

THORNTON TOMASETTI FOUNDATION

THE BEGINNING 14 YEARS

ARCHIVE GLOBAL - \$39,035 MUD TO MORTAR PROJECT

Beneficiary Home Surveys



archive
architecture for health

Thank You's



On behalf of project masons, beneficiaries, and ADESH staff, thank you for your contribution to Mud to Mortar.

archive
architecture for health

Installation of rain-harvesting function for pilot station

Installation photos and diagram of water being funneled into tank.




Images of hand washing station in use

The pilot hand washing station has been installed at ADESH's office. Here you can see it in use by women from the community. The bottom images show the left pedal dispensing soap and the right pedal operating the water.



COOPER UNION - \$32,500 PORTABLE MIGRANT SHELTER

FUTURE WORK
RIFSK



REDUCING COST OF FABRIC

QUICKER JOINT ASSEMBLY


CLEAR SYSTEM TO ANCHOR TO GROUND

+IMPLEMENTATION AND REVIEW FROM UNHCR

STEM THE COOPER UNION ALBERT HEIKEN SCHOOL OF ENGINEERING

Linear Regression of Abalone Snails

Ethan and Samara



Background Information

Abalone Snails are large sea snails that are commonly found in coasts around the world. Scientists have been harvesting them in farms to do extensive research on their species in order to find a new method to predicting their age through physical attributes such as height, weight, sex, diameter etc. in order to replace the traditional approach which was cutting their shells open which could be seen as time consuming and harmful for the snails.

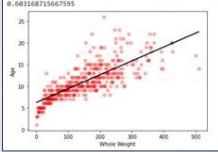
Results

As apart of our experimentation we made 1-D Linear regressions charting age with respect to several variables such as length, height weight, etc.

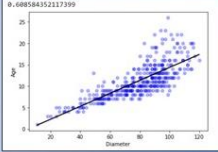
We found the two values(whole weight, diameter) which correlated best with the age and created a 2-D regression on top of that. Although it's not the best our correlations were around 60% accurate.

It can be concluded there is a strong correlation between diameter and whole weight to age.

Whole weight

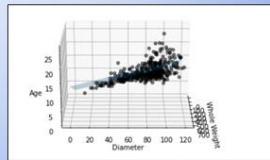


Diameter



2-D Regression

$R^2 = 0.63005289569$




**Thornton
Tomasetti**

Thank you

Eugene Briskman
Richard Tomasetti
Ninad Pandit
David Gersten
Dean Mike Essl

Cynthia Alberto and the Weaving Hand



SEA²M³

QUESTIONS?

BRIDGES TO PROSPERITY - \$100,000



Children of the Bajo Grande community on their newly-completed footbridge



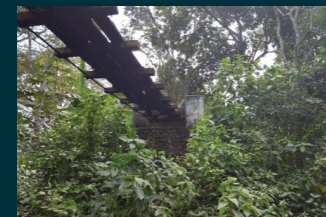
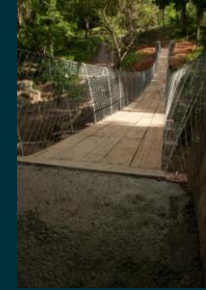
The Messiah College team working alongside local community members on lower construction

BUILD CHANGE, EARTHQUAKE PROTECTION

~~\$63,500~~

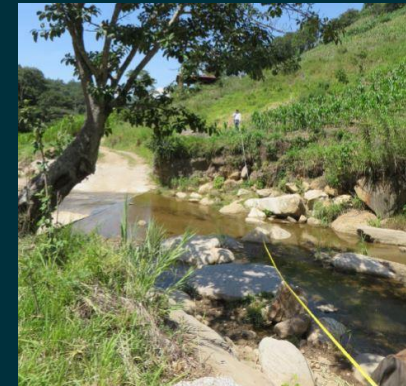


ENGINEERS IN ACTION - \$75,000



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ENGINEERS WITHOUT BORDERS - \$240,125



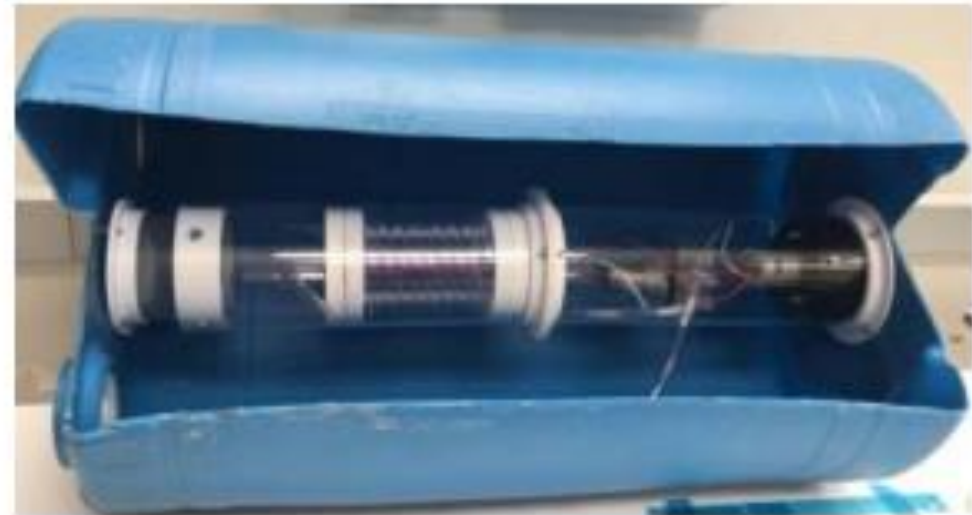
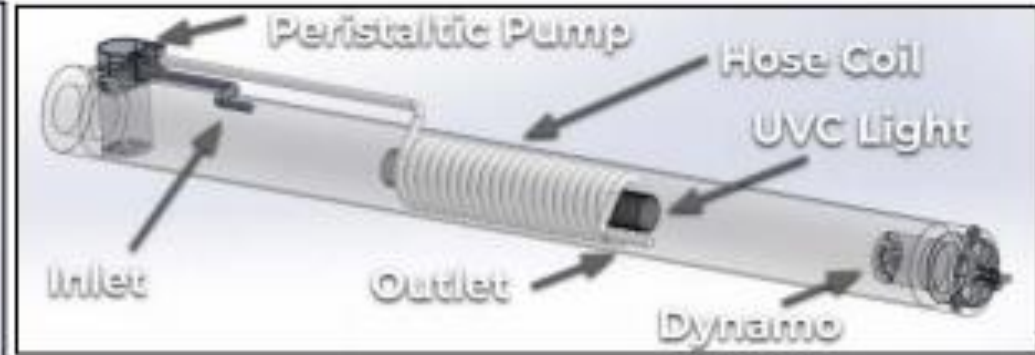
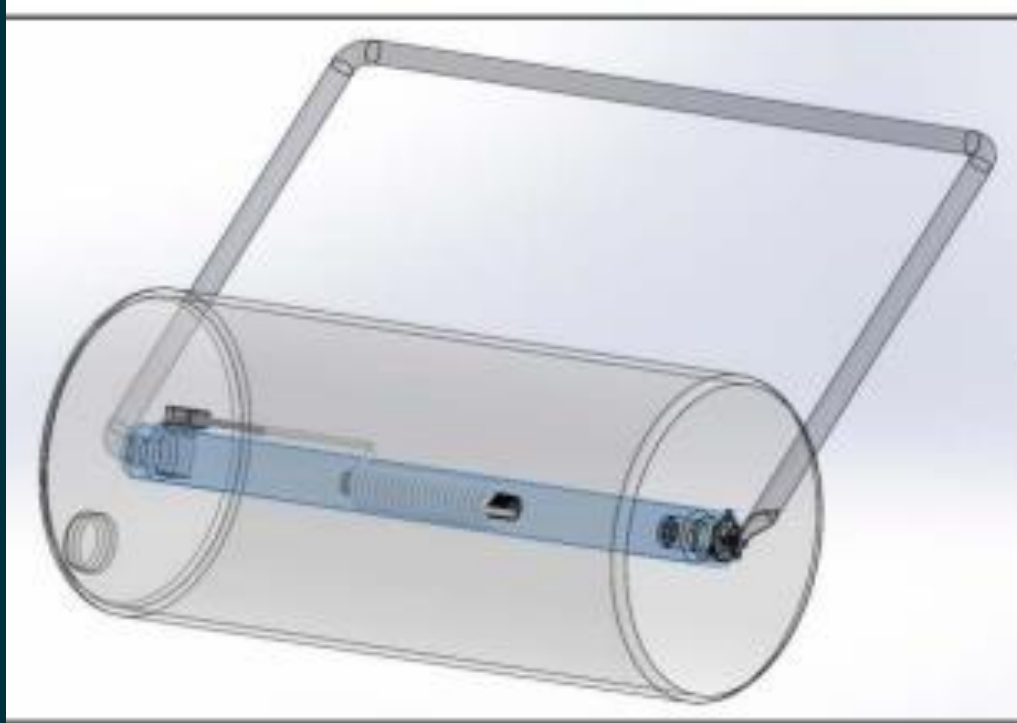
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ENGINEERS FOR A SUSTAINABLE WORLD - \$15,000 RESILIENCY AND SUSTAINABILITY



FLORIDA INTERNATIONAL UNIVERSITY FOUNDATION- \$15,000 INNOVATIVE WATER PURIFICATION

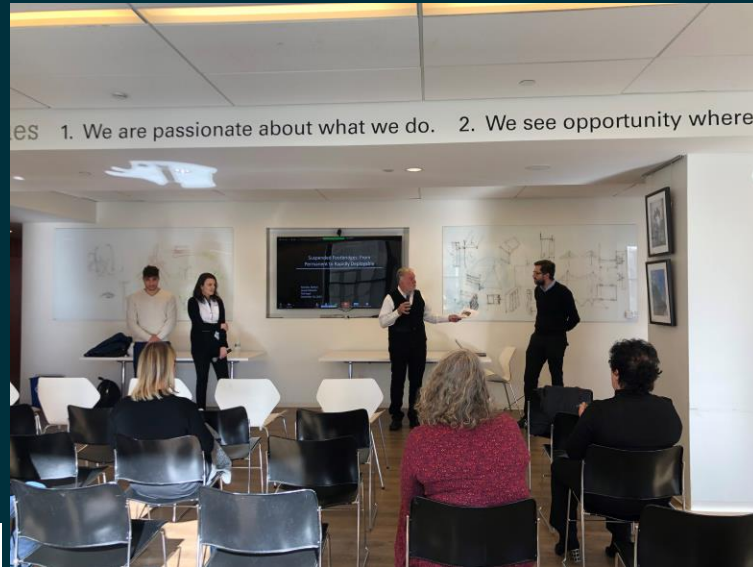


GEOHAZARDS - \$87,500

PROMOTING WORLDWIDE EARTHQUAKE RESISTANCE



HOFSTRA UNIVERSITY - \$21,200 EMERGENCY BRIDGE DEPLOYMENT



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THE URBAN ASSEMBLY SCHOOLS - \$85,000 SUPPORTING UNDERSERVED STUDENTS



INNOVATIVE EDUCATIONAL PROGRAMS SHARED NATIONALLY

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THOSE AMAZING PROFESSIONS - \$38,000



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THOSE AMAZING BUILDERS WEB INITIATIVE



ATTENTION: AMAZING BUILDERS

A WEBSITE THAT WILL TURN KIDS ON TO A CAREER IN CONSTRUCTION!

The construction industry holds incredible potential for new recruits: exciting and meaningful work, good compensation, innovation, sustainable practices, and an opportunity to help society after the challenges of 2020. There are plenty of options for young people with and without a college degree. And with the promise of massive new infrastructure spending, it is a career that students should know about. As the *The New York Times* recently stated, "Industries like the skilled trades offer excellent careers and face worker shortages."

IT'S A GREAT STORY. LET US HELP YOU TELL IT NOW

Those Amazing Professions (TAP), a nonprofit that aims to introduce young people early on to careers that benefit them as well as society, is seeking funding for a new website on careers in construction, *Those Amazing Builders*, based on our book of the same name.

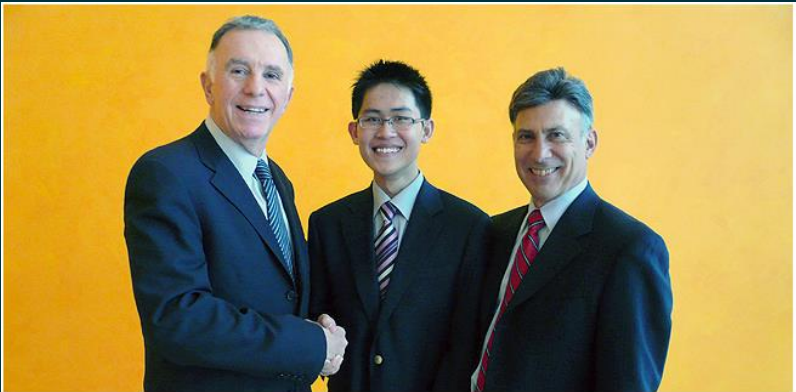
Those Amazing Builders, the book, introduces middle and high school students to the variety of career opportunities in the construction industry and is full of examples of construction projects across the globe. It's the kind of book that motivates students to become part of creating the world we live in—and making it smarter, greener, and more cost effective.

WHY A WEBSITE?

Attracting and retaining qualified employees has long been an issue in the construction industry. The *Those Amazing Builders* website will explain in simple student-oriented language what it means to have a career in the building industry today. Photos and short videos will enhance the message.

TAP THOSE AMAZING PROFESSIONS!
thoseamazingprofessions.org

UNIVERSITY OF ILLINOIS ELI W. COHEN TTF ENDOWED SCHOLARSHIP - \$25,000

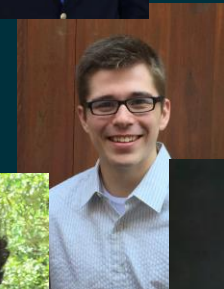
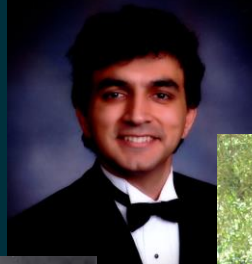
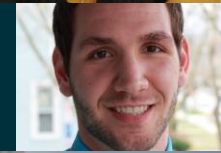


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Reach of scholarship & Fellowship programs – 72 universities

Arizona State U	Massachusetts Institute of Technology (MIT)	The University of Texas at Austin
Auburn U.	Michigan State University	The University of Utah
Brown University	Milwaukee School of Engineering	U. of Cincinnati
California Institute of Technology	NC State University	University of Washington
California Polytechnic University	New Jersey Institute of Technology	University of California - Berkeley
California State University - Northridge	Northeastern University	University of California - Davis
California State University - Chico	Northwestern University	University of California - San Diego
Carnegie Mellon University	NYU - Polytechnic Institute of Engineering	University of Illinois at Urbana Champaign
Colorado State University	Pennsylvania State University	University of Massachusetts Amherst
Columbia University	Pennsylvania State University	University of Michigan
Cooper Union	Princeton University	University of Missouri
Cornell University	Purdue University	University of Notre Dame
Drexel U.	Rensselaer Polytechnic Institute	University of Virginia
Duke University	Rice University	University of Wisconsin - Madison
Florida Atlantic University	Rutgers, The State University of New Jersey	Villanova University
George Mason University	San Jose State U.	Virginia Tech
Georgia Institute of Technology	Stanford University	Washington State U.
Georgia Southern Institute	State University of New York at Buffalo	The University of Iowa
Illinois Institute of Technology	Stevens Institute of Technology	Hofstra University
Iowa State U.	Texas A&M University	Oklahoma State University
John Hopkins University	The City College of New York	Olin College of Engineering
Kansas State University	The George Washington University	King's College
Lafayette College	The University of Kansas	
Lamar University		
Lehigh University		
Manhattan College		
Marquette U.		

NATIONAL SCHOLARSHIP - \$300,000



From left, Daniel Lu, Cameron Ritchie and Barbara Simpson



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STUDENT INNOVATION FELLOWSHIP - \$40,000

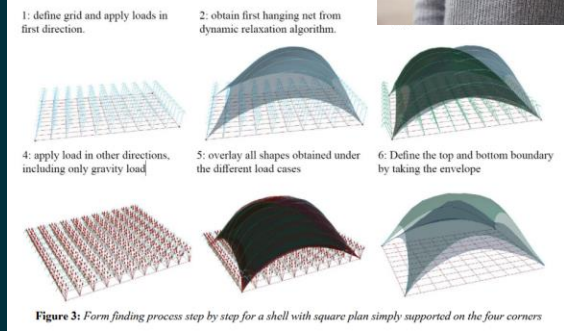
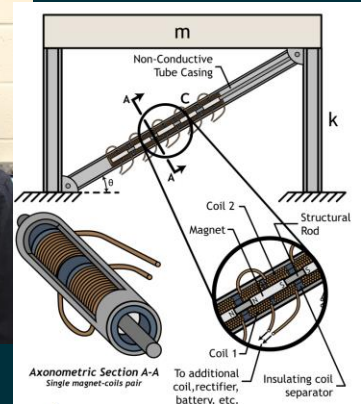
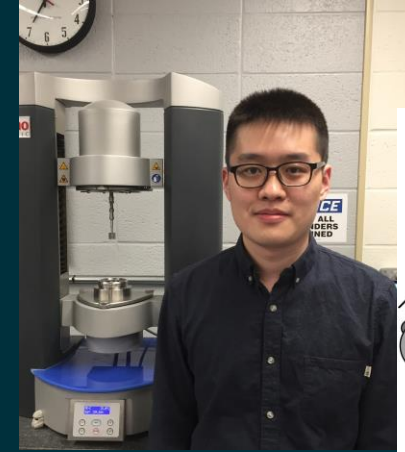
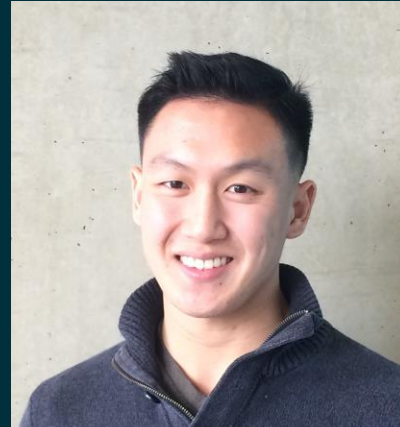
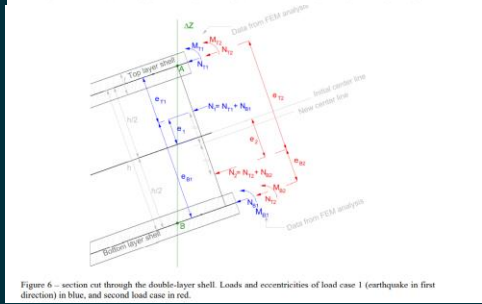
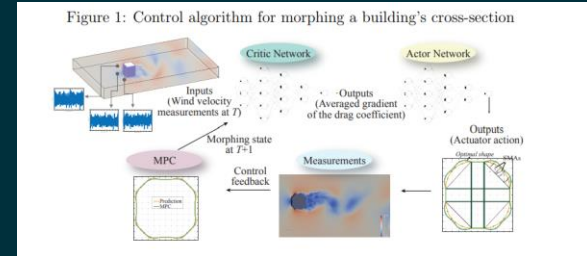


Figure 7: Process to material compatibility check showing a complete single layer curved trajectory



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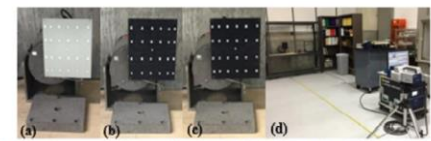
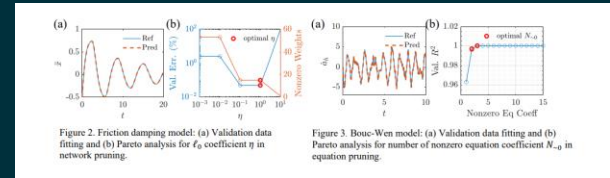
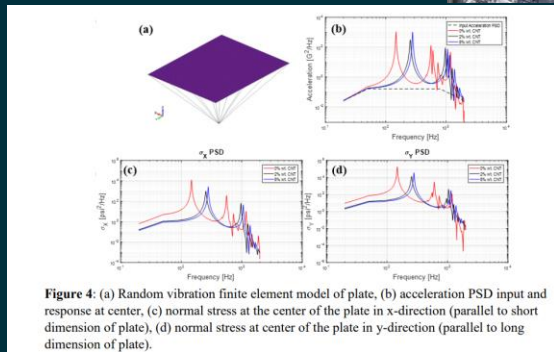
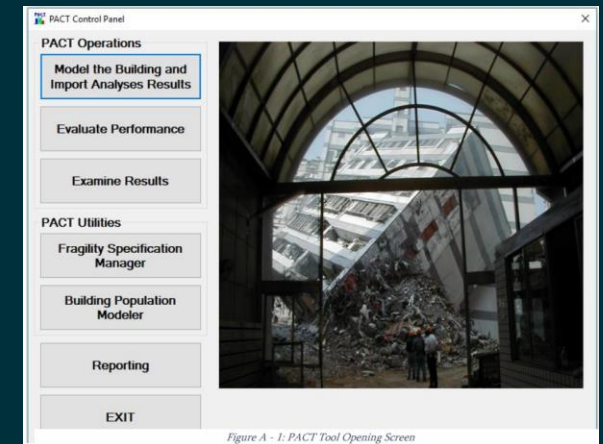
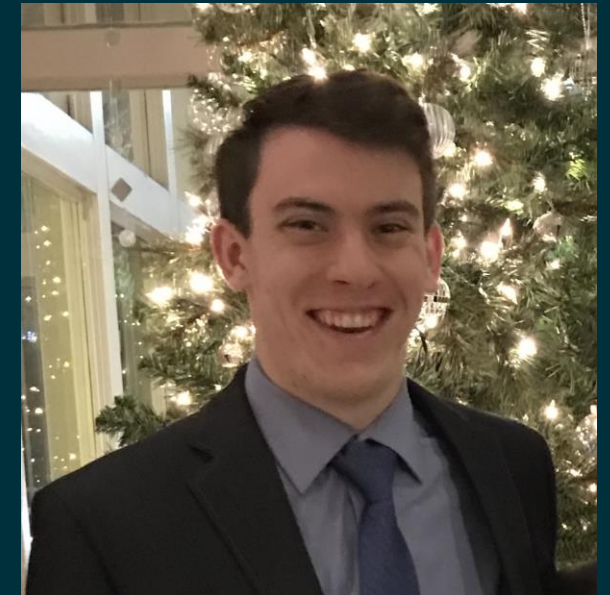
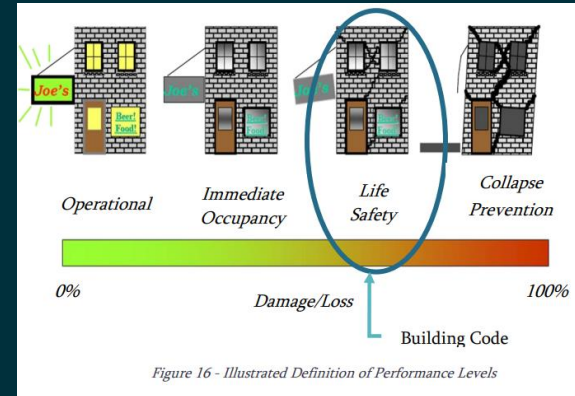


Figure 1: Fiberglass/epoxy quasi-isotropic plates of (a) 0% wt. CNT, (b) 2% wt. CNT, and (c) 5% wt. CNT. (d) Scanning laser vibrometer test set-up.

TECHNICAL LITERACY FELLOWSHIP - \$11,250



WWW.THORNTONTOMASETTIFOUNDATION.ORG

Current Board of Governors: Richard L. Tomasetti, Andrew Goldbaum, Elisabeth Malsch, Joseph G. Burns, Raymond Daddazio, Wayne Stocks, Robert J. Nacheman

Past Board of Governors: Dan Cuoco, Joel Weinstein

Current Activities committee: Elaine Shapiro, Amy Macdonald, Peter Quigley

Past Activities committee: Aaron Beebe, Rachel Jackson

Liaison with marketing: Jim Kent, Fallon Dunham, Alex Konidaris, Mike Pinzuti, Vakaris Renetkis, Carolyn Everett, Lorenzo Sanjuan

Foundation Administrator: Gwendolyn Dowdy

THORNTON TOMASETTI FOUNDATION 14 YEARS OF UNIQUE PHILANTHROPY AND APPRECIATION



SOME FORWARD THINKING

ICARE – The Thornton Tomasetti Foundation Graduate Fellowship

- **ICARE**: **I**nnovation for **C**limate **A**daptation and **R**esilience in **E**ngineering
- Research and educational support to conduct innovative research at their home institution in an area with demonstrated relevance to climate adaptation, resilience, and civil engineering
- Who should apply?
 - Student enrolled or intend to enroll in a full-time PhD program with at least one year remaining
 - US citizen or permanent US resident
- Benefits (tbd)
 - Some examples, tuition reimbursement (up to some limit) paid to home institution, stipend paid to student, option for an Internship at TT.
 - *Say \$50 - \$75K total and renewable for additional years.*
 - **ICARE** could approach the prestige of a Fulbright fellowship