

## GEORGIA INSTITUTE OF TECHNOLOGY, EERI STUDENT CHAPTER 2008 – 2009 ANNUAL REPORT

### *GENERAL CHAPTER INFORMATION:*

**Address:**

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Atlanta, GA 30332

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[eri@gatech.edu](mailto:eri@gatech.edu)

**Website:**

<http://cyberbuzz.gatech.edu/eri/>

**2008-2009 Officers (Executive Committee):**

President:	Karthik Ramanathan
Vice President:	Lindsay Ivey
Secretary:	Robert Moser
Treasurer:	Jieun Hur
Webmaster:	Timothy Wright

**Faculty Advisor:**

Dr. Reginald DesRoches  
Professor and Associate Chair  
School of Civil and Environmental Engineering  
Georgia Institute of Technology

**Student Chapter Members:**

**Graduate Members:**

1	Karthik Ramanathan	2	Timothy Wright
3	Robert Moser	4	Jieun Hur
5	Benjamin Kosbab	6	Matthew Speicher
7	Jazalyn Dukes	8	Niki Fanouraki
9	Abdollah Shafieezadeh	10	Akhil Sharma
11	Tiziano Perea	12	Bo Yeon Lee
13	Jong-Su Jeon	14	Christopher Shearer
15	Juan Jimenez	16	Varun Varun
17	Seokho Jeong	18	Mohammad Towhidur Bhuiyan
19	Brittany Luken	20	Jun Bong Jang
21	Eun Jeong Cha	22	Reza Mirzaeifar
23	James Benjamin Deaton	24	Laura Jacobs
25	Andrew McMorro	26	Dylan Phelan
27	Amal Jayapalan	28	Jun Chen

**Undergraduate Members:**

- |   |                    |   |                 |
|---|--------------------|---|-----------------|
| 1 | Matthew Rothenberg | 2 | Jacob Tzegaegbe |
| 3 | Midhu Ann John     | 4 | Laura Schultz   |
| 5 | Joshua Gresham     | 6 | Judith Cook     |
| 7 | Rolan Duvvury      |   |                 |

***COMMUNITY OUTREACH ACTIVITY PROGRAM:***

**BEAT the Traffic:**

BEAT the Traffic is a Department of Transportation funded grant that is designed to provide content knowledge in the applied science related to Civil Engineering and Transportation to Fulton County Middle and High School Technology/Engineering and Science teachers. This two year program centers around discovery learning and a strengthening of the science concepts that meet the state education standards for the course offered in schools. The teachers are exposed to real-life research and experiences that are then developed into instructional units for use in their respective classrooms. This year's focus was on Physical Science and Foundations of Engineering and presented topics in the science behind bridge design and basic principle of engineering. Next summer the program will again bring teachers to the Georgia Tech campus to showcase the knowledge and research inside the School of Civil Engineering.

EERI Chapter President, Karthik Ramanathan and Webmaster, Timothy Wright gave presentations about fundamental mechanics and Introduction to Bridge Engineering and opportunities within engineering, with numerous demonstrations. It helped the teachers to understand concepts better and implement the same during their class instructions in their respective schools. Couple of laboratory demonstrations was also organized on a separate day to reinforce the concepts further. It was a successful event that provided a stimulating and positive learning experience.

**Technology, Engineering and Computing (TEC) Camp:**

Every year the Women in Engineering (WIE) at Georgia Institute of Technology sponsors a week long Technology, Engineering & Computing (TEC) Camp for middle school girls on campus. This year, the camp took place between June 22 and June 26, 2009. EERI members Jazalyn Dukes and Niki Fanouraki developed activities for the girls based on different civil engineering topics. EERI Chapter chose to highlight several civil engineering topics, which include structural engineering, earthquake engineering, transportation, and geotechnical engineering. They also scheduled a tour for the girls in the structural lab. Through the participation of over 15 other EERI members and other volunteers, the girls learned fundamentals in structural design for loads, transportation problem solving, earthquake design principles and geotechnical design principles. The Chapter hopes to participate in the same activity in 2010.

**ACE Atlanta - Mentor Program of America:**

The ACE Mentor Program was started in New York City, formed by seventeen construction-industry firms which banded together to form three teams. ACE Atlanta is a mentor program that has been active for about four years now. Over eighty high school students from various counties around metro Atlanta have gone through the program this year with over fifty mentors from a wide spectrum. The Georgia Tech Chapter of EERI was invited to give a presentation to the group and arrange a day long activity at Skansa. Faculty Advisor, Dr. Reginald DesRoches gave a presentation to the group and this was followed by a bridge design competition using the WestPoint bridge design software. The event was successful by the involvement of a large number of the chapter volunteers. The Chapter is looking forward to the opportunity in the years to come.

### **Structures Lab Tours:**

Through the year a number of laboratory tours were given to student groups that visited the Georgia Tech Campus. Robert Moser was instrumental in giving most of the tours. The tours were typically 1.5 to 2 hours in length and included a detailed explanation regarding various experimental techniques and advancements. They also included small demonstrations.

### **Scout Day at the Fernbank Museum of Natural History:**

Every year Fernbank Museum hosts an annual Scout Day, where activities are provided for both Cub and Girl Scouts. In addition, for the last several years local community scientists and science enthusiasts in the area are invited to the event. Many of the scout badges require them to meet someone in the field, and this provided an inspiring opportunity for our Chapter to spread some awareness about earthquakes and their mitigation. Demonstrations on the shake-table of structural performance of a model building were well received and performed several times to various groups. The students and parents had a lot of fun and were active participants with many questions. It was a successful event that provided a stimulating and positive learning experience, as well as encouraged the students to pursue higher education.

### ***EERI ANNUAL MEETING:***

The 61<sup>st</sup> EERI Annual Meeting was held in Salt Lake City, UT in February 2009. Karthik Ramanathan represented the Georgia Tech EERI chapter by presenting a poster on the previous year's chapter activities.



Karthik Ramanathan  
President



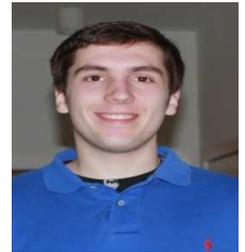
Lindsay Ivey  
Vice President



Robert Moser  
Secretary



Jieun Hur  
Treasurer



Timothy Wright  
Webmaster



Dr. Reginald DesRoches  
Faculty Advisor – EERI Student Chapter

EERI Officers (Executive Committee) for 2008-2009



EERI Chapter President, Karthik Ramanathan and Webmaster, Timothy Wright with the teachers in the Materials laboratory



EERI Chapter Secretary, Robert Moser giving a lab tour



EERI Member and past President, Matthew Speicher giving a demonstration in the Structures laboratory



Dr. DesRoches giving a presentation to the students at the SKANSA outreach activity



EERI Chapter President, Karthik Ramanathan helping out during the SKANSA outreach activity



Winners of the bridge design competition



EERI members and volunteers at the SKANSA outreach activity



EERI member, Jazalyn Dukes with girl scouts as a part of the T.E.C. Girls camp



EERI Secretary, Robert Moser giving a lab tour during the T.E.C. Girls camp



EERI President, Karthik Ramanathan giving a shake-table demonstration at the Scout Day in Fernbank Museum of Natural History – assisted by Webmaster, Timothy Wright and Secretary, Robert Moser



EERI Members with the cub scouts during the Scout Day at the Fernbank Museum of Natural History

### ***SEMINARS AND GUEST LECTURES:***

#### **Friedman Visiting Professional – Mr. David Cocke, Structural Focus, Gardena, CA:**

Georgia Tech EERI Chapter was grateful to host Mr. David Cocke of Structural Focus as part of the Friedman Visiting Professional program. Mr. Cocke gave a lecture to the undergraduate concrete design class, met with faculty, had lunch with EERI members, and was hosted to dinner by faculty and students. He also gave a departmental seminar about the structure of historic buildings that was well attended. The success of the visit is a true testament to the programs ability to bring the academic and professional side of earthquake engineering together and provide a unique opportunity for students to see what their future may hold. The experience and knowledge brought by David was both interesting and educational for the Department of Civil Engineering at Georgia Tech.

#### **Seminar – Dr. Bruce Ellingwood, Georgia Institute of Technology:**

Dr. Bruce Ellingwood, Raymond Allen Jones Chair in Civil Engineering and College of Engineering Distinguished Professor gave a seminar titled “Reliability based assessment of seismic performance of buildings – uniform hazard vs. uniform risk”. The seminar was very well attended by the EERI members, faculty and the graduate students in the department.

#### **Seminar – Dr. Jack Baker, Stanford University:**

Dr. Jack Baker, Assistant Professor with the Department of Civil and Environmental Engineering at Stanford University gave a talk to a packed audience. The seminar was titled “Spatial correlation of earthquake ground motion intensities: measurement and implications for regional infrastructure risk”. Dr. Baker met with several faculty and graduate students during his visit and joined them for lunch. He was then hosted to dinner by the EERI members.

#### **Upcoming seminars for 2010:**

##### **Seminar – Dr. Reginald DesRoches, Georgia Institute of Technology:**

Dr. Reginald DesRoches, Professor and Associate Chair with the School of Civil and Environmental Engineering at Georgia Tech will present a talk titled “The 2010 Haiti Earthquake: Reconnaissance Work”. The seminar will be co-hosted by the EERI student chapter and ASCE chapter.

##### **EERI Distinguished Lecture of 2009 – Dr. Norm Abrahamson:**

Norman A. Abrahamson, a senior engineering seismologist in the Geosciences Department at Pacific Gas and Electric Company in San Francisco, is EERI’s 2009 Distinguished Lecturer. He will present his lecture on the topic of “The State of the Practice of Seismic Hazard Analysis: From the Good to the Bad”.

##### **EERI Distinguished Lecture of 2010 – Dr. Sharon Wood:**

Dr. Sharon Wood, Chairman and Robert L. Parker, Sr. Centennial Professor in Engineering will present a talk titled “The potential of ubiquitous sensing”. Prof. Wood is the EERI’s 2010 Distinguished Lecturer.



Friedman Visiting Professional, Mr. David Cocke giving a presentation to the EERI members



EERI Chapter President, Karthik Ramanathan, Mr. David Cocke, Members and Past Presidents Matthew Speicher and Benjamin Kosbab at the dinner



Dr. Bruce Ellingwood talking to a packed audience during one of the EERI seminars



Dr. Jack Baker speaking to a full house during an EERI Seminar