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**STRUCTURAL ENGINEERING INSTITUTE  
GRADUATE STUDENT CHAPTER**

**AT**

**WEST VIRGINIA UNIVERSITY**

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Activities Report (October 1, 2018 - August 14, 2019)



**STRUCTURAL  
ENGINEERING  
INSTITUTE**

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**Graduate Student Chapter  
West Virginia University**

# Table of Contents

- About the Chapter ..... 2
- Chapter Mission..... 3
- Faculty Advisor’s Message..... 4
- President’s Message..... 5
- Leadership Team ..... 6
- Chapter Membership ..... 7
- Sponsors ..... 8
- New Initiatives ..... 9
- Guest Lecture ..... 10
- Collaboration with Professional Chapter ..... 12
- Lunch and Learn ..... 13
- Webinar ..... 14
- High School Visitation ..... 15
- Decide WVU ..... 17
- Social Events ..... 18
- Meetings ..... 19
- Award Inception ..... 20
- Contact Us..... 21

## About the Chapter

Structural Engineering Institute Graduate Student Chapter at West Virginia University (SEIGSC- WVU) was formed in spring 2013 with approval from American Society of Civil Engineers' Structural Engineering Institute. We are the **second** graduate student chapter in the United States. The Chapter was formed with a mission is to promote graduate education in structural engineering, develop leadership skills, create professional development opportunities for current graduate students, and enhance networking with structural engineering professionals. The chapter is advised by Dr. Udaya B. Halabe, P.E., F.ASCE, F.SEI, F.ASNT, Professor of Civil and Environmental Engineering at West Virginia University.

The primary goal of the chapter is to advance and improve our members' career, technological advancement and professional practice. In addition, we help create an association between academia and practicing engineers by conducting technical and networking sessions to share each other's experiences, cutting edge research and its practical implications as well as discuss several avenues of professional growth.



*SEIGSC-WVU Receiving Certificate of Establishment in 2013, Pittsburgh, PA*

## Chapter Mission

The mission of this chapter shall be to promote structural engineering profession to graduate, undergraduate and high school students. This shall include enhancing professional development skills, networking with industry leaders and providing service through outreach activities.

### **Chapter Membership Requirements**

Section 1. The membership of this organization shall be limited to WVU-CEE graduate students with a minimum of 3.0 cumulative GPA. The members also must register as student members with the Structural Engineering Institute of the American Society of Civil Engineers (SEI/ASCE).

Section 2. This organization will not deny membership based on race, sex, age, disability, veteran status, religion, sexual orientation, color, or national origin.

## Faculty Advisor's Message

Dear friends,



The Structural Engineering Institute Graduate Student Chapter at West Virginia University has been very active since its inception in Spring 2013. The Chapter has promoted various interactions between students ranging from high school, freshmen, upperclassmen to graduate levels and structural engineering faculty and industry professionals. This year's Committee has been extremely active in organizing numerous events for students including interaction with the Professional Chapter in West Virginia in order to provide learning opportunities for students beyond the classroom and to promote the structural engineering profession. I commend our Chapter Executive Committee for putting in countless hours towards the mission of the Chapter and enriching the college experience for our students.

**Udaya B. Halabe, Ph.D., P.E., F.ASCE, F.SEI, F.ASNT**  
Chapter Advisor

## President's Message

Dear membership,



I am honored to have been afforded the privilege of serving as President of the Structural Engineering Institute Graduate Student Chapter at West Virginia University since 2014. I am excited to continue serving in this role for the Year 2019 by building up on the success we have already achieved. This year's committee has been exemplary in its role to serve and provide numerous opportunities for students including professional development activities, networking opportunities with industry leaders and supplemental travel support to attend conferences. I extend my sincere thanks to our sponsors whose generosity has helped us support a number of new initiatives to actively engage our membership.

My long-term vision for the chapter is to provide continued support for the professional development of our student community in collaboration with industry leaders and professional organizations. I take this opportunity to commend the hard work of our committee members for a successful year.

In closing, let me THANK all our sponsors, supporters, and volunteers who always strive hard to promote the chapter's mission. Your commitment to our chapter and willingness to trust us in carrying on the business is greatly appreciated.

**Praveen K.R. Majjigapu, MS, S.M.ASCE**  
Chapter President

## Leadership Team

### **President: Praveen Majjigapu, M.S., S.M.ASCE**

Praveen is a WVU Foundation Distinguished Doctoral Scholar pursuing his doctoral degree in Structural Engineering. Praveen joined SEIGSC-WVU as its founding Vice-President and was elevated as Chair in 2014. Praveen continues to serve as the Chair for the Year 2019.



### **Secretary: Shabnam Khanal, B.S., S.M.ASCE**

Shabnam is currently pursuing Master's degree in Civil Engineering at WVU in the area of Structures and Nondestructive Evaluation. Shabnam joined SEIGSC-WVU in fall 2018 as its Secretary and continues to serve in this position for the Year 2019.



### **Event Coordinator: Krishna Gadde, M.S., S.M.ASCE**

Krishna is a Doctoral student in Civil Engineering at West Virginia University pursuing her research in the area of structural rehabilitation using advanced composite materials. Krishna will serve as the Chapter Event Coordinator for the Year 2019.



### **Faculty Advisor: Udaya Halabe, Ph.D., P.E., F.ASCE, F.SEI, F.ASNT**

Dr. Halabe is a professor of Civil and Environmental Engineering and faculty advisor for SEIGSC at West Virginia University. Dr. Halabe started this Chapter at WVU in 2013 and continues to serve as its faculty advisor for the sixth year.



## Chapter Membership

SEIGSC-WVU has 15 members currently enrolled for the Year 2018-2019:

1. Barker William, M.S. in Civil Engineering, May 2019
2. Bekir Bas, M.S. in Civil Engineering, December 2019
3. Rajneesh Bharil, Ph.D. in Civil Engineering, December 2019
4. Nicole Hegele, M.S. in Civil Engineering, May 2019
5. Amir Houshmandyar, Ph.D. in Civil Engineering, May 2021
6. Jonas Kavi, Ph.D. in Civil Engineering, December 2018
7. Shabnam Khanal, M.S. in Civil Engineering, August 2020
8. Praveen K.R. Majjigapu, Ph.D. in Civil Engineering, December 2019
9. Tadamon Mohammed, M.S. in Civil Engineering, December 2018
10. Andrew Pacifico, M.S. in Civil Engineering, May 2019
11. Justin Smith, M.S. in Civil Engineering, December 2018
12. Piyush Soti, Ph.D. in Civil Engineering, May 2019
13. Robert Tennant, Ph.D. in Civil Engineering, December 2020
14. Kalrav Singh Tomer, M.S. in Civil Engineering, December 2019
15. Krishna Tulasi Gadde, Ph.D. in Civil Engineering, August 2021



## Sponsors

SEIGSC-WVU has started its first ever fundraising drive in February 2019 and raised 2000 USD. The Chapter gratefully acknowledges the generous sponsorship provided by Greenman-Pedersen, Inc. and Civil & Environmental Engineering Consultants, Inc. towards the Chapter activities. The Chapter hopes to create some exciting opportunities for our students through this sponsorship.

### Silver sponsors

# GPI



Civil & Environmental Consultants, Inc.

## New Initiatives

SEIGSC-WVU organizes numerous outreach and technical activities each year geared towards K- 12, high school, freshman engineering, and undergraduate student community to promote structural engineering profession. In addition, we also encourage our graduate student members, officers and faculty to actively participate and represent SEIGSC-WVU at various local and national level technical/leadership meetings and conferences. This year we proposed and executed several new initiatives to actively engage our membership:

1. Lunch and learn sessions
2. Onsite guest speaker presentations
3. Collaboration with ASCE WV professional chapter
4. Awards inception
5. Sponsorship drive
6. Social events

A summary of the recent activities and accomplishments by SEIGSC-WVU is provided in the following sections.

## Guest Lecture

### 1. Mr. Daniel Estep, P.E. - Industry Professional

March 25, 2019 (Monday) - SEIGSC-WVU hosted Mr. Daniel Estep, Project Engineer with Greenman-Pedersen, Inc. (GPI) and WVU-CEE Alumnus to present a guest lecture on "Role of Bridge Engineers - Tips for Success and Professional Licensure". During this hour-long presentation, Mr. Estep shared his professional experiences as Assistant Project Manager, Project Engineer, and Team Leader on numerous bridge construction projects. Mr. Estep focused his presentation on bridge inspection, design, repair and retrofit while highlighting some major issues facing bridges in America and ways to overcome some of those issues effectively. Coming from an industry professional, it was a very informative session for aspiring engineers to better comprehend real life applications of their knowledge. There were a total of 45 attendees for this event including undergraduate and graduate students.



## 2. Hota V. S. GangaRao, Ph.D., P.E., F.ASCE, F.SEI – Wadsworth Distinguished Professor

April 1, 2019 (Monday) - Dr. Hota GangaRao, Maurice A. and Jo Ann Wadsworth Distinguished Professor of Civil and Environmental Engineering at West Virginia University, presented a guest lecture on “Fiber Reinforced Composites and Applications to Civil Infrastructure.” This presentation was geared towards providing basic knowledge on Fiber Reinforced Composites including their advantages, limitations, market potential and field applications. The presentation also featured several award-winning research projects completed by the WVU’s Constructed Facilities Center since its inception in 1988. A total of 45 students attended the guest lecture and interacted with the guest speaker.



## Collaboration with Professional Chapter

### ASCE WV Section President Gregory K. Michaelson, Ph.D., P.E. Speaks at SEIGSC-WVU Chapter Event

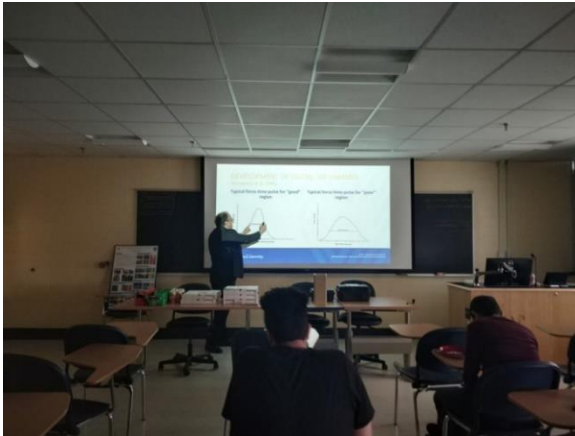
June 17, 2019 (Monday) - SEIGSC-WVU welcomed Gregory K. Michaelson, Ph.D., P.E., ASCE West Virginia Section President and Assistant Professor in the Weisberg Division of Engineering at Marshall University, as guest speaker. Dr. Michaelson talked on the "Development of Economical Short-Span Steel Bridge Solutions." The presentation mainly focused on innovative short-span bridge systems for accelerated bridge construction. Dr. Michaelson emphasized the significance of structural analysis and design in real-world construction. His talk featured design methodology, experimental testing, analytical studies and field investigations of short-span bridges which combine concrete deck with steel tub girders. There were a total of 22 attendees for this event including undergraduate and graduate students. Snacks and drinks were served during this session.



## Lunch and Learn

### Presentation by SEIGSC-WVU Faculty Advisor - Dr. Udaya B. Halabe

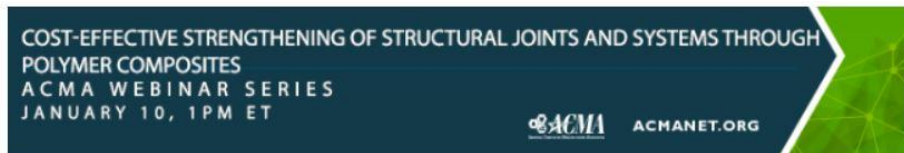
June 5, 2019 (Wednesday) - SEIGSC-WVU Advisor Dr. Udaya B. Halabe gave a talk on "Nondestructive Testing (NDT) for Condition Assessment of Structures." His talk included basic theory and applications of NDT techniques such as infrared thermography and digital tap hammer along with in-class demonstrations of these techniques. The presentation also included a brief introduction to Fiber Reinforced Polymer (FRP) Composites and their applications in bridge rehabilitation projects. This was followed by case studies showing applications of NDT techniques for construction quality control during several bridge rehabilitation projects involving the use of FRP composite fabric wraps. A total of 21 undergraduate and graduate students attended the session. Pizza and soft drinks were served during this Lunch and Learn session.



# Webinar

## American Composites Manufacturers Association (ACMA) Webinar

July 26, 2019 (Monday) - SEIGSC-WVU has provided a webinar opportunity for the chapter membership on "Cost Effective Strengthening of Structural joints and Systems through Polymer Composites" presented by Professor Hota GangaRao and Praveen Majjigapu.



### Learn Cost-Effective Strengthening of Structural Joints and Systems through Polymer Composites

**Topic:** The role of multifunctional fiber reinforced polymer composites in reinforcing structural joints and systems.

**Date:** January 10, 2019 at 1pm ET

Join ACMA and featured speakers, Prof. Hota V.S. GangaRao, Ph.D. & Praveen K.R. Majjigapu, of West Virginia University's Benjamin M. Stalter College of Engineering and Mineral Resources.



*Prof. Hota V.S. GangaRao, Ph.D.*



*Praveen K.R. Majjigapu*

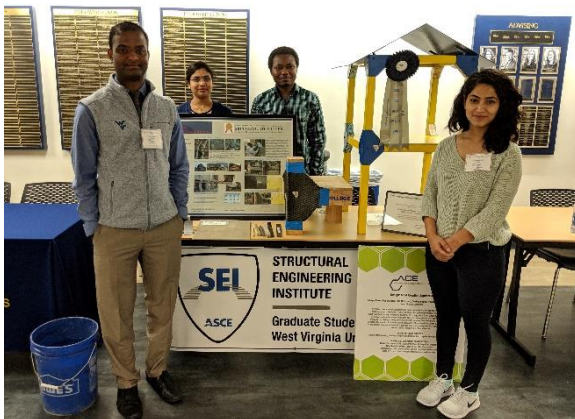
#### Attendees will learn about:

- Opportunities for structural engineers and designers to identify ways to minimize stress-concentrations at reentrant corners, thus enhancing the structural capacities and reduce catastrophic failures in the field.
- Discuss the Achilles heel in any structural system performance – its joint, especially under hurricanes, earthquakes and blast load – and how to improve and bolster performance.
- The role of multifunctional fiber reinforced polymer composites in reinforcing structural joints and systems to resist extreme forces by providing energy absorbing, and fire resistant capabilities in a cost-effective manner.

# High School Visitation

## Event - 1

November 3, 2018 (Saturday) - SEIGSC-WVU has been actively involved in several events within the campus and the Morgantown community. SEIGSC-WVU actively participated in Student Organizations Fair, as a part of Discover WVU, organized by WVU and the Benjamin M. Statler College of Engineering and Mineral Resources. Through this Fair, SEIGSC-WVU provided introduction and general insight about civil and structural engineering to the visiting high school students and their families. A table was set up to demonstrate various types of fiber reinforced polymer composite materials for civil engineering infrastructure applications, award-winning researches, and models of advanced systems used in civil infrastructure strengthening and rehabilitation. Members from SEIGSC-WVU gave presentations about their research experience related to recent advances including Next-Gen Rehabilitation System for wind and earthquake resistant structures, advantages and uses of composite materials in the repair and rehabilitation of structures, and structural health monitoring of existing structures using nondestructive testing techniques.





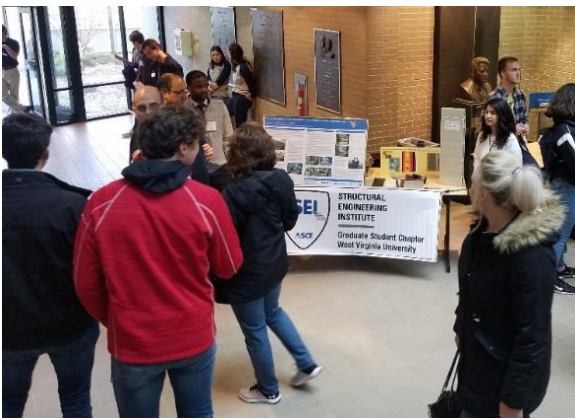
## Event - 2

March 30, 2019 (Saturday) - SEIGSC-WVU actively participated in the second open house event organized by the Benjamin M. Statler College of Engineering and Mineral Resources. The Chapter's participation in this event has helped high school students and their families to become familiar with WVU's civil/structural engineering program. As a part of this event, SEIGSC-WVU setup a table displaying variety of composite specimens such as pultruded bridge decks, fiberglass composite wrapped timber poles, fiberglass rebar, wood- and foam- core sandwich decks, nondestructive testing equipment and others. SEIGSC-WVU Chapter officers shared their academic and research experiences with prospective students and their families. This event has attracted more than 400 guests.



## Decide WVU

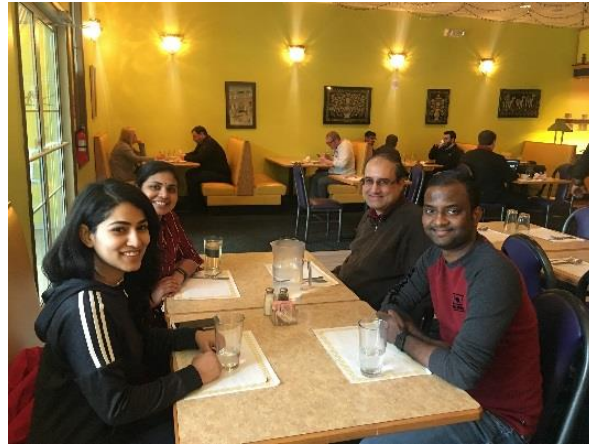
March 23, 2019 (Saturday) - SEIGSC-WVU actively participated in an open house event organized by the Benjamin M. Statler College of Engineering and Mineral Resources. Decide WVU Day is designed to introduce civil/structural engineering discipline to prospective WVU students. As a part of this event, SEIGSC-WVU set up a table displaying variety of composite specimens such as pultruded bridge decks, fiberglass composite wrapped timber poles, fiberglass rebar, wood- and foam- core sandwich decks, and nondestructive testing equipment. SEIGSC-WVU Chapter officers shared their academic and research experiences with prospective students and their families. Professor Halabe provided an overview of civil engineering curriculum and degree requirements.



## Social Events

### Event - 1

February 14, 2019 (Thursday) - SEIGSC-WVU hosted a welcome lunch event at a local restaurant in Morgantown, WV. The social gathering was attended by the EXCOM and faculty advisor where they exchanged ideas to plan upcoming events. The lunch event also served as a platform to socialize and get to know more about the new executive committee members.



### Event - 2

August 13, 2019 (Tuesday) – SEIGSC-WVU kicked off its Fall 2019 semester with a lunch event for all the chapter members at a local restaurant in Morgantown, WV. The event was oriented towards welcoming new members and planning for the upcoming events to promote the chapter activities.



## Meetings

### **SEI Local Chairs Quarterly Conference Call:**

- January 24, 2019, 1:00 PM to 2:00 PM (ET) attended by Dr. Udaya Halabe and Praveen Majjigapu
- May 22, 2019, 1:00 PM to 2:00 PM (ET) attended by Dr. Udaya Halabe, Praveen Majjigapu, and Shabnam Khanal
- August 13, 2019, 2:00 PM to 3:00 PM (ET) attended by Dr. Udaya Halabe and Praveen Majjigapu

### **SEI Local Leaders Conference:**

- October 5-6, 2018, at ASCE, Reston, Virginia attended by Praveen Majjigapu

### **SEI Graduate Student Chapter Leadership Council EXCOM Meeting:**

- October 5, 2018, at ASCE, Reston, Virginia attended by Praveen Majjigapu

### **SEI Graduate Student Chapter Leadership Council Conference Call:**

- June 6, 2019, 12:00 PM to 12:40 PM (Chicago Time) attended by Praveen Majjigapu

### **SEIGSC-WVU EXCOM Meeting:**

- September 28, 2018, 5:00 PM to 6:00 PM, Statler College, West Virginia University, Morgantown, West Virginia
- October 26, 2018, 5:00 PM to 6:00 PM, Statler College, West Virginia University, Morgantown, West Virginia
- December 11, 2018, 5:00 PM to 6:00 PM, Statler College, West Virginia University, Morgantown, West Virginia
- February 8, 2019, 5:00 PM to 6:00 PM, Statler College, West Virginia University, Morgantown, West Virginia
- March 8, 2019, 5:00 PM to 6:00 PM, Statler College, West Virginia University, Morgantown, West Virginia
- April 5, 2019, 5:00 PM to 6:00 PM, Statler College, West Virginia University, Morgantown, West Virginia
- May 31, 2019, 5:00 PM to 6:00 PM, Statler College, West Virginia University, Morgantown, West Virginia
- June 28, 2019, 5:00 PM to 6:00 PM, Statler College, West Virginia University, Morgantown, West Virginia

### **West Virginia University Statler College Student Organizations Advisory Council Meeting:**

- January 22, 2019 at 5:00 PM to 6:00 PM attended by Shabnam Khanal and Krishna Gadde
- February 19, 2019 at 5:00 PM to 6:00 PM in Room 113 MRB attended by Shabnam Khanal and Krishna Gadde
- March 19, 2019 at 5:00 PM to 6:00 PM in Room 113 MRB attended by Shabnam Khanal and Krishna Gadde
- April 16, 2019 at 5:00 PM to 6:00 PM in Room 113 MRB attended by Shabnam Khanal and Krishna Gadde

## Award Inception

SEIGSC-WVU has incepted award in five categories to acknowledge the contributions of chapter leaders and volunteers, and to encourage participation of membership in various events.

**Outstanding Leadership and Visionary Award** will be presented to a chapter officer who has made significant contributions to promote the chapter's mission and whose leadership brings great visibility among other chapters and professional organizations.

**Volunteer Award** will be presented to undergraduate or graduate student who contributes significant amount of time and effort to promote the chapter's mission.

**Travel Award** will be presented to a graduate student (preferably a SEIGSC Chapter Officer) to attend an annual technical conference based on the amount of funds generated during the academic year.

**Fundamentals of Engineering Award** will be presented to undergraduate or graduate student selected based on their competence and application material.

**Excellence Award** will be presented to undergraduate student or student team selected based on the annual technical oral or poster presentation competition.

**Note:** SEIGSC-WVU is seeking sponsorship for travel, fundamentals of engineering, and excellence awards for the Year 2020. Interested sponsors please send an email to [udaya.halabe@mail.wvu.edu](mailto:udaya.halabe@mail.wvu.edu)

## Contact Us

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