

APPENDIX THREE

Table 1-Summary of participation in conferences and oral presentations for a sample of students.

Student Name	Title of Conference Presentation (Oral)
2008-2009	
J Philips	“A Rapid Green Base Repair CLSM,” <i>Transportation Research Board 88th Annual Meeting Compendium of Papers DVD, January 2009.</i>
B. Byard	“Making Precast Concrete Mixtures More Sustainable with Byproduct Fine Aggregate,” <i>The National Bridge Conference, PCI Annual Convention, Orlando, FL, October 7, 2008.</i>
Kristen Hood	“Lean, Green and Mean (LGM) PCC: A First Look,” <i>TDOT – TCA Liaison Committee Meeting, Nashville, September 3, 2008.</i>
J Philips	Lean, Green and Mean (LGM) PCC: A First Look,” <i>TDOT – TCA Liaison Committee Meeting, Nashville, September 3, 2008</i>
J D Self	“Making Precast Concrete Mixtures More Sustainable with Byproduct Fine Aggregate,” <i>The National Bridge Conference, PCI Annual Convention, Orlando, FL, October 7, 2008.</i>
Lindsay Smith	“Expansion and Cracking of Concrete Structures Due to Delayed Ettringite Formation,” (Poster presentation). <i>4th Annual Undergraduate Research Posters at the Capital, Nashville, TN, February 11, 2009.</i>
Lindsay Smith	Expansion of Cementitious Mortars Due to Delayed Ettringite Formation,” <i>19th Annual Argonne Symposium for Undergraduates in Science, Engineering, and Mathematics, Argonne National Laboratory, Argonne, IL, November 7, 2008.</i>
2009-2010	
Elizabeth Boden	“Real Time Traffic Signal Delay Estimation Using State-of-the-Practice Detection Technology: a Simulation Proof-of-Concept”. <i>TTU Research Day, 2010</i>
Caitlin B. Moffit	“Validation of the Global NASA Satellite-based Flood Detection System in Bangladesh”. <i>TTU Research Day, 2010.</i>
Elizabeth Boden	“Real Time Traffic Signal Delay Estimation Using State-of-the-Practice Detection Technology: a Simulation Proof-of-Concept”, <i>89th Annual Transportation Research Board Meeting January 2010.</i>
2010-2011	
Chris Berry	New Interchange Design: FRE Interchange: Releasing Control and Enhancing Performance” <i>89th Annual Meeting of the Transportation Research Board, 2010.</i>
Gregory Browning	“Optimum Air Content Range (Plastic and Hardened) for TDOT Class D PCC RES 2010-07 Update”, <i>TDOT – TCA Liaison Committee Meeting, Nashville, February 17, 2011</i>
Suhai Zhang	Simplification of Live Load Distribution Factor Equations, <i>TTU Research Day, 2011.</i>

2011-2012

Benjamin Fennell	Water Reuse and Conservation Considerations in Drought Planning Using Oasis Modeling, <i>TN Water Resources Symposium, April 12, 2012.</i>
D. G. Keaton	Nanoscale Pore Structure Analysis of Mortars Undergoing Delayed Ettringite Formation. <i>American Ceramic Society, Cements Division, 3rd Advances in Cement-based Materials: Characterization, Processing, Modeling and Sensing, Austin, TX, June 10-12, 2012.</i>
D.G. Keaton	Nano-scale Pore Analysis of Cementitious Mortars Due to Delayed Ettringite Formation” (Poster presentation). <i>Tennessee Technological University Student Research Day, Cookeville, TN, April 11, 2012.</i>

**Table 2-List of sample journal publications ensuing from the thesis work
for a sample of MS students.**

Student Name	Full citation in the journal ensuing from thesis work
Amanda Harris	Optimal configuration of conceptual hydrologic models for satellite rainfall-based flood prediction for a small watershed,” <i>IEEE Geosciences and Remote Sensing Letters</i> , vol. 5(3), July, 2008
Jason Philips	Five Part Series on the New TDOT 204.06 CLSM Specification Part 5: The Future of CLSM in Tennessee”, <i>Tennessee Concrete</i> , Vol. 23, No. 1, Spring 2009.
Matthew Boynton	Improving Engineering Education Outreach in Rural Counties through Engineering Risk Analysis, <i>ASCE Journal of Professional Issues in Engineering Education and Practice</i> , (DOI: 10.1061/(ASCE) EI.1943-5541.0000026. 2010
A.H.M. Siddique-E-Akbor	Inter-comparison Study of Water Level Estimates Derived from Hydrodynamic-Hydrologic Model and Satellite Altimetry for a Complex Deltaic Environment. <i>Remote Sensing of Environment</i> , vol. 115, pp. 1522-1531 (doi:10.1016/j.rse.2011.02.011). 2011
Caitlin B. Moffit	Validation of TRMM Flood Detection System over Bangladesh, <i>International Journal of Applied Earth Observation and Geoinformatics</i> , (doi:10.1016/j.jag.2010.11.003). 2011
Caitlin B. Moffit	“A Review of State of the Art on Treaties in relation to Management of Transboundary Flooding in International River Basins and the Global Precipitation Measurement Mission” <i>Water Policy</i> (DOI:10.2166/wp.2009.117. 2010
Caitlin B. Moffit	Forensic Analysis of two contrasting satellite rainfall products for detection of the July 2002 flooding in South-central Texas, <i>Environmental Forensics</i> , vol. 12, pp. 19–225,(doi:10.1080/15275922.2011.595045). 2011
Kirsten Hood	“Influence of Bleed Water Reabsorption on Cement Past Autogenous Deformation”, <i>Cement and Concrete Research</i> , 2010; 40(2):220-225.
Kirsten Hood	“Factors Influencing Mitigation Strategies for Autogenous Shrinkage.” <i>Cement and Concrete Research</i> (In review)
A.H.M. Siddique-E-Akbor	Role of Land-water Classification and Manning’s Roughness parameter in Space-borne estimation of Discharge for Braided Rivers: A Case Study of the Brahmaputra River in Bangladesh, <i>IEEE Special Topics in Applied Remote Sensing and Earth Sciences</i> , (doi:10.1109/JSTARS.2010.2050579). 2010.
Chris Berry	Evaluation of Traditional and Non-Traditional Interchange Treatments to Preserve the Service Life of Narrow Over- and Underpass Roadways, <i>J. Transportation Research Board</i> , 10-2676, 2010.
Elizabeth Boden	Using Dynamic Maximum Greens to Reduce Traffic Signal Timing Maintenance Needs. <i>ITE Journal</i> , Volume 80, Issue 4, 2010
Elizabeth Boden	“Evaluation of Traditional and Non-Traditional Interchange Treatments to Preserve the Service Life of Narrow Over- and Underpass Roadways” <i>Transportation Research Record: Journal of the Transportation Research Board</i> , Issue 2171, 2010.

Table 3-List of research facilities/laboratories in CEE Department

Physical Facility Building and Room Number	Purpose of Laboratory	Condition of the Laboratory	Adequacy for Graduate Studies	Number of Student Stations	Area (sq.ft)
PH 132	Construction Materials	Excellent	Adequate	5	943
PH 134	Construction Materials	Very good	Adequate	5	697
PH 127	Surveying Laboratory	Good	Adequate	4	624
PH 131	Materials Laboratory	Excellent	Adequate	5	1003
PH 345 and 310	Geotechnical Instruction	Very good	Adequate	4	1296
PH 314	Structures Research and Instruction	Good	Adequate	2	755
PH 341	Structures Research and Instruction	Good	Adequate	2	740
PH 315	Strength of Materials and Concrete Research Laboratory	Excellent	Adequate	2	360
PH 317	Materials	Very good	Adequate	1	384
PH 328	Environmental Preparation and Instruction	Good	Adequate	2	265
PH 329	Environmental Research and Instruction	Very good	Adequate	5	902
PH 326	Environmental Research and Instruction	Very good	Adequate	5	1626
PH 338	Environmental Instruction	Very good	Adequate	5	740
PH 320	Environmental Research and Instruction	Fair	Adequate	2	172
PH 321	Environmental Research and Instruction	Good	Adequate		172
PH 335	Environmental Preparation	Good	Adequate		172
PH 336	Environmental Preparation and Research	Good	Adequate	1	172
Stadium, ESTA 122	CEE Shop – support services	Good	Adequate		1035
Stadium,	Structures Lab, Shop –	Good	Adequate	1	2988

ESTA 121	support services				
CH 104	Mechanics Instruction	Excellent	Adequate	5	1210
CH 122	New Materials and Mechanics Laboratory	Excellent	Adequate	4	1041
PH 122C	Transportation Laboratory	Good	Adequate	3	-
TOTAL					17,297 sq.ft.

Table 4- List of scholarly journals relevant to Civil Engineering that are subscribed by the TTU library

	Journal Name	Area of Specialization	Type	Coverage
1	ACI Materials Journal	Materials/ Transportation	Journal	Print: 1988-present
2	Advanced Materials and Processes	Engineering Mechanics	Journal	Print: 1986-present Online: 1994-present
3	Applied Mechanics Review	Engineering Mechanics	Journal	Microfilm: 1948-1963 Print: 1964-1999 Online: 2000-present
4	Architectural Record	Structural Engineering	Journal	Microcard: 1891-1902 Print: 1948-2003 Online: 1992-present
5	Building and Environment	Inter-disciplinary	Journal (Discontinued)	Print: 1976-2008
6	Civil Engineering	Inter-disciplinary	Journal	Print: 1930-present
7	Civil Engineering Practice (Journal of Boston Society of Civil Engineers/ASCE)	Inter-disciplinary	Journal	Print: 1987-2008
8	Computer Applications in Engineering Education	Inter-disciplinary	Journal	Print: 1992-1996 Online: 1996-present
9	Computers and Fluids	Water/Inter- disciplinary	Journal	Print: 1973-2008 Online: - present
10	Computers in Education Journal	Inter-disciplinary	Journal	Print: 1991-present
11	Concrete	Structural Engineering/ Materials	Journal	Print: 1968-2008
12	Concrete International (Design and Construction)	Structural Engineering/ Materials	Journal	Print: 2000-present
13	Engineering and Technology	Environment/Water	Journal	Print: 2006-present
14	Environmental Engineering Science	Environment/Water	Journal	Online: 1984-present
15	Environmental Progress	Environment/Water	Journal	Print: 1982-1998 Online: 2009-present

16	Hydraulics and Pneumatics	Water	Journal	Print: 1969-1983 + last 2 years Online: 1983-present, less 2 years
17	IMA Journal of Numerical Analysis	Inter-disciplinary	Journal	Print: 1982-2008 Online: 1999-2006
18	International Journal of Numerical Methods in Engineering	Inter-disciplinary	Journal	Online: 1996-present
19	International Journal of Engineering Education	Inter-disciplinary	Journal	Print: 1992-1996 Online: 1994-present
20	International Journal of Engineering Science	Inter-disciplinary	Journal	Print: 1963-2001 Online: 2002-present
21	Journal of the American Water Works Association	Water/Environment	Journal	Print: 1914-1947 Online: 1997-present
22	Journal of Applied Mathematics and Mechanics	Engineering Mechanics	Journal	Print: 1958-2001 Online: 1998-present
23	Journal of Applied Mechanics	Engineering Mechanics	Journal	Print: 1935-1949; 1959-1999 Microfilm: 1951-1960 Online 1970-present
24	Journal of Computational and Non-linear Dynamics	Inter-disciplinary	Journal	Online: 2006-present
25	Journal of Environmental Systems	Environment/Water	Journal	Print: 1972-present Online: 2002-2006
26	Journal of Irrigation and Drainage (ASCE)	Water/Environment	Journal	Online: 1983-present
27	Journal of Materials in Civil Engineering	Materials/ Transportation/ Structural Engineering	Journal	Online: 1989-present
28	Journal of Materials Education	Materials/ Transportation	Journal	Print: 1984-present
29	Journal of Sound and Vibration	Engineering Mechanics	Journal	Print: 1964-1997 Online: 2002-present
30	Journal of Air and Waste Management Association	Environment/ Water	Journal (Discontinued)	Print: 1955-1989
31	Journal of the American Water Resources Association	Water/ Environment	Journal	Online: 1997-present
32	Journal of the IEST	Inter-disciplinary	Journal	?

33	Magazine of Concrete Research	Structural Engineering /Materials	Journal	Print: 1966-2009 Online: 1976-present
34	Materials Characterization	Engineering Mechanics/ Materials	Journal	Print: 1990-2001 Online: 2002-present
35	Materials Evaluation	Materials/ Transportation	Journal	Print: 1964-present
36	Metallurgical and Materials Transactions	Materials	Journal	Print: 1964-1996 Online: 1997-present
37	Modern Steel Construction	Structural Engineering	Journal	Print: 1988-2002 + last 2 years Online: 2003-present, less 2 years
38	Natural Hazards Review	Environment/Water	Journal	Online: 2000-present
39	PCI Journal (Prestressed Concrete Institute)	Structural Engineering/ Materials	Journal	Print: 1964-present
40	Public Works (New York)	Environment	Journal	Microfilm: 1896-1968 Print: 1968-1991 Online: 1992-present
41	Soils and Foundation	Materials/ Geotechnical	Journal	Print: 1969-present
42	Structural Engineer	Structural Engineering	Journal	Print: 1965-present
43	Tennessee Environmental Law Letter	Environment	Journal (Discontinued)	Print: 1992-2009
44	Transportation Journal	Transportation	Journal	Print: 1968-1992 Online: 1992-present
45	Transportation Science	Transportation	Journal	Print: 1984-1997 Online: 1998-present
46	Water and Environment Journal	Water/ Environment	Journal	Print: 2001-2002 Online: 1997-present
47	Water Environment Research	Environment/ Water	Journal	Print: 1992-1996 + last 2 years CD-ROM: 2000-2009
48	Water Resources Research (AGU)	Water/Environment	Journal	Print: 1965-present Online: 2010-present, less 1 year

49	ASCE Journal of Hydrologic Engineering	Water	Journal	Online: 1996-present
50	ASCE Journal of Bridge Engineering	Structural Engineering	Journal	Online: 1996-present
51	ASCE Journal of Composites for Construction	Engineering Mechanics/ Materials	Journal	Online: 1997-present
52	ASCE Journal of Geotechnical & Geoenvironmental Engineering	Geotechnical/ Materials	Journal	Online: 1997-present
53	ASCE Journal of Materials in Civil Engineering	Materials	Journal	Online: 1989-present
54	ASCE Journal of Performance of Constructed Facilities			Online: 1987-present
55	ASCE Journal of Computing in Civil Engineering	Inter-disciplinary	Journal	Online: 1987-present
56	ASCE Journal of Structural Engineering	Structural Engineering/ Mechanics	Journal	Online: 1983-present
57	ASCE Journal of Surveying Engineering	Surveying	Journal	Online: 1983-present
58	ASCE Journal of Waterway, Port and Coastal Engineering	Water/ Environmental	Journal	Online: 1983-present
59	ASCE Journal of Engineering Mechanics	Engineering Mechanics	Journal	Online: 1983-present
60	ASCE Journal of Environmental Engineering	Environmental/ Water	Journal	Online: 1983-present
61	ASCE Journal of Water Resources Planning and Management	Water/ Environment	Journal	Online: 1983-present
62	Journal of Transportation Engineering	Transportation/ Traffic	Journal	Online: 1983-present
63	ASCE Journal of Urban Planning and Development	Transportation	Journal	Online: 1983-present
64	Academic OneFile	Inter-disciplinary	Electronic Database	
65	ASCE Online	Inter-disciplinary	Electronic Database	
66	Blackwell Synergy	Inter-disciplinary	Electronic Database	
67	Computer Database	Inter-disciplinary	Electronic Database	
68	EBSCOhost Electronic Journals	Inter-disciplinary	Electronic	

			Database	
69	Energy Citations Database	Inter-disciplinary	Electronic Database	
	Engineering Village Cempendex	Inter-disciplinary	Electronic Database	
70	Environment Index	Inter-disciplinary	Electronic Database	
71	Expanded Academic	Inter-disciplinary	Electronic Database	
	Information Bridge: DOE Scientific & Technical Information	Inter-disciplinary	Electronic Database	
72	J-Stage	Inter-disciplinary	Electronic Database	
73	Sage Publications	Inter-disciplinary	Electronic Database	
74	Scitation	Inter-disciplinary	Electronic Database	
75	SpringerLink	Inter-disciplinary	Electronic Database	
76	TRID (Transportation Research Board)	Inter-disciplinary	Electronic Database	
77	Wiley Online Library	Inter-disciplinary	Electronic Database	

Table 5 - List of some major externally funded projects during 2008-2012

Faculty Name	Project Title	Sponsor
Sharon Huo	“Simplified Live Load Distribution Factor Equations for Tennessee Bridge Design”; Amount: USD \$65,000; June 2009; PI	TDOT
L K Crouch	“Optimum Air Content Range (Plastic and Hardened) for TDOT Class D Portland Cement Concrete (PCC)”, Amount: USD \$130,000; June 2009; PI	TDOT
	“Higher Volume Fly Ash PCC for Sustainability and Performance”; Amount: USD\$ 130,000; June 2010; PI	TDOT
Faisal Hossain	“Modeling the hydrologically-relevant features of uncertainty of NASA’s high resolution precipitation products for advancing global applications over ungauged regions”; Amount: USD\$82,800; May, 2008, PI.	NASA
	“Advancing the Hydrologic potential of NASA’s TRMM-based Satellite Rainfall Estimation System for Global Flood Monitoring in Anticipation of GPM”; Amount: USD\$ 310,000; April, 2008, PI.	NASA
	“A Satellite-based Early Warning, Mapping and Post-Disaster Visualization System for Water Resources of Low-lying Deltas of the Hindu Kush-Himalayan Region”; Amount: USD \$840,000, April 2012; PI	NASA
	“Understanding Atmospheric Rivers, Terrain and Anthropogenic Land Cover Changes on Storm Modification around Large Dams using Multi-sensor Satellite Data, Cloud Tracking and Numerical Modeling”; Amount: USD\$82,800, May 2012; PI	NASA
	“Satellite Rainfall Uncertainty Estimation Across the Globe for Diverse Hydrologic Applications Using Readily Accessible Geophysical Features”; Amount: USD\$ 82,800; May 2012; PI	NASA
Daniel Badoe	“Development of a Tennessee Travel Demand Model Users’ Group”; Amount: USD \$7,000, June, 2009 PI	TDOT
	Development of a Tennessee Travel Demand Model Users’ Group”; Amount: USD \$27,750, August, 2010.	TDOT
Vince Neary	Development of Morphology Relationships and the Establishment of Geomorphic Reference Reaches for the Nashville Basin Physiographic Province”; Amount: USD\$ 98,808; January, 2009; PI	TDEC
	“Hydrodynamic and Water Quality Modeling Review II, Northern Everglades, ARM Loxahatchee NWR,” Amount: USD\$75,000; PI	US Fish and Wildlife
Benjamin Mohr	“Transport Kinetics of Internal Curing Water in High Performance Concretes,” Amount: USD \$220,767; PI	NSF
	“MRI: Acquisition of XRD Attachments for Extending X-Ray	NSF

	Laboratory Capabilities”; Amount: USD \$171,083; September 2009; PI	
	"Nanoscale Characterization of Expansion Due to Delayed Ettringite Formation"; Amount: USD\$ 300,000; September 2011; PI	NSF
Steven Click	“Application of Non-Traditional Interchange Treatments to Improve Interchange Quality of Service and Preserve the Service Life of Narrow Over- and Underpass Roadways” Amount: USD\$100,000; PI	TDOT
	Field Evaluation of Traffic Signal Based Interchange Treatments”; Amount: USD \$200,000; June 2009, PI	TDOT
Jane Liu	“Modeling of Face Sheet Wrinkling of Cylindrical Sandwich Shells,” Amount: \$24,000, April 30, 2008; PI	United Launch Alliance
	“Biaxial Stress Testing of Rohacell”; Amount: USD\$ 15,000; April, 2009; PI	United Launch Alliance

Table 6- Individual CEE faculty project funding (approximate and rounded off to the nearest thousand) awarded (as PI and Co-PI) since 2008-09. (Only external funding is reported). For multiple CEE Co-PIs, only the PI's name is reported). Note: the budget figures on the rightmost column are not necessarily always activations on campus for the specific year in question.

YEAR	FACULTY	RESEARCH FUNDING
2008-09	Badoe	7,000
Total Activations: \$449,061	Click	100,000
	Crouch	37,000
	Mohr	75,000
	Huo	65,000
	Hossain	210,000
	Liu	24,000
	Neary	120,000
2009-10	Badoe	7,000
Total Activations: \$431,985	Click	70,000
	Crouch	130,000
	Mohr	220,000
	Huo	35,000
	Hossain	210,000
	Liu	45,000
2010-11	Badoe	27,750
Total Activations: \$376,166	Click	200,000
	Crouch	255,000
	Mohr	110,000
	Huo	65,000
	Hossain	27,000
2011-12	Badoe	9,500
\$484,207	Click	66,000
	Crouch	210,000
	Mohr	110,700
	Huo	70,000