spring	GES101 - Foundations of Environmental Sustainability	3	111
2014	Spring	ECOL698 - Research	18	46
2014	Spring	SOCR784 - Supervised College Teaching	18	7
2014	Spring	SOCR699 - Thesis	18	10
2013	Fall	SOCR799 - Dissertation	18	19
2013	Fall	ECOL698 - Research	18	55
2013	Fall	SOCR492 - Seminar	1	32
2013	Fall	SOCR784 - Supervised College Teaching	18	6
2013	Fall	SOCR498 - Undergraduate Research	6	1
2013	Summer	SOCR1000 - Summer Soil Institute	3	28
2013	Spring	SOCR799 - Dissertation	18	17
2013	Spring	GES101 - Foundations of Environmental Sustainability	3	112
2012	Fall	SOCR799 - Dissertation	18	17
2012	Fall	SOCR440 - Pedology	4	34
2012	Fall	SOCR440 - Pedology - Recitation	0	34
2012	Fall	SOCR440 - Pedology -Lab	0	17
2012	Fall	SOCR440 - Pedology -Lab	0	17
2012	Fall	SOCR492 - Seminar	1	30
2012	Fall	SOCR784 - Supervised College Teaching	18	3
2012	Summer	SOCR799 - Dissertation	18	1
2012	Spring	SOCR799 - Dissertation	18	15
2012	Spring	SOCR495 - Independent Study	18	5
2011	Fall	SOCR799 - Dissertation	18	12
2011	Fall	GES101 - Foundations of Environmental Sustainability	3	107
2011	Fall	GES101 - Foundations of Environmental Sustainability	3	30
2011	Fall	SOCR440 - Pedology	4	23
2011	Fall	SOCR440 - Pedology - Recitation	0	23
2011	Fall	SOCR440 - Pedology -Lab	0	10
2011	Fall	SOCR440 - Pedology -Lab	0	13
2011	Fall	SOCR492 - Seminar	1	32
2011	Spring	SOCR799 - Dissertation	18	9
2011	Spring	GES101 - Foundations of Environmental Sustainability	3	99
2011	Spring	SOCR580A4 - Foundations of Soil Science	2	8
2011	Spring	SOCR699 - Thesis	18	13
2010	Fall	SOCR799 - Dissertation	18	12
2010	Fall	SOCR440 - Pedology	4	26
2010	Fall	SOCR440 - Pedology - Recitation	0	26
2010	Fall	SOCR440 - Pedology -Lab	0	13
2010	Fall	SOCR440 - Pedology -Lab	0	13
2010	Fall	SOCR699 - Thesis	18	9
2009	Fall	SOCR580A4 - Foundations of Soil Science	2	8
2009	Fall	SOCR495 - Independent Study	18	1
2009	Fall	SOCR440 - Pedology	4	21
2009	Fall	SOCR440 - Pedology - Recitation	0	21
2009	Fall	SOCR440 - Pedology -Lab	0	8
2009	Fall	SOCR440 - Pedology -Lab	0	13
2009	Spring	SOCR799 - Dissertation	18	10
2009	Spring	SOCR699 - Thesis	18	7
2008	Fall	SOCR799 - Dissertation	18	12
2008	Fall	LAND220 - Fundamentals of Ecology (GT-SC2)	3	67
2008	Fall	LIFE220 - Fundamentals of Ecology (GT-SC2)	3	33
2008	Fall	SOCR440 - Pedology	4	22

2008	Fall	SOCR440 - Pedology - Recitation	0	22
2008	Fall	SOCR440 - Pedology -Lab	0	13
2008	Fall	SOCR440 - Pedology -Lab	0	8
2008	Fall	SOCR440 - Pedology -Lab	0	1
2008	Fall	SOCR784 - Supervised College Teaching	18	3
2008	Spring	SOCR799 - Dissertation	18	14
2007	Fall	LAND220 - Fundamentals of Ecology (GT-SC2)	3	67
2007	Fall	SOCR220 - Fundamentals of Ecology (GT-SC2)	3	41
2007	Fall	SOCR795 - Independent Study	18	1
2007	Fall	SOCR440 - Pedology	4	26
2007	Fall	SOCR440 - Pedology - Lab	0	13
2007	Fall	SOCR440 - Pedology - Lab	0	13
2007	Fall	SOCR440 - Pedology - Lab	0	0
2007	Fall	SOCR440 - Pedology - Recitation	0	26
2007	Fall	SOCR784 - Supervised College Teaching	18	4

### Guest Lectures:

<u>Year</u>	<u>Semester</u>	<u>Course No./Title</u>	<u># of Guest Lectures</u>	<u>Delivery Mode</u>
2013	Fall	FSHN330 - Forest Ecology	3	Face to Face
2013	Fall	ECOL - Foundations of Ecology	2	Face to Face
2013	Fall	SOCR675 - Proposal Preparation	1	Face to Face
2013	Spring	SOCR - Foundations of Soil Science	2	Face to Face
2013	Spring	SOCR441 - Soil Ecology	3	Face to Face

### EXTENSION/ENGAGEMENT ACTIVITIES/ACCOMPLISHMENTS

#### Field Day

Soils and Geomorphology of Mountain Ecosystems. Grand nLake and Fraser Colorado, CO. Number of times program was made: 1. Total number of participants: 45. Percent Responsible: 100%. 2013.

#### Managing the Planet

Thriving Beyond Sustainability: How cities are taking planning, green building, and economic development to the next level. Ft. Collins, CO. Number of times program was made: 1. Total number of participants: 110. Percent Responsible: 50%. 2013.

Melting Down at the Poles. Ft. Collins, CO. Number of times program was made: 1. Total number of participants: 120. Percent Responsible: 50%. 2012.

#### Managing the Planet

Planetary restoration: Is there a roadmap for restoring sustainable ecosystems?, Ft. Collins, CO. Number of times program was made: 1. Total number of participants: 100. Percent Responsible: 50%. 2013.

Understanding Climate Change. Ft. Collins, CO. Number of times program was made: 1. Total number of participants: 100. Percent Responsible: 50%. 2012.

Welcome to the Future: Is the 2012 Fire Season Indicative of What Lies Ahead. Ft. Collins, CO. Number of times program was made: 1. Total number of participants: 100. Percent Responsible: 50%. 2012.

#### Manmging the Planet

What have we learned from climate change science? What the latest data mean for our water, mountains, food and species. Ft. Collins, CO. Number of times program was made: 1. Total number of participants: 130. Percent Responsible: 50%. 2013.

### COMMITTEES

Water Center Executive Committee, (January 1, 2013 - Present).

Associate Director for Research and Development, SoGES, (2008 - Present).

Water Center Task Force, (September 1, 2012 - December 31, 2013).

(2010).

(2010).

Strategic Initiatives for Agriculture - Land Use, (July 1, 2011 - Present).

SoGES Executive Committee, (July 1, 2010 - Present).

Strategic Initiative- CAS Water Activities, (July 1, 2001 - Present).

Search Committee for Manager for Orchard Mesa & Fruita, (April 1, 2013 - July 10, 2013).

(2010).

(2010).

Undergraduate Recruiting and Retention, (July 1, 2013 - Present).

(2010).

(2010).

## **PROFESSIONAL AFFILIATIONS AND ACTIVITIES**

Ecological Society of America. (2000 - Present).

Soil Science Society of America. (1989 - Present).

Committee Member, SSSA-Fellow Committee. (January 1, 2013 - Present).

Graduate Students from multiple institutions, Ft Collins, CO. (2012 - Present).

Reviewer, Ad Hoc Reviewer, National Science Foundation. (2012 - Present).

Committee Chair, New CSU Water Center. (2012 - Present).

Committee Chair, SoGES - GCRT. (2012 - Present).

Committee Chair, USDA-AFRI. (2012 - Present).

USDA-NRCS -, Ft. Collins, CO. (2012 - Present).

Strategic Initiative - Water. (2011 - Present).

Reviewer, Ad Hoc Reviewer, Department of Energy. (2010 - Present).

Reviewer, Ad Hoc Reviewer, Department of Interior. (2010 - Present).



Member, National Science Foundation. (2010 - Present).

Nature. (2010 - Present).

Member, Presidents Carbon Advisory Group. (2010 - Present).

Strategic Initiatives - Land Use. (2010 - Present).

Committee Chair, USDA-AFRI Bioenergy and C Sequestration. (2010 - Present).

Associate Director for Research and Development, SoGES. (2008 - Present).

Member, Executive Advisory for SoGES. (2008 - Present).

Member, Ecological Society of America. (2000 - Present).

Editor, Associate Editor, Geoderma. (1995 - Present).

Member, Soil Science Society of America. (1989 - Present).

Editorial Review Board Member, Biogeochemistry. (July 1, 2009 - December 31, 2013).

Editorial Review Board Member, Geoderma. (July 1, 1993 - December 31, 2013).

Reviewer, Grant Proposal, NASA-DOE-USDA, Carbon Cycle Science, Washinton, D.C. (January 15, 2013 - May 15, 2013).

After Rio+20 - Moving Forward  
September 12, 2012 |. (2012).

Biofuels: Facts, Fictions, and Forecasts  
April 18, 2012. (2012).

Climate Change Case Studies: The Pine Beetle  
March 21, 2012. (2012).

Political Polarization & Our Environmental Future  
October 10, 2012. (2012).

The Biochar Solution: Facts vs Fiction  
November 14, 2012. (2012).

The Next Silent Spring: What is Happening to our Planet's Biodiversity?  
February 15, 2012. (2012).

Editor, Associate Editor, Biogeochemistry. (2010 - 2012).

Member, Committee on Sustainability. (2007 - 2012).

Member, Soil Ecology Minor. (2010 - 2011).

Managing the Planet Series, Chaired Panel Discussion on Climate Change, Avogadros Number, Feb 2010. (2010).

Managing the Planet Series, Chaired Panel Discussion on Extreme Events, Avogadro's Number, December, 2010. (2010).

Managing the Planet Series, Chaired Panel Discussion on Food Security, Avogadros Number, April 2010. (2010).

Managing the Planet, Chaired Panel Discussion on Soil C, Managed Ecosystems and Greenhouse Gasses, Avogadro's Number, October, 2010. (2010).

**OTHER ACTIVITIES/ACCOMPLISHMENTS – SERVICE/OUTREACH**

Litigation, Barkan & Robon Ltd., OH, United States. (June 1, 2013 - July 1, 2013).

Weld County District Attorney's Office. (2010).

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