

## **Sherri M. Cook**

### ***Curriculum Vitae***

Assistant Professor

Civil, Environmental, & Architectural Engineering Department, University of Colorado-Boulder  
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## **Appointments**

- Aug. 2014 - present Assistant Professor  
Dept. of Civil, Environmental, and Architectural Engineering, CU-Boulder
- 2012 Graduate Student Instructor  
Dept. of Civil and Environmental Engineering, University of Michigan
- 2008-2014 Graduate Student Research Assistant  
Dept. of Civil and Environmental Engineering, University of Michigan

## **Education**

- Ph.D.** *University of Michigan, Ann Arbor, MI*  
*May 2014* Environmental Engineering  
Co-Advisors: Nancy Love and Steven Skerlos  
Dissertation: Analysis-Driven Sustainable Design of Waste Management Systems for Unused Medications & Wastewater Solids
- M.S.E.** *University of Michigan, Ann Arbor, MI*  
*Dec 2009* Environmental Engineering
- B.S.** *Virginia Tech, Blacksburg, VA*  
*May 2008* Civil Engineering

## **Awards & Honors**

- 2013-2014 Rackham Predoctoral Fellow
- 2010-2013 Graham Sustainability Institute Doctoral Fellow
- 2010 Michigan Water Environment Association Jack H. Wagner Scholarship
- 2009-2012 National Science Foundation Graduate Research Fellow
- 2010 Michigan Water Environment Association Jack H. Wagner Scholarship
- 2008-2009 Phi Kappa Phi Honor Society National Fellow
- 2008 Virginia Tech College of Engineering Outstanding Senior
- 2007, 2006 Morris K. Udall Scholar

## **Publications**

(underline denotes student Cook advised as primary advisor; \*denotes student Cook advised as non-primary advisor)

### **Peer-Reviewed Journal Articles**

**Cook, S.M.;** VanDuinen, B.J.; Love, N.G.; Skerlos, S.J. Life cycle comparison of environmental emissions from three disposal options for unused pharmaceuticals (2012), *Environmental Science & Technology*, 46 (10), 5535-5541.

### Published Correspondences

**Cook, S.M.;** Love, N.G.; Skerlos, S.J. Response to "Comment on 'Life cycle comparison of environmental emissions from three disposal options for unused pharmaceuticals'" (2012), *Environmental Science & Technology*, 46 (15), 8521–8522.

### Anticipated Peer-Reviewed Journal Articles

**Cook, S.M.;** Skerlos, S.J.; Raskin, L.; Love, N.G.; The establishment of a stability algorithm for anaerobic codigestion. In preparation for submission to *Water Research*.

Thompson, K.; Shimabuku, K.K.\*; Kearns, J.P.; Knappe, D.R.U.; Summers, R.S.; **Cook, S.M.\*** Environmental comparison between activated carbon and biochar for tertiary wastewater treatment. In preparation for submission to *Environmental Science & Technology*.

Shilling, E.; Linden, K.; **Cook, S.M.** An environmental assessment framework for small water systems and its application to drinking water disinfection. In preparation for submission to *Environmental Science & Technology*.

### Conference Proceedings

Guest, J.S.; **Cook, S.M.;** Skerlos, S.J.; Love, N.G. A methodology to assess the environmental impacts of upgrading wastewater infrastructure: A case study to evaluate energy recovery from black water. *Proceedings of the 82<sup>nd</sup> Annual Water Environment Federation Technical Exhibition and Conference (WEFTEC)*, Orlando, Florida, October 2009.

**Cook, S.M.;** Guest, J.S.; Skerlos, S.J.; Love, N.G. Environmental characteristics of different energy recovery systems from the management of sewage sludge and food waste. *Proceedings of the 12<sup>th</sup> International Water Association Sludge Conference*, Harbin, China, August 2009.

### Contracts and Grants

U.S. Environmental Protection Agency (2014-2017), \$4,099,973 "Design of Risk-reducing, Innovative-implementable, Small-system Knowledge (DeRISK)" Small Drinking Water System Research Center, Lead PI: Scott Summers; PIs: Robin Collins, James Malley, Karl Linden; Co-PIs: Joy Barrett, **Sherri Cook**, Chris Corwin, Aaron Dotson, William Hogrewe, Kiril Hristovski, Fernando Rosario-Ortiz, Chad Seidel, James Uber, Paul Westerhoff.

U.S. Environmental Protection Agency (2010-2011), \$9,888, "Development of a Low-Maintenance Anaerobic Biogas System for Use in Developing Countries," PI: Steven Skerlos; Other Investigators: **Sherri Cook**, Heather Dorer, Jinhyung Hwang, Zijia Li. *People, Prosperity and the Planet (P3) Student Design Competition for Sustainability*, Phase I, *Funded*. Phase II, *Honorable Mention*.

## Professional Presentations

(<sup>†</sup> denotes presenter, underline denotes student Cook advised as primary advisor; \*denotes student Cook advised as non-primary advisor)

### Conference Oral Presentations

Shilling, E.; Linden, K., **Cook, S.M.**<sup>†</sup> A Comparison of Life Cycle Environmental Emissions from Disinfection Technologies for Small Drinking Water Systems. *Association of Environmental Engineering and Science Professors (AEESP) Education and Research Conference*, New Haven, CT, June 2015.

Shilling, E.<sup>†</sup>; Linden, K., **Cook, S.M.** Sustainable Solutions for Small Water Systems: An Environmental Assessment Framework and Its Application to Drinking Water Disinfection Technologies. *American Water Works Associate 15<sup>th</sup> Annual Conference & Exposition*, Anaheim, CA, June 2015.

Shilling, E.<sup>†</sup>; Linden, K., **Cook, S.M.** Sustainable Solutions for Small Water Systems: An Environmental Assessment Framework and Its Application to Drinking Water Disinfection Technologies. *Rocky Mountain Student Region AWWA and WEA 12<sup>th</sup> Annual Student Conference*, Las Cruces, NM, May 2015.

Shilling, E.; Linden, K., **Cook, S.M.**<sup>†</sup> Sustainable Solutions for Small Water Systems: A Comparison of the Life Cycle Environmental Emissions of Conventional & Innovative Technologies. *Engineering Sustainability Conference*, Pittsburgh, PA, April 2015.

Shilling, E.; Linden, K., **Cook, S.M.**<sup>†</sup> Sustainable Solutions for Small Water Systems: An Environmental Assessment Framework and Its Application to Drinking Water Disinfection Technologies. *International Water Association Conference on Water Efficiency and Performance Assessment of Water Services*, Cincinnati, Ohio, April 2015.

**Cook, S.M.**<sup>†</sup> Modeling Energy Production: Codigestion Overview and ADM1. Part of the Workshop “How Can Modeling be Effectively Used for Energy Balance Optimization”, *International Water Association Wastewater Treatment Modeling (WWTmod) Spa*, Belgium, March 2014.

**Cook, S.M.**<sup>†</sup>; Love, N.G. A regional strategy for managing food processing and septage waste: The Grand Traverse region collaboration. *Biogas Summit*, Flint, MI, October 2010.

**Cook, S.M.**<sup>†</sup>; Guest, J.S.; Christianson, M.G.; Love, N.G.; Skerlos, S.J. Energy recovery from wastewater: Evaluation of resource management alternatives for appropriate and environmentally sustainable energy production. *Engineering Sustainability Conference*, Pittsburgh, PA, April 21, 2009.

**Cook, S.M.**<sup>†</sup>; Jaradat, A.Q.; Grimberg, S.J.; Holsen, T.M. Sustainable stormwater treatment: Colloid concentration effect on natural media filtration efficiency. *American Society of Civil Engineers' 2008 Virginias' Student Conference*, Summersville, WV, April 2008.

**Cook, S.M.<sup>†</sup>**; Novak, J.T. Sustainable wastewater treatment: Investigation of chemical, enzymatic, and/or biological agents as additives to enhance anaerobic digestion and reduce biosolids cake odor. *2<sup>nd</sup> Annual ACC Undergraduate Research Conference*, Charlottesville, VA, April 2007.

### Conference Poster Presentations

**Cook, S.M.<sup>†</sup>**; Skerlos, S.J.; Love, N.G. A design-oriented stability analysis of anaerobic codigestion using ADM1. *International Water Association Wastewater Treatment Modeling (WWTmod)*, Spa, Belgium, March 2014.

**Cook, S.M.<sup>†</sup>**; Skerlos, S.J.; Love, N.G. Modeling anaerobic codigestion performance and reliability under varying influent compositions. *Association of Environmental Engineering and Science Professors (AEESP) Education and Research Conference*, Golden, CO, July 2013.

**Cook, S.M.<sup>†</sup>**; Delgado Vela, J.; Stadler, L.G. Modeling advancing the success of engineering service projects from the classroom to the field. *Association of Environmental Engineering and Science Professors (AEESP) Education and Research Conference*, Golden, CO, July 2013.

**Cook, S.M.<sup>†</sup>**; VanDuinen, B.J.; Skerlos, S.J.; Love, N.G. Life cycle comparison of environmental impacts from alternative pharmaceutical disposal methods. *Association of Environmental Engineering and Science Professors (AEESP) Education and Research Conference*, Tampa, FL, July 2011.

**Cook, S.M.<sup>†</sup>**; Love, N.G. Two-phase anaerobic codigestion of septage and food processing waste: Designing a reliable, regional waste management strategy. *8<sup>th</sup> International Water Association Leading-Edge Conference on Water and Wastewater Technologies (LET)*, Amsterdam, the Netherlands, June 2011.

Dorer, H.<sup>†</sup>; Hwang, J.<sup>†</sup>; Li, Z.<sup>†</sup>; Twill, K.<sup>†</sup>; Coir, E.<sup>†</sup>; Gupta, A.<sup>†</sup>; Frederick, T.<sup>†</sup>; Schulman, B.; Collins, M.; Nagel, A.; McCleary, E.; Bhandari, A.; Kaniz, N.; Sung, C.; **Cook, S.M.<sup>†</sup>**; Skerlos, S.J. Development of a robust anaerobic biogas system for use in developing countries. *National Sustainable Design Exposition*, Washington, D.C., April 2011.

**Cook, S.M.<sup>†</sup>**; VanDuinen, B.J.; Skerlos, S.J.; Love, N.G. Life cycle comparison of environmental impacts from alternative pharmaceutical disposal methods. *Engineering Sustainability Conference*, Pittsburgh, PA, April 2011.

## Teaching, Mentoring, & Advising

### Courses Taught

Spring 2016. University of Colorado-Boulder, Sustainability Principles for Environmental Engineers (CVEN 4834), Enrollment = 58.

Fall 2015. University of Colorado-Boulder, Wastewater Treatment (CVEN 5534), Enrollment = 9.

Spring 2015. University of Colorado-Boulder, Sustainability Principles for Environmental Engineers (CVEN 4834), Enrollment = 59.

Fall 2014. University of Colorado-Boulder, Wastewater Treatment (CVEN 5534), Enrollment = 14.

Spring 2012. University of Michigan, Biological Processes in Environmental Engineering (CEE 592). Co-Instructor. Enrollment = 14.

### Course Development

Spring 2014. *Sustainability Principles for Environmental Engineers*, Undergraduate Required Course (sophomore level). Created a new course on the emerging topic of sustainability assessments, challenges, and engineering solutions. Teaching and learning assessment material creation included: learning objectives (by topic), reading materials, lecture materials (slides and notes, topic identification), in-class activities, example and homework problems, reading quiz questions, team projects, and examination materials.

### Advising

**Masters.** Pranjali Kumar (2015). Elizabeth Shilling (2015). Pranoti Kikale (expected 2016). Christopher Jones (expected 2017).

**PhD.** Kyle Thompson (expected 2017). Allison Davis (expected 2020).

### Guest Lectures

“Introduction to Sustainability Principles for Engineers,” EVEN 1000: Introduction to Environmental Engineering, Dec 10, 2015 and Nov 20, 2014.

“Sustainability Assessments with Systems Modeling,” CVEN 4147/5147: Civil Engineering Systems, Dec 8, 2015.

“Water and Energy Nexus,” MCEN 4228: Sustainable Energy, Oct 19, 2015.

“Introduction to Evaluations of Wastewater Treatment Technologies using Life Cycle Assessment,” CVEN 5834: Bioenergy and Bioresource Recovery, Dec 2, 2014.

“Life Cycle Assessment Case Study: Unused Medication,” ES 313: Environmental Impact Assessment (Wellesley College), Feb 7, 2013.

## Service Activities

### Professional

#### *Peer-Reviewer: Proposals*

NSF Environmental Engineering Unsolicited Panel (2015)

#### *Peer-Reviewer: Research Projects*

Water Environment Research Foundation Project Subcommittee (2014-present)

#### *Peer-Reviewer: Journals*

Water Research, Science of the Total Environment, Environmental Engineering Science, Waste Management, WEF Technical Practice Update

### University

#### *Campus*

Udall Scholarship Selection Committee (2016)

Faculty Student Mentor Program (2014)

#### *Department*

CEAE Curriculum Committee (2014-present)

CEAE Classroom Renovation Committee (2015)

CEAE Graduate Committee (2014-2015)

EVEN Curriculum Committee (2014-2015)

### Conferences

#### *Scientific Committees*

IWA Wastewater Treatment Modeling Conference, Annecy, France, April 2016 – Chair of  
Young Water Professional Scientific Committee and Workshop

IWA Wastewater Treatment Modeling Conference, Spa, Belgium, April 2014

#### *Organizing Committees*

Sustainable Energy Fellowship National Student Conference, Ann Arbor, MI, May 2009

#### *Session Chair*

Engineering Sustainability, Pittsburgh, PA, April 2015

IWA Wastewater Treatment Modeling, Spa, Belgium, April 2014

IWA Sludge Conference, Harbin, China, August 2009

### Community Outreach

Detroit Area Pre-College Engineering Program (K-12, middle school). Designed and led hands-on water quality testing activities, Ann Arbor, MI (2009 and 2010)

Anaerobic Digester Installations; Potreritos and Bramadero, Nicaragua (2009); University of Michigan Multidisciplinary Design Service-Learning Course (trip leader, graduate advisor)