FACULTY DISTINCTIONS
National Academy of Engineering .............................................2
National Academy of Sciences.................................................1
Institute of Medicine ..................................................................1
National Young Investigators ....................................................8
NSF CAREER Awards (2009-10) ................................................7
Total NSF CAREER Awards ......................................................27
Presidential Early Career Award for Scientists and Engineers .......1
Alexander Von Humboldt Research Awards..............................2
Fulbright Awards ......................................................................3
AAAS Fellows .........................................................................1
Growth, freshman enrollment '09-'10 .........................................13%

EXTERNAL GRANTS AND AWARDS:
FY 2010 (THROUGH 5/30/10)
$41M

<table>
<thead>
<tr>
<th>Agency</th>
<th>Amount</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>NSF</td>
<td>$12.89M</td>
<td>31.44%</td>
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<tr>
<td>NIH</td>
<td>$6.30M</td>
<td>15.37%</td>
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<tr>
<td>DOE</td>
<td>$4.05M</td>
<td>9.89%</td>
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<tr>
<td>DOD</td>
<td>$3.96M</td>
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<tr>
<td>Misc</td>
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<td>ED</td>
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<tr>
<td>Corporate</td>
<td>$2.13M</td>
<td>5.19%</td>
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<tr>
<td>DOT</td>
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<tr>
<td>CDC</td>
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<td>2.65%</td>
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<tr>
<td>NASA</td>
<td>$1.00M</td>
<td>2.45%</td>
</tr>
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</table>

$40,994,995 100.00%
In 2008, UConn’s School of Engineering was chosen the research lead among seven designated DHS National Transportation Security Centers of Excellence. Within UConn’s Center for Resilient Transportation Infrastructure, teams are investigating:

- **Ultra-high performance concretes** for superior strength, ductility, blast and fire resistance, plus better durability and resistance to environmental degradation. *(Drs. Adam Zofka and Michael Accorsi; and James Mahoney)*

- **New metallic structural materials** that can mitigate and exploit blast waves to metamorphose into new, fire-resistant materials. *(Drs. Rainer Hebert, Bryan Huey, George Rossetti and Jeong-Ho Kim – UConn; Richard Riman – Rutgers; and Arun Shukla – University of Rhode Island)*

- **Stabilized soil mixtures** that can withstand heavy loads, such as levee systems and high speed rail. Allied research will predict soil and geo-structural responses to normal and destructive loads. *(Drs. Maria Chrysochoou, Dipanjun Basu and Amvrossios Bagtzoglou)*

- **Identification of vulnerable points** in the transportation network (e.g., roads, bridges, fuel pipelines), through game theory. *(Drs. Nicholas Lownes, Reda Ammar and Sanguethevar Rajasekaran)*

- **Combining vibration reduction techniques** and structural health measures for better bridge safety. Structural control monitors will diagnose problems and redirect the energy and vibrations to allow prediction of damage severity. *(Drs. Richard Christenson and Jiong Tang)*

### INNOVATIVE CANCER DETECTION TRIALS

A device developed by Dr. Quing Zhu performed well in expanded clinical trials and could reduce physicians’ reliance on breast biopsies. Relying on noninvasive light and sound waves to locate and analyze suspicious breast tumors, the device was tested on 178 women who had suspicious lesions over a four-year period. Study results indicate the device, which uses ultrasound-guided diffuse optical tomography, was accurate 92% of the time for sensitivity and 93% of the time for specificity when evaluating cancers of 2 cm. or less. The results appeared online in the journal Radiology. NIH and the Donaghue Medical Research Foundation funded the study.

### USAID/HED SUPPORTS ETHIOPIAN EFFORT

Drs. Mekonnen Gebremichael and Mike Accorsi lead an international project to increase Ethiopia’s ability to manage its water resource challenges. UConn engineering and geology faculty are joined by partners at Addis Ababa Univ. (Ethiopia lead), Alabama A&M Univ., Arba Minch Univ., Bahir Dar Univ., Hawassa Univ. and Mekelle Univ. After landing a 2009 USAID/HED planning grant, in April the team learned of HED’s intent to recommend over $7.2M in funding for the project, aimed at overhauling the technology curriculum at Ethiopia’s three largest universities, and establishment of an Ethiopian Institute of Water Resources.

### UCONN & ENN PARTNER

UConn signed a $1.5M agreement with ENN Energy Technologies (Hebei, China) aimed at developing a uniquely trained workforce of sustainable energy educators and leaders. The five-year project, led by Drs. Mun Choi (Dean), Kazem Kazerounian (Assoc. Dean), Zhongxue Gan (Vice Chair, ENN) and Yunquan Sun (President, ENN Group North America) will support five doctoral students yearly, who will conduct innovative research in energy technologies of mutual interest to the partners. The doctoral “energy innovators in training” will be co-adjvised by researchers from both UConn and ENN. A world leader in sustainable energy, ENN employs over 24,000 people and has total assets of $4B.

### UCONN: NSA CENTER OF EXCELLENCE

The National Security Agency and DHS named UConn a 2010-2015 National Center of Academic Excellence in Information Assurance Research (CAE-R). The first Connecticut institution to receive the designation, UConn was selected for its strong core of faculty and graduate research, professional engagement, and ongoing outreach in areas related to information security and encryption. The UConn Center for Information Assurance and Computer Systems Security will provide a research and computing hub for CAE-R activities.

### FOR MORE INFORMATION

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**CALLING ALL UCONN ENGINEERING ALUMNI!!** Keep us informed of your career activities. Visit Class Notes www.engr.uconn.edu/alumni and report your news today.

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