

# FIU

# FLORIDA INTERNATIONAL UNIVERSITY

ANNUAL REPORT  
2009 - 10



# CONSTRUCTION MANAGEMENT

**Department of Construction Management  
College of Engineering and Computing  
Annual Report 2009-2010**



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## 1. Introduction

This year the Department of Construction Management continued to make noteworthy accomplishments as in the previous years. The Bachelor of Science in Construction Management program is re-accredited by the American Council for Construction Education (ACCE) for a six year period ending in 2013 in 2008. The third year report is due in December this year to ACCE.

Enrollment is slightly higher than last year's. The Fall 2009 total (undergraduate and graduate) headcount is 594 as opposed to 571 in Fall 2008. The Annual Unique Headcount considering both Fall and Spring terms during 2009-10 academic year is 752.

This year, the graduate Fall 2009 enrollment is 192, and the undergraduate enrollment is 402. The graduation rate declined from last year's total of 126 to 99 this year.

The department continued its annual industry support campaign with the help of the college Development office, and raised \$168,000 as of June 30. The campaign continues to reach its goal of \$250,000 by the end of the year.

The department did very well this year, as in the past, in attracting significant amount of scholarship (endowed and onetime) funds for its students.

The faculty members were active in publishing their research findings in reputed construction journals and conference proceedings.

The department completed a 650 square feet space to build its MEP (mechanical, electrical, plumbing) studio on the first floor of the Engineering Center Building. This lab is equipped with HVAC, electrical and plumbing appliances/fixtures for demonstration to students, and computer hardware and software for instruction and training.

In addition, the undergraduate students taking the course on Construction Materials are required to meet three class sessions in the civil engineering materials laboratory for hands-on demonstration on testing of common construction materials, such as cement, concrete, steel and timber. This arrangement provides much needed laboratory experience to our students. The department is in the process of procuring endowment funds from the industry to develop its own "construction process laboratory", which will provide students hands-on training on construction materials and components and on their assembly.

The department currently has 8 fulltime faculty and employs anywhere between 10 to 14 adjunct faculty members every term. Two new fulltime faculty members will join

the department this year, one in a tenure-track and the other in a non-tenure-track position. Dr. Wallied Orabi, a recent PhD in civil engineering from University of Illinois at Urbana-Champaign, will join the department in Fall 2010 as a tenure-track Assistant Professor. Dr. Ayman Morad, a long-time adjunct faculty in the department will join in the non-tenure-track position this Fall.

Dr. Syed M. Ahmed, Associate Professor and Director of the Graduate Program, has announced his resignation effective Fall 2010. He has accepted the position of Chairperson of the Department of Construction Management in East Carolina University.

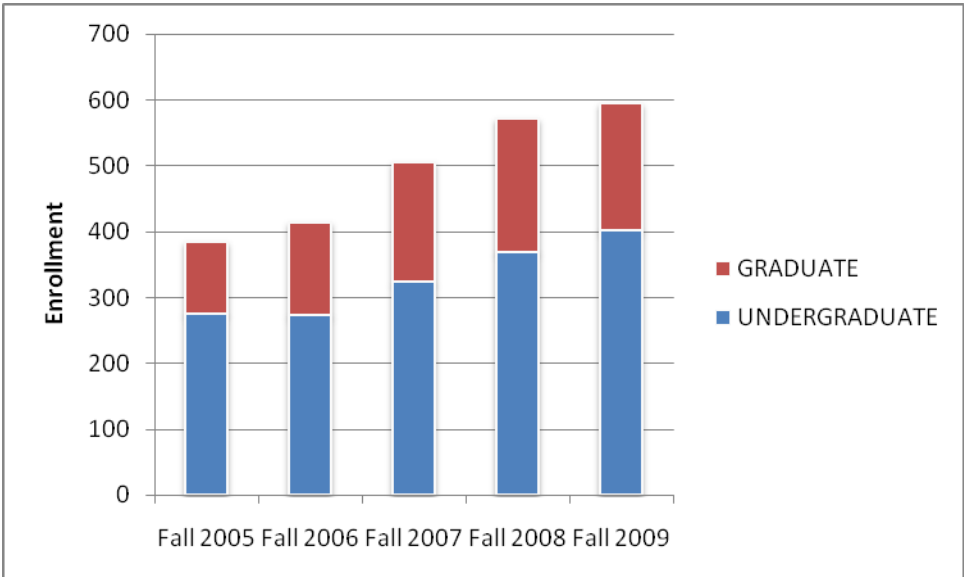
**2. Academics**

**2.1. Enrollments and FTEs**

Fall headcount (enrollment) history is shown in Table 1 and Figure 1. The department has continued to grow in undergraduate enrollment, but declined slightly in graduate enrollment. The extent of growth over the last three years was 47% at the undergraduate and 36% at the graduate level. The department currently has 8 fulltime faculty and employs anywhere between 10 to 14 adjunct faculty members every term.

**Table 1. Fall Headcount History**

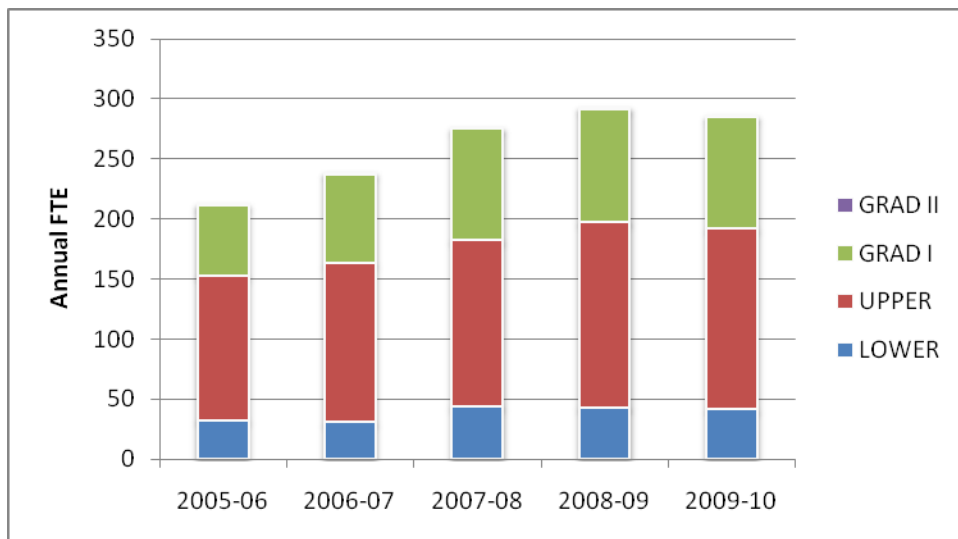
	Fall 2005	Fall 2006	Fall 2007	Fall 2008	Fall 2009
UNDERGRADUATE	276	273	323	369	402
GRADUATE	108	141	182	202	192
TOTAL	384	414	505	571	594



**Figure 1. Fall Headcount History**

**Table 2. Annual Full Time Equivalent (FTE)**

	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010
LOWER	32.4	30.5	43.7	42.8	41.3
UPPER	119.8	132.3	138.5	154.7	150.4
GRAD I	58.7	74.5	92.6	94.1	92.8
GRAD II	1.4	0.8	0.9	0.5	0.5
<b>TOTAL</b>	<b>212.3</b>	<b>238.0</b>	<b>275.7</b>	<b>292.0</b>	<b>285.0</b>



**Figure 2. Annual FTE History**

The annual full-time equivalent (AFTE) students, calculated as the fundable student credit hours divided by 40 or 32 credits for the undergraduate and graduate students, respectively, have declined slightly at both undergraduate and graduate levels over the last year. Overall decrease in AFTE is 2.4% over the last year (2008-09). The increase in total AFTE, however, was close to 40% over the three year period from 2005-06 to 2008-09. Figure 2 shows the AFTE history of the department since 2005-06.

## 2.2. Florida Engineering Education Delivery System (FEEDS)

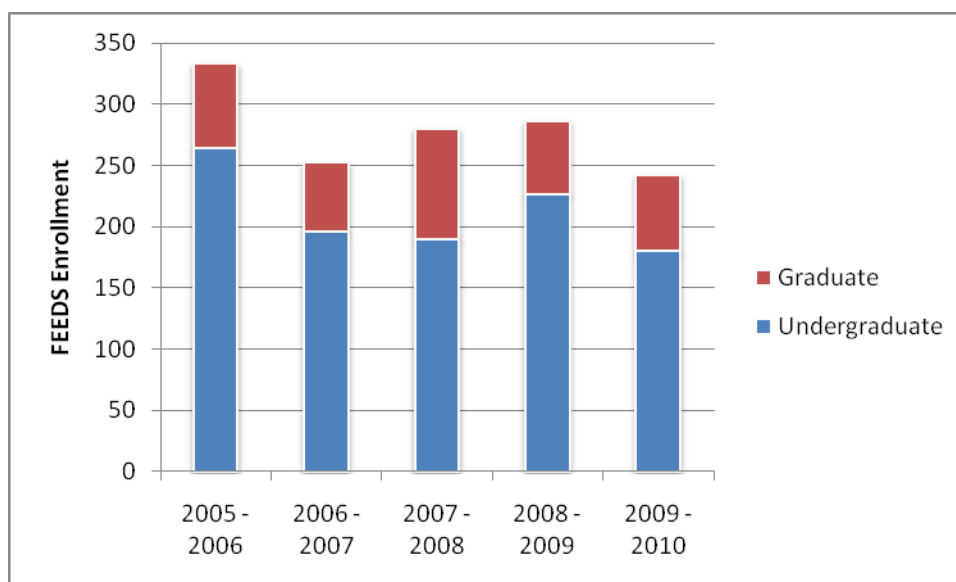
Table 3 and Figure 3 show the FEEDS enrollment (total registrations) over the last five years. In 2005, the department developed and implemented its FEEDS Policy in order to improve the quality of instruction and delivery of course materials. As a result



enrollment in FEEDS sections were capped. Thus the decrease in FEEDS enrollment was by design and deliberate. The desired quality control measures were effective and the quality of FEEDS instruction was not an issue during the re-accreditation visit. At the graduate level, the decrease in FEEDS enrollment has been compensated by online classes as discussed in the following.

**Table 3. FEEDS Enrollment History**

	FEEDS Enrollment (Total registrations)				
	2005 - 2006	2006 - 2007	2007 - 2008	2008 - 2009	2009 - 2010
<b>Undergraduate</b>	264	196	190	226	180
<b>Graduate</b>	69	56	90	60	62
<b>Total</b>	333	252	280	286	242



**Figure 3. FEEDS Enrollment History**

### 2.3. Online Masters Program

The department began offering graduate courses online for its Masters students in 2004. Two sections for each online course are offered, one for the in-state students and the other for the out-of-state students. Fee structures are different. FTE credits of out-of-state students are not credited to the department. Sufficient courses are offered within a four-semester cycle enabling students to graduate by taking all courses online. The enrollment is on the rise as can be seen from Tables 4 and 5. At present,

approximately a total of 150 students enroll in online classes in a typical term. About 90 of them are in-state and 60 out-of-state. Currently, the college charges in-state students a plus fee of \$299 per course and out-of-state graduate students a flat fee of \$1,599. The department's total revenue in the 2009-2010 academic year was close to \$350,000.

**Table 4. Online (MS) Enrollment and Course Offering**

Semester/Year	Online Enrollment	Online Course Offering
<b>2005 - 2006</b>	112	7
Summer 2006	30	1
Fall 2006	64	3
Spring 2007	111	5
<b>2006 - 2007</b>	205	9
Summer 2007	62	2
Fall 2007	104	3
Spring 2008	115	4
<b>2007 - 2008</b>	281	9
Summer 2008	86	2
Fall 2008	110	3
Spring 2009	154	4
<b>2008 - 2009</b>	350	9
Summer 2009	125	3
Fall 2009	143	3
Spring 2010	133	4
<b>2009 - 2010</b>	401	9

**Table 5. Online (MS) Course Registrations History**

	Online Enrollment (Total)				
	2005 -2006	2006 -2007	2007 -2008	2008 -2009	2009 -2010
<b>Graduate</b>	112	205	281	350	401

#### 2.4. Pines Center

The department offers classes in the Pines Center campus, which is located in the Broward County for convenience of the students primarily residing in the Broward and the Palm Beaches counties. We offer a number of classes there every semester during the academic year, and fewer during the summer. Courses which are offered at the

Pines Center during a given semester are not offered at the Engineering Center during that same semester and vice versa. During 2009-10 academic year 16 undergraduate and 7 graduate course-sections were offered with a total of 448 undergraduate and 133 graduate student-registrations in the Pines Center. The data in Table 6 show that there has been a drop in graduate enrollment and in the number of courses offered at the graduate level. This is probably because there has been a corresponding rise in the increase in online enrollment of graduate courses as shown in Table 5.

**Table 6. Pines Center Course offering/registrations**

	Academic Year		
	2007-2008	2008-2009	2009-2010
Undergraduate	16/352	17/446	16/448
Graduate	10/231	11/246	7/133
<b>TOTAL</b>	<b>26/583</b>	<b>28/692</b>	<b>23/581</b>

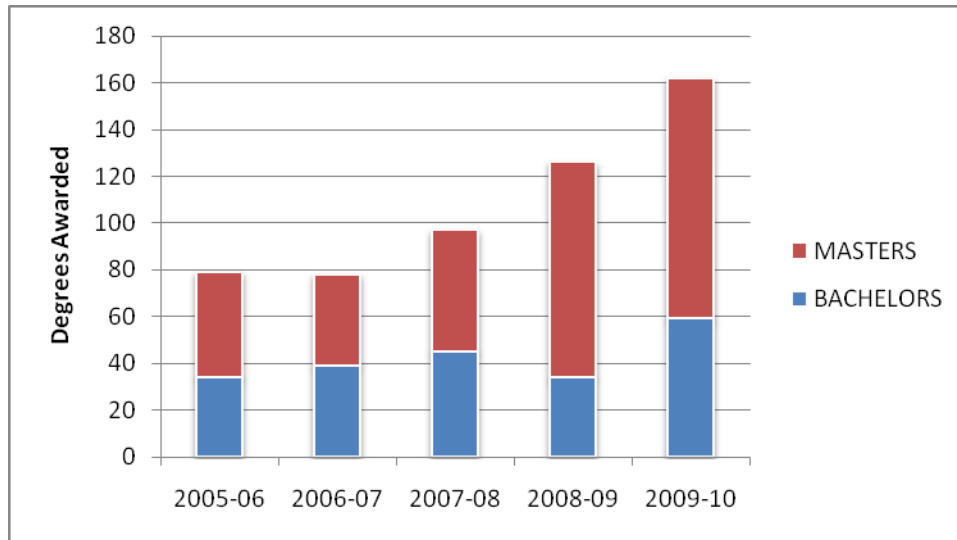
## 2.5. Degrees Awarded

The department awarded degrees to 162 students last year. This indicates an increase of 28.6% over last year. The historical numbers over the last five years for bachelors and masters are shown in Table 7 and Figure 4. Our graduates are employed by all major construction companies in south Florida and nationwide. Moss and Associates, Coastal Construction, Turner Construction, Odebrecht Construction, Balfour Beaty, and Skanska are the major employers.

**Table 7. Degrees by Students**

DEGREE LEVEL	Academic Year				
	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010
BACHELORS	34	39	45	34	59
MASTERS	45	39	52	92	103
<b>TOTAL</b>	<b>79</b>	<b>78</b>	<b>97</b>	<b>126</b>	<b>162</b>





**Figure 4. Degrees Awarded History**

**2.6. ACCE Accreditation**

The undergraduate program has been re-accredited in fall 2007. The program has been awarded accredited status for another six years by the American Council for Construction Education (ACCE). The department’s strengths were duly recognized. In response to ACCE site visit report, the department planned to construct a 650 sq. ft. MEP laboratory. It was completed this year. The department will have to work closely with the College Dean’s Office and the FIU administration for establishing a construction process laboratory.

**2.7. Student Chapter Activities**

Four student chapters are active in the Department. These are: ABC (Associated Builders and Contractors), AGC (Associated General Contractors), National Association of Women in Construction (NAWIC), and Sigma Lambda Chi Honor Society. ABC Student Chapter is the most active and works closely with the South Florida ABC. This student chapter participates in the National Construction Management Competition annually. This year (2010) the FIU team won the Third Prize in estimating category. The Department thanks the ABC East Florida staff, Board of Directors and all members of the mentoring team for the time, effort and passion that everyone gave to make the competition for the FIU student chapter a success. Every year ABC East Florida Chapter organizes a golf tournament to raise funds for supporting the student team. Dr. Jose Faria served as the mentor and advisor of the team. It should be mentioned that in 2006 the ABC Student Chapter team won the National Grand Championship.

**2.8. Appointment and Recognition of Mr. Chad Moss ('94)**

Mr. Chad Moss ('94), Senior Vice President and Project Executive of Moss and Associates was selected as the 2009 Distinguished Alumni Torch Award recipient from the College of Engineering and Computing. By this award his support of the Department of Construction Management and his leadership on the Department's Industry Advisory Council were duly recognized.

In addition, Mr. Chad Moss was also appointed as a member of the FIU Foundation Board of Directors in 2009-10 academic year.

## **2.9. Other Events**

### **2.9.1. Florida Infrastructure Sustainability Forum**

FIU College of Engineering and Computing (CEC) and Titan America, LLC jointly organized the Florida Infrastructure Sustainability Forum on February 18, 2010. Dr. Irtishad Ahmad, P.E. Chair of the Department of Construction Management was the presiding chair of the Forum.

The purpose was to convene a think tank representing academic, industry, government and environmental groups to discuss the economic, social, technological, and environmental challenges and strategies that will advance the achievement of sustainability within Florida's infrastructure. With more than 70 participants representing various business and industrial sectors, governmental agencies and academia the Forum was held at the Engineering Center of FIU.

Mr. Aris Papadopoulos, CEO of Titan America addressed the forum with his remarks on the importance of sustainability initiative in Florida. The first Keynote speaker, Stephanie Kopelousos, Secretary of the Florida Department of Transportation delivered her speech on "sustainable transportation for the future." Dr. Amir Mirmiran, Dean of the College of Engineering and Computing presented his perspective on sustainability in the context of Florida's infrastructure. At lunch, Dr. Mark B. Rosenberg, the President of FIU spoke to the participants and highlighted FIU's commitment towards building a sustainable future for Florida. He described various initiatives and projects the College of Engineering and Computing is involved with.

Dr. Susan Jay, Director of Development, College of Engineering and Computing, moderated the panel session. The panelists included:

- Susanne M. Torriente, Director, Miami-Dade Office of Sustainability
- Tim Kuebler, Vice President, Cement and Aggregates, Titan America

· Tom Gustafson, Director, Government and Transportation Policy, Lehman Center for Transportation Research, FIU

· Yong Tao, Associate Dean, Undergraduate Affairs, College of Engineering and Computing, FIU

· Daniella Levine, CEO and President, Human Services Coalition of Miami-Dade, and

· James Murley, Assistant Dean, External Affairs, College of Architecture, Urban and Public Affairs, FAU

### **2.9.2. AGC Dinner and LBA Luncheon Meeting**

Dr. Mark Rosenberg, President of FIU, was the keynote speaker at the May monthly meeting of the Associated General Contractors (AGC) on May 18, 2010. He appealed to the leaders of the south Florida construction industry to support the Department of Construction Management at FIU. Dr. Rosenberg was also the keynote speaker in the Latin Builders Association (LBA) monthly luncheon meeting held on March 26, 2010. Dean Mirmiran and the faculty of the department participated in these events.

### **2.9.3. Industry Advisory Council Events**

- Donor Thank you Event - Held on August 25, 2009 at Presidential Gold Suite, FIU Football Stadium to thank all CM emergency industry fund donor of 2009-10 year.
- CM Industry Advisory Council Meeting and Holiday Luncheon - Held on December 8, 2009 at EC 2300.
- FIU construction projects workshop - Held on February 23, 2010 for the IAC members. John Cal, Associate Vice President, Facilities Management, Bob Griffith, Director of Planning and Real Estate Development, and Sylvia Berenguer, Director, Minor Projects, were the speakers.
- Tour of Marlins Stadium Construction Site - Held June 2, 2010 for the IAC members and donors of 2010-11, sponsored by Moss and Associates.

### 3. Research and Scholarly Activities

#### 3.1. Research Areas

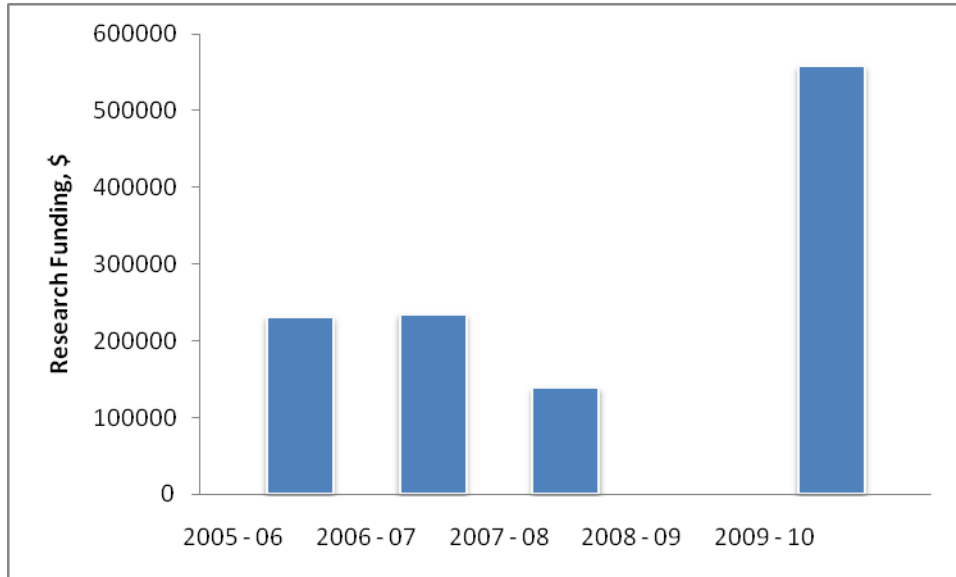
<u>Major Research Area</u>	<u>Faculty Member</u>
Risk Management and Decision Making	Irtishad Ahmad Emre Bayraktar Syed M. Ahmed Jose A. Faria
Sustainability and Green Construction	Gene Farmer Yimin Zhu Emre Bayraktar Jose Faria
Information and Communication Technology	Irtishad Ahmad Yimin Zhu
Infrastructure Systems and Management	Irtishad Ahmad Yimin Zhu Jose Mitrani
Safety and Health	Syed M. Ahmed Gene Farmer
Construction Education	Syed M. Ahmed Yimin Zhu Ron Baier

#### 3.2. Research Funding

As shown in Table 8 and Figure 5, after a disappointing last year the department did extremely well this year in external research funding, thanks to Dr. Yimin Zhu. One of his grant proposals has been awarded by National Science Foundation. For the first time, CM department received an award from the prestigious NSF. As in the previous years, this year also a number of research proposals were submitted to various funding agencies. There are a few research proposals in the pipeline.

**Table 8. Research Funding History**

Year	2005 - 2006	2006 - 2007	2007 - 2008	2008 - 2009	2009 - 2010
<b>Total \$</b>	\$230,201	\$234,138	\$138,456	\$0	\$557,855



**Figure 5. Research Funding History**

### 3.2.1. Active Research Projects

1. Analysis of Energy Environmental and Life Cycle Cost Reduction Potential of Ground Source Heat Pump (GSHP) in Hot and Humid Climate  
 PIs: Dr. Yimin Zhu and Dr. Yong Tao  
 Co PI: Dr. Teshome Jiru  
 Department of Energy: \$250,000  
 12/28/09 – 02/28/11
2. Stochastic Time, Cost and Environmental Impact Optimization for Construction Processes  
 PI: Dr. Yimin Zhu  
 National Science Foundation: \$307,855  
 07/01/10 – 06/30/13
3. Venture Capital Opportunities in Green Building Technologies  
 PI: Dr. Emre M. Bayraktar  
 FIU Ewing Marion Kauffman Foundation: \$14,937  
 01/01/2010 – 01/01/2011

### **3.2.2. Recently Completed Research Projects**

1. Development of Improved Information Management Processes for FDOT Dispute Review Board System  
PI: Dr. Yimin Zhu  
CoPI: Dr. Emre Bayraktar  
Florida Dept. of Transportation: \$96,480  
6/08-6/09
2. Coordination of Specialized Transportation Services for Transportation-Disadvantaged Population: Issues and Solutions  
PI: Dr. David Shen  
CoPI's: Dr. Irtishad Ahmad, Dr. Albert Gan, Dr. Fang Zhao  
US Depart of Transportation: \$388,350  
9/04-6/09
3. Development of a Strategic Model for Improvement of Construction Project Management Education, Research and Practice in Pakistan  
PI: Dr. Syed M Ahmed  
CoPI's: Dr. Irtishad Ahmad, Dr. Yimin Zhu  
National Academy of Sciences: \$130,000  
11/06-6/09
4. Developing a Realistic-Prototyping Road User Cost Evaluation Tool for FDOT  
PI: Dr. Yimin Zhu  
CoPI's: Dr. Irtishad Ahmad  
Florida Dept of Transportation: \$129,511  
12/06-12/08

### **3.2.3. Submitted Research Proposals**

1. Collaborative Research: Developing and Assessing Case-based Synergistic Animation and Simulation (CSAS) Tools to Enhance Learning of Design, Engineering and Construction  
PI: Yimin Zhu  
Funding Agency: National Science Foundation  
Amount: \$96,305 (Zhigang Shen, PI at University of Nebraska, Lincoln)  
Date Submitted: 5/28/2010
2. Collaborative Research: Foster Complex Systems Thinking in Construction Engineering Education using a Case-Based Multidimensional Virtual Environment (CMVE)  
PI: Yimin Zhu



Funding Agency: National Science Foundation  
Amount: \$100,000 (Zhigang Shen, PI at University of Nebraska, Lincoln)  
Date Submitted: 3/31/2010

3. A US-Sino Consortium for Energy Efficient Building  
Co-PI: Ymin Zhu, (Principal Investigator: Yong Tao)  
Funding Agency: Department of Energy  
Amount: \$12,000,000  
Date Submitted: 5/21/2010
4. A Cyber-based Post-Occupancy System for Building Performance Measurements with User-Adapted Energy Saving Behavior  
Co-PI: Yimin Zhu (Principal Investigator: Yong Tao)  
Funding Agency: University of Central Florida  
Amount: \$2,500,000  
Date Submitted: 4/15/2010

### **3.3. Construction in the Developing Countries (ICCIDC-II) International Conference**

The department (Dr. Ahmed and Dr. Ahmad as organizers) has organized the second conference on Construction in Developing Countries in Cairo, Egypt in August 2010.

### **3.4. Research Productivity**

In this section, a listing of the research output and faculty scholarly work is compiled.

#### **3.4.1. Journal Editorship**

Ahmad, I. Editorial Board Member, *Journal of Management in Engineering*, American Society of Civil Engineers.

Ahmad, I. Editorial Board Member, *Leadership and Management in Engineering*, American Society of Civil Engineers.

Bayraktar, M.E. Associate Editor, *Journal of Management in Engineering*, American Society of Civil Engineers.

Ahmed, S. Specialty Editor, *Journal of Construction Engineering and Management*, American Society of Civil Engineers.

#### **3.4.2. Books and Book Chapters**

1. Lincoln Forbes and Syed Ahmed, *Modern Construction – Lean Project Delivery, and Integrated Practices*, Taylor and Francis, to be published in October 2010.

2. Gene Farmer. "Sustainable Building A LEED Approach to Construction Management", Delmar Cengage, Summer 2010.

### 3.4.3. Refereed Journals

1. Salman Azhar, Irtishad Ahmad and Maung K. Sein, "Action Research: A Proactive Research Method for Construction Engineering and Management," Special Issue on Research in ASCE *Journal of Construction Engineering and Management*, January, 2010.
2. Papajohn, D., Cui, Q., and Bayraktar, Mehmet Emre., Public-Private Partnerships in U.S. Transportation: A Critical Review and the Path Forward. *Journal of Management in Engineering*, 2010
3. Zhu Y., Bayraktar, Mehmet Emre, and Chen S. Application of Metadata Modeling to Dispute Review Report Management, *Journal of Civil Engineering and Management*, 2010
4. Perkinson, C., Bayraktar, Mehmet Emre, and Ahmad, I. The Use of Computing Technology in Highway Construction as a Total Jobsite Management Tool *Automation in Construction*, Elsevier Science Publishers, 2010
5. Bayraktar, Mehmet Emre and Hastak, M. . "A Scoring Approach to Construction Bond Underwriting", *Journal of Construction Engineering and Management*, ASCE, 2010.
6. Bayraktar, Mehmet Emre and Owens, C.. "A LEED Implementation Guide for Construction Practitioners", *Journal of Architectural Engineering*, 2010.
7. Ossman III, G., Bayraktar, Mehmet Emre, and Cui, Q. . "Construction Arbitration Consistency and Reliability: Empirical Study", *Journal of Management in Engineering*, ASCE, 2010.
8. Cui, Q., Johnson, P., Sharma, D., and Bayraktar, Mehmet Emre. . "Determinants of Industry Acceptance for Highway Warranty Contracts: Alabama Case Study", *Journal of Infrastructure Systems*, ASCE, 2010.
9. Zhu, Y., Bayraktar, E., and Chen, S. C.. "Application of Metadata Modeling to Dispute Review Report Management", *International Journal of Civil Engineering and Management*.
10. Jiang, A. and Zhu, Y.. "A Multi-Stage Approach to Time-Cost Trade-Off Analysis Using Mathematical Programming", *Journal of Construction Management*.
11. Li, X. D., Zhu, Y., and Zhang, Z. H.. "An LCA-based Environmental Impact Assessment Model for Construction Processes", *Building and Environment*.
12. Zhu, Y., Zhang, R., and Ahmad, I.. "Applying Concept Similarity to the Evaluation of Common Understanding in Multidisciplinary Learning", *Journal of Computing in Civil Engineering*.
13. Rizwan U. Farooqui, Syed M. Ahmed and Sarosh H. Lodi . "State of Adoption and Implementation of Knowledge Management Strategies In The U.S.

Construction Industry.", International Journal of Architectural Engineering and design Management (AEDM), Earthscan Publication. , 2009.

14. Rizwan U. Farooqui, Syed M. Ahmed and Sarosh H. Lodi . "Assessment of Pakistani Construction Industry - Current Performance and the Way Forward. ", Journal for the Advancement of Performance Information and Value, Vol. 1, Issue 2, 35-50, Performance Based Studies Research Group & CIB Task Group 61., 2009.

#### **3.4.4. Conference Proceedings**

1. Bayraktar, Mehmet Emre, Arif, F., and Cinkilic, C.. "Assessment of Disputes in Florida Transportation Projects and Lessons Learned", Second International Conference on Construction in Developing Countries, Cairo, Egypt, Aug. 3-5, 2010.
2. Zhu, Y. and Tao, Y.. "Future House USA: an experience of international collaboration on a green building demonstration project", the International Conference of Construction and Real Estate Management, Beijing, China, November 5-6, 2009.
3. Gulbin, O. and Zhu, Y., . "Cycle Assessment of a Net Zero Energy House", the International Conference of Construction and Real Estate Management, Beijing, China, November 5-6, 2009.
4. Rizwan U. Farooqui and Syed M. Ahmed . "Proposal for a Construction Industry Safety Management Model based on Total Quality Management Principles", Proceedings of the 4th International Conference for Postgraduate Researchers of the Built and Natural Environment (PRoBE 2009), Nov 19-20, 2009, Glasgow, Scotland. , Glasgow, Scotland, Nov 19-20, 2009.
5. Rizwan U. Farooqui, Muhammad Saqib, Sarosh H. Lodi and Syed M. Ahmed . "Factors Affecting Success of Construction Projects in Pakistan", Proceedings of the 2nd Construction Industry Research Achievement International Conference (CIRAIC) 2009, Kuala Lumpur, Malaysia, Nov 3-5, 2009, Kuala Lumpur.
6. Rizwan U. Farooqui, Sarosh H. Lodi and Syed M. Ahmed . "A Stakeholder Perspective on the Desirable Skills of Project Managers in the Pakistani Construction Industry", Construction in Muslim World, Facing New and Challenging Environments, Kuala Lumpur, Malaysia, Oct 21-22, 2009.
7. Rizwan U. Farooqui, Syed M. Ahmed and Dilshad Umer . "Joint Ventures: Key Issues, Benefits and Critical Success Factors", Proceedings of the Fifth International Conference on Multi-National Joint Ventures for Construction Works, Kuala Lumpur, Malaysia, Oct 21-22, 2009.
8. Rizwan U. Farooqui and Syed M. Ahmed . "Current State of Adoption of Knowledge Management Practices in U.S. Construction Firms", Proceedings of the 3rd Latin American Conference on Construction Management and Economics (ELAGEC III), , Bogota, Colombia, Sep 9-11, 2009.

9. Rizwan U. Farooqui and Syed M. Ahmed . "Knowledge and Information Management in Construction Contracting Firms –The U.S. Perspective", Proceedings of 5th International Conference on Information and Knowledge Management in Building Construction (CIB-W102): Deconstructing Babel: Sharing Global Construction Knowledge, Rio de Janeiro, RJ, Brazil, , June 17-19, 2009.

### 3.4.5 Refereed Journal Papers (2008-09)

1. Rizwan U. Farooqui, **Syed M. Ahmed** and Sarosh H. Lodi (2009). "State of Adoption and Implementation of Knowledge Management Strategies In The U.S. Construction Industry". Accepted for Publication *for International Journal of Architectural Engineering and design Management (AEDM), Earthscan Publication*
2. Rizwan U. Farooqui, **Syed M. Ahmed** and Sarosh H. Lodi (2009). "Assessing the Project Management Culture in Construction Client Organizations in Pakistan – A Preliminary to Industry Performance Improvement". Accepted for Publication *for International Journal of Engineering and Management (IJEM), Serials Publication, Vol. 1*
3. Rizwan U. Farooqui, **Syed M. Ahmed** and Sarosh H. Lodi (2009). "Assessing Impacts of Low-Bid Procurement on Performance of Public Work Construction Projects: A Case Study of Pakistan". Accepted for Publication *for Journal of Construction Procurement, CIB Publication.*
4. Panthi, K, **Ahmed, S.M.** and Ogunlana, S.O (2008). "Contingency Estimation for Projects through Risk Analysis", Accepted for Publication *Associated Schools of Construction, Journal of Construction Education and Research.*
5. Ossman III, G., **Bayraktar, Mehmet Emre**, and Cui, Q. (2009). "Construction Arbitration Consistency and Reliability: An Empirical Study." *Journal of Management in Engineering, ASCE.*
6. **Bayraktar, Mehmet Emre** and Hastak, M. (2008). "A Multi-Objective Decision Support System for Highway Work Zone Projects." *Automation in Construction, Elsevier Science Publishers.*
7. **Bayraktar, Mehmet Emre** and Hastak, M. (2007). "A Model for Evaluation of Contracting Strategies in Highway Maintenance: Two Case Studies." Accepted for publication, *Journal of Construction Engineering and Management, ASCE.*
8. Cui, Q., Johnson, P., Sharma, D., and **Bayraktar, Mehmet Emre.** (2008). "Warranty Provisions from the Perspective of Highway Contractors: Alabama Case Study." Accepted for publication, *Journal of Infrastructure Systems, ASCE.*
9. **Zhu, Y., Ahmad, I.**, and Wang\*, L., (2009) "Estimating Work Zone Road User Cost for Alternative Contracting Methods in Highway Construction Projects," accepted for publication *Journal of Construction Engineering and Management, ASCE.*
10. M. K. Sein, **I. Ahmad** and G. Harindranath, (2008) "Sustaining ICT for Development Projects: The Case of Grameenphone CIC," *Teletronikk, Issue 2.*

11. S. Azhar, **I. Ahmad** and M.K. Sein, (2009) "Action Research: A Proactive Research Method for Construction Engineering and Management," Accepted for publication in a Special Issue on Research in *ASCE Journal of Construction Engineering and Management*.
12. Rafiq M. Choudhry, Dongping Fang and **Syed M. Ahmed** (2008). "Safety Management in Construction – Best Practices in Hong Kong". *Journal of Professional Issues in Engineering Education & Practices*, Vol. 134, No. 1, pp. 20-32.
13. **Y. Zhu**, (2008), An Exploratory Study on the Value of Information Systems to Electrical Firms: A Resource-Based View. *Journal of Management in Engineering*.

#### 3.4.6 Conference Proceedings Papers (2008-09)

1. Ahmad, I. "Construction Education and Research in USA," Keynote speech, International Conference on Construction in Developing Countries, Karachi, Pakistan, August 2008.
2. Ahmad, I. and Sein, M.K., Transformational Capacity of ICT: A Technology Management Perspective in Construction, Annual PICMET Conference, Cape Town, South Africa, July 2008
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## 4. Fundraising

### 4.1. Scholarships

NAME OF SCHOLARSHIP	DESCRIPTION	PRINCIPAL
CONSUL TECH (endowed)	1 for \$1,000	\$21,791.00
BALFOUR BEATTY (endowed)	1 for \$1,000	\$22,049.47
CONDOTTE AMERICA (endowed)	1 for \$1,500	\$30,925.65
CASF (endowed)	1 for \$2,500	\$42,604.49
ASPE (endowed)	1 for \$2,000	\$27,249.29
KELLY FOUNDATION (CM & CIVIL) (endowed)	2 for \$2,000 ea.	\$78,115.73
Donald E. Hudson (one time)	2 for \$2,500 ea.	
Turner Construction (one time)	1 for \$2,500	

### 4.2. Industry Support Campaign

The Construction Management Industry Advisory Council continued its Annual Industry Support Fund Campaign this year and raised \$167,948 in total. This amount included the overage amount of \$25,625 raised last year. Following is the list of the participating companies along with the amount contributed.

Arellano Construction Co	\$10,000
Baker Concrete	\$2,500
Baring Industries	\$2,500
Coastal Construction	\$10,000
Condotte America	\$2,500
Construction Financial Management Association	\$2,500 (p)
Cuesta Construction	\$2,500
David J. Valdini & Assoc	\$5,000 (p)
Emilio F. Alvarez & Co.	\$10,000
First Florida Building Corp	\$1,000 (p)
GFA International Inc	\$2,500
KVC Constructors, Inc.	\$2,500
L&R Structural	\$2,500 (p)
Link Construction Group	\$2,500
MCM Corporation	\$5,000

Moss Construction	\$10,000
Nielson & Company	\$10,000
Odebrecht Construction, Inc.	\$2,500
PBS&J	\$1,000 (p)
Peckar & Abramson	\$5,000
Right Way Plumbing Co.	\$5,000
Skanska Construction	\$10,000
SPI Structural Prestressed Industries, Inc.	\$2,500 (p)
Steel Fabricators, Inc.	\$2,500
Suffolk Construction Co.	\$10,000 (p)
Superior Electric	\$5,000
Turner Construction Co.	\$10,000
Williams Paving Co. inc	\$5,000
Alumni	\$320

(Jorge Bouza, Aarti Pandit, Rudy Esteva, Mario Berrios, Rohan Green and Henrey Ovaes)  
(p) - pledged amount, as of July 8, 2010.

## 5. Future Plans and Priorities

### 5.1. Priorities

#### 5.1.1. Fund raising

Fundraising from the industry for endowment - with the help of the Office of University Advancement, the department has already undertaken an aggressive campaign for raising funds for the department. The department and the college administration work closely with the local construction industry leaders to raise funds for the industry support campaign and endowments.

The CM Industry Advisory Council developed the following membership categories (shown in **Appendix A**) in order to facilitate its fundraising efforts.

The department and the council will continue its efforts to generate endowment fund in order to establish the FIU School of Construction, and to raise fund for laboratory facilities for the department. Funds will also be utilized for supporting faculty development, student activities, scholarships, and to provide for various resources/facilities, including labs, computer hardware and software.

The Industry Executive Council had been established with the leaders of the IAC as its members. The department will publish newsletters on a regular basis (once a year newsletter with quarterly electronic bulletins or e-letters) in order to keep the industry partners and alumni informed and engaged.

The IAC will be involved in providing advice on curriculum, fund raising, and

outreach activities. The council is also an excellent source of guest speakers and adjunct professors.

#### **5.1.2. Maintain Accredited Status**

The department will continue to retain its accredited status of the bachelors program with the highest order of approval. Preparations in terms of outcomes assessment, satisfying curriculum requirements, providing oversight of instruction, achieving program goals, involving the industry in curriculum development and improvement are underway.

#### **5.1.3. Strengthening online program**

The department will expand the program beyond geographic and time barrier, to make programs accessible to overseas, out-of-state and professional/working students.

#### **5.1.4. Industry relations/outreach**

The department will involve the industry in department's activities by offering continuing education and training programs. This will open other forms of involvement that can lead to fund raising, student support and curriculum improvement.

#### **5.1.5. Research Funding**

The department will strive towards establishing the CM department as a research intensive program. Hiring of new faculty (by filling the two vacant lines) in strategic areas to increase external research funding will be a priority.

#### **5.1.6. Marketing of programs (website, visits, brochures, newsletters, postcards, mail campaign)**

The department will continue its efforts in attracting students from other states and countries as well as from governmental and corporate entities.

#### **5.1.7. Alumni Association**

The department Alumni Association will be encouraged to undertake activities such as annual gathering, sports, and other extracurricular activities. Alumni will be invited to participate in outcomes assessment survey, contribute to newsletter articles, and fund-raising.

#### **5.1.8. Student chapter/honor society activities**

The department will continue to encourage student chapter and the honor society activities and their participation in student competitions.

### **5.2. Resource Needs**

- Construction Process laboratory for the undergraduate students.
- Staff support for developing and maintaining relationship with the industry, alumni, and the hiring companies.
- Additional faculty lines.

### **5.3. New Programs**

- New programs – There seems to be a market for a construction executive program at the Master’s level which will attract busy executives already employed in the construction industry and are in need of academic training and/or a degree for professional and personal development. The department is planning with the college Dean’s office to offer such a degree on weekends. In addition, international programs at the Master’s level in Jamaica and Hong Kong are being explored. The department already has a successful online Master’s program. Another area for expansion could be a joint MS degree program in Construction Engineering together with the Department of Civil Engineering.
- Continuing education/workshops – The department can offer continuing education short courses and workshops for the industry professionals, contractors and their employees. There is a vast market for such programs since most professional licensing authorities require continuing education credits for renewal of certificates. These programs can potentially generate additional revenue to be used partly to hire support staff to expand these types of activities.

### **5.4. New Directions**

#### **Organizational Growth and Development**

- Recruitment of two additional faculty members within two years.
- Recruitment of an additional staff position to support industry and alumni engagement activities and to secure donors support.

#### **Curriculum Implementation**

- If approved, implement the new programs, including Master of Science in Construction Engineering in collaboration with Civil and Environmental Engineering and enact improvements as necessary.

#### **Enrollment Management**

- Re-evaluate the admission policy for the undergraduate and graduate programs



to address the quality of students being admitted to the program and the high demand on the discipline.

### **Research**

- Hire faculty with proven strengths in research and identify emerging research areas and funding agencies to capture external funding.

### **Fundraising**

- Complete an endowment campaign and begin to envision future fundraising goals.

### **Marketing and Market Research**

- Enhance marketing of the online graduate program.
- Continue to grow and market the career expos as a means to attract prospective students, donor support and to enhance placement opportunities for our graduating students

## **Appendix A - Industry Advisory Council Membership**

### **INTRODUCTION**

The purpose of the Construction Management Industry Advisory Council (CM IAC) is to support and promote the Construction Management programs at Florida International University.

### **MISSION**

The Department of Construction Management at Florida International University is committed to excellence in teaching, research, and service in and for the construction industry. The objectives of the CM IAC are to:

1. Advance and support the highest quality faculty, educational facilities, and undergraduate and graduate programs for the students enrolled in Construction Management.
2. Serve as a liaison between the construction industry and the Department impacting the curriculum and research directions.
3. Develop and implement innovative programs which will benefit the Department and the construction industry.
4. Offer advice, counsel, and financial support to the Department.

### **MEMBERSHIP PRINCIPLES AND GIVING LEVELS**

The CMIAC meets twice annually in the fall and the spring. Active participation is encouraged. Special meetings may be announced occasionally. Sub-committee meetings will be held, as necessary, throughout the year.

Effective June 2009, the CM IAC is extending annual membership to the construction management industry in the following contribution categories:

### **FOUNDATION SOCIETY (\$2,500 to \$4,999) corresponds to FIU's Dean's Circle**

Privileges include:

- Invitations to CMIAC-exclusive events. Events for 2009-2010 included:
  - Donor recognition event at FIU Panther Stadium
  - Holiday networking luncheon
  - FIU Construction Workshop 101/Campus Ten-Year Plan
  - Marlins Stadium Construction Site Tour
- Select invitations to University-wide events
- Donor Honor Roll listing in Department office, *FIU Magazine* and FIU Annual Giving website

- Florida International University Panther Shield Decal

**ARCH SOCIETY (\$5,000 to \$9,999) corresponds to FIU's Provost's Circle**

Privileges include:

- Invitations to CMIAC-exclusive events. See above for past examples.
- Priority to events and recruiting activities sponsored by the Department
- Special invitation from the University President to private receptions honoring persons of national and international prominence who visit FIU
- Special invitation to the Alumni Tailgate Party
- Annual Student Thank-a-Thon
- Select invitations to University-wide events
- Donor Honor Roll listing in Department office, *FIU Magazine* and FIU Annual Giving website
- Florida International University Panther Shield Decal

**PILLAR SOCIETY (\$10,000 to \$24,999) corresponds to FIU's President's Circle**

Privileges include:

- Invitations to CMIAC-exclusive events. See above for past examples.
- Preferential consideration for co-op and internship positions through the Department at no fee
- Priority to events and recruiting activities sponsored by the Department
- Private Holiday reception with the University's top donors hosted by the President of the Foundation Board of Directors
- Special invitation from the University President to private receptions honoring persons of national and international prominence who visit FIU
- Special invitation from the President to attend the Presidential Lecture Series throughout the year as an invited guest
- Special Invitation to the Alumni Tailgate Party
- Select Invitations to University-wide events
- Annual Student Thank-a-Thon
- Donor Honor Roll listing in Department office, *FIU Magazine* and FIU Annual Giving website

**TOWER SOCIETY (\$25,000 to \$49,999) corresponds to FIU's Tower Society**

Privileges include:

- Invitations to CMIAC-exclusive events. See above for past examples.
- Individual plaque in Department office with company logo
- Preferential consideration for co-op and internship positions through the Department at no fee
- Priority to events and recruiting activities sponsored by the Department
- Private Holiday reception with the University's top donors hosted by the President of the Foundation Board of Directors
- Special invitation from the University President to private receptions honoring persons of national and international prominence who visit FIU
- Special invitation from the President to attend the Presidential Lecture Series throughout the year as an invited guest
- Special Invitation to the Alumni Tailgate Party
- Select Invitations to University-wide events
- Annual Student Thank-a-Thon
- Donor Honor Roll listing in Department office, *FIU Magazine* and FIU Annual Giving website

**SKYSCRAPER SOCIETY (\$50,000 to \$99,999) corresponds to FIU's Society of Founders**

Privileges include:

- Invitations to CMIAC-exclusive events. See above for past examples.
- Individual plaque in Department office with company logo
- Preferential consideration for co-op and internship positions through the Department at no fee
- Priority to events and recruiting activities sponsored by the Department
- Individual Recognition event
- Commemorative event recognition piece
- Private Holiday reception with the University's top donors hosted by the President of the Foundation Board of Directors
- Special invitation from the University President to private receptions honoring persons of national and international prominence who visit FIU
- Special invitation from the President to attend the Presidential Lecture Series throughout the year as an invited guest
- Special Invitation to the Alumni Tailgate Party
- Select Invitations to University-wide events
- Yearly Valentine postcard
- Yearly Birthday greetings

- Annual Student Thank-a-Thon
- Donor Honor Roll listing in Department office, *FIU Magazine* and FIU Annual Giving website

Two additional membership categories exist to facilitate organization members and individual members, as follows:

#### **Organization/Association Member**

- In deference to the significant contributions made by representatives of the professional construction industry associations and organizations to the Construction Management program, these individuals are not required to pay annual membership dues. Members in this category may be asked from time to time to sponsor events organized by the Department.

#### **Alumni/Individual/Governmental Agency Member**

- Individuals, alumni and governmental agency representatives may be invited to serve on the IAC as advisors. The annual contribution for individuals/alumni is \$1,000. Governmental agency representatives are not required to pay annual membership dues.

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