

# Jonathan E. Mellor, PhD

University of Connecticut  
Dept. of Civil & Environmental Engineering  
Storrs, CT 06269

+ 1 (434) 760-5498  
mellor@enr.uconn.edu

## Education

- **PhD, Civil Engineering** 2013  
*University of Virginia*
  - Dissertation: Modeling the Complexities of Water, Hygiene and Sanitation in Limpopo Province South Africa.
- **MS, Environmental Engineering** 2009  
*Michigan Technological University*
  - Master's International Program
  - Thesis: Water and Sanitation Accessibility and the Health of Rural Ugandans
- **MS, Physics** 2006  
*University of Virginia*
  - Thesis: Studies and Measurements of Irradiated Solid Polarized Target Materials
- **BS, Physics (High Honors)** 2001  
*The College of William and Mary*
  - Thesis: Investigation of a Sol-Gel Coating Technique for Polarized  $^3\text{He}$  Target Cells
  - Minor: History

## Academic Appointments

- Assistant Professor 2015 -
  - University of Connecticut - Department of Civil and Environmental Engineering
- Postdoctoral Research Associate - Yale Climate and Energy Institute 2013 - 2014
  - Yale University - Department of Chemical and Environmental Engineering
- Graduate Fellow - EPA Star Program 2011 - 2013
  - The University of Virginia - Department of Civil and Environmental Engineering
- Research Assistant 2009 - 2011
  - The University of Virginia - Department of Civil and Environmental Engineering
- Research Assistant 2009
  - The University of Virginia - Center for Immunity, Inflammation and Regenerative Medicine
- Research Assistant 2006 - 2009
  - Michigan Technological University - Department of Civil and Environmental Engineering
- Research Assistant 2001 - 2006
  - The University of Virginia - Department of Physics
- Undergraduate Researcher 2000 - 2001
  - The College of William and Mary - Department of Physics
- Laboratory Assistant 1998
  - The Naval Research Laboratory

## Certification

- **Engineer-in-Training** 2009  
*The State of Maryland*

## Peer-Reviewed Publications

- In Preparation (for submission within the next six months)
  1. **Mellor, J.E.**, Nelson, K., Zimmerman, J.B. (201x). “An Integrated Approach to Quantifying Climate Change Impacts on Water Resources in Hubli, India”.
- Submitted
  1. **Mellor, J.E.**, Levy, K., Bartram, J., Carlton, E., Clasen, T., Dillingham, R., Eisenberg, J., Elliott, M., Guerrant, R., Lantagne, D., Mihelcic, J., Nelson, K., and Zimmerman, J.B. (201x). “Systems approaches to study water and diarrheal diseases in resource-limited settings under climate change”, *Nature Climate Change*.
- Published
  1. **Mellor, J.E.**, Kallman, E.N., Oyanedel-Craver, V.A., Smith, J.A. (2014). “A Comparison of Three Household Water Treatment Technologies”, *Journal of Environmental Engineering*. In Press.
  2. **Mellor, J.E.**, Abebe, L., Ehdaie, B., Dillingham, R.A., Smith, J.A. (2014). “Modeling the Sustainability of a Ceramic Water Filter Intervention”, *Water Research*, 49, 286-299.
  3. **Mellor, J.E.**, Smith, J.A., Samie, A., and Dillingham, R.A. (2013). “Coliform Sources and Mechanisms for Regrowth in Household Drinking Water in Limpopo, South Africa”, *Journal of Environmental Engineering*, 139(9), 1152 - 1161.
  4. Demarest, J.B., Pagsuyoin, S.A., Learmonth G.P., **Mellor, J.E.**, Dillingham, R.A. (2013). “Development of a Spatial and Temporal Agent-based Model for Studying Water and Health Relationships: the Case Study of Two Villages in Limpopo, South Africa” *Journal of Artificial Societies and Social Simulation*. 16 (4) 3.
  5. **Mellor, J.E.**, Smith, J.A., Learmonth, G.P., Netshandama, V.O., Dillingham, R.A., (2012). “Modeling the Complexities of Water, Hygiene, and Health in Limpopo Province, South Africa”, *Environmental Science & Technology*, 46 (24), 13512 -13520.
  6. **Mellor, J.E.**, Mihelcic J.M., and Watkins D.W. (2012). “Collection Effort and Water Usage in East Africa”. *Waterlines*, 31:3, 215-225.
  7. The CLAS Collaboration (S. Niccolai **et al.**). (2006). “Search for the  $\Theta^+$  Pentaquark in the  $\gamma d \rightarrow \Lambda n K^+$  Reaction Measured with CLAS.” *Physics Review Letters*. 97:032001.
  8. Crabb, D. G. on behalf of the UVA Polarized Target Group (Day, D. B., Fomin, N., Hill, C., McKee, P., **Mellor, J.**, Pierce, J. and Wright, J.) (2004). “Polarization in radiation-doped butanol and CD<sub>2</sub>” *Nuclear Instruments and Methods in Physics Research Section A: Accelerators, Spectrometers, Detectors and Associated Equipment*. 526(1), 56-59.

## Conference Presentations

1. **Mellor, J.E.**, Zimmerman, J, (2012), “A Systems Approach to Climate, Water and Diarrhea in Hubli-Dharward, India”, Abstract 13401 presented at 2014 Fall Meeting, AGU, San Francisco, CA, 15-19 Dec.
2. **Mellor, J.E.**, Burt, Z., Ercumen, A., Kumpel, E., Zimmerman, J.B., Nelson, K.L. (2014), “A Systems Approach to Climate, Water and Diarrhea in Hubli-Dharward, India ”, to be presented at Water and Health Conference: Where Science Meets Policy, University of North Carolina at Chapel Hill, Chapel Hill, NC, 13-17 Oct.
3. **Mellor, J.E. (Invited)** (2014), “The Secluded Scientist: Communicating Science to a Wider World”, presented at Boost BioTech Meeting, Łódź, Poland, 24 Apr.
4. **Mellor, J.E. (Invited)** (2014), “Water and Climate Change in Africa”, panelist at Sankofa54: African Empowerment Conference, Yale University, New Haven, CT, 5 Apr.
5. **Mellor, J.E.** (2013), “Modeling the Sustainability of a Ceramic Filter Intervention in Limpopo Province, South Africa”, presented at Water and Health Conference: Science, Policy and Innovation, University of North Carolina at Chapel Hill, Chapel Hill, NC, 14-18 Oct.
6. **Mellor, J.E.** (2013), “What Works Best in Diarrheal Disease Prevention: Evidence from Rural Uganda”, presented at Water and Health Conference: Science, Policy and Innovation, University of North Carolina at Chapel Hill, Chapel Hill, NC, 14-18 Oct.
7. **Mellor, J.E.**, Smith, J.A., Learmonth, G.P., Netshandama, V.O., Dillingham, R.A., (2012), “Modeling the Complexities of Water and Hygiene in Limpopo Province South Africa”, Abstract H21E-1220 presented at 2012 Fall Meeting, AGU, San Francisco, CA, 3-7 Dec.

8. **Mellor, J.E.**, Smith, J.A., Dillingham, R.A.,(2012), “Pathogen Sources and Mechanisms for Regrowth in Household Drinking Water in Limpopo, South Africa”, Presentation Number LB-185 presented at the American Society of Tropical Medicine and Hygiene Annual Meeting, Atlanta, GA, 11-15 Nov.
9. **Mellor, J.E.** (2012), “Modeling the Complexities of Water, Hygiene and Sanitation in Limpopo Province South Africa”, presented at Water and Health Conference: Science, Policy and Innovation, University of North Carolina at Chapel Hill, Chapel Hill, NC, 29 Oct - 2 Nov.
10. **Mellor, J.E.** (2011), “Water, Hygiene and Sanitation in Limpopo Province South Africa”, presented at Symposium on Opportunistic Infections Parasitology and Medicinal Plants, University of Venda, Thohoyandou, South Africa, 29 July.

## Session Organizer

1. Convener, “Climate Change and Diarrheal Disease”, Side Event at the Water and Health Conference: Where Science Meets Policy, University of North Carolina at Chapel Hill, Chapel Hill, NC, 13-17 Oct 2014.

## Professional Experiences

- **Site Coordinator** Charlottesville, VA and Limpopo, South Africa  
*Water and Health in Limpopo Project* 2011  
 \* Served as the site coordinator overseeing 40 undergraduate and graduate students from the University of Virginia and the University of Venda (Univen) in Limpopo Province, South Africa. Responsibilities included managing five water and health research and humanitarian projects in local communities, serving as a conduit and facilitator between UVA and Univen faculty, staff and students as well as financial management, stakeholder coordination, community outreach, quality assurance and team building.
- **Peace Corps Volunteer - Water Resources Engineer** Kalisizo, Uganda  
*United States Peace Corps* 2007 - 2009  
 \* Worked as a capacity builder and water resources engineer in an indigenous non-governmental organization in Kalisizo, Uganda. Directed water and sanitation projects, founded a youth business organization, founded environmental clubs at local schools, managed project finances, supervised construction and rehabilitation of spring wells, authored grant proposals, wrote project reports, and initiated organizational and professional development with staff.
- **Project Manager - What Works Best in Diarrheal Disease Prevention?** Kalisizo, Uganda  
*Open Palm COWESER* 2007 - 2009  
 \* Managed a research and humanitarian project that brought water and sanitation education and facilities to over 10,000 people in six rural communities. Responsibilities included project design and implementation, managing a ten-person team, accounting, fundraising, data collection and analysis, community mobilization and engineering design.
- **Project Manager** Houghton, MI and Fronterizo, Guatemala  
*Engineers Without Borders* 2006  
 \* Led a 50-person team of students and faculty members who successfully brought two sustainable water supplies to adjacent communities in Fronterizo, Guatemala. Responsibilities included overall project planning and management, fundraising, community education and outreach and engineering design.

## Teaching

Co-Instructor: Global Health Research Methodologies	2011
- Public Health Sciences - The University of Virginia	
Co-Instructor: Global Health Policy and Practice	2011
- Public Health Sciences - The University of Virginia	
Teaching Assistant: Science, Technology and Society and Engineering Practice	2010
- Science, Technology and Society Department - The University of Virginia	
Teaching Assistant: Introductory Physics	2001-2003
- Department of Physics - The University of Virginia	

## Peer Reviewer

1. Environmental Science & Technology
2. Water Research
3. Journal of Water, Sanitation and Hygiene for Development
4. African Journal of Environmental Science and Technology
5. WHO South-East Asia Journal of Public Health
6. International Journal of Environmental Research and Public Health

## Awards and Honors

Science To Achieve Results (STAR) Fellowship - The Environmental Protection Agency	2011-2013
William R. Walker Graduate Research Fellowship - Virginia Water Resources Research Center	2011
Summer Student Fellowship - Istituto Nazionale di Fisica Nucleare / DOE / NSF Genoa, Italy	2005
Hampton University Graduate Studies Summer School Fellowship - Department of Energy - Hampton University	2003
Senior Honors Thesis - High Honors - Department of Physics - The College of William and Mary	2001

## Funding History

\$153,600 - Postdoctoral Research Fellowship - Yale Climate and Energy Institute - Yale University	2013-2015
\$126,000 - Science To Achieve Results (STAR) Fellowship - The Environmental Protection Agency	2011-2014
\$1,500 - Travel Grant Award - The Department of Civil and Environmental Engineering - The University of Virginia	2012
\$2,750 - William R. Walker Graduate Research Fellowship - Virginia Water Resources Research Center	2011
€2,400 - What Works Best in Diarrhea Disease Prevention Project - Betterplace.org	2008
€4,000 - Summer Student Fellowship - Istituto Nazionale di Fisica Nucleare / DOE / NSF Genoa, Italy	2005

## Media and Other Publications

1. **Mellor, J.E.** (2014). "Climate Impacts on Sanitation in Botswana". YCEI In the News Article. <http://climate.yale.edu/>. Last accessed July 16, 2014.
2. **Mellor, J.E.** (2014). "Cascading Effects of Green Transportation Reforms". YCEI In the News Article. <http://climate.yale.edu/>. Last accessed July 16, 2014.
3. **Mellor, J.E.** (2014). "Excessive Winter Deaths. Don't Expect Reductions From Global Warming". YCEI In the News Article. <http://climate.yale.edu/>. Last accessed May 15, 2014.
4. **Mellor, J.E.** (2014). "Water-related Disease and Climate". YCEI Perspective Article. <http://climate.yale.edu/>. Last accessed March 1, 2014.
5. **Mellor, J.E.** (2014). "Climate Change Changing Dengue Fever Distribution". YCEI In the News Article. <http://climate.yale.edu/>. Last accessed March 1, 2014.

6. **Mellor, J.E.** (2014). "Collective Action on Climate Change: What Game Theory Can Teach Us". YCEI In the News Article. <http://climate.yale.edu/>. Last accessed March 1, 2014.
7. **Mellor, J.E.** (2014). "South America Weather Forecast: Gastrointestinal Disease Likely". YCEI In the News Article. <http://climate.yale.edu/>. Last accessed March 1, 2014.
8. **Mellor, J.E.** (2013). "Global Food Security". YCEI In the News Article. <http://climate.yale.edu/>. Last accessed March 1, 2014.
9. **Mellor, J.E.** (2013). "Increased Risk of Global Floods Due to Climate Change ". YCEI In the News Article. <http://climate.yale.edu/>. Last accessed March 1, 2014.
10. SSali, M.J. "Water project stops diarrhea in Rakai" Daily Monitor Newspaper. March, 17, 2009.
11. **Mellor, J.E.** (2001). "Investigation of a sol-gel Coating Technique for Polarized  $^3\text{He}$  Target Cells", The Sol-Gel Gateway. <http://www.solgel.com/Resources/biblio/onlinepapers.htm>. Last accessed October 2, 2012.

## Books

1. **Mellor, J.E.** (2011). "Access to Water and Sanitation and the Health of Ugandans: Results from Two Surveys in Rural East Africa". VDM Publishing House Ltd.

## Computer Languages

Netlogo, R Statistical Programming Language, SPSS, Perl, C++, Fortran (basic).