State of the CEE Department
CHARLES W. SCHWARTZ
PROFESSOR AND CHAIR
NOVEMBER 2, 2017

Members:
Mark Ballard, AECOM
Ken Bell, Bechtel
Paul Burkart, GeoConcepts
Martina Driscoll, Wiss Janney Eltn
Stephen Houff*, Forrester Construction
Scott Greenhaus, Structural
Peggy Johnson, Penn State University
Jim Kinkead, Clark Construction
Marco Legaluppi*, Whitney Bailey Cox & Magnani
Mike Lenkin, Miller & Long
Dave Little, Gutschick Little & Weber
Tony Mawry, Wallace Montgomery
Christine Merdon, Architect of Capitol
Dave Meyers, Whiting-Turner
David Mongan, (Retired)
Bob Rauch, Rauch, Inc.
Fahim Sadak, NIST
Gregory Slater*, MD State Highway Admin
Eric Tievy, Consigli Construction

*Newly elected

Spring 2017
http://cee.umd.edu/bov

A. JAMES CLARK
SCHOOL OF ENGINEERING
Mission Statement

The mission of the Department is threefold:

• Provide a high quality, challenging education that encompasses breadth and depth and prepare graduates to be proficient in both analysis and synthesis aspects of civil engineering design

• Maintain a strong research program that is recognized for excellence in major areas of civil and environmental engineering

• Provide service to the University, the civil engineering profession, and the community at large

Quick Statistics
(Fall 2017)

<table>
<thead>
<tr>
<th>Enrollments:</th>
<th>Undergraduate</th>
<th>Graduate (FT+PT; MS+PhD)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015-16</td>
<td>426</td>
<td>183</td>
</tr>
<tr>
<td>2016-17</td>
<td>454</td>
<td>175</td>
</tr>
<tr>
<td>Fall 2017</td>
<td>410</td>
<td>181</td>
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<tr>
<td></td>
<td>Fall 2015</td>
<td>Fall 2016</td>
</tr>
<tr>
<td></td>
<td>183</td>
<td>175</td>
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</table>

<table>
<thead>
<tr>
<th>Degrees:</th>
<th>BS</th>
<th>MS/MEng</th>
<th>PhD</th>
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</thead>
<tbody>
<tr>
<td>2015-16</td>
<td>137</td>
<td>29/43</td>
<td>22</td>
</tr>
<tr>
<td>2016-17</td>
<td>127</td>
<td>33/42</td>
<td>19</td>
</tr>
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<td>2015-16</td>
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<td>2015-16</td>
<td>2016-17</td>
<td>2016-17</td>
<td>2016-17</td>
</tr>
</tbody>
</table>

Faculty:

• Tenure/Tenure Track: 27.5 (includes 1 on sabbatical)
• Full-time Lecturers: 2
• Part-time Lecturers: 11 (average per semester)
• Current search for 1 new Assistant Professor

*Does not include MEng
Graduate Degrees

Bachelor of Science Degrees

Combined CE-ENV Engineering FE Exam
Quick Statistics
(Spring 2017)

Annual research expenditures
- 8th among CEE programs (ASEE 2015)

Top 20 public university CEE program
- 2017: 25th overall, 19th among publics
- 2016: 27th overall, 18th among publics
- 2015: 26th overall, 17th among publics
- 2014: 28th overall, 19th among publics

Clark School Research Expenditures
Developments Since Last Spring (and Ongoing)

“Building Together” Investment
Accreditation
Laboratory Renovation
Design Studio
Communications
Technical Communication Program
Center for Disaster Resilience
Maryland Transportation Institute
Student Achievements
Teaching (Materials, Soils)

Teaching (Structures)

Teaching (Specimen Prep)

Laboratory Renovation
Current Status

Fundraising

GIFTS OF $1,500,000 AND UP
The Whiting-Turner Contracting Company

GIFTS OF $100,000 -- $1,500,000
TBD

GIFTS OF $50,000 -- $99,999
Maryland Asphalt Association
Scott Greenhaus ’82, ’86

GIFTS OF $25,000 -- $49,999
Gutschick, Little and Weber
Joe Makar ’78
KCI Technologies Inc.
Maryland Chapter - American Concrete Institute
Wallace Montgomery
Whitman, Requardt and Associates
Whitney Bailey Cox & Magnani

GIFTS OF $10,000 -- $24,999
Anonymous
Global Resource Recyclers
Forrester Construction
GeoConcepts
Mercado Consultants, Inc.
VIKA
Wiss Janney & Elstner
Computer Design Studio

Annual Usage by Upper Level UG Classes:
- ENCE 360 Analysis of Civil Engineering Systems (120 students)
- ENCE 423 Project Planning, Estimating, and Scheduling (130 students)
- ENCE 426 Construction Documentation and BIM Applications (60 students)
- ENCE 466 Design of Civil Engineering Systems (125 students)
- ENCE 470 Highway Engineering (30 students)

Summer 2017:
Replaced 40 student workstations
Upgraded instructor console

Funding from Differential Tuition
- CEE Department $35K
- College of Engineering $43.2
- Total Cost $78.2

CEE TERPS INFORM

Media Hits January–September

<table>
<thead>
<tr>
<th>TOPIC AREAS</th>
<th>HITS BY MONTH</th>
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</thead>
<tbody>
<tr>
<td>Resilience 65%</td>
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</tr>
<tr>
<td>Infrastructure 5%</td>
<td></td>
</tr>
<tr>
<td>Transportation 30%</td>
<td></td>
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</tbody>
</table>

TOP OUTLETS
- Rolling Stone
- New York Times
- The Guardian
- CBS This Morning
- NPR
What Happens When a Superstorm Hits D.C.?

A major hurricane could paralyze the government and jeopardize national security. Why is D.C. so unprepared?

When the big storm hits D.C., the resulting disaster may not kill as many as Katrina, or flood as much physical real estate as Harvey, but the toll it takes on American institutions will be unfathomable. The storm will paralyze many

of the agencies that operate and defend the nation, raising the specter of national-security threats. Imagine, says Gerald Galloway, a disaster and national-security expert at the University of Maryland who served 38 years in the military, “the world waking up some morning to see an aerial photograph of Washington, D.C., with everything from the Lincoln Memorial to the

grounds of the Capitol under-water – that certainly does not speak well for the United States’ preparedness.”


Civil Remarks

Better Together

Cross-cutting capstone equips graduates for professional careers

Anjanette Riley,
Communications Coordinator, Editor
Monthly eNewsletters

UMD Engineers Answer Questions About Hurricanes, Flooding

National and local news outlets turned to University of Maryland engineers for their disaster resilience and recovery expertise in the wake of hurricanes Harvey and Irma.

Read More

C.E.E. TERPS INFORM

Media Hits January-September

Topic Areas

Transportation: 30%

Resilience: 60%

Infrastructure: 10%

Web Site Redesign

Undergraduate

Civil and environmental engineers are problem solvers, innovators, and global leaders. They work with a full arsenal of the buildings we live in, the roads we travel on, the systems that treat our water, the pollution controls that protect our health, and the strategies that help mitigate and recover from disasters. Stronger global communities, economies, and ecosystems depend on dedicated civil and environmental engineers.

Al Santos
Senior Undergraduate Student

Build the future.
Kirlin Distinguished Lecture

Jeff Kayce ’03
Thursday, October 19, 2017
Kim Engineering Building

6:00 pm: Lecture, Zupnik Hall
7:00 pm: Reception, Rotunda
Networking with industry partners and students (Business casual)

As SVP – Managing Director at Bozzuto Development Company, Jeff is responsible for expanding joint venture opportunities throughout the Mid-Atlantic region. He oversees a team managing the development process for multifamily and mixed-use projects, from entitlements through construction and lease-up. Jeff is currently overseeing predevelopment of the College Park Southern Gateway, a $140 million mixed-use project in partnership with the University of Maryland, Academy Yard Phase II, a Department of Housing and Urban Development (HUD)-financed second phase in Odenton, MD, and Odenton Town Center, a transit-oriented development at the Odenton MARC station with the Maryland Department of Transportation. Prior work includes Piatt170 at Academy Yard, a 362-unit HUD-financed redevelopment of a former manufacturing site; the Fitzgerald at UO Midtown, recipient of the 2011 Urban Land Institute National Award for Excellence; and Arbors at Anfeld Preserve, a suburban community of 496 residences in Hanover, MD.

Technical Communications

ENCE 200 Pilot Planned for Spring 18 Semester
New/Anticipated Hires:
• 2-3 Assistant Profs
• 0.5 Full Prof/Director
Torero, Jose

Director, Center for Disaster Resilience
3104G J.M. Patterson Building
Email: jtorero@umd.edu
Phone: 301-405-3992

Research Interests
Fire dynamics, flame spread, smouldering, combustion in microgravity, smoke detection, protection and suppression systems

Professional Memberships:
Royal Society of Edinburgh (UK), the Royal Academy of Engineering (UK), the Australian Academy of Technology and Engineering (Australia), the Queensland Academy of Arts and Sciences (Australia), the Society of Fire Protection Engineers (USA), the Building Research Establishment (UK), the Institution of Civil Engineers (UK)

Areas of Expertise: Disaster Resilience

Maryland Transportation Institute
A Proposal to Establish a Leading Interdisciplinary Transportation Research and Education Institute

Overview, Opportunities and Challenges

Transportation@Maryland (T@M) is a leading multidisciplinary transportation research and education program in the nation, providing solutions to congestion, traffic safety, urban planning, economics, public policy, travel behavior, social and environmental impact issues in the transportation system.

T@M is a Core Area of Research and Scholarship Excellence at UMD

- 2nd in journal publications
- 5th in research funding, more than $20M/year
- 8th in overall publications

Confirmed Participation for T@M - from 10 UMD colleges -

- ARCH
- BUS
- CMNS
- JOUR
- ARHU
- SPH
- BSOS
- School
- SPP

Largest Transportation Big Data Center in the U.S., serving federal governments, all 50 states and D.C., by collecting, fusing and analyzing 8 billion data records each day.
Consortium Lead of the FAA Center of Excellence
University Lead of the US DOT Smart Mobility Initiative.

Only US DOT National University Transportation Center for economic competitiveness.
Leaderships in Smart Growth, Cyber Security, GIS, Logistics, Sustainability, Human Computer Interaction, Transportation and Health at UMD and UMB.
Official Roll-Out at 2018 TRB Meetings in DC

Steel Bridge Competition

2/7 Regionally
17/40 Nationally
2017 Solar Decathlon
Denver, CO
Resilient Adaptive Climate Technology (reACT)

1st in US
2nd Internationally