

**The Department of Civil & Environmental Engineering and
The Department of Mechanical Engineering at the University of Houston
and the National Science Foundation**

Summer Research Experience for Undergraduates in Civil Infrastructure Engineering May 26 – July 30, 2009

Student Information

Student Name	First	Middle	Last
E-mail Address			
Permanent Mailing Address			
Current School Address			
Home Phone	()	School Phone*	()
		Mobile Phone (if any)	()
College/University Name/City/State			
Major		Minor (if any)	
Cumulative GPA		GPA in last 60 hours	
Expected Graduation Date	<input type="checkbox"/> Fall 2008 <input type="checkbox"/> Spring 2009 <input type="checkbox"/> Fall 2009 <input type="checkbox"/> Spring 2010		
Gender	<input type="checkbox"/> Male <input type="checkbox"/> Female		
Ethnicity	<input type="checkbox"/> Asian or Pacific Islander <input type="checkbox"/> Hispanic or Latino <input type="checkbox"/> White, Non-Hispanic <input type="checkbox"/> African American or Black <input type="checkbox"/> American Indian or Alaska Native <input type="checkbox"/> Other		
Citizen Status	<input type="checkbox"/> US citizen <input type="checkbox"/> US Permanent Resident		
Likelihood of Attending Graduate School	<input type="checkbox"/> <10% <input type="checkbox"/> 25-50% <input type="checkbox"/> 50-75% <input type="checkbox"/> 75-90% <input type="checkbox"/> > 90%		
On-Campus Housing Required?	<input type="checkbox"/> Yes <input type="checkbox"/> No		

* Where you can be reached at the end of April and early May.

Academic Information

Check the courses you have already completed or are currently taking.		
<input type="checkbox"/> Calculus	<input type="checkbox"/> Statics	<input type="checkbox"/> Dynamics
<input type="checkbox"/> Engineering Mathematics	<input type="checkbox"/> Mechanics of Materials	<input type="checkbox"/> Engineering Materials
<input type="checkbox"/> Thermo-Dynamics	<input type="checkbox"/> Fluid Mechanics	<input type="checkbox"/> Environmental Engineering
<input type="checkbox"/> Geotechnical Engineering	<input type="checkbox"/> Concrete Design	<input type="checkbox"/> Steel Design
Check the programming languages that you are proficient in.		
<input type="checkbox"/> C/C++	<input type="checkbox"/> Java	<input type="checkbox"/> Fortran
An official transcript (i.e., sent directly from your school) of your college work to date should be received by the Program Director by April 1, 2007, at the address below. In addition, list the courses you are taking in the 2006-07 academic year that are not listed on your transcript, using both course number and title.		
List the honorary and professional societies of which you are a member, indicating offices held, as well as any extracurricular activities/organizations in which you participate.		
Briefly describe your interest in participating in the UH REU in Civil Infrastructure Engineering.		
List any industrial or project experience.		

Project Preference

Consult the <http://www.egr.uh.edu/structurallab/> for a list of available research topics. List the top three topics by their code. We will try to match your interest with the topics. You may be assigned to any topic on our list.

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| 1. | 2. | 3. |
|----|----|----|

Reference Information

List two faculty members who will be submitting a letter of recommendation for your application in this program. The letters should be submitted online or sent directly to the REU Program office listed on the recommendation form.

Faculty Name	
Title	
Department	
Institution	
Office Phone	
E-mail Address	

Faculty Name	
Title	
Department	
Institution	
Office Phone	
E-mail Address	

You may select one of the following methods to submit your application.

1. Scan your application, and email to reu-ce@egr.uh.edu .
2. Fax your application to 1-713-743-4260, and check with reu-ce@egr.uh.edu by email if your application has been received.
3. Go to <http://www.egr.uh.edu/structurallab/> and complete e-application.

3. Send your application by post to

Dr. Y. L. Mo

NSF REU Program

Department of Civil and Environmental Engineering

University of Houston

Houston, TX 77204-4003

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List of Available Research Topics

- (1) Testing of Insulation materials in deep offshore oil pipelines
- (2) Repairing of water pipelines
- (3) Developing and testing of smart materials
- (4) River morphology in flash flood prone Texas Hill Country
- (5) Flocculation and fall velocity of cohesive marine mud
- (6) Erosive strength of cohesive sediments in rivers and estuaries
- (7) Interaction of water waves with floating structures
- (8) Study of dam-break flows
- (9) Prediction of wind induced significant wave height
- (10) Prediction of suspended sediment concentration in lakes
- (11) Full-scale tests on Prestressed Steel Fiber Concrete Girders
- (12) Full-scale tests on Prestressed High Strength Concrete Girders
- (13) Development of 3-D Universal Panel Tester
- (14) Seismic Performance Of a Two-story Two-bay Reinforced Concrete Building
- (15) Seismic Simulation of Concrete Structures
- (16) Development of Nano-engineered Concrete
- (17) Damage Detection of Reinforced Concrete Columns Using Smart Sensors
- (18) Intelligent Sensor Development For Infrastructures
- (19) Smart Aggregates For Concrete Structures
- (20) Vibration Suppression Of Bridges Via Base Isolation Technology
- (21) Smart Bolts For Health Monitoring Of Steel Bridges
- (22) Pathogenic pollution in metropolitan waterways
- (23) Polychlorinated Biphenyls in sediment and water in an urban waterway
- (24) Decision support for water and sewer networks and associated water quality