Emily Grubert Assistant Professor School of Civil and Environmental Engineering

CONTACT INFORMATION

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I. EARNED DEGREES

PhD	Stanford University, Environment and Resources, 2017 Dissertation: Improving Life Cycle Assessment as a Decision Support Tool Using Empirical Data for Multicriteria Prioritization Co-advisors: Adam Brandt, Mark Algee-Hewitt
MS	The University of Texas at Austin, Environmental and Water Resources Engineering, 2011 Thesis: Freshwater on the Island of Maui: System Interactions, Supply, and Demand Advisor: Michael Webber
MA	The University of Texas at Austin , Energy and Earth Resources, 2010 Thesis: <i>Maui's Freshwater: Status, Allocation, and Management for Sustainability</i> Advisor: Michael Webber
BS	Stanford University , Mathematics (Honors), Atmosphere/Energy Engineering (Honors), Biological Sciences (Minor), 2009

II. EMPLOYMENT HISTORY

- 2019- **Georgia Institute of Technology**, Assistant Professor, Civil and Environmental Engineering and, by courtesy, Public Policy
- 2018 University of California, Berkeley, Lecturer, Civil and Environmental Engineering

- 2017-18 **University of California, Berkeley**, Postdoctoral Scholar, Civil and Environmental Engineering Supervisor: Arpad Horvath
- 2011-13 Business Analyst and Junior Engagement Manager, McKinsey & Company

III. HONORS AND AWARDS

2017 Reviewer of the Year, Environmental Research Letters

IV. RESEARCH, SCHOLARSHIP, AND CREATIVE ACTIVITIES

*: performed at Georgia Tech **bold:** indicates student co-author

A. PUBLISHED BOOKS, BOOK CHAPTERS, AND EDITED VOLUMES

A1. Books

no data

A2. Refereed Book Chapters

[1] Haya, B., A. Strong, E. Grubert, and D. Cullenward. 2015. "Carbon Offsets in California: Science in the Policy Development Process." In: *Communicating Climate Change and Natural Hazard Risk and Cultivating Resilience: Case Studies for a Multidisciplinary Approach*. Eds: Yekaterina Kontar et al. Springer.

A3. Edited Volumes

no data

B. REFEREED PUBLICATIONS AND SUBMITTED ARTICLES

B1. Published and Accepted Journal Articles

- [20] Bell, C., K. Spahr, E. Grubert, J. Stokes-Draut, E. Gallo, J. McCray, and T. Hogue. Accepted. Decision-making on the Grey-green Stormwater Infrastructure Continuum. *Journal of Sustainable Water in the Built Environment*.
- [19] Grubert, E. In press. Relational Values in Environmental Assessment: The Social Context of Environmental Impact. *Current Opinion in Environmental Sustainability*. DOI: 10.1016/j.cosust.2018.10.020
- [18] Grubert, E. In press. The Eagle Ford and Bakken Shale Regions of the United States: A Comparative Case Study. *The Extractive Industries and Society*. DOI: 10.1016/j.exis.2018.09.011

- [17] Grubert, E. and K. Sanders. 2018. Water Use in the United States Energy System: A National Assessment and Unit Process Inventory of Water Consumption and Withdrawals. *Environmental Science & Technology*. DOI: 10.1021/acs.est.8b00139
- [16] Grubert, E. and M. Cook. 2017. Communication Science for Science Communication: Water Management for Oil and Natural Gas Extraction. *Journal of Water Resources Planning and Management*. DOI: 10.1061/(ASCE)WR.1943-5452.0000842
- [15] Grubert, E. and W. Skinner. 2017. A Town Divided: Community Values and Attitudes Towards Coal Seam Gas Development in Gloucester, New South Wales. *Energy Research and Social Science*. DOI: 10.1016/j.erss.2017.05.041
- [14] Drummond, V. and E. Grubert. 2017. Fault Lines: Seismicity and the Fracturing of Energy Narratives in Oklahoma. *Energy Research and Social Science*. DOI: 10.1016/j.erss.2017.05.039
- [13] Grubert, E. and M. Algee-Hewitt. 2017. Villainous or Valiant? Depictions of Oil and Coal in American Fiction and Nonfiction Narratives. *Energy Research and Social Science*. DOI: 10.1016/j.erss.2017.05.030
- [12] Grubert, E. 2017. The Need for a Preference-based Multicriteria Prioritization Framework in Life Cycle Sustainability Assessment. *Journal of Industrial Ecology*. DOI: 10.1111/jiec.12631
- [11] Grubert, E. 2017. How to Do Mail Surveys in the Digital Age: A Practical Guide. *Survey Practice.*
- [10] Grubert, E. 2017. Implicit prioritization in Life Cycle Assessment: Text mining and detecting metapatterns in the literature. *International Journal of Life Cycle Assessment*. DOI: 10.1007/s11367-016-1153-2
- [9] Grubert, E. 2016. Water Consumption from Hydroelectricity in the United States. *Advances in Water Resources*. DOI: 10.1016/j.advwatres.2016.07.004
- [8] Grubert, E. and A. Siders. 2016. Benefits and applications of interdisciplinary digital tools for environmental meta-reviews and analyses. *Environmental Research Letters*. DOI: 10.1088/1748-9326/11/9/093001 (selected for September 2016 monthly highlights)
- [7] Lukacs, H., N. M. Ardoin, and E. Grubert. 2016. Beyond formal groups: neighboring acts and watershed protection in Appalachia. *International Journal of the Commons*. DOI: 10.18352/ijc.578
- [6] Grubert, E. and M. E. Webber. 2016. Synthetic flows for engineered systems with nonstationary parameters: A study of Maui's Wailoa Ditch. *Journal of Hydrologic Engineering*. DOI: 10.1061/(ASCE)HE.1943-5584.0001468
- [5] Grubert, E. 2016. Rigor in Social Life Cycle Assessment: Improving the scientific grounding of SLCA. International Journal of Life Cycle Assessment. DOI: 10.1007/s11367-016-1117-6

- [4] Grubert, E. and M. E. Webber. 2015. Energy for water and water for energy on Maui Island, Hawaii. *Environmental Research Letters*. DOI: 10.1088/1748-9326/10/6/064009
- [3] Grubert, E., A. Stillwell, and M. E. Webber. 2014. Where does solar-aided desalination make sense? A method for identifying sustainable sites. *Desalination*. DOI: 10.1016/j.desal.2014.02.004
- [2] Grubert, E., F. Beach, and M. E. Webber. 2012. Can switching fuels save water? A life cycle quantification of freshwater consumption for Texas coal- and natural gas-fired electricity. *Environmental Research Letters*. DOI: 10.1088/1748-9326/7/4/045801
- [1] Grubert, E. 2012. Reserve reporting in the United States coal industry. *Energy Policy*. DOI: 10.1016/j.enpol.2012.01.035

B2. Conference Presentation with Proceedings (Refereed)

- [12] Cook, M., and E. Grubert. April 2017. Water Use in the Oil and Gas Industries: An Evaluation of Best Practices for Communicating with Scientists, Policymakers, and the Public. Proceedings of the Society of Petroleum Engineers Health, Safety, Security, Environment, & Social Responsibility Conference-North America. DOI:10.2118/184431-MS.
- [11] Grubert, E., D. Kelly, B. Rumbelow, and J. Wilson. May 2015. Improving Produced Water Management: A Case Study of Designing an Inland Desalination Pilot Project. Proceedings of the World Environmental and Water Resources Congress 2015. DOI: 10.1061/9780784479162.052
- [10] Grubert, E., B. Parks, E. Schneider, and S. Sekar. December 2011. Pebble Bed Modular Reactors Versus Other Generation Technologies: Costs and Challenges for South Africa. *Proceedings of GLOBAL 2011*. Paper 391144
- [9] Grubert, E., C. King, and M. E. Webber. November 2011. Water for Biomass-based Energy on Maui, Hawaii. *Proceedings of the ASME 2011 International Mechanical Engineering Congress and Exposition*. DOI: 10.1115/IMECE2011-63199
- [8] Grubert, E. and M. E. Webber. August 2011. Water, Energy, and Land Use Planning on Maui Island, Hawaii: Estimating Surface Water Supply. Proceedings of the ASME 2011 5th International Conference on Energy Sustainability. DOI: 10.1115/ES2011-54332
- [7] Grubert, E. May 2011. Lifecycle Water Impacts of Coal Use in the United States. Proceedings of the World Environmental and Water Resources Congress 2011: Bearing Knowledge for Sustainability. DOI: 10.1061/41173(414)344
- [6] Grubert, E. May 2011. Modeling Maui's Freshwater System to Inform Water Resource Management. Proceedings of the World Environmental and Water Resources Congress 2011: Bearing Knowledge for Sustainability. DOI: 10.1061/41173(414)105
- [5] Phillips, R. and E. Grubert. May 2011. Water and Deforestation in Brazil: Future Challenges for Policy Implementation. *Proceedings of the World Environmental and*

Water Resources Congress 2011: Bearing Knowledge for Sustainability. DOI: 10.1061/41173(414)129

- [4] Grubert, E. February 2011. Energy Resource Extraction, Water Resources, and a Human Right to Water in the West. "Implementing the Human Right to Water in the West: Conference Report." Willamette Law Review. Volume 48:1.
- [3] Grubert, E. September 2010. Mining-related Environmental Impacts of Carbon Mitigation: Coal-based Carbon Capture and Sequestration. *Proceedings of the World Energy Congress*.
- [2] Grubert, E. May 2010. Centralized Transportation Fuel Planning: Leveraging Californian Refineries as Transportation Utilities. Proceedings of the ASME 2010 4th International Conference on Energy Sustainability. DOI: 10.1115/ES2010-90027
- [1] Grubert, E. and M. E. Webber. May 2010. Water Impacts of the American Clean Energy and Security Act Renewable Portfolio Standard on Texas. *Proceedings of the ASME 2010 4th International Conference on Energy Sustainability*. DOI: 10.1115/ES2010-90029

B3. Other refereed material

- [3] Grubert, E. 2018. Civil engineering's internal skepticism on climate change. Journal of Professional Issues in Engineering Education and Practice. DOI: 10.1061/(ASCE)EI.1943-5541.0000370 (Editor-refereed)
- [2] Grubert, E. 2016. Response to "Discourse over a contested technology on Twitter: A case study of hydraulic fracturing" Word choice as political speech. *Public Understanding of Science*. DOI: 10.1177/0963662515626310 (*Editor-refereed*)
- [1] Emerging Leaders in Science and Society (ELISS) Fellows*. December 2015.
 Reimagining Epidemic Communications. *Domestic Preparedness Journal*. (*equal contributions by R. Erion, E. Grubert, S. Mosbah, M. Munyikwa, B. Paul, and C. Tran) (*Editor-refereed*)

B4. Submitted Journal Articles

- [3] Greer, F., J. Chittick, E. Jackson, J. Mack, M. Shortlidge, and E. Grubert. Energy and Water Efficiency in LEED: How Well are LEED Points Linked to Climate Outcomes? Submitted August 2018, *Energy and Buildings*.
- [2] Grubert, E. and A. Brandt. Three Considerations for Modeling Natural Gas System Methane Emissions in Life Cycle Assessment. Submitted August 2018, *Journal of Cleaner Production*.
- [1] Grubert, E. Every Door Direct Mail in US Survey Research: An Anonymous Census Approach to Mail Survey Sampling. Submitted June 2018, *Methodological Innovations*.

C. OTHER PUBLICATIONS AND CREATIVE PRODUCTS

- [7] Rogers, L. and E. Grubert. *Terraforming: Art and Engineering in the Sacramento Watershed*. 2017. Green Library, Stanford University, Stanford, CA. (*Co-curator, library exhibition*)
- [6] Grubert, E., C. King, and M. E. Webber. August 2013. "Maui's Complicated Relationship With Water." Earth Magazine.
- [5] Lovins, A. and Rocky Mountain Institute. September 2011. *Reinventing Fire: Bold Business Solutions for the New Energy Era*. Chelsea Green Publishing Company, Vermont. (E. Grubert as research contributor, natural gas and coal systems)
- [4] Grubert, E. August 2011. "Why Business-as-Usual Coal Consumption Could Mean Dramatic Changes." Scientific American Guest Blog: Commentary invited by editors of Scientific American.
- [3] Grubert, E. and S. Kitasei. December 2010. *How Energy Choices Affect Fresh Water Supplies: A Comparison of U.S. Coal and Natural Gas.* Worldwatch Institute Briefing Paper. Worldwatch Institute: Washington, D.C.
- [2] Grubert, E. January 2010. "Beat a Dead Horse or Breed Immortal Ones." *Solutions*. National Council for Science and the Environment.
- Grubert, E. Over 60 published print columns, *The Stanford Daily* (January June 2009), *The Daily Texan* (August 2009 December 2010). Additional web columns for Americans for Energy Leadership and Elmrox (2010 2011).

D. PRESENTATIONS

D1. Keynote and invited conference presentations

- [5] Energy Policy Research Conference. September 2018. "Water-Energy Nexus in the West, Plenary Session & Lunch." *(Moderator)*
- [4] Resources for Future Generations. June 2018. "Keynote: Estimating water usage for the US energy system: Suggestions for improving data collection and reporting." Vancouver, British Columbia. *(Co-author with R. Peer, K. Sanders)*
- [3] South by Southwest Eco. October 2013. "New Global Models: Real-Time and Local." Austin, Texas. (*Panel*)
- [2] Society of Women Engineers 12th Annual Conference for Women Engineers. November 2012. "Understanding the Water Implications of our Energy Choices." Houston, Texas. (Panel)
- [1] International Student Energy Summit. June 2011. "Global Energy Dynamics: The Nexus between Energy and Water." Vancouver, Canada. *(Panel)*

D2. Submitted conference presentations

[29] Sanders, K. and E. Grubert. December 2018. "Estimating the water usage of the US energy system within the context of change." American Geophysical Union Fall Meeting. Washington, D.C. *(Oral)*

- [28] Stokes-Draut, J., and E. Grubert. December 2018. "Unraveling the Water-Energy-Carbon Nexus for California's Urban Water Future." American Geophysical Union Fall Meeting. Washington, D.C. *(Oral)*
- [27] Hogue, T., C. Bell, E. Gallo, K. Spahr, E. Grubert, J. Stokes-Draut, and J. McCray. December 2018. "Advancing tools for holistic management of water resources: Development of an integrated decision support tool (i-DST) for grey and green infrastructure implementation." American Geophysical Union Fall Meeting. Washington, D.C. (Oral)
- [26] Peer, R., E. Grubert, and K. Sanders. December 2018. "A Geospatial Assessment of the Water Consumed and Withdrawn for US Fossil Fuel Production." American Geophysical Union Fall Meeting. Washington, D.C. *(Poster)*
- [25] Gallo, E., T. Hogue, C. Bell, K. Spahr, E. Grubert, and J. Stokes-Draut. December 2018.
 "Application of a new integrated decision support tool (i-DST) for urban water infrastructure: Analyzing water quality compliance pathways in Ballona Creek Watershed in Los Angeles, California." American Geophysical Union Fall Meeting. Washington, D.C. (*Poster*)
- [24] Grubert, E. June 2018. "Socioenvironmental priorities and experiences in the Eagle Ford and Bakken Shale regions of the United States: A comparative case study." International Symposium on Society and Resource Management. Salt Lake City, Utah. (Oral)
- [23] Grubert, E. May 2018. "Developing Social Elements of Life Cycle Assessment." World Environmental and Water Resources Congress. Minneapolis, Minnesota. *(Oral)*
- [22] Webber, M. and E. Grubert. December 2017. "Thirst for Power: Energy, Water, and Human Survival." American Geophysical Union Fall Meeting. New Orleans, Louisiana. *(Oral)*
- [21] Grubert, E. December 2017. "Water Use for Unconventional Energy Development: How Much, What Kind, and to What Reaction?" American Geophysical Union Fall Meeting. New Orleans, Louisiana. *(Poster, Invited)*
- [20] Traer, M., R. Haupt, and E. Grubert. December 2017. "Stop saving the planet! Carbon accounting of superheroes and their impacts on climate change." American Geophysical Union Fall Meeting. New Orleans, Louisiana. *(Poster)*
- [19] Wang, J. and E. Grubert. November 2017. "Perceived variability in attribute outcomes, moral attributes, and compromise." Society for Judgment and Decision Making Annual Meeting. Vancouver, British Columbia. *(Poster)*
- [18] Grubert, E. November 2017. "Integrating Water Quantity to Life Cycle Assessment: A US-based Energy Water Nexus Case Study." American Water Resources Association Annual Conference. Portland, Oregon. *(Oral)*
- [17] Suganuma, J. and E. Grubert. July 2017. "Community Response to Unconventional Oil and Gas Development in North America." Energy Impacts Symposium 2017. Columbus, Ohio. (Oral)

- [16] Grubert, E. and K. Sanders. June 2017. "A National Assessment of the Water Withdrawn and Consumed for the US Energy Economy." 2017 Joint Conference of the International Society for Industrial Ecology and International Symposium on Sustainable Systems and Technology. Chicago, Illinois. (Oral)
- [15] Grubert, E. and M. Cook. May 2017. "Communicating Controversial Scientific Issues: Water Use for Oil and Natural Gas." World Environmental and Water Resources Congress. Sacramento, California. (*Poster*)
- [14] Grubert, E. and K. Sanders. December 2016. "Water for Energy: Quantifying Water Use in the United States Energy Economy as of 2014." American Geophysical Union Fall Meeting. San Francisco, California. *(Oral)*
- [13] Jagdeo, J., A. Ravikumar, E. Grubert, and A. Brandt. December 2016. "A Holistic Assessment of Energy Production: Environmental, Economic, and Social Impacts of Hydraulic Fracturing in Williams County, North Dakota." American Geophysical Union Fall Meeting. San Francisco, California. (Poster)
- [12] Melby, G., E. Grubert, and A. Brandt. "Perceptions of Shale Gas Development: Differences in Urban and Rural Communities." American Geophysical Union Fall Meeting. San Francisco, California. (Poster)
- [11] **Drummond, V.**, E. Grubert, and A. Brandt. "Fault Lines: Seismicity and the Fracturing of Energy Narratives in Oklahoma." American Geophysical Union Fall Meeting. San Francisco, California. *(Poster)*
- [10] Grubert, E. May 2016. "The Dynamic Water Intensity of Hydroelectricity." World Environmental and Water Resources Congress. West Palm Beach, Florida. *(Oral)*
- [9] Cook, M. and E. Grubert. May 2016. "Water Use in the Oil and Gas Industries: Communicating with Scientists, Policymakers, and the Public." World Environmental and Water Resources Congress. West Palm Beach, Florida. *(Poster)*
- [8] Grubert, E. April 2016. "The Water Intensity of Coal Mining in the United States: A Basin Level Evaluation." American Water Resources Association Spring Specialty Conference. Anchorage, Alaska. *(Oral)*
- [7] Grubert, E. December 2015. "Social Priorities as Data." American Geophysical Union Fall Meeting. San Francisco, California. *(Poster)*
- [6] Grubert, E. December 2015. "Empowering Graduate Students to Lead on Interdisciplinary Societal Issues." American Geophysical Union Fall Meeting. San Francisco, California. *(Oral)*
- [5] Grubert, E. and A. Brandt. October 2015. "Methane Leakage in LCA: Quantifying the Effect of Fugitive Methane Emissions on Greenhouse Gas Inventories." American Center for Life Cycle Assessment LCA XV. Vancouver, Canada. *(Oral)*
- [4] Grubert, E. February 2015. "Hearing the Unspoken: Using Text Mining to Investigate Social and Environmental Priorities." American Association for the Advancement of Science Annual Meeting. San Jose, California. *(Poster)*

- [3] Grubert, E. March 2015. "Evaluating Produced Water as a New Source in the United States." American Water Resources Association Spring Specialty Conference. Los Angeles, California. (*Oral*)
- [2] Grubert, E. August 2011. "Modeling Water Supply and Demand on Maui: Forests as a Land Use Category." Hawaii Conservation Conference. Honolulu, Hawaii. *(Oral)*
- [1] Grubert, E. October 2010. "Air Impacting Water: How Carbon Emissions Standards Could Impact West Virginia Water." West Virginia Water Conference: West Virginia's Water Resources: Threats and Opportunities. Morgantown, West Virginia. *(Oral)*

D3. Non-conference invited talks

- [13] Data Science for Sustainability Meetup. October 2018. "The Water-Energy Nexus: Water Use for Energy Systems." San Francisco, CA. *(Individual)*
- [12] American Center for Life Cycle Assessment and the International Society for Industrial Ecology. February 2018. "The Need for a Preference-Based Multicriteria Prioritization Framework in Life Cycle Sustainability Assessment." LCSA Webinar Series. (Individual)
- [11] Convent of the Sacred Heart. June 2017. Commencement Address. Greenwich, Connecticut. *(Individual)*
- [10] Energy Impacts Research Coordination Network. February 2017. "New Voices in Energy Impacts Research: Graduate Research Highlights." Webinar. *(Panel)*
- [9] MAP. March 2016. "Water Intensity of Energy Systems: A Major Emerging Policy Issue." Palo Alto, California. *(Individual)*
- [8] United World College USA. February 2016. "Triple Bottom Line Policy Making: How Do We Balance Priorities?" Montezuma, New Mexico. *(Individual)*
- [7] United World College USA. February 2016. "Implementation and Activism: Being Effective While Advocating." Montezuma, New Mexico. *(Individual)*
- [6] MAP. March 2015. "The Future of the Energy Industry." Palo Alto, California. (Panel)
- [5] Texas Natural Gas Regulatory Modernization Initiative. June 2013. "Natural gas, coal, and water in Texas." Austin, Texas. *(Individual)*
- [4] Yale Climate and Energy Institute, Yale University. February 2013. "Fuel Switching Can Save Water: Freshwater Use for Coal Versus Natural Gas Extraction and Power Generation in Texas." New Haven, Connecticut. (Individual)
- [3] Rocky Mountain Institute. January 2011. "The Role of Coal in the United States: Reserves and Externalities." Boulder, Colorado. *(Individual)*
- [2] Texas Leadership Society Luncheon. April 2010. Keynote Address. Austin, Texas. *(Individual)*
- [1] Amarillo Area Foundation and Texas Energy Forum. April 2010. "Energy and Water." Amarillo, Texas. *(Individual)*

D4. Other presentations

[1] Grubert, E., A. Fraser, and E. Holland. September 2012. "Thermal Coal Vision 2030: United States Coal." McKinsey Basic Materials Knowledge Day. Las Vegas, Nevada.

E. GRANTS AND CONTRACTS

no data

- **E1. AS PRINCIPAL INVESTIGATOR**
- E2. AS CO-PRINCIPAL INVESTIGATOR
- E3. AS SENIOR PERSONNEL OR CONTRIBUTOR
- E4. PENDING PROPOSALS
- E5. PROPOSALS SUBMITTED BUT NOT FUNDED (last two years)
- F. OTHER SCHOLARLY AND CREATIVE ACCOMPLISHMENTS

no data

G. SOCIETAL AND POLICY IMPACTS

G1. SELECTED PUBLIC COMMENTS

- [2] Cullenward, D., M. Mastrandrea, E. Grubert, and A. Strong. March 2016. Use of 20year GWPs in the Draft Aliso Canyon Methane Leak Climate Impacts Mitigation Program. Comment to the California Air Resources Board. (Written)
- [1] Grubert, E. April 2014. Testimony Regarding the Mine Methane Capture Carbon Offset Protocol. Meeting of the State of California Air Resources Board. *(Oral)*

G2. SELECTED PRESS COVERAGE

Platts, Houston Chronicle, Scientific American, Environmental Research Web, Eos, Montgomery Herald, Mountain West News Bureau, Tonopah Times-Bonanza, The Alcalde, Texas Clean Energy Coalition, Washington Post

H. Other Professional Activities

- 2016, 18 **Project Consultant**, Lineage Logistics, Irvine, California
- 2014-15 Project Consultant, SandRidge Energy, Oklahoma City, Oklahoma
- 2013-14 **Project Consultant**, Energy Innovation, San Francisco, California
- 2013 **Project Analyst**, Pacific Gas and Electric
- 2011-pres Engineer-in-Training, Environmental Engineering (#45743)

2009-pres Leadership in Energy and Environmental Design (LEED) Accredited Professional, Building Design and Construction

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V. EDUCATION

A. COURSES TAUGHT

A1. Georgia Tech

no data

A2. Berkeley

Spring, 2018	CE 268s	Buildings and Sustainability	25
A3. Stanford			
Fall, Spring, 2015-18	CEE 107a/207a	Understanding Energy	30-150
Summer, 2014-17	CEE 107s	Energy Resources: Fuels and Tools	20-40
Winter, 2017	Envres 340	E-IPER PhD Writing Seminar	8
Fall, 2016	Envres 276	Water Resources:	6
		Culture and Context	
Winter, 2015	Envres 275	The Practice of Mining and its	10
		Social and Environmental Context	

B. INDIVIDUAL STUDENT GUIDANCE

B1. Ph.D. Students

no data

B2. M.S. Students

no data

B3. Undergraduate Students

A. Groenke, Undergraduate Research Assistant, University of California, Berkeley

- V. Drummond, Undergraduate Research Assistant, Stanford University
- G. Melby, Undergraduate Research Assistant, Stanford University
- J. Suganuma, Undergraduate Research Assistant, Drake University
- N. Herring, Undergraduate Research Assistant, Stanford University
- L. Rey, Undergraduate Research Assistant, The University of Texas at Austin

B4. Service on thesis or dissertation committees

Jin, Qingxu (Bill). Graduation date: Spring 2019 (expected). "Design of Titanium Dioxide Modified Cementitious Materials for Multi-Functionalities." Advisor: Kim Kurtis.

B5. Mentorship of postdoctoral fellows or visiting scholars

no data

C. EDUCATIONAL INNOVATIONS AND OTHER CONTRIBUTIONS

no data

VI. SERVICE

A. PROFESSIONAL CONTRIBUTIONS

2242	
2018-pres.	Advisory Board Member, Social Energy Atlas
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- 2018-pres. Advisory Board Member, Environmental Research Letters
- 2018-2019 **Program Committee**, International Conference on Sustainable Infrastructure (ICSI) 2019: Sustainable Cities for an Uncertain World, American Society of Civil Engineers
- 2016-pres. **Member**, Hydraulic Fracturing Technical Committee, Interdisciplinary Council, Environmental and Water Resources Institute of the American Society of Civil Engineers

B. PUBLIC AND COMMUNITY SERVICE

no data

C. INSTITUTE CONTRIBUTIONS

2019 OceanVisions2019 Session Co-chair (School level)