

# IGNITE CHANGE. GO GREEN.

## Faculty Spotlight:

### Ross Lee, PhD, Adjunct Professor in the College of Engineering

In this interview series we bring you inside the world of Villanova's faculty and explore how their work relates to creating a sustainable future. In this issue we hear from Dr. Ross Lee, an adjunct professor in the College of Engineering.

#### **What is your academic background?**

I studied chemistry at the University of Rochester before completing my doctorate in Organic Chemistry at Michigan State. The focus of my thesis was on a fundamental new Organic Chemistry reaction that enabled new ways to synthesize complex organic molecules with less waste and energy, while producing higher yields.

#### **How long have you been teaching at Villanova?**

I have been teaching at Villanova for seven years.

#### **In your own words, how would you define sustainability and why is it important to you?**

I would define sustainability as "enough for all forever." Learning from nature to change the way we engage with the earth so that we become a sustainable member of the ecosystem and return more than we take so that future generations will be advantaged instead of compromised. Sustainability is the sensible way to holistically solve the problems that face us. Embracing sustainability will lead to not only better solutions, but also more prosperous and longer lived outcomes.



#### **What is your current research focus?**

I study sustainable materials, especially biomimetic solutions (inspired by nature).

#### **Do you collaborate with others for your research?**

All the time. Our Sustainable Engineering Master's and PhD program is based on collaborating with other faculty in order to bring in the discipline specific expertise to complement the sustainable engineering, whole systems perspective.

Interview continues on second page

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## Do you incorporate sustainability into the courses you teach?

Yes. I start with the benefits that today's technologies provide in the course area and discuss the associated sustainability concerns. We then look at sustainable alternatives and focus on how we can achieve the benefits while reducing these issues. I use this approach in my Sustainable Materials course, my Biomimicry course and my Sustainable Industrial Chemistry course.



## If you could create one course out of thin air, what would it be?

I would like to develop a course on Industrial Symbiosis (sometimes referred to as Industrial Ecology). Such a course would focus on how the waste products of one industrial process can become the incoming raw material for another to provide a closed loop system and one aligned with the emerging "circular economy". The premier example of this is in Kalundborg, Denmark where 7 companies have been utilizing industrial symbiosis for over 40 years. I had the pleasure of visiting Kalundborg with one of my Master's students, a Fulbright scholar from Peru, in August of 2014. It was an exceedingly worthwhile experience and I discussed collaborating with Kalundborg to develop such a course based on their model and the training that the Kalundborg Industrial Symbiosis Institute provides today.

## What are your favorite outside of the office activities?

I enjoy being outdoors either hiking, biking, kayaking or boating.

## Nova Bike Share

Free bike share  
Share comes with:

Bike  
Lock  
Winter storage  
Regular maintenance

Rent a bike for a semester or year  
Students MUST provide their own helmet

**Registration**  
August 30- September 5

**Bike Pickup**  
September 6-14



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## **NEW SHORTER SEASON - ONLY 7 WEEKS**

Registration is open from August 31 - September 7  
Join us for 7 weeks of local organic goodness.

**DELIVERIES ARE FROM  
SEPTEMBER 12 - OCTOBER 31  
(SKIPPING THE WEEK OF FALL BREAK)**

[www.lancasterfarmfresh.com](http://www.lancasterfarmfresh.com)



### **Vegetable Share**

**Large (11 - 12 items per week)  
Medium (6 - 8 items per week)**

#### **Bread Share**



#### **Fruit Share**



#### **Chicken Share**



#### **Meat Share**



#### **Cheese Share**



# EVENTS

Friday, September 9

**2016 VCASE Research Symposium:** Resilience in Engineering Design or Practice  
CEER 001 Lobby, 8:30AM- 1:00PM -Register Online

Tuesday, September 13

**#Friend Earth: Issues of Sustainability and the Environment**

Robert Curry Ph.D., Biology

Liesel Schwarz, Campus Sustainability Manager

Mary Elizabeth Clark, SSJ, The Sisters of Saint Joseph Earth Center

Falvey Memorial Library's Speakers Corner, 12:00-1:00PM

Friday, September 16

**Campus Tree Tour**

Corr Hall Arch, 3:30-4:30PM



Monday, September 19

**Bike Safety and Repair 101**

Public Safety Office (Garey Hall) 3:00-4:00PM

Thursday, September 22

**St. Thomas of Villanova Lecture and One Book Keynote**

Pulitzer Prize winner, Elizabeth Kolbert

Villanova Room, 7:00PM

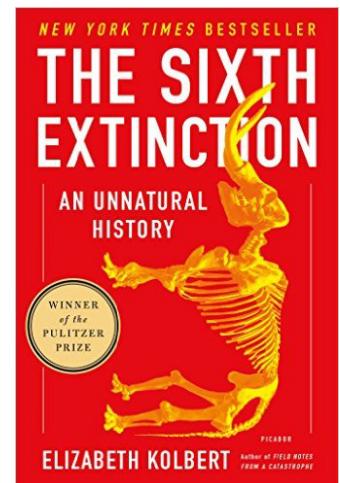
Wednesday, September 28

**Climate Change: What's Faith Got to do With It?**

Comic Storyteller & Host of the Climate Stew Podcast

Peterson Toscano

Driscoll 134, 6:00PM



**VILLANOVA**  
UNIVERSITY  
Sustainability

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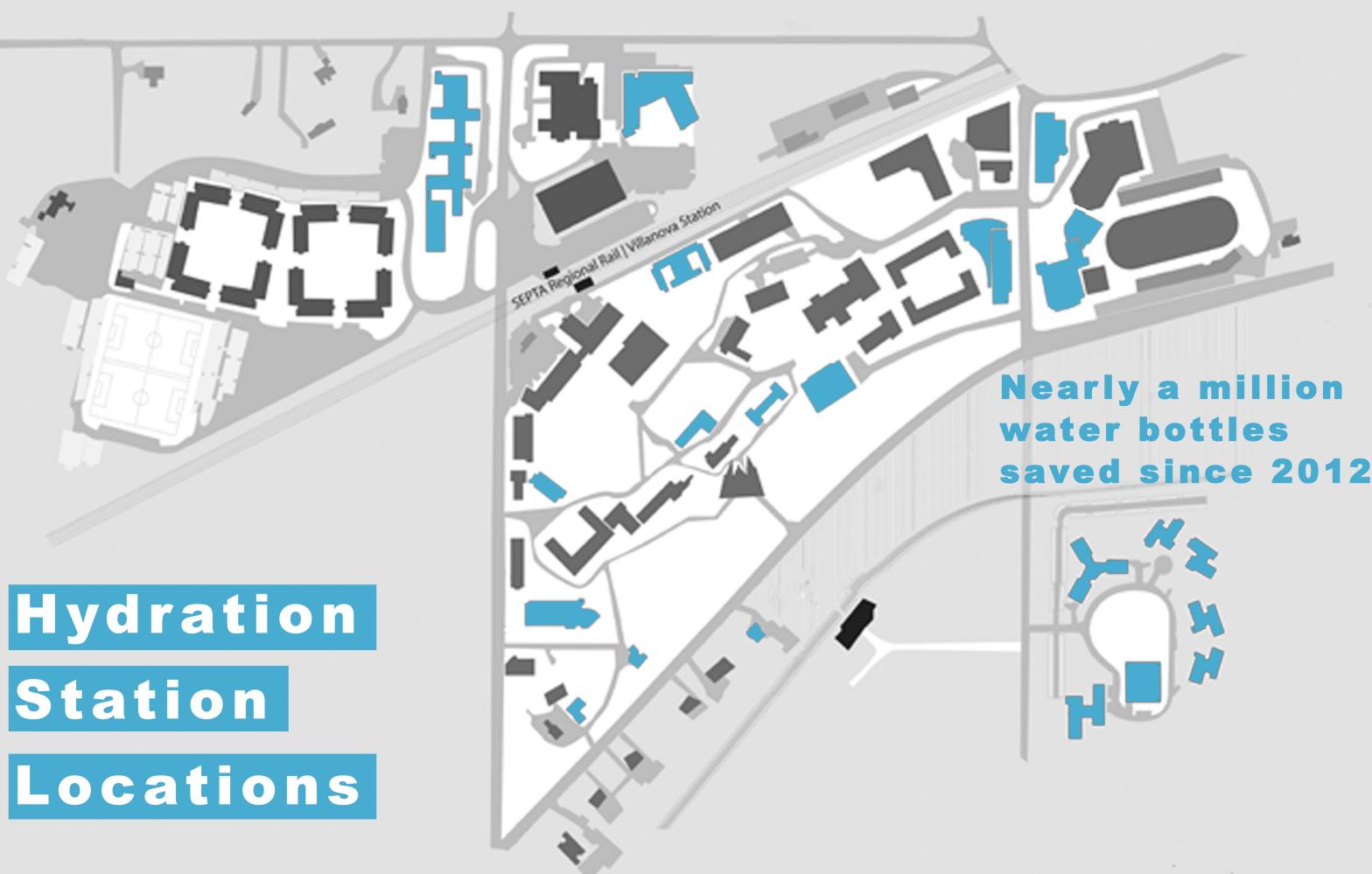
# OPPORTUNITIES

## Philadelphia Parks Alliance Intern for 2016-2017 school year

Founded in 1984, the Parks Alliance is the voice of Philadelphia's parks and recreation users—advocating for and supporting one of the largest urban recreation systems in the country. See attachment for more details.

## Defend Our Future fall 2016 internship

Defend Our Future is seeking a new generation of climate change activists, eager to learn the ins and outs of grassroots campus organizing. See attachment for more details.



### Stations Per Building

Alumni	2	Dougherty	1	O'Dwyer	1	White Hall	2
Austin	3	Good Council	1	Pavilion Pool	1		
Bartley	5	Jake Nevin	1	SAC	4		
Caughlin	1	Katharine	1	Simpson	1		
CEER	1	Law School	1	St. Mary's	2		
Davis Center	1	McGuire	1	St. Monica	1		
Donahue	1	Moriarty	1	Stanford	1		

The Philadelphia Parks Alliance is looking for energetic and passionate interns for the 2016-2017 school year. Founded in 1984, the Parks Alliance is the voice of Philadelphia's parks and recreation users—advocating for and supporting one of the largest urban recreation systems in the country. We want to make Philadelphia a healthy, vibrant, and sustainable city for all.

The Parks Alliance is a fast-paced and lively 501(c)(3) non-profit that welcomes big ideas and big personalities at our West Philadelphia office. Our work is collaborative by nature and empowering by design. The Parks Alliance is a place for people looking for real responsibility and impact-- not grabbing coffee or making copies.

Internships with the Parks Alliance are unpaid, but we can promise a rewarding experience doing work that matters. During their tenure with our organization, interns will divide their time between one or more long-term projects in addition to day-to-day work.

Our work is varied, and we currently have projects in advocacy, journalism, fundraising, photojournalism, marketing, communications, program management, sustainability, law, research, public policy, graphic design, urban design, GIS analysis, and community outreach.

If you are interested in working with us, please send a cover letter and resume to Olivia Ortiz at [olivia@philaparks.org](mailto:olivia@philaparks.org). For questions or inquiries, call 215-879-8159. We accept applications on a rolling basis.



# Defend Our Future

## Fall 2016 Internship

Defend Our Future is actively seeking a new generation of climate change activists, eager to learn the ins and outs of grassroots campus organizing. Defend Our Future Fall interns will learn cutting edge grassroots organizing tactics from some of the country's very best climate Organizers, and make lasting connections with like-minded and passionate leaders.

APPLY NOW to lead the charge to combat climate change and implement real solutions on your campus and in your community. The internship begins September 7<sup>th</sup> and runs through December 8<sup>th</sup>. The application can be found at [action.defendourfuture.org/internships](http://action.defendourfuture.org/internships).

Defend Our Future's mission is to engage students on college campuses and challenge them to take meaningful action on climate change, including voting this November as a climate voter. As a non-partisan, non-profit organization we believe in a "big tent" approach to addressing this issue and we engage a wide and diverse range of supporters, regardless of political or ideological affiliation.

### Job Responsibilities

- Recruit and build volunteer networks with one-on-one meetings, conversations with campus groups and presentations to classes;
- Assist in execution of campus events promoting action on climate;
- Engage students on the importance of being a climate voter through tabling and crowd canvassing;
- List building, data entry and recruitment calls

### Qualifications

- Must be a current college student enrolled in a bachelor or master's degree program
- Be available for at least 10 hours per week
- Excellent written and verbal communication skills
- Computer proficiency must include Word, conducting internet research
- Ability to work in and adapt to a fast-moving, team-oriented environment
- Willingness to work irregular weekday, evening and weekend hours; and
- Familiarity with climate change issues is preferred.

Internships are unpaid with the possibility for course credit.

To Apply please visit [action.defendourfuture.org/internships](http://action.defendourfuture.org/internships).

We strongly encourage women and minorities to apply. Defend Our Future is an affirmative action – equal opportunity employer.