


# 2009-2010
## ANNUAL REPORT

CONCRETE INDUSTRY MANAGEMENT

*"Advancing The Concrete Industry By Degrees."*

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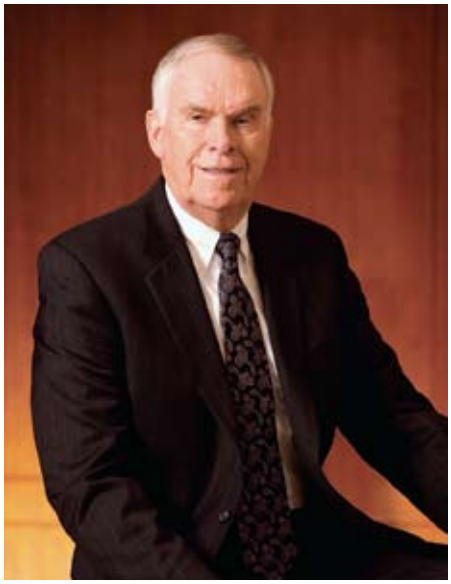
# INTRODUCTION FROM THE EXECUTIVE DIRECTOR

## THE CONCRETE INDUSTRY



Management Program (CIM) under the direction of the National Steering Committee (NSC) completed another successful year in achieving the vision of "Advancing the concrete industry by degrees." In 2003, in collaboration with our flagship school Middle Tennessee State University (MTSU), the NSC decided the time was right to expand the CIM program beyond one school. Texas State University – San Marcos (TSU) successfully completed its first full year as our fifth CIM program school. TSU now joins Arizona State University (ASU), California State University - Chico (CSU), MTSU and New Jersey Institute of Technology (NJIT) with established CIM programs. As you review this second annual report, I feel sure you will be impressed by the number of students enrolled and the growing number of graduates the program is producing annually.

Much of the program's success is directly related to the ongoing support of our sponsoring organizations. Spearheaded by the initial founding sponsors, the National Ready Mixed Concrete Association, Portland Cement Association and the RMC Research and Education Foundation, this strong industry coalition now comprises six additional organizations. Over the years, the founding sponsors have been joined by the American Concrete Institute Foundation, American Society of Concrete Contractors, American Concrete Pipe Association, National Concrete Masonry Association, National Precast Concrete Association and The Precast/Prestress Concrete Institute.

These sponsoring organizations are not only financially committed to the program, but support the overall mission of the NSC. That mission is to provide financial support, oversight and direction to the CIM program schools. The oversight and direction portion of the NSC mission is the primary responsibility of the NSC Board of Directors. The board is comprised of representatives of our sponsor organizations, joined by members of some of the industry's leading national companies. The direction established by the board is carried out through the work of various NSC committees.

Some of the highlights of the NSC over the course of the year included:

- Distributed a record $460,000 of financial support to participating program schools.
- Conducted a highly successful auction in spite of the industry suffering through a deep recession. The fifth annual CIM Auction raised $382,772. This auction would not be possible without the tremendous support from Hanley Wood, the World of Concrete, and Ritchie Bros. Auctioneers.
- The Marketing Committee published the first ever Annual report.
- Significant progress in the establishment of a definitive path forward with both short and long range plans.
- The Masters Task Force fully developed an Executive MBA program that will be unveiled to the industry early in the 2010-2011 fiscal year.

The success of CIM would not be possible without the strong partnership that exists between the NSC and the patrons' groups of each participating university. The collective patrons' groups not only match the financial commitment of the NSC to the individual schools; but provide many in-kind services as well. The local patrons provide similar guidance to the local universities as the NSC does on the national levels and are engaged in assisting the program directors with students needs, local scholarships, facilities improvements and guest lecturing. As you review this second Annual Report, join with the entire concrete industry in taking great pride in what the program has accomplished to date and envision what is possible in the future.

SINCERELY,

Eugene P. Martineau

**Eugene P. Martineau**
Executive Director

# MESSAGE FROM THE CHAIRMAN

As the Chairman of the CIM NSC, I take great pride in introducing the 2009-2010 CIM Annual Report for your review. This report shows the current status of all five of our current CIM programs. These are:

- Middle Tennessee State University
- Arizona State University
- California State University - Chico
- New Jersey Institute of Technology
- Texas State University - San Marcos

Each institution report shows enrollment information, faculty updates/research, student activities/service projects, patrons' group updates and program financial information.

The report also summarizes the work of each of the CIM committees. I would like to thank everyone who works on these committees for their tireless and enthusiastic support of the CIM program. Their efforts and work product allow us as an industry to sustain the CIM program and improve the learning experiences of our students.

This past year has been very challenging to each of us and our respective organizations. The companies and associations that support the CIM program have each had to adjust to the current economic climate in their own way. In spite of these adjustments, the industry support for CIM has not faltered and remains very strong. We raised more than $382,772 at the annual CIM Auction held at the World of Concrete, and our sponsoring associations continued their support of the program.

As the CIM program continues to grow, it is imperative that the NSC continue to provide a vision for the CIM program and maintain the integrity and quality of the curriculum throughout all of our programs. This is being done through the continuing efforts of our Education and the Long Range Planning Committees.

In these trying economic times, it is more important than ever that we continue to support the CIM program with our time, talent and treasure. One way of doing this is by participating in the CIM Auction at the World of Concrete. Another way to support the program is by hiring interns and graduates from the program into your respective organizations. Please remember that the students in the CIM programs represent the future of our industry.

Thank you for your continued commitment to the CIM program. Please review this annual report and feel free to share with others. Any suggestions and comments are welcome.

SINCERELY,

Mike Schneider

**Mike Schneider**
Chairman, CIM National Steering Committee

## DR. REX COTTLE

***Chairman***
*Education Committee*

THE EDUCATION COMMITTEE made significant progress on several initiatives this year. First, a subcommittee has worked closely with the CIM program and the College of Business at MTSU to develop the concept of a "CIM Executive MBA" program. There is general agreement on the curriculum content, faculty preparation and support, and the industry participation needed to make this innovative graduate program a reality in the future. This program is another example of how industry and academia are working cooperatively to create valuable learning experiences for future leaders of the concrete industry. In the coming year, the subcommittee will finalize the curriculum, begin a faculty development initiative, and create a marketing plan to promote this most unique graduate degree program.

Second, in our ongoing commitment to the concrete associations, the directors of the CIM programs have developed a matrix of topics taught in CIM courses and the coverage given to the various concrete associations. All of the concrete associations have contributed significantly to the educational mission of the CIM program; for this, we are very appreciative. Graduates of our program have been exposed in a very meaningful way to a broad range of concrete products and processes.

Third, accrediting the CIM programs has been a topic of discussion ever since the inception of the CIM program over a decade ago. The Education Committee is creating an accreditation document that, if adopted by the NSC Board of Directors, will be the basis of program reviews in the future. It is a comprehensive document that establishes the CIM NSC as the responsible party for maintaining the high academic and professional standards expected of CIM graduates across all CIM programs. Accreditation ensures that graduates from the CIM programs will have similar academic and industry experiences regardless of their university affiliation.

Fourth, starting in the fall of 2010, the NSC will begin a detailed review of the CIM programs including involvement of the respective patrons' groups. One program per year will be reviewed as part of an on-campus visit by the NSC. This is in addition to the annual program reviews included in this document. Such an extensive review of all aspects of the CIM program will provide a thorough understanding of the past development, the current status, and the future direction of a CIM program. Such a complete review will be major part of the re-accreditation process.

Fifth, during the past year, the Education Committee has been very busy in formalizing the infrastructure of the CIM program and the oversight responsibilities of the CIM NSC. The Education Committee has accepted the challenges put forth by the work plan developed by the NSC. The thoughtful and creative efforts of the industry and academic committee members have enhanced the quality and sustainability of CIM programs going forward.

# MARKETING COMMITTEE REPORT


## BRIAN GALLAGHER

***Chairman***
*Marketing Committee*

DURING THE LAST 12 MONTHS, the CIM Marketing Committee has focused on raising awareness of the CIM Program, including the NSC and CIM institutions. Our target areas include: the concrete industry, the overall construction industry, the general media, the academic community and potential students and student influencers (parents, guidance counselors, etc).

To help raise awareness and build the CIM brand, the Marketing Committee has engaged in a variety of integrated marketing communication efforts that include a number of promotional, marketing and public relations activities. In addition, the Marketing Committee provides marketing support for CIM institutions, including the sharing of best practices, leveraging marketing efforts, and maintaining CIM brand and message consistency.

Our integrated marketing communications program includes:

- **Advertising:** To help promote the CIM program to the concrete and construction industry, we have developed a series of print and web ads that have run free-of-charge in association and industry publications. We are very appreciative of the support provided by the concrete industry trade publications and associations that have donated print and on-line ad space to promote the CIM programs and the CIM Auction.
- **Public Relations:** During the past year, we have built upon our momentum in the area of public relations. These efforts have had a tremendous impact as we have promoted the CIM brand and increased awareness of the CIM programs. Our public relations efforts are focused on two areas: promoting the CIM programs to the industry, and promoting CIM programs to students and student influencers. In addition, we developed a series of profiles of CIM students, graduates, faculty, patrons' group members, and NSC members that have been used in a variety of ways to promote CIM. The Marketing Committee has been publishing the CIM eNews eight times per year, reaching more than 3,000 people with each eNews. We also held a press conference at the 2010 World of Concrete that resulted in editorial coverage in several publications.

  For the last two years, CIM has been working with Constructive Communication, Inc. (CCI) on a proactive public relations campaign that has resulted in the distribution of over 15 press releases and placement of over 80 articles in industry publications such as Concrete Construction, Concrete Monthly, Concrete Producer, Concrete Technology Today, University Business, Concrete International and American School Counselor Magazine. Articles also had online coverage on websites such as Concrete Producer Online, ForConstructionPros.com, Concrete Construction Online, iGreenBuild.com, Concrete Repair Bulletin, Construction Equipment Guide.com, Hard Hat News.com and Aggregate Research.com.
- **Internet:** The ConcreteDegree.com website is maintained and updated by the Marketing Committee. During the 2009-2010 school year, we completed a significant overhaul of the web site content. We continue to enhance the CIM web presence by adding interesting and relevant content, news and tools. We continued our search engine optimization (SEO) initiative, and social media efforts. These include using RSS, Twitter, LinkedIn, Wikipedia and Facebook. During the spring of 2010, we launched a new CIM blog.
- **Events & Trade Shows:** In 2010, the CIM NSC exhibited at the World of Concrete in Las Vegas, NV. In addition, we exhibited at the American School Guidance Counselors Show in Dallas, TX. We have also supported a number of presentations conducted at industry meeting and events.
- **Auction Support:** The Marketing Committee remains an instrumental part of the annual CIM Auction. The Marketing Committee manages a number of activities to help promote the Auction including: press releases, promotional collateral, advertisements, web marketing and other efforts.
- **Collateral & Promotional Materials:** The Committee produced various promotional materials to support the CIM image and/or brand, including brochures, graphics and other materials. At the 2010 World of Concrete, the Marketing Committee introduced the first CIM Annual Report. This document was developed to inform, educate and update stakeholders on national and institutional activities. In addition, the Annual Report serves as an important marketing tool for CIM.

## WALLY JOHNSON

***Chairman***
*Auction Committee*


THE CONCRETE INDUSTRY MANAGEMENT (CIM) Fundraising Auction is the program's largest fundraising effort. This annual event – held at the World of Concrete – is sponsored by the CIM NSC, CIM patrons and staff, World of Concrete Show Management, Hanley Wood Publications, and Ritchie Bros. Auctioneers.

The CIM Auction Committee conducted its fifth annual auction in February 2010. Despite a challenging economy, we were able to raise $382,772. Over the past three years, the auction has raised an average of $400,000 per year. The 2010 Auction featured both live and silent auctions. We were able to expand the opportunity to participate in the live auction by offering internet bidding. In fact, several items were sold through the live internet bidding.

The signature item for the 2010 auction was a concrete truck chassis and mixer donated by McNeilus and Freightliner. Once again in 2010, McNeilus stepped up and provided the mixer as they have for each of the last five years. We were pleased to welcome Freightliner to the auction with their support. The Auction Committee's 18 members were able to obtain donations from 79 companies involved in the concrete industry. This year, 17 cement companies participated and donated 3,650 tons of cement. We also received $8,000 in cash donations, and $2,500 in donations made by WOC attendees at the show registration.

This event benefits the efforts of the CIM NSC in support of the CIM Programs at MTSU, ASU, NJIT, CSU - Chico and TSU - San Marcos.

## JULIE GARBINI

***Chairwoman***
*Research Committee*

THE CIM RESEARCH COMMITTEE IS WORKING ON A communications plan to highlight capabilities, past projects and opportunities in funding research through the CIM universities. The universities can partner with each other, as well as with departments within their respective universities, to carry out a multitude of research needs for individual concrete companies as well as associations and foundations. There are many benefits to funding research through one or more of the CIM universities. For one, it is another way to support the institutions financially while also getting needed industry research accomplished. The geographic spread and working relationship between the universities is a natural for projects where regional testing is needed. Their expertise in concrete and the learning opportunities for CIM students are also great benefits to the industry.

In addition to working together as CIM institutions, there is also the opportunity to partner with other universities with which the industry has collaborated, as well as with government agencies on the national and state levels. The committee continues to foster the communication between the CIM institutions and other industry-funded research organizations to maximize opportunities for cooperation and award of research monies from government agencies and other outside funding sources.

# RECRUITMENT COMMITTEE REPORT

## BRUCE STRICKLAND

***Chairman***

*Recruitment Committee*

THE OBJECTIVE OF THE RECRUITMENT COMMITTEE IS TO CONTINUALLY draw students into the CIM program as well as attract a more diverse mix of students for all CIM universities through a uniform recruitment plan. This plan, which offers the flexibility to meet each CIM school's current and future needs, outlines a set of contact guidelines for attracting new students.

This includes recommended guidelines for visits to local high schools, vocational/technical/two-year schools, and guidance counselors each year.

With regard to on-campus recruiting, the Committee is focused on developing methods to market the CIM program to undecided students through program presentations by CIM professors, patron companies, and CIM graduates. In conjunction with the Marketing Committee, we will also develop informational brochures and distribute them via hard copy and e-mail.

The Committee is also focused on the recruitment of minority and female students through participation in career fairs where there is a particular minority and/or woman focus, and making contact with on- and off-campus minority-related groups (where feasible) to market the CIM program. Also, we will participate in advertising in minority and women publications to further enhance the CIM image to continually attract and recruit a more diverse group of students.

Finally, the committee will encourage referrals from existing CIM students currently in the program and the benefits of an incentive-based referral program are being discussed.

## MICHAEL HARLAN

***Secretary/Treasurer***
*Finance Committee*

I AM PLEASED TO REPORT that although the concrete industry continued to experience a devastating decline in the overall construction economy during our 2009-2010 fiscal year, the National Steering Committee (NSC) remains on solid financial ground. The cash reserves that were created over the past several years, primarily as a result of the annual World of Concrete (WOC) auction and the continued support of industry organizations, have allowed the NSC to continue to honor its commitment to CIM. This support includes both direct contributions to participating CIM program universities as well as significant marketing, program oversight and development activities.

As of June 30, 2010, the NSC had total assets of $1,053,035, consisting primarily of unrestricted cash. We have provided our auditors with all financial records for our fiscal year which ended June 30. Since the audit is still in process, we cannot unequivocally state that we have an unqualified opinion from our auditor yet. However, we have no reason to expect anything other than a favorable unqualified opinion. In fact, as we closed the books for the year, we were able to include all outstanding invoices. Consequently, we have no debt at the end of the fiscal year and no need for accruals for prior year expenses in the 2010-2011 accounts.

Armed with the five year financial model that was put in place during the 2008-2009 year, the NSC slightly exceeded its revenue projections for the year and operated within its budget until well into the second half of the year. At that time, because of the accuracy of the financial modeling, strict adherence to budgeted expenditures and the increase in budgeted revenues, the board of directors voted in favor of certain non-budgeted program development expenditures which primarily accounted for the use of the cash reserves. Revenues for the year totaled $570,894 and were comprised of the following:

- Sponsor Organizations .....$185,000
- Auction Proceeds .....$382,772
- Interest Income ..... $3,122

During the year, we had expenses of $659,115.64. The major expense was $460,000 distributed to the CIM program universities. Marketing expenses totaled $77,581, of which $29,327 was for prior year expenses. The remaining expenditures were primarily administrative, program development and auction expense. The shortfall between revenue and expenses was made up from our cash reserves.

With the near term outlook for the overall construction economy being less than robust, the NSC will continue to rely on a number of revenue sources. The three primary sources continue to be sponsoring industry organizations, proceeds from our annual WOC auction and our cash reserves. We believe that we have accurate financial projections that, once achieved, will allow us to honor the concrete industry's commitment to CIM program universities and assess the possibilities of further development and extensions of this great program.

# LONG RANGE PLANNING COMMITTEE

## L. MICHAEL SHYDLOWSKI

***Chairman***

*Long Range Planning Committee*

THE LONG RANGE PLANNING (LRP) COMMITTEE was approved as a standing committee by the Board of Directors at the 2009 February meeting. The current work plan for the LRP was approved at the Board of Directors meeting held in Las Vegas, Nevada in February, 2010.

The plan contains a vision for the CIM program, along with a mission statement and six strategic goals. The goals are:

- Determine the emerging market needs for the Concrete Industry Management graduates regionally, nationally, and internationally and ensure the network of institutions is sufficient to meet those needs.
- Preserve and protect the value of the Concrete Industry Management brand.
- Determine the scope and outreach of the Concrete Industry Management Program.
- Promote the use of the Concrete Industry Management university network to conduct coordinated research that benefits the concrete industry.
- Determine the appropriate allocation of NSC funds in support of the Concrete Industry Management Program.
- Determine the long-term goal and leadership succession of the NSC.

Each of these goals has been assigned to a CIM NSC committee. These committees will review and add appropriate actions and mileposts to the goals to ensure that they will be effectively achieved. This should be completed during the first year of the plan. The Executive Committee is currently updating actions to work out a new funding plan after the expiration of the initial funding commitment.

The work plan also contains the strategy for the NSC for the coming years. The next steps for the Long Range Planning Committee will be to update the NSC bylaws and begin developing a true long range plan.

DR. JAMES ERNZEN
***ASU CIM Program Director***

ARIZONA STATE UNIVERSITY

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## 2009-10 ENROLLMENT

| | Undergraduate | Graduate | Total |
|---|---|---|---|
| Engineering College | 4,253 | 2,154 | 6,407 |
| School of Construction | 328 | 58 | 386 |
| CIM Program | 45 | 0 | 45 |

### Number of CIM Majors:

45 majors

## PROFESSIONAL ACTIVITIES

- All CIM faculty attended a NRMCA sponsored seminar on pervious concrete held on the ASU campus in July 2009.
- Professor Luke Snell delivered a presentation on concrete education and another presentation on the history of concrete mixture design at the fall and spring ACI Conventions respectively.
- Dr. Ernzen attended the Spring ACI Convention.
- All CIM faculty participated in the planning and execution of the Concrete Sustainability Conference sponsored by the National Ready Mix Concrete Association (NRMCA) and held on the ASU campus in April 2010.
- Professor Edwin Weaver attended a concrete durability seminar conducted by NRMCA in June 2010.

# PROGRAM SUPPORT

## Student Internships

### 2009-2010:

- The CIM program received $32,000 in scholarships from the Southwestern Patrons' organization which were awarded to 21 students.
- The Del Webb School also awarded $14,000 to 5 CIM students.

## Marketing and Promotional Activities

Produced and delivered a two-page newsletter to over 80 industry contacts and patrons each month. In addition, several industry associations included information about the program in their newsletters.

**CIM students manned recruitment tables at the following:**

- National Precast Show held in February 2010
- National Concrete Bridge Conference held in February 2010
- Concrete Decorative Show held in March 2010
- NRMCA Concrete Sustainability Conference held at ASU in April 2010
- Attended six community college transfer fairs in the Phoenix area.
- Made over 30 high school recruiting visits throughout Arizona and surrounding states.

## Student Educational Activities

- CIM students participated in and assisted with the local Arizona ACI chapter's annual bowling and golf tournaments in August and September 2009.
- The ASU CIM program fielded a two-student team in the Concrete Cube competition at the fall 2009 ACI Convention. The CIM students placed 13th out of 38 participating teams.
- CIM students organized and hosted Kevin MacDonald from Cemstone Concrete at the November meeting of the Arizona ACI Chapter. Kevin spoke to over 80 attendees, including 25 students, about the concrete used in the new I-35 bridge in Minneapolis.
- Eight students attended the World of Concrete in Las Vegas, NV in February 2010 where they supported the CIM recruitment booth as well as assisted with the CIM Auction.
- Fifteen CIM students attended the February meeting of the Arizona ACI Chapter.
- Nine CIM students attended the National Precast Show where they introduced speakers as part of the education program. The students also manned a recruitment booth at the show.
- The CIM program fielded 2 teams of 5 students each for the Pervious Concrete Competition held at the spring 2010 ACI Convention. The teams place 8th and 16th respectively out of 38 participating teams.
- Three students participated in the Concrete Construction Competition at the spring 2010 ACI Convention and placed 3rd out of 30 teams.
- Twenty-five CIM students attended the April meeting of the Arizona ACI Chapter. At the meeting, Michael Carter from Propex spoke about the current use of fibers in concrete.
- One faculty member and 2 students attended the quarterly meeting of the Arizona Masonry Contractors Association in April 2010.
- Three faculty and 4 students attended the annual meeting of the ICRI and ACI in May 2010 and heard a presentation on the Hoover Dam Bypass Bridge.
- One student attended and assisted with the quarterly Safety Luncheon hosted by the Arizona Rock Products Association.

## CIM Patron Involvement

- The Southwestern Patrons continue their active support of the program both in and out of the classroom. The patrons have met quarterly with the program staff to increase communication and ensure needs and expectations are met.
- The patrons provided faculty associates who taught or co-taught two CIM classes in their entirety during the year.
- The patrons made over 30 guest speaking appearances in the CIM classes this past year to share their expertise with the students.
- The Arizona ACI Chapter sponsors CIM students with highly reduced rates for ACI certifications for Field Grade 1, Flatwork Finish Technician, Concrete Strength, and Aggregate Level 1.
- Suntec Concrete sponsored the CIM Capstone Course in spring 2010.
- The Southwestern Patrons provided more than 20 field trips during the school year including trips to cement plants, ready mix concrete and aggregate operations, block and paver plants, testing laboratories, and concrete construction sites.

# FINANCIAL INFORMATION

| Income | |
|---|---|
| Industry/Patrons | $100,000 |
| National Steering Committee | $100,000 |
| University | $201,840 |
| Scholarships | $32,000 |
| **Total Income** | **$433,840** |

| Expenses | |
|---|---|
| Salaries | $349,760 |
| Operating | $33,880 |
| Travel | $18,200 |
| Scholarships | $32,000 |
| **Total Expenses** | **$433,840** |

DR. TANYA KOMAS
***CSUC CIM***
***Program Director***

Chico
*Today Decides Tomorrow*

College of Engineering, Computer Science, and Construction Management ∘ O'Connell Technology Center 410
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## PROGRAM ENROLLMENT

### Number of Majors:

| | 2006-07 | 2007-08 | 2008-09 | 2009-10 | 2010-11 |
|---|---|---|---|---|---|
| Number of Majors | 20 | 38 | 50 | 55 | 55 *(projected)* |

### Graduates:

Spring 2009 – 7
Spring 2010 – 14

**Number of Graduates with jobs:** 82% of 2010 graduates placed

# PROFESSIONAL ACTIVITIES

## Dr. Komas

### Completed:

- Transportation Research Board, National Cooperative Highway Research Program, Synthesis Topic 40-01: Recycled Materials and Byproducts in Highway Applications
- Fiber Reinforced Concrete testing, Propex

### Ongoing:

- Chico State CIM Summer Field School at Alcatraz Island, Golden Gate National Recreation Area, Year One Pilot Summer Project, 2010 - grant received for student housing, industry sponsorship for student stipends
- Advanced Highway Surface Preparation/Protection Treatment, cooperative project with Caltrans
- Historic Concrete Investigations at Pointe du Hoc, Normandy, France – September 2009 trip (4 Chico State students, 2 MTSU students), future trips planned, writing historic structures reports

### Proposed:

- FHWA Highways for Life Technology: Advanced Highway Surface Protection Treatment Proposal, $500,000
- Partnered on National Science Foundation CCLI Equipment Proposal with CIM programs at MTSU and NJIT
- California State University Commission on the Extended University, "Certificate in Emerging Concrete Industry Topics"

# PRESENTATIONS

## Dr. Komas

- Television Appearances/Expert Technical Consultant for concrete – Eight episodes "Life After People," History Channel; "Recent Advances in Concrete Repair," Association for Preservation Technology International Annual Conference; "Sustainability: Making the Case for Repair," Technical Session, World of Concrete Latin America; CIM Update – California Precast Concrete Association

## Tim Hostettler

- CIM update presentation to CALCIMA; CIM Update presentation to Concrete Promotion Council of Northern California

## Dr. Shekhar Misra, Dr. Michael Polson, and Dr. Mitch Casselman (Chico State College of Business MBA faculty)

- Iberoamerican Federation of Ready Mixed Concrete (FIHP) Executive Retreat, Panama. Attendees were top executives from major international concrete companies. Plans for future industry training underway.

# PUBLICATIONS

- "Towering Achievement: Students at WOC Create Decorative Memorial to Fallen 9/11 Firefighters," Concrete Construction magazine, April 2010
- "CIM Students at CSU Give Back to their Community in Concrete," Concrete Technology Today magazine, Vol. 3, 2010
- Local newspaper articles for each of two above projects
- Architectural Decorative Concrete: Best Practices – CIM text book under development

# MARKETING ACTIVITIES/ PUBLIC SERVICE

## Dr. Komas

- CIM Update to Sierra Nevada Concrete Association; MESA High school career day lab visit; CIM update to ASCC Decorative Concrete Committee at WOC; CIM update to Volumetric Mixer Association at WOC; Lab funding presentation to Granite Construction; Chico State Preview Day; fourth grade concrete lab field trip; three NSC meetings; two Chico State Patrons' meetings/Founders' Dinners; two Chico State Patrons' Officers' meetings; two ICRI meetings chaperoning Chico and MTSU students; Co-authored "Surface Repair Inspector Certification" for ICRI; Co-authored repair chapter for upcoming ACI Guide to Sustainability, Volume II; ICRI Board of Directors, Chairman – Evaluation Committee, Member of Education, Finance, Sustainability, and Certification Committees; Association for Preservation Technology International – Member of Technical Committee on Sustainable Preservation: Working Group on Rating Systems and

Lifecycle; Concrete Promotion Council of Northern California – Member, Architectural/Decorative Concrete Committee; Bridge Preservation Task Group – first CA university professor invited to join newly formed group organized by ten western state DOTs; Pavement Preservation Expert Task Group – American Concrete Paving Association Southwest Chapter/ Federal Highway Administration; advisor to all CIM students during spring semester mandatory advising; CIM Student Society advisor

### Tim Hostettler

- Chico State Preview Day; two Chico State Patrons' meetings/ Founders' Dinners, one NSC meeting, Concrete Promotion Council of Northern California – Member; CIM Student Society advisor; CIM Lab Coordinator; CIM Internship Coordinator

### Doug Guerrero, Chico State CIM Patrons' Chairman

- Presentation to Board of the California Nevada Cement Association; held two Officers & Executive Committee Meetings in Sacramento; presented to the Oregon Concrete and Aggregates Association in Bend, OR.; conducted campus tours for prospective and incoming students; attended three NSC Meetings; participated in class lectures several times during year; participated in campus Preview Day; participated in planning for Blitz Build winter project; built strongest patron participation year-to-date during 5th year as volunteer Chairman; elected to Chico State Foundation Board of Governors and currently serves as Vice Chairman

### Jerry Hight, Assistant Dean

- Authored CIM Accreditation Criteria for NSC; tasked with authoring addendum to NSC bylaws; two Officers & Executive Committee Meetings, two Chico State Patrons' Meetings/ Founders' Dinners, three NSC Meetings; Lab funding presentation to Granite Construction; partnered on writing research proposals

## STUDENT PROJECTS

- ACI Bowling Ball Competition - Chico State team placed 3rd nationwide (awarded 5th but two teams disqualified)
- ACI Concrete Construction Competition
- ACI Pervious Concrete Competition
- ASCE Concrete Canoe Competition
- 9/11 Memorial Project for Artistry at World of Concrete (final memorial will be installed in Memorial Park near NYC Times Square Fire House)
- "Blitz Build" Winter Break Project – Construction of two houses built by College of Engineering students for the Chico Catalyst Domestic Violence Center (placed and ground/stained/ polished finished concrete floors throughout; houses awarded LEED Gold certification)
- Chico State Turner Gallery Floor Moisture Testing and Electro-Osmatic Pulse Technology Application

### Chico State Senior Capstone Projects

- "Electro Osmatic Pulse Technology for repelling water beneath floor slabs" (with Structural Group)
- "Promoting Concrete as the Preferred Building Material for Caltrans Roads" (data collected from Caltrans databases in conjunction with the American Concrete Paving Association)
- "Recycled Shot Blast Dust in Pre-Packaged Concrete Products: Business Perspective" (with Blastrac)
- "Recycled Shot Blast Dust in Ready Mix Concrete" (with Blastrac)
- "Fiber Reinforced Concrete Testing" (for Propex)
- "Curing Room Mist System Alternatives"
- "Concrete Lab Sustainability Upgrade"

## STUDENT EDUCATIONAL ACTIVITIES

### Trips and Tours

- Pointe du Hoc, Normandy, France – 4 students
- ACI – 4 students; ICRI – 8 students
- NRMCA Sustainability Conference – 4 students
- World of Concrete – 16 students
- It's Concrete Hands-on Workshop Tour – 12 students
- Lehigh Cement Plant and Quarry Tour – 12 students
- Basalite Plant Tour – 10 students

# PROGRAM SUPPORT

## Scholarships

**Chico State CIM Patrons provided:**

### Fall 2009:

31 scholarships for a total of $21,700

### Spring 2010:

32 scholarships for a total of $22,400

# INTERNSHIPS

- Mentored 18 students during summer 2009

# INVOLVEMENT OF PATRONS/ INDUSTRY

- Fall Chico State CIM Patrons' Meeting (39 patrons attended) & Founders' Dinner (47 patrons attended); Spring Chico State CIM Patrons Meeting (41 patrons attended) & Founders' Dinner (59 patrons attended); First Annual CIM Student Society Golf Tournament; patron panel judges for internship presentations and Senior Capstone presentations, numerous guest lecturers in classroom and lab; provided substantial materials and in-kind contributions of time for laboratory coursework and special projects at WOC, Blitz Build, Preview Day, and Alcatraz.

# FINANCIAL INFORMATION

| Income | |
|---|---|
| Industry/Patrons | $190,000.00 |
| Previous Year Patron Equipment Balance | $23,915.84 |
| National Steering Committee | $100,000 |
| University Course Fees | $1,007.54 |
| University In-kind Salaries | $35,500.00 |
| Scholarships - Patrons | $33,000.00 |
| Previous Year Patron Balance | $11,100.00 |
| **Total Income** | **$394,523.38** |

| Expenses | |
|---|---|
| Salaries (Includes University In-Kind) | $234,905.00 |
| Operating | $25,295.37 |
| Equipment | $23,915.84 |
| Travel | $42,659.33 |
| Patron Scholarships | $44,100.00 |
| **Total Expenses** | **$370,875.54** |

DR. HEATHER BROWN
***MTSU CIM***
***Program Director***

MIDDLE TENNESSEE STATE UNIVERSITY

1301 East Main Street • Murfreesboro, TN 37132 • (615) 898-2300

## PROGRAM ENROLLMENT

| Semester | 2007-08 | 2008-09 | 2009-10 | 2010-11 |
|---|---|---|---|---|
| Fall | 386 | 423 | 415 | 375 |
| Spring | 415 | 445 | 386 | 400 *(projected)* |

### Graduates:

Fall 2009 – 33

Spring 2010 – 39

Summer 2010 – 7

## PROFESSIONAL ACTIVITIES

### Presentations

#### Dr. Brown:

- "Current Trends and Emerging Technology, Florida Independent Contractors and Producers," Orlando, Florida
- "Measurement of TSS and Other Pollutant Removal by Pervious Concrete and Incorporation of Results into a Site Development Tool," American Concrete Institute International Convention, New Orleans, Louisiana
- "Pervious Pavements for a More Livable Environment," NRMCA/PCA Storm Water Solution Seminar, Phoenix, Arizona
- "Pervious Pavements for a More Livable Environment," TN USGBC Chapter, Nashville, Tennessee
- "Comparison of Permeable Systems," Belgard University, Oldcastle APG, Franklin, Tennessee

- "Pervious Pavements for a More Livable Environment," Tennessee Higher Education Sustainability Association, Trevecca University
- "ASTM Testing Update for Pervious Concrete," Tennessee Concrete Association, Adventure Science Museum, Nashville, Tennessee
- Permeable Pavement Demonstration, Belgard and Siteworks, MTSU ROTC Lot
- "Pervious Pavements for a More Livable Environment," Biology 6620 Class, MTSU Campus

### Dr. Yang:

- "Freeze and Thaw Durability of Pervious Concrete under Simulated Field Conditions," ACI Fall 2009 Convention, New Orleans, LA, November 8-11, 2009

### Dr. Knight:

- "Comparison of Pullout Strength of Headed Studs in Normal and Lightweight Concrete," Precast/Prestressed Concrete Institute, San Antonio, Texas, September 13, 2009

## PUBLICATIONS

### Dr. Morton:

- Morton, JH et al., "Performance of slash pine fibers in fiber cement products," Constr Build Mater (2009), doi:10.1016/j.conbuildmat.2007.08.015
- Brown, Heather J., Speakman, Jim D., and Morton, Jerry H., "Applications of an Alkaline Resistant Cellulose Polymer Fiber in Ready Mix Concrete," Accepted for publication by ACI, 2009
- Bell, Robert I. and Morton, Jerry H., "Alkali Resistant Cellulose Fibers for Decorative Concrete," Accepted for publication by ACI, 2009
- Purdy, Jim, Speakman, Jim D., and Morton, Jerry H., "Practical Applications for Natural Cellulose Fiber, including Slab-on Ground," Accepted for publication by ACI 2009

### Dr. Brown:

- "Test Method for Infiltration Rate of In-Place Pervious Concrete," ASTM Book of Standards, Volume 04.02, 4 pp., October 2009
- Brown et al., "Applications of Alkaline-Resistant Cellulose Polymer Fiber in Ready Mixed Concrete," ACI Special Publication, Volume 268, Pages 55-62, March 2010
- "Decorative Council Gets Creative, Cover Story," Tennessee Concrete Magazine, Volume 23, No. 3, Winter 2009

### Dr. Knight:

- "Comparison of Pullout Strength of Headed Studs in Normal and Lightweight Concrete," The National Bridge Conference and PCI Annual Convention Proceedings, September 2009
- "Use of Stay-in-Place Forms for Concrete Bridge Decks in Tennessee," Transportation Research Record, Journal of the Transportation Research Board, Volume 2098, 133-140, 2009
- Headed Stud Tensile Capacity as a Function of Concrete Tensile Strength, The National Bridge Conference and PCI Annual Convention Proceedings, September 2009
- "Early TCA Experiments with Self-Compacting Pervious PCC," Tennessee Concrete Magazine, Volume 23, 10-17, Winter 2009

### Dr. Yang:

- "Development of Specification for Accelerated Approval Process of Flowable Fill Mixtures," ASCE Journal of Materials in Civil Engineering, Volume 21, Issue 12, pp. 740-748, December 2009

## SERVICE

### Dr. Brown:

- MTSU Presidents Council for the Advancement of Women, 2004 to Present
- MTSU Undergraduate Research Awards Committee – 2006-2009
- MIMIC Advisory Board, 2007 to Present
- CLEAR Water Institute, 2008 to Present
- ET Assessment Committee
- ET Graduate Committee
- ET Scholarship Committee
- ACI Faculty Advisor
- AGC/ABC Student Chapter Support
- Cane Ridge High School Partnership
- Engineering, Manufacturing, and Industrial Partnerships Council for Metro Nashville Schools, 2008 to Present, Member
- TCA Technical Committee, 2001 to Present, Member
- ACI 522 Pervious Concrete Committee, 2005 to Present, Member
- GeoShanghai 2010 Conference, October 2009, Reviewer

- ASCE Journal of Materials in Civil Engineering, July 2009, Reviewer
- Innovation and Technology Commission grant review, February 2010

### Dr. Knight:

- Member ASTM Committee C09 on Concrete and Concrete Aggregates
- Member ASTM Committee C09.47 on Self Consolidating Concrete
- Member ASTM Committee C09.21 on Lightweight Aggregates and Concrete
- Invited Instructor, American Society of Civil Engineers (ASCE), Professional Engineer Exam Review Course (Civil Engineering), "Mechanics of Materials and Timber Design Sections," March 22, 2010, Nashville, TN
- Invited Instructor, Tennessee Society of Professional Engineers (TSPE), Professional Engineer Exam Review Course (Civil Engineering), "Mechanics of Materials and Timber Design Sections", October 1, 2009, Nashville, TN
- Served as on-site faculty advisor for CIM student service project involving approximately 250 feet of sidewalk to provide access for disabled person to reach existing county sidewalk, November 18-20, 2009
- Traveled with students to tour construction project taking place at Center Hill Dam, October 16, 2009
- Served as Major Field Test Proctor, November 6, 2009
- Attended CIM alumni function at Arrington Vineyards. Served as faculty representative and helped with logistics of function. October 22, 2009.
- Attended Concrete Industry Management Social, September 10, 2009, Lafarge
- Attended (Faculty Representative) CIM Scholarship Dinner, August 28, 2009
- Served as examiner for ACI exams for CIM students on the following dates: May 5, 2010, March 1, 2010, February 26, 2010, November 23, 2009, October 5, 2009, October 2, 2009, September 30, 2009
- Member Academic Appeals Committee College of Basic and Applied Sciences Subcommittee
- Alternate Member Grade Appeals Committee College of Basic and Applied Sciences

### Dr. Yang:

- *Materials Characterization Journal*, March 2010, Reviewer
- GeoShanghai 2010 Conference, October 2009, Reviewer
- *Materials and Structures Journal*, August 2009, Reviewer
- *ASCE Journal of Materials in Civil Engineering*, July 2009, Reviewer

## AWARDS

- Faculty Who Make a Difference – Mr. Fulks, Dr. Brown
- Student Award: 2nd, 8th and 10th place in Concrete Construction Competition, ACI Spring 2010 Convention, Chicago, IL, March 21, 2010 mentored by Dr. Brown, 15 students.

## RESEARCH

### Funded Activities

### Dr. Yang:

- $88,000 Development of Patching Materials for Rehabilitation of Surface Distresses in Concrete Bridges in Tennessee, TDOT, Jan. 10-Sept. 2011

### Dr. Brown:

- $13,500 MTSU Sustainable Campus Fee Grant for Permeable Pavers
- $18,665 FilterPave Installation at MTSU Campus, MTSU Sustainable Fee
- $88,000 Development of Patching Materials for Rehabilitation of Surface Distresses in Concrete Bridges in Tennessee, TDOT, Jan. 10- Sept. 2011

### Pending/Not Funded Support

- $599,623.00 Partnership in Building Next Generation Energy Efficient and Environmentally Friendly Paving Materials, NSF PFI, Jan. 2010- Jan. 2012
- $790,000 Plasma Arc Re-Processing of Coal Fly Ash to Yield Electric Power and Supplemental Materials for Cement, TVA ORAU, December 2009
- $296,800.00 Characterization of Fly Ashes in TVA Plants and Development of High Volume Fly Ash Systems, TVA, August 2009, 3 years.
- $150,000+$50,000 match, Collaborative Research: Curriculum Harmonized Across National Concrete Education (CHANCE), NSF CCLI, ($800K total among 4 schools), June 2010 – June 2012.

- $1.2 Million FY 2010 Appropriations: Extended Effective Runway Length at GA Airports

## Undergraduate Research Projects

### Dr. Morton:

- ACI Student Competition, Concrete Bowling Ball, 3 students
- ACI Student Competition, Pervious Concrete, 4 students
- Shrinkage Compensating Concrete, presentation for ET Open House, 4 students
- Decorative Concrete Countertops, presentation for ET Open House, 5 students

### Dr. Brown:

- XUREX Chloride Permeability Testing, 3 Students – Shawn McFarland, Dylan Stephens, Dillon Brann, Research
- CEMEX Byproduct Testing, 2 students – T. Diedrich, K. Harris, Research
- Domtar Trial Batching, 3 Students – M. Nelson, V. Brooks, C. Richardson, Research
- Polycon Skid Resistance Testing, 2 Students – L. Nelson, W. Byrnes, Research
- TCA Round Robin Testing, 3 Students – K. Vaccaro, A. Beaty, B. Young, Research
- ASTM Round Robin Testing – Pervious Concrete, 3 Students – A. Tomlinson, M. Timberlake, W. Shelton, Research

# PROGRAM SUPPORT

Scholarships – 25 Industry Scholarships totaling $107,500 potential gifts. Many scholarships are resident-based or company-dependent scholarships which do not always get awarded. Scholarship monies awarded in 2009-2010 totaled $57,000.

- Arkansas Ready Mix Concrete Association
- Carolinas Ready-Mixed Concrete Association Scholarship
- Cemex Scholarship
- Command Alkon Annual Scholarship
- Concrete Supply Company Scholarship
- Cordie Hughes Scholarship
- Dr. Earl Keese CIM Scholarship
- Florida Independent Concrete & Associated Products
- Georgia Concrete & Products Association Scholarship
- H. Elton Cook Scholarship
- Illinois Ready-Mixed Concrete Association Scholarship
- J.W. "Red" Victory Memorial Scholarship
- Kentucky Ready-Mixed Concrete Association Scholarship
- Lehigh Cement Scholarship
- Maryland Ready-Mixed Concrete Association Scholarship
- BASF Scholarship
- National Association of Women in Construction
- National Precast Concrete Association's Educational Foundation
- R.C. Martin Memorial Scholarship (Sponsored by FICAP)
- Sika Scholarship
- Southeast Regional PCA Scholarship
- Tennessee Concrete Association Scholarship
- Titan American LLC Scholarship
- Virginia Ready-Mixed Concrete Association Scholarship
- Wisconsin Ready-Mixed Concrete Association Scholarship

## Internships

Between summer 2009 and spring 2010 - **58** internships were completed.

## Marketing Activities

### Dr. Brown

- CIM Update, National Precast Concrete Association, Hilton Head, SC, October 1.
- CIM Update, National Steering Committee, Phoenix, AZ, October 7
- CIM Update, National Steering Committee, Las Vegas, NV, February 4
- CIM Update, National Steering Committee, Murfreesboro, TN, May 6
- CIM Update, Tennessee Road Builders Association, Memphis, TN, July 22.
- CIM Update, AGC of East TN, Chattanooga, TN, August 27
- "Careers in Concrete and Construction," Blackman Middle School, May 11.
- "Concrete is Lean, Mean and Green, MTSU Expanding your Horizons," MTSU Campus, October 31.
- CIM Introduction, Williamson County High School, MTSU, November 19.
- "Careers in Concrete and Construction," Blackman Middle

School, February 17.
- "Careers in Concrete and Construction," TWISTER, Adventure Science Museum, Nashville, TN, February 13.

### Dr. Knight

- CIM Program Update (PCI Foundation Board of Trust), Precast/Prestressed Concrete Institute, San Antonio, TX, September 11, 2009

### Becky Linville

- Participated in summer freshman orientation
- Presented at 2009 American School Counselors Association Conference in Dallas, TX
- Scheduled company socials and interviews for full time and internship opportunities
- Advised numerous prospective students and parents
- Wrote program updates for various CIM-related newsletters
- Updated CIM website
- Created time-lapse video of CIM Decorative Concrete on-campus project for YouTube

## Student Educational Activities

### Dr. Brown: (139 Students):

- Permeable Paver Project at ROTC Lot, 8 Undergraduate Students, 1 Graduate Student
- Decorative Concrete Project at Murphy Center, 10 Undergraduate Students, 1 Graduate Student
- Permeable Paver Project at Murphy Center, 30 Undergraduate Students, 1 Graduate Student
- Sig Ep Sidewalk Project, 6 Undergraduate Students
- TCA Concrete Village Demonstration Project, 8 Undergraduate Students
- ASCC Seminars, 4 Undergraduate Students
- Disabled Veterans Sidewalk Project, 15 Undergraduates, 1 Graduate Student
- Discovery Center Museum and Tennessee Department of Environment Conservation Watershed Project, 6 Undergraduate Students, 1 Graduate Student
- World of Concrete Trade Tower Project, 3 Undergraduates
- ACI Concrete Construction Competition, 44 Undergraduates

### Dr. Knight

- Organized industry and university service opportunities (some paid) for students (70) to serve as proctors in a certified testing program administered by the American Concrete Institute (ACI).

## Involvement of the Patrons and Industry

67 companies visited MTSU in either a guest speaker, interviewing, research or lab role. These companies were as follows:

### Companies/Organizations Involved With the MTSU CIM Program

Expanded Shale, Clay and Slate Institute
Ozinga Concrete
Accord Industries
Fritz Pak
Propex Fiber
Advance Testing Company
Gerdau AmeriSteel
Procon
AGC
Grace (W.R. Grace)
Quikrete
AGT Group
Gray Construction
Ready Mix USA
Aggregate Industries
Hanson Pipe & Precast
Rogers Group
American Concrete (Oldcastle)
Highland Consulting Group
Sequatchie Concrete
BASF (Master Builders)
Hohbach Lewing Structural Engineering
Sherman-Dixie
Belgrade Pavers
Holcim
Standard Concrete Products
Bowman Works
Irving Material
Stan Reece Concrete
Butterfield Color
Lafarge
Stalite
Cal Portland
Lafarge - Kansas City
Stephens Mfg
Capitol Aggregates
Lafarge - Midsouth
Tennessee Concrete Association
Carroll Concrete
Latimore Ready Mix
Tennessee Dept. of Transportation
Cemex
Marcor Construction
Titan America
CeraTech, Inc
Maschmeyer Concrete
Turner Construction
Concrete Supply of Topeka
McCarthy Building Companies
Tycer Ready Mix
Con E Co (Barnes Industrial)
Metro Ready Mix Concrete Co.
Western Construction Company
Command Alkon
Middle Tennessee Testing
Wiss, Janney, Elstner Associates, Inc
Dayton Superior Technical Services Grp
MRI Network Mgmt Recruiters
Delaware Valley Concrete
Nashville Concrete Artist
Durafiber Inc.
Nature's Point Stone
Euclid Chemical
Oldcastle

**18 companies donated time, talent and treasure to 3 demonstration projects on campus.**

### DCC PROJECT

ASCC
Butterfield Color
DCC
Dusty & Sons, Inc.
Fritz Pak
Landmark Homes of TN
L.M. Scofield
Nashville Ready Mix
Oakley Construction
Oldcastle Belgard Env.
Stan Reece Concrete
Stardek, Inc.

### ROTC PERMEABLE PAVER LOT

Oldcastle Belgard Env.
Ragan Smith Associates
Swanson Development
Moody Excavating
Rogers Group
Siteworks LLC
Stan Reece Concrete
Nashville Ready Mix
ADS Pipe

### STADIUM PERMEABLE PARKING

Oldcastle Belgard Env.
Siteworks LLC
Landmark Homes of TN
Oakley Construction

- $28,500 In-Kind materials and labor, Paver ROTC Lot, 6 companies, August – October 2009
- $17,000 In-Kind materials and labor, DCC Decorative Slab Project, 8 companies, October 2009 (YouTube Link: http://www.youtube.com/watch?v=d7drhS0-daw)
- $10,500 In-Kind materials and labor, Murphy Center Paver Parking Area, 4 companies

## FINANCIAL INFORMATION

| Income | |
|---|---|
| Patrons | $48,051 |
| Patron Scholarships | $57,000 |
| National Steering Committee | $100,000 |
| University | $664,196 |
| **Total Income** | **$869,247** |

| Expenses | |
|---|---|
| Salaries | $606,908 |
| Operating | $118,571 |
| Travel | $40,790 |
| Scholarships | $57,000 |
| **Total Expenses** | **823,269** |

DR. MOHAMED MAHGOUB
***NJIT CIM***
***Program Director***

Department of Engineering Technology
University Heights ○ Newark, New Jersey 07102-1982 ○ (973) 596-8193

## PROGRAM ENROLLMENT BY YEAR

| | Fresh. | Soph. | Jr. | Sr. | Total |
|---|---|---|---|---|---|
| 2008-09 | 5 | 6 | 9 | 2 | 22 |
| 2009-10 | 8 | 4 | 11 | 7 | 30 |
| Net Change | +3 | -2 | +2 | +5 | +8 |

## MARKETING ACTIVITIES

- A CIM Specialist was hired for recruiting.
- There were 12 high school visits, 4 high school trips to campus, 11 college fairs visited and 4 transfer fairs for county colleges. Presentations to encourage students to join the CIM program were performed and brochures and gifts were distributed.
- Starting a new poster for CIM program advertisement to be posted at high schools and community colleges.
- Four newsletters have been mailed to more than 200 industry contacts and patrons.

## PROFESSIONAL ACTIVITIES

- NJIT ACI Student Chapter was initiated.
- NJIT CIM website was revised. Student events and videos of presentations were added.
- CIM students participated in field visits to several famous concrete plants and construction sites. The field visits included World Trade Center, Sika Corporation, and Weldon Materials.
- Many guest speakers were invited from the concrete industry. Invited companies included LaFarge, PCA, Titan America, Weldon Materials, Kerr Pipe and CRSI.
- CIM Students attended the NJACI 47th Annual Concrete Awards Dinner.
- CIM Students were represented at 2010 World of Concrete in Las Vegas.
- Additional communication work was incorporated in CIM courses. CIM students were required to perform final projects at each class, do presentations and write reports.
- Two CIM students became ACI Field Level 1 certified. CIM students have been offered a special reduced rate to apply for this certificate offered by NJACI.
- Four CIM students attended a workshop titled "A Day of Pervious Concrete, When It Rains It Drains." PCA Northeast paid the fees and students became Pervious Concrete Certified.
- CIM students will perform their first ever on-campus project in the fall 2010. A pervious concrete slab will be placed in a small garden near the Department of Engineering Technology building.

## PROGRAM SUPPORT

- The annual Northeast Patrons' Wine Tasting Event was held in February.
- Dr. Mohamed Mahgoub, hired as an assistant professor for the CIM program in September, 2009, was appointed as the Program Director in May, 2010.
- Scholarship programs available to CIM students include: Silvi Scholarship, Sika Scholarship, CIM Patrons' Endowed Scholarship and ICRI.

## STUDENT INTERNSHIPS

During the summer of 2010, all CIM students who sought internships or co-ops were placed into positions.

## PATRONS INVOLVEMENT

The Northeast Patrons have a very active role in supporting all areas of the CIM program in and out of the classes. A few examples are:

- Meeting on a regular basis on and off campus with CIM program director and students. They were always kept posted on the program progress. They also provide great advice and support.
- Offering CIM students with internships, co-ops, and jobs.
- Providing CIM students several types of scholarships.
- Supporting CIM students with guest speakers and field visits.
- Advertising the program on websites and joining in high school visits.
- Providing a great support to the concrete graduate and undergraduate research at NJIT with supplies, donations and guidance.

## RESEARCH

NJIT's CIM program is working hard to take its place as a leader in concrete-related research activities. NJIT is considered a research university (RU/H: Research University with high research activity) in Carnegie classification. We began to develop research at the graduate and undergraduate levels, which can be incorporated into classes. Last academic year, several concrete-related researches started under Dr. Mahgoub's supervision:

- Undergraduate: Effect of Confinement on Concrete Cylinder, Concrete Maturity, Concrete strength of Type 3 Concrete, Concrete behavior when using Pepsi as a Retarder, Inventing Pervious Concrete Diffuser Plate for Concrete Filters used in Haiti, Concrete Lost Moisture Due to the Use of Different Types of Color Hardeners, and Short Study about Short Load Concrete Company
- Masters: Obtaining High Strength Concrete Using Recycled Aggregate Concrete by Matching its Gradation to Normal Aggregate Concrete.
- PhD: Seismic Characterization of Recycled Aggregate Concrete.

## Committees

Dr. Mahgoub is a member of the following ACI committees:

- 342 – Evaluation of Concrete Bridges and Bridge Elements
- 440 – Fiber Reinforced Polymer Reinforcement

In the past academic year, Dr. Mahgoub became a member in the following ACI Committees:

- 130 – Sustainability of Concrete
- 555 – Concrete with Recycled Materials
- 343 – Concrete Bridge Design (this is a joint committee between ACI-ASCE)
- Dr. Mahgoub is also a member of ASCE

## PUBLICATIONS

Dr. Mahgoub is an author of chapters in the following, in progress, ACI Special Publications:

- "Live Load Distribution for Existing Concrete Bridge Evaluation"
- "Concrete Sustainability: Structures in Service"

## AWARDS

Dr. Mahgoub was awarded Portland Cement Association (PCA) Travel Award to attend a workshop titled "Teaching the Materials Science, Engineering, and Field Aspects of Concrete" in Skokie, IL.

## PROPOSALS

Three proposals were submitted the previous academic year:

- CALTRANS "The Stiffness Provided by Girders, Decks and Soffits Framing into Integral Concrete Bent Caps"
- TRB "Consequences of Delayed Maintenance of Bridges"
- NSF, CCLI, "Collaborative Research: Curriculum Harmonized Across National Concrete Education" – submitted in conjunction with the other CIM schools

## FINANCIAL INFORMATION

| Income | |
|---|---|
| Industry/Patrons | $50,000 |
| National Steering Committee | $100,000 |
| University | $50,000 |
| Scholarships | $0 |
| **Total Income** | **$200,000** |

| Expenses | |
|---|---|
| Salaries | $120,000 |
| Operating | $40,000 |
| Travel | $20,000 |
| Scholarships | $1,000 |
| **Total Expenses** | **$181,000** |

TEXAS STATE UNIVERSITY
SAN MARCOS
*The rising STAR of Texas*

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DR. VEDARAMAN SRIRAMAN
***TSU CIM Program Director***

## ENROLLMENT DATA

| Semester | Fall 2009 | Spring 2010 |
|---|---|---|
| Texas State University | 30,805 | 29,275 |
| Department of Engineering Technology | 436 | 425 |
| CIM Program | 13 | 21 |

## PROFESSIONAL ACTIVITIES

### Ongoing Research

Evaluation, Presentation and Repair of Microbial Acid-Produced Attack of Concrete, Project sponsor: TxDOT (RTI 0-6137)

### Recently Funded Grants

- F. Bektas and J. Hu, "Use of Waste Clay Brick as Cement Additive in Concrete: Feasibility Study in the State of Texas," funding source: TSU-San Marcos Research Enhance Program (REP), Amount: $16,000, January 2010-December 2010
- C. Gaedicke, "Optimizing Pervious Concrete to Improve Pavement Sustainability," funding source: TSU-San Marcos Research Enhance Program (REP), Amount: $8,000, January 2010-December 2010

## PRESENTATIONS

- Gaedicke, C., "A Fracture-Based Method to Predict the Flexural Capacity of Concrete Slabs," presented at the American Con-

crete Institute 2009 Fall Convention, New Orleans, November 2009

- Bektas, F., Taylor, P., Wang K., "Scaling Resistance of Concrete Containing Slag Cement: A Critical Review," presented at the 89th Annual Meeting of Transportation Research Board, Washington, D.C., January 2010
- Hu J., Wang K., Ge Z., "Study of Iowa PCC Thermal Properties for Mechanistic-Empirical Pavement Design," 2009 Mid-Continent Transportation Research Symposium, Ames, Iowa, August 2009.

## PROGRAM SUPPORT

### Scholarships

Ten students received scholarships for a total of $14,000. Of these, one student received a $3,000 scholarship, two students received $2,000 scholarships and seven students received $1,000 scholarships.

## MARKETING ACTIVITIES

The following marketing/promotional activities were undertaken:

- The new CIM degree was highlighted during the freshman and transfer student advising sessions in the summer.
- Presented information on the new CIM degree at the monthly meetings of ACI Austin and San Antonio chapters.
- Presented information on the CIM degree to construction and undecided majors in TECH 1260 and TECH 2342.
- Our patrons hosted "recruitment socials" at the Plucker's Restaurant with the objective of presenting the new degree opportunity to interested students. These events occurred on January 26 and April 19, 2010.
- Presented the new CIM degree program and gave a tour of the concrete testing laboratory to all the advising staff in the College of Science.

## STUDENT EDUCATIONAL ACTIVITIES

- Field trip to Ingram Ready Mix Plant on October 23, 2009.
- Field trip to Lehigh Cement Plant on February 4, 2010.
- Field trip to Ingram Ready Mix Plant on March 25, 2010.
- Eight industrial guest speakers made presentations in CIM courses.
- Six students attended the NRMCA Convention in Austin, TX, on March 12-14, 2010.
- Six students participated in the NRMCA Pervious Concrete Technician Certification Seminar on April 16, 2010.
- ACI Student Chapter was founded in spring 2010.
- Students worked on a pervious concrete class project in collaboration with faculty and Mr. Sean Van Delist of the Texas Cement Council.

## INVOLVEMENT OF THE PATRONS/ INDUSTRY

- ACI San Antonio sponsored our student ACI chapter
- ACI San Antonio and Austin have provided support for scholarships
- Provided CIM students the opportunity to participate in industrial plant visits
- Provided speakers for the ACI student chapter
- Provided internship opportunities
- Provided supplies for our concrete testing laboratory
- Assisted with fund generation and recruitment
- Martin Marietta Materials donated equipment to the CIM program

## FINANCIAL INFORMATION

| Income | |
|---|---|
| TSU Patrons | $160,000 |
| National Steering Committee | $60,000 |
| TSU Operating Budget | $85,000 |
| TSU Funding | $279,000 |
| **Total Income** | **$584,000** |

| Expenses | |
|---|---|
| Operations *(travel, materials, equipment, etc.)* | $109,815 |
| TSU Faculty Start-Up | $95,000 |
| TSU Faculty Salaries | $184,000 |
| **Total Expenses** | **$388,815** |

## DANIEL COOK, Middle Tennessee State University

**What school are you currently attending and when is your intended graduation date?**

I am currently attending MTSU in Murfreesboro and I will be graduating in May 2011.

**Why did you choose this university and the CIM program?**

This will be my second bachelor's degree from MTSU. Ten years ago, I chose this school because it was close to my hometown. Upon graduation, I was working with a construction equipment supply company where I visited jobsites and found a real passion for the construction industry. I heard how well students in MTSU's CIM program were excelling upon entering the job market. I decided that in order to achieve my career goals, I needed to apply to the CIM program and return to school.

**How has the CIM program prepared you for graduation and entrance into the business world?**

While pursuing my first degree, there weren't many opportunities for extracurricular involvement. This time around has been a different story. From the combination of my knowledge of what most employers require from an entry-level applicant and the experience opportunities and leadership that the CIM program offers its students, I feel that I will be as prepared as I could possibly be to enter the job market.

**What advice would you give to other current CIM students?**

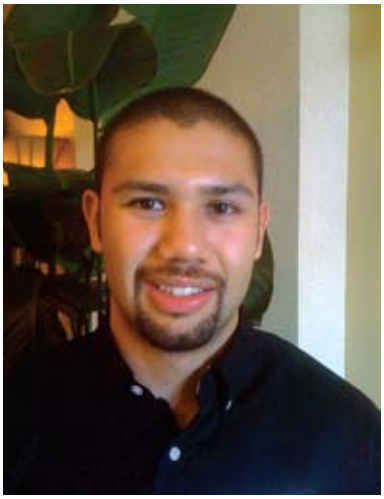
As someone who has graduated once and tried to get a job with no experience, I would tell them to be as involved as possible and experience as much as you can. Luckily they are in a program that gives them ample opportunity to do these things. Also, I would tell them to try to introduce themselves to as many people in their industry as possible. This will get their name out to the people who will one day be looking at their resume.

**The CIM program works with businesses in providing summer internships. Have you been able to take advantage of that program or any other special program to develop your industry knowledge?**

Yes. I am currently involved in my second internship with a large commercial contractor. These experiences have increased my industry knowledge ten-fold from day one. For my school and four others nationally, the CIM program does extremely well in setting up internship opportunities for their students in every way they possibly could. However, like I mentioned before, it is ultimately up to the student to take advantage of these gifts that the CIM program presents.

**Have you been able to interact with the CIM patrons at MTSU? If so, in what capacity?**

Last semester, I led a team of five students to a second place finish nationally in the 2010 ACI Concrete Construction Competition. During our research, we consulted several industry professionals including CIM patrons from MTSU. Every time I talk with a patron, they are more than willing to listen to me and offer advice. I have learned that all I have to do is mention that I am a CIM student and they want to help.



## GREG MERCURIO, California State University, Chico

**Why did you choose the CIM program and CSU - Chico?**

When I first came to Chico State, I was a pre-business administration major. I had a background in construction and was considering switching my major to construction management. I was told about the Concrete Industry Management major and attended their first patrons' meeting and was blown away by the industry support. I decided to keep my business major and add the CIM program. I chose to come to Chico State because I loved the small college town atmosphere and the people are very friendly.

I graduated on May 22, 2010 with a bachelor's of science in Concrete Industry Management and Business Administration and a minor in Managing for Sustainability.

**Can you tell us about your internship with NRMCA?**

I was able to work on several projects for NRMCA and it turned out to be a great experience. I was able to learn a lot about the concrete industry as a whole while meeting some great people.

**During your internship, you developed the LEED Calculator program. Tell us how this developed.**

It started out as a one-page Excel spreadsheet with a few simple calculations. As I got more familiar with Excel I was able to add more features to it until it eventually became a multiple-page program that looked nothing like a spreadsheet. You can purchase the calculator through the NRMCA's website at http://my.nrmca.org.

**Why did you choose this internship?**

I chose this internship and organization because of my interest in sustainability within the concrete industry, which was the focus area of the projects during the internship. I also liked the idea of working for this organization because you meet a lot of people with different backgrounds in the concrete industry.

**How has the CIM program prepared you for the "real world"?**

I can't stress enough the amount of industry involvement in the CIM program. Just about every core class in the program includes a lab component where we get industry experts to teach the labs. We are also one of the only majors on campus that requires an internship to graduate. The curriculum was also designed by industry experts to ensure that we are learning what is relevant to the industry.

**What are you doing now?**

Since my graduation in May, I am working for Independent Floor Testing and Inspection, Inc. (IFTI). They are a national independent floor testing company that specializes in concrete slab moisture testing. My position is Technical Report Writer. I analyze field data and develop reports. IFTI is an up-and-coming small company and I am really excited to be working with them.

## LEANN R. ORAMA, New Jersey Institute of Technology

**Which CIM university did you attend and when did you graduate?**

I recently graduated from the NJIT on May 17, 2010.

**How has the CIM program prepared you for your graduation from NJIT and entrance into the business world?**

The CIM program has not only broadened my knowledge in every aspect of the concrete industry, but also in the general construction business as well. The curriculum is designed to prepare its students not only to understand the building materials, but how to market and sell them to the masses as well as effectively run any concrete operation. The CIM program has engaged my interests in a wide field of construction sectors and that has allowed me to effectively diversify my interests. This in turn has helped me gain an edge and has helped me network across these different fields and pursue endless opportunities. Consequently I am thrilled to have been hired as a Field Engineer by the Turner Construction Company.

**What advice would you give to other current CIM students?**

I would tell every current CIM student to not limit their interests to a specific facet of the concrete industry. As we all know concrete has many different markets and products that can virtually cater to every student's interests whether it's the management, research and development, product design, or the sales and marketing of whichever concrete market they wish to pursue.

**The CIM program works with businesses in providing summer internships. Have you been able to take advantage of that program or any other special program to develop your industry knowledge?**

During the summer of my freshman year, I was able to intern for the Port Authority of New York and New Jersey in their estimating department. I learned engineering fundamentals early on that helped me during consequent years of school. During my sophomore year, I was hired as a Corporate Operations intern with Sika Corporation, a national patron of the CIM program. My final year in school I interned with the Port Authority of New York and New Jersey once again, but this time with their Materials Engineering Department where I got to demonstrate every day at work what I've learned in our core lab classes. This internship was very exciting because I got to work overnight concrete pours on the World Trade Center project at Ground Zero.

**Have you been able to interact with the CIM patrons at NJIT? If so, in what capacity?**

The CIM patrons have been very generous with their time and resources to make this program a success. Every semester the CIM department scheduled industry professionals to come in and give us comprehensive presentations of their companies and their functions within the company. These are not only very informative, but also a wonderful networking opportunity of which our students take full advantage.

## CHRISTOPHER WAYNE TRAINA, Texas State University

**Why did you choose the CIM program and TSU – San Marcos?**

I decided to move to the CIM program after completing an internship with a small concrete construction company. Being exposed to the industry allowed me to realize my passion for concrete and my potential for success. After researching the CIM program, it was evident that I would be able to use both my management and technical skills in an industry of high demand. Choosing CIM has been a great decision and I look forward to what the future holds.

**What are your plans and goals upon graduation from TSU?**

After graduating from TSU, I would like to pursue a management position in the concrete industry. I would also like to obtain my MBA in the near future.

## TRAVIS REED MOUSER, Texas State University

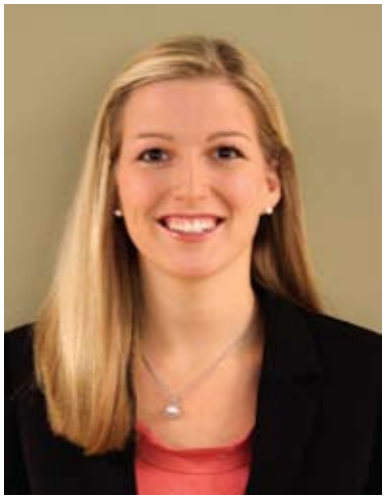
**Why did you choose the CIM program and TSU – San Marcos?**

I chose to move to CIM because of the great opportunities that became apparent to me. I wanted to stay in the construction industry with a finance degree, but after much research about the concrete industry, CIM seems to fulfill everything that I have wanted to pursue, focusing on a niche market that will always have a high demand.

**What are your plans and goals upon graduation from TSU?**

When I graduate from Texas State University, I'd like to go into concrete sales or management. I would also like to get my MBA or perhaps attend law school.

# JENNA (THOMAS) BARBE,
## Middle Tennessee State University
*Class of 2007*



**What school did you graduate from and in which year?**

I graduated Summa Cum Laude from MTSU in 2007 with a Bachelor of Science degree in Concrete Industry Management and a minor in Business Administration.

**What is your current position and responsibilities at R.J. Griffin & Company?**

I am an assistant project manager with the RJ Griffin Nashville Division specializing in healthcare construction. My job responsibilities include: assisting preconstruction with budget and buyout, working with design team, client, and facility staff ensuring goals and priorities are achieved, vendor coordination, managing subcontractors, scheduling, cost control, quality assurance, and safety. My previous jobs included a 16,000-square-foot HCA imaging and diagnostics facility in Lebanon, TN, a 282,358-square-foot HCA Greenfield 126-bed hospital in Fredericksburg, VA, and my most recent assignment is a 134,000-square-foot cancer center in Glenwood Springs, CO.

**Why did you choose this position and this company?**

I started interning with RJ Griffin & Company in 2006 and continued until graduation. I enjoy each project's diversity and the meticulous coordination required to make every job a success. The company was not afraid to put me in front of the client with little experience and gave me the opportunity to live onsite for a $96 million hospital project in Greenfield. These opportunities are rare and their faith in my abilities as a project manager made my decision to join the RJ Griffin team an easy one!

**How has the CIM program prepared you for your current job responsibilities?**

The technical information helps me speak the construction language and the business principles make me an effective manager.

**Why did you choose the CIM program?**

Originally, my major was marketing until I realized prospective careers paths were vague and saturated. After speaking with the CIM staff, I enrolled in CIM 1010 'Introduction to the Concrete Industry.' The class explained basic principles and possible career paths, all of which were unique and intriguing.

**What classes did you enjoy the most?**

Senior lab and Capstone were my favorite classes.

**What advice would you give to current CIM students?**

There are so many unique career paths a CIM graduate can choose. The program stresses personal development, creativity, and dispute resolution. These are invaluable assets any professional possesses. Always think outside the box and you will grow regardless of economic climate.

## KYLE WEATHERLY, Middle Tennessee State University

*Class of 2001*

**What school did you graduate from and in which year?**

I graduated from MTSU in 2001 with a Bachelor of Business Administration degree, and also in 2007 with a Bachelor of Science degree in Concrete Industry Management (CIM).

**What is your current position and responsibilities at Carolina Stalite?**

I am currently a Sales and Technical Service Representative for Carolina Stalite (lightweight aggregate). My territory includes TN, KY, IN, OH, WV, and western PA. I manage current accounts and work to improve business relations with new prospective customers.

**Why did you choose this position and this company?**

I wanted to be in sales from the time I started the program and this opportunity came along. Stalite is one of the leaders in lightweight aggregate and it was a great fit for me. I have worked for Stalite for about three years now and I love the people I work with and I get to meet so many different people in the concrete industry.

**How has the CIM program prepared you for your current job responsibilities?**

The program offers so many different things. It helped me understand concrete and showed me how complicated concrete really is. The teachers and staff work well with the students and industry leaders lend their time and effort to make sure the program has the resources it needs to make it the best!

**Why did you choose the CIM program?**

I had a lot friends involved in the program and hearing them talk about how much they enjoyed it made the decision easy for me. I went back to school to earn this degree after working in the insurance industry and it has been the best decision I ever made.

**What classes did you enjoy the most?**

I enjoyed every class that involved concrete.

**What advice would you give to current CIM students?**

Take it seriously and work hard. It will open a lot of doors to further your career. Listen to advice from the ones who are working in the industry and remember someone is always watching.

## PAUL OZINGA, Middle Tennessee State University

*Class of 2006*

**What school did you graduate from and in which year?**

I graduated from MTSU in December of 2006 with a Bachelor of Science degree in Concrete Industry Management and a minor in Business Administration.

**What is your current position and responsibilities at Ozinga?**

I am currently working in our customer sales department and am responsible for handling key accounts in our Chicago metropolitan service area. My primary responsibilities include ensuring continued customer satisfaction, maintaining relationships and accurately pricing the market.

**Why did you choose this position and this company?**

I have chosen the current position because of my continued interest in learning all areas of the company and industry. I enjoy the necessary personal interaction, problem solving, and maintaining and building new relationships with customers for the betterment of the company.

The main reason I chose to work at Ozinga is because I am part of the fourth generation of Ozinga's to work in the family business. My interest is personal in the way that I would like to be part of watching and helping the company, its employees and the community, and ensuring that future generations continue to serve and grow.

**How has the CIM program prepared you for your current job responsibilities?**

Having grown up in the industry, I performed many different tasks that ready mix requires. The CIM program gave me a solid in-depth explanation for the basis of each task. I was given hands-on training as well as expert advice from experienced professionals throughout the industry. The CIM program has given me a base and a confidence in understanding how our industry operates.

**Why did you choose the CIM program?**

I chose the CIM program because I had a thirst to learn more about how the concrete industry works and figured that since I grew up in the industry, I might actually get pretty decent grades too!

**What advice would you give to current CIM students?**

Build relationships with those you are going through the program with, these are your future colleagues, competitors, employees or employers that you will be working with the rest of your career.

## JIONG HU, Texas State University-San Marco

*Assistant Professor*

**What interesting projects have your students been involved with during this last school year?**

In this last year, I have CIM students involved in one externally funded project (Evaluation, Presentation and Repair of Microbial Acid-Produced Attack of Concrete) and two internally funded projects (Use of Waste Clay Brick as Cement Additive in Concrete: Feasibility Study in the State of Texas and Self-compacting Concrete Using Recycled Concrete Aggregate). The projects offer CIM majors valuable experience as research assistants involved in real-life projects, as well as the use of state-of-the-art research facilities.

**Why should incoming students consider CIM as a major course of study?**

CIM is a unique program with emphasis on both concrete technology and management. Students will have great "hands-on" experiences through participation in a variety of laboratory activities and "real life" experience with a series of industry-related activities. With their very unique skill set, CIM students have excellent employment opportunities upon graduation.

**Can you describe the different career paths that graduates of the CIM program can take?**

With strong skill sets in concrete technology, construction management and business administration, the CIM program prepares professionals in either management or technical positions in concrete-related industries.

**What is unique about the graduates of the CIM program?**

The CIM program addresses the needs of the modern concrete industry. The program produces "industry prepared" students with "real world" experiences grounded in the basics of concrete's production techniques and its use in a multitude of construction applications.

**What are your thoughts about the industry/academic partnership between CIM and its industry partners?**

The industry-patented academic degree program represents a very unique academia/industry partnership at national and local levels. The NSC provides funding and oversight direction for each program and local patrons provide opportunities to engage the local concrete industry in advancing and growing the CIM program.

**Why should companies in the concrete industry get involved in the CIM program?**

CIM is a practice-oriented degree with strong industrial focus, built on the strong relationship between industry and academia. The program needs heavy involvement from local industry such as guest lectures and field trips to provide students with "real life" experience. A strong connection between industry and students is also needed through different social activities.

# DR. MOHAMED MAHGOUB,
## New Jersey Institute of Technology
*Program Director*

**What interesting projects have your students been involved with during this last school year?**

CIM students were involved with so many projects. Some examples are:

- The students started an ACI Student Chapter at NJIT.
- They participated in the pervious concrete workshop run by PCA and were certified.
- The students participated in high school visits to promote the CIM program.
- They were Involved in concrete-related projects to help communities in the United States and abroad.

**Why should incoming students consider CIM as a major course of study?**

CIM is the best available concrete-related program. It not only teaches about concrete, but business management as well. CIM students learn so many hands-on concrete applications and they practice them by themselves, unlike other programs that teach only in the class. CIM students also get the chance to attend conferences, field visits, workshops and meet other people in the industry.

**Can you describe the different career paths that graduates of the CIM program can take?**

CIM graduates work in so many concrete-related careers including production, management, construction, research, laboratories, sales and marketing. This variety gives the CIM program a great advantage over other programs.

**What is unique about the graduates of the CIM program?**

I could not find better words than what one of the recent NJIT CIM graduates said and I quote - "the CIM program has not only broadened my knowledge in every aspect of the concrete industry, but also in the general construction business as well. The curriculum is designed to prepare its students to not only understand the building materials, but how to market and sell it to the masses as well as effectively run any concrete operation."

**What are your thoughts about the partnership between CIM and its patrons?**

The partnership between CIM and its patrons is essential for the program's success. Each partner plays a great role to keep the program in the lead. The role of the institutions is to prepare future concrete leaders through teaching and enhancing the student's knowledge about concrete and management. The role of the local patrons is to provide the necessary tools and support for this mission.

**What is your vision for the CIM program?**

The way the CIM program has been progressing over the last few years leads me to say that I have no doubt that this is one of the most successful concrete programs in the United States. I expect that it will keep attracting more students and institutions. This will lead to an expansion of the program in the United States and abroad.

## JAMES ERNZEN, Arizona State University

*Program Director*

**What interesting projects have your students been involved with during this last school year?**

The most interesting project has been the students participation with the Habitat for Humanity Net-Zero Energy home. The home was the first concrete home built by the Phoenix Habitat organization and included a unique concrete wall system and a pervious concrete driveway. The CIM students participated in several activities during the construction and added to their technical knowledge bank of concrete systems and materials while more importantly adding to their value bank by learning to give back to those less fortunate in their community.

**What is unique about the graduates of the CIM program?**

The unique feature of the CIM program is the extent of industry involvement in the students education. Due to the amount of industry interaction demanded of CIM students during their education, they will find themselves VERY comfortable in their knowledge of what is expected of them coming out of school and very confident in their ability to excel immediately upon joining the industry.

**What are your thoughts about the industry/academic partnership between CIM and its industry partners?**

I believe the partnership forged between the industry and academia to support the CIM program is nothing less than revolutionary. I believe it will fundamentally change the way higher education is funded at universities in the future. I have already seen other sectors of the construction market in the Greater Phoenix area plan and execute similar fundraising plans to create and deliver curriculum for the Del Webb School after seeing what the CIM program has done at ASU.

**What are your thoughts about the partnership between CIM and its patrons?**

I think the current partnership between the ASU CIM program and the Southwestern Patrons organization is fantastic and will only get better. It took time for the patrons and the ASU academic unit to understand each other's role in the partnership and to realize the importance of communicating with each other on the continuous basis. Now the partnership is on very firm footing and the future is very bright ahead.

**What is your vision for the CIM program?**

My vision for the ASU CIM program mirrors that of the original founders who conceived of the idea 20+ years ago. Develop a strong undergraduate program that creates entry-level graduates who can enter the industry to eventually manage organizations and lead people. We also need to offer a graduate program for those people who find themselves in our industry without an appropriate degree and that program is in the planning stage. My personal goal for the ASU program is to continue to increase the number of students as well as the number of industry patrons who support the program with their time, talent and treasure.

## CRISTIAN GAEDICKE, PhD, Texas State University

*Assistant Professor*

**Which CIM program are you involved with and what are your responsibilities?**

I am involved with the TSU-San Marcos program. My responsibilities include teaching CIM courses, concrete research, advising students, maintaining contact with local professional chapters, and serving as faculty advisor for the ACI Student Chapter.

**How did you become involved with this school and the CIM program?**

I have always had an interest in concrete and management. During my last year as a PhD student at the University of Illinois at Urbana Champaign, I wanted to obtain a faculty position that would combine these two interests. I was fortunate in seeing an ad for a CIM faculty position at Texas State posted at an ACI Conference, so I applied. I like that this program has strong ties with the industry and was also excited with the opportunity to work on applied research.

**What interesting projects have your students been involved with during this last school year?**

Last semester I engaged students in a pervious concrete project. They started the project from scratch testing the aggregates, preparing the mix design and testing the properties. An interesting aspect of the project was having students co-advised by Sean Van Delist, a MTSU CIM alumnus. Sean helped them with the testing methods for pervious concrete.

**Why should incoming students consider CIM as a major course of study?**

The CIM program offers outstanding opportunities to our students. The state of Texas has one of the largest consumptions of cement per person in the nation. The concrete industry needs CIM majors to fill positions vacated by professionals who are retiring.

**Can you describe the different career paths that graduates of the CIM program can take?**

CIM graduates have multiple career path options. Many of them work in management positions at cement, concrete and construction companies. Other graduates find careers at concrete-related consulting firms or cement and concrete associations.

**What is unique about the graduates of the CIM program?**

CIM graduates are unique as they combine strong technical skills in concrete technology and construction with a solid business background.

## EARL INGRAM,
## Texas State University, CIM Patrons' Foundation
*Chairman*

**What is your involvement in the CIM program? Why did you get involved with the program?**

I am Chairman of the Texas State University CIM Patrons' Foundation. I have been involved with the TSU program since the initial discussion pertaining to possible expansion.

Prior to moving back to Texas, I was a civil engineering professor at the University of Tennessee and was somewhat familiar with the CIM program at MTSU. The idea for a CIM program in Texas originated from a Texas Aggregates and Concrete Association board meeting discussion. With knowledge of the high level of industry and university enthusiasm regarding a TSU CIM program and my familiarity with the Middle Tennessee program, I viewed the possible expansion as a great opportunity for our industry.

**Why have you and your company made the commitment to the CIM program? What benefits do you think it will bring to your company?**

Ingram Ready Mix, Inc. is of the opinion that the CIM program is the leader in management education for the concrete industry. We recognize that this is the first four-year degree program that is solely dedicated to educating the workforce for the entire concrete construction industry. The CIM program provides a talent recruiting pool for our company that previously did not exist.

**What are your thoughts about the industry/academic partnership between CIM and its industry partners and patrons?**

The concrete industry includes ready-mix, concrete construction, manufactured concrete products, cement, aggregates, admixtures, and related equipment. We are an industry that did not have a classical educational path that led directly to our businesses. The CIM NSC has developed a partnership between academia and industry that allows businesses to communicate their managerial and technical education needs to the educators.

**Why should other companies in the concrete industry get involved in the CIM program?**

In the business world, the value of educational programs is often measured by the demand of the knowledge gained. Through involvement in the education process, companies can ensure that their future employees possess the knowledge that is valued by the company. The strength of the CIM curriculum is that it was developed through a partnership between industry and academia to provide meaningful and useful knowledge to its students.

**How can they get involved?**

Each of the five CIM institutions has a local patrons' group that interacts with the faculty. The patrons' groups assist in facilitating needs of the program. Requests often include locations for educational field trips (such as plant tours and construction site visits), providing guest speakers that are experts on certain topics, and financial assistance for educational activities. Involvement allows companies to become familiar with the educational process, faculty, and students.

## ANGELA BROWN, Arizona State University

*Southwest Patrons' Chair*

**What is your involvement in the CIM program? Why did you get involved with the program?**

I am the Southwest Patrons' Chairman for ASU. I got involved with the program because of the available opportunities to share my professional experiences in the concrete industry with aspiring students.

**Why have you and your company made the commitment to the CIM program? What benefits do you think it will bring to your company?**

Propex strongly believes in the education and development of our industry. We realize that what is learned in the classroom and on field trips can be directly applied to real life applications. The benefits of the program are not only for the students, we feel the program will also keep patrons in tune with the future of the concrete industry.

**What are your thoughts about the industry/academic partnership between CIM and its industry partners and patrons?**

The CIM program offers a special opportunity for students; a unique partnership between industry experiences and classroom studies. An insight of the talent being developed from the CIM programs is paramount to our success as an industry.

**Why should other companies in the concrete industry get involved in the CIM program?**

The CIM program is a benefit to both parties involved. The students profit from the decades of professional experience our patrons have acquired, and the patrons get to interact with future industry talent.

**How can they get involved?**

By donating both time and funds, industry leaders can facilitate the growth of the CIM program. Along with recruiting, mentoring, and sponsoring students, any company can easily be engaged and help the program grow.

**What is your vision for the CIM program?**

Years from now this program will help the concrete industry be years ahead of other industries by better educating individuals in the specific skills and knowledge unique to the concrete industry. The CIM program will help expand upon the knowledge of the existing industry as well as enhance those entering the industry.

**How do you think the CIM program will benefit the concrete industry?**

The concrete industry will have well informed and specialized individuals with specific skills and knowledge that can help our industry embrace innovations as we look toward the future.

## ERIN WILLIAMS, Middle Tennessee State University

*Patrons' President and Board Member*

**What is your involvement in the CIM program? Why did you get involved with the program?**

I am a 2006 graduate of the MTSU CIM program. I am the current MTSU Patrons President and Board Member. The patrons are a group of industry professionals, graduates and interested parties who serve as the link between the Concrete Industry and Academia.

I originally got involved with the program because I was looking for a career change. I wanted to be involved in something where I could "see" the results of my work. So the concrete and concrete products industry seemed like a perfect fit. I began taking CIM classes and working for a local producer while I was in school to learn as much as possible. I chose to stay involved in the program because it is so unique. Never has there been such a joining of academia and industry. I've been through other programs and there is no other program that has the level of participation in an academic program as does the concrete industry.

**Why have you and your company made the commitment to the CIM program? What benefits do you think it will bring to your company?**

Ready Mix USA has hired nine graduates of the CIM program and will continue to hire graduates in the future. One of my job responsibilities is being the Ready Mix USA liaison for MTSU. The benefits these CIM graduates provide are that they are ahead of the curve when it comes to training. These graduates know the basics of the concrete products industry, meaning they can hit the ground running. The CIM graduates bring new and innovative ideas to the table and continue to impress when it comes to their love of the business.

**What are your thoughts about the industry/academic partnership between CIM and its industry partners and patrons?**

Again, this is a unique program. Dr. McPhee and those presidents of MTSU before him see the opportunity this program has to be expanded into other industries. Before this program, companies would have hired people with degrees such as Business or Accounting, then spend the next three years training them about the business. The turnover for the companies was astronomical. The CIM program provides graduates with a basic understanding of business, but more importantly the concrete business. Because of the industry involvement, students are able to get hands-on experience, do a summer internship with companies in the concrete industry and learn the day-to-day operations of their business. The patrons are the intermediary group between the students and the industry. The patrons are people who are out in the industry, spreading the word about the CIM program and getting feedback from companies on the things that are important to them, things they want graduates to know. The patrons also meet with students to see how their experience has been during their time in the CIM program, what students like and what they would like to see improved. The patrons are also a fund raising mechanism for the CIM program. These funds supplement the school budget and provide students with opportunities outside of the classroom.

# CIM STUDENTS HONOR FALLEN HEROES OF 9/11

STUDENTS FROM THE CIM PROGRAM honored the fallen firefighters of three New York City firehouses located in the Times Square area of New York City at the 2010 World of Concrete Artistry event in Las Vegas, NV. A memorial was constructed by the CIM students of CSU and MTSU in the form of two nearly 10-foot-tall concrete replicas of the World Trade Center towers. On September 11, 2001, these firehouses lost two Companies including the men and women on duty for Ladder 4, Engine 54 and Battalion 9.

The simple, evocative design – two vertical forms representing the silhouette of the Twin Towers – reflects light on a faceted surface etched with the names of the fallen firefighters. The CIM students at each university learned about the technique for the special glass fiber reinforced concrete process that was used on the project prior to arriving in Las Vegas for World of Concrete. At the show, the students performed all of the concrete work including forming, mixing and placing the concrete, erecting the completed panels, and dismantling the memorial at the end of the event.

The completed towers stand 9 feet 10 inches and 9 feet 8 inches, respectively, which mimics the appearance of the actual towers against the New York City skyline. The memorial towers were made of glass fiber reinforced concrete cast against faceted casting mats that produced a reflective mirrored finish. "The face of one tower is etched with the story of the 9/11 terrorist attacks, while the other displays the names of the 32 firefighters who lost their lives," said Tanya Wattenburg Komas, Director of Chico State's Concrete Industry Management program.

The memorial was presented to the Captain of the New York City firehouse in a ceremony Thursday, Feb. 4, at World of Concrete and the towers were placed in a memorial park across from the New York firehouse and will be rededicated in September 2011 on the 10th anniversary of the attacks.


ACI Foundation

NRMCA®

NPCA MEMBER

PCA
Portland Cement Association

RMC RESEARCH & EDUCATION FOUNDATION

American Concrete Pipe Association

National Concrete Masonry Association
FOUNDATION

PCI FOUNDATION

EDUCATION, RESEARCH & DEVELOPMENT
A S C C
FOUNDATION
AMERICAN SOCIETY OF CONCRETE CONTRACTORS

PROVIDING THE MEANS TO ADVANCE CONCRETE CONSTRUCTION

# ASSOCIATION RESOURCES

**The following association resources are a vital part of the curriculum in all of the CIM universities. Association publications and websites play a huge role in developing and maintaining the program — they allow our curriculum to be current and relevant.**

American Concrete Institute (ACI)

American Concrete Pavement Association (ACPA)

American Concrete Pipe Association (ACPA)

American Society of Concrete Contractors (ASCC)

American Society for Testing and Materials (ASTM)

Concrete Reinforcing Steel Institute (CRSI)

Federal Highways Administration (FHWA)

Hanley Wood

International Concrete Repair Institute (ICRI)

National Concrete Masonry Association (NCMA)

National Precast Concrete Association (NPCA)

National Ready Mixed Concrete Association (NRMCA)

Portland Cement Association (PCA)

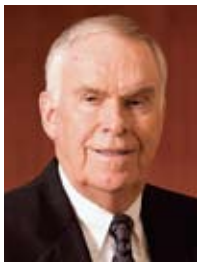
Precast/Prestressed Concrete Institute (PCI)

The Masonry Society (TMS)

The Post-Tensioning Institute (PTI)

## ADVANCING THE CONCRETE INDUSTRY BY DEGREES

Recognizing the need for people with enhanced technical, communication and management skills, the Concrete Industry Management (CIM) program was developed in 1996 at Middle Tennessee State University (MTSU). The individuals graduating from this program have the skill set necessary to meet the growing demands of the progressively changing concrete industry of the 21st century. It is a business intensive program, providing solid management skills that can be used in any industry, but has been developed specifically for the concrete industry. The program gives students many advantages including entering the concrete work force with exposure to the industry early in their careers, unlike others coming in with generic business degrees.



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The goal of the program is to produce broadly educated, articulate graduates grounded in basic business management, who are knowledgeable of concrete technology and techniques and are able to manage people and systems as well as promote products or services related to the concrete industry. It entails a broad range of courses, from English and history to science and mathematics. A series of required business courses such as finance, marketing, management and business law are also taken throughout the length of the program. The concrete-specific courses teach the fundamentals of concrete, properties and testing, concrete construction and more. All of these courses provide much more than what is simply in the text – they emphasize problem solving, quality assurance and customer satisfaction. They utilize practical case studies and an internship to make sure the student obtains real-world experience essential to starting a successful career.

The need for such a program was recognized and put into action by the concrete industry. The end-result was a partnership between the concrete industry and MTSU to develop the CIM program, implementing it with its first two students in 1996. Available at MTSU, Arizona State University, California State University, Chico, the New Jersey Institute of Technology, and Texas State University, the program has been successful for both the industry and the graduates.

## THE NATIONAL STEERING COMMITTEE

Administrative bodies were needed within the concrete industry to manage participation, guidance, and other forms of support related to the program. A grassroots advisory group, the CIM Patrons, was formed to raise funds, promote the program, recruit and mentor students, and provide guest lecturers for classes. A National Steering Committee (NSC), made up of pioneering concrete industry executives, was established to provide oversight to the CIM curriculum and supply guidance for general program direction from a national perspective.

The NSC Board of Directors includes the leadership of long-standing CIM financial supporters RMC Research & Education Foundation (RMCREF) and the Portland Cement Association (PCA). It has been joined by the National Ready Mix Concrete Association (NRMCA), the American Society of Concrete Contractors (ASCC), The American Concrete Pipe Association (ACPA), National Concrete Masonry Association (NCMA), the National Precast Concrete Association (NPCA), the Precast/Prestressed Concrete Institute (PCI) and the American Concrete Institute (ACI) Foundation.

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