



**TIME INTERVALS OF ALL RECORDED TALKS (4:00-5:30PM) ON NEXT PAGE**

## **Capstone Symposium**

**ENVR E 599, Sustainability Program  
Saturday, December 9, 2017, 2:00 - 5:30pm  
G-125 Maxwell-Dworkin Building**

*Live Link* <https://zoom.us/j/6677121143>

*Recorded Link:* <https://zoom.us/recording/play/FCqOiG5LetqsghaXs-tRDkyIkpAzm67c2ZhO48ojgsEQFWsu3zIlmzHkW0QRMP1U>  
<https://tinyurl.com/HESFall2017CapstoneSymposium>

### **2:00 WELCOME & PANEL INTRODUCTIONS**

*Thomas Gloria, Ph.D.* Program Director, Sustainability  
*Mark Leighton, Ph.D.* Associate Director & Senior Research Advisor, Sustainability  
*Rick Wetzler, Ph.D.* Research Advisor, Sustainability & Capstone Course Leader

### **2:05 APPLYING LIFE CYCLE ASSESSMENT (LCA) WITHIN THE CIRCULAR ECONOMY**

*Manuel Cassas* Designing Defense Products for Recovery and Resource Efficiency: Aircraft Carrier Acquisition by the US Navy  
*Darcy Williams* A Wasteful Courtesy? Rethinking The Superior Court of Pennsylvania's "Courtesy Copy" Briefing Requirements Using A Comparative LCA  
*Yebia Khalil* Comparative Environmental and Human Health Evaluations of Thermolysis & Solvolysis Recycling Technologies of Carbon Fiber Reinforced Polymer Waste  
*Nicole Wilson* Improving Development Models In Emerging Textile Markets: Analyzing Key Social & Environmental Performance Indicators of Ethiopia's Cotton Production

### **3:05 MARINE SYSTEMS: STRESSORS & RESILIENCE**

*Perry Dripps* Using the Hudson River to Teach Systems Thinking to K-12 Students  
*Michelle Gardner* The Effect of Increased Atmospheric CO<sub>2</sub> Concentrations on Coccolithophore Abundance and Calcification Rates

*continued*

**3:35 FURTHER QUESTIONS FROM THE PANEL & AUDIENCE**

**3:50 BREAK (Beverages provided)**

**4:00 LAND USE CHANGE: KEY DRIVERS & RESPONSES**

*Laura Hanrahan* Food System Sustainability: The Role of Production Scale **00:00:02-00:18:30**

*Fran Blanchard* “Paying for Nature” – Possible Transitions to a Self-Funding Model for  
Private Land Trusts in Massachusetts **00:19:16-00:34:12**

*Lael Pascual* The Pup Poop Problem: Sustainable Solutions to Dog Waste Management  
**00:35:47-00:54:27**

**4:45 RE-THINKING THE FUTURE OF ENERGY**

*Yaima Roldan Casillas* Changing the Rules of the Game: How Energy Storage  
Could Change Massachusetts’ Electricity Future **00:56:04-01:17:02**

*Ben Elsener* “Flattening the Duck” to Enable a More Efficient, Cleaner Grid:  
A Smart Home Algorithm Demonstrating Value in Utility Reform  
**01:17:55-01:32:50**

**5:15 FURTHER QUESTIONS FROM THE PANEL & AUDIENCE 01:32:57-01:33:10**

**5:30 SYMPOSIUM CLOSE**

**5:30- RECEPTION, Maxwell-Dworkin Lounge, immediately west of auditorium**

**7:00 (refreshments provided)**

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**Harvard DCE Online Technology Support**

**In advance**

Web conference general: <https://canvas.harvard.edu/courses/12626>  
Zoom specific: <https://canvas.harvard.edu/courses/12626/pages/zoom>

**On 12/9/17**

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**Program in Sustainability, Harvard Extension School**

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