



# PACE

PartnersfortheAdvancementofCollaborativeEngineeringEducation

moving the needle

2010 ANNUAL REPORT

## Letter from PACE Core Team

The vitality and value of PACE are evidenced in the momentum it maintained throughout the global economic crisis of recent years. The stamina of the program demonstrates the high degree of commitment of the PACE Partners, Contributors, and Supporters to the PACE Institutions and students, and ultimately to the PACE mission. The program’s strength is equally due to the tremendous dedication of the faculty to their students and to preparing them for successful engineering and design careers.

The energy and fidelity of PACE can be seen in this summary of activities for the year 2010. The successful PACE Annual Forum in Korea, the launch of the new global Sustainable Urban Transport project, and the increase in global courses and course competitions all manifest this. In addition, the American Society of Engineering Education (ASEE) selected PACE as the recipient of the 2010 Corporate Member Council (CMC) Excellence in Engineering Collaboration award, the highest award given by the CMC.

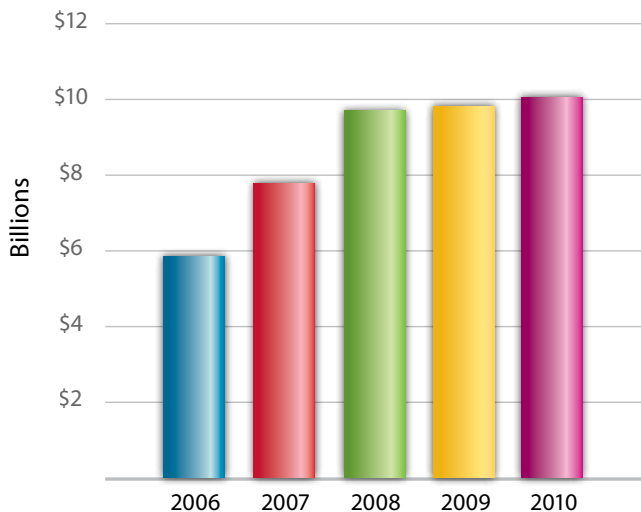
It has been said many times that “PACE will be what we make of it.” We thank everyone who makes PACE successful around the world in so many ways.

### The PACE Core Team:

- Vass Theodoracatos, GM
- Ed Martin, Autodesk
- John Nielsen, Hewlett Packard
- Keith Rajecki, Oracle
- Hulas King, Siemens PLM Software



## Cumulative Contributions



Year	Yearly Total*	Overall Total*
2010	\$ 348,618,352	\$ 10,175,258,766
2009	\$ 126,813,844	\$ 9,826,640,414
2008	\$ 1,889,779,973	\$ 9,686,953,993
2007	\$ 1,837,355,001	\$ 7,797,174,020
2006	\$ 2,007,794,971	\$ 5,959,819,019
2005	\$ 682,854,012	\$ 3,952,024,048
2004	\$ 574,441,059	\$ 3,269,170,036
2003	\$ 903,410,937	\$ 2,694,728,977
2002	\$ 1,071,862,140	\$ 1,791,318,040
2001	\$ 532,278,419	\$ 719,455,900
2000	\$ 131,753,981	\$ 187,177,481
1999	\$ 55,423,500	\$ 55,423,500

This annual report is made possible through the contributions of Autodesk, HP, Oracle and Siemens PLM Software.

\*All totals shown in U.S. dollars

## PACE is a “Winning” Program

PACE has been in existence for more than 10 years, and the PACE Partner and Contributor companies have provided more than \$10 billion of in-kind distributions to the PACE Institutions during that time. Each year, as the program continues to grow and develop, new “wins” are realized. Typical examples of these wins include the addition of new institutions and companies to the program, new collaborative student projects, and further integration of PACE software into the engineering or design curriculum at PACE Institutions.

## PACE Wins ASEE/CMC Highest Award

The American Society of Engineering Education (ASEE) Corporate Member Council (CMC) named PACE as the recipient of the 2010 CMC Excellence in Engineering Collaboration Award. Karl Stracke, GM vice president for Global Vehicle Engineering, (represented by Vass Theodoracatos, manager of Global PACE Partnerships), and Ed Arlin, vice president, Siemens, were on hand to accept the award at the ASEE 2010 Conference for Industry & Education Collaboration in Palm Springs, California in February. This award recognizes CMC members that demonstrate collaboration with colleges and universities, impact engineering education and heighten the interest of young people in engineering.



## CD-adapco Becomes New PACE Contributor

The PACE Contributor companies provide critical hardware, software, and services to the institutions. PACE invites one or more companies to join the program each year in order to supplement its offerings in a specific area. In 2010, CD-adapco joined PACE as a contributor company, providing the STAR-CCM+ and STAR-CD software products to PACE Institutions. GM uses the CD-adapco software products in the powertrain product development process, including internal fluid flow analysis, internal combustion engine simulation, and other advanced CFD calculations. More information about CD-adapco and its software can be found at [www.cd-adapco.com](http://www.cd-adapco.com).



## PACE Welcomes Inha University

Being selected to join PACE is just the first step for new PACE Institutions. After selection, the institution establishes its PACE Lab in order to provide access to the PACE software for students and faculty. The university also begins the process to integrate PACE software into its design or engineering curriculum, including CAD, CAE, and CAM courses. The institution incorporates PACE global projects and course competitions into existing courses and activities. Once the institution decides it has made good progress on these fronts, it invites the PACE partners to a celebration event to formally announce the university's association with PACE.

In May 2010, Inha University in Incheon, Korea was formally welcomed to the PACE program with a media announcement celebration. University President Bon-Su Lee welcomed representatives from the five PACE Partner companies, including D. Y. Sohn, President of GM Dae-woo, and K. R. Kwon, President of Siemens PLM Software Korea. The PACE Lab was officially opened with a ribbon cutting ceremony, followed by software demonstrations by Inha University students and faculty.



## PACE Now a GM Key Organization

PACE is now formalized as a GM "Key Organization," through the combined efforts of the GM PACE team and GM Talent Acquisition. This has positive downstream recruitment implications for GM since the Key Organization program facilitates the acquisition of critical skills. The Key Institution/Key Organization program works effectively in developing closer ties with universities and organizations, and is a primary component of GM's on-campus presence. The PACE Key Organization team will consist of a Key Organization Liaison (KOL), an Organization Relations Team Coordinator (ORTC), and Organization Relations Team (ORT) members who will work closely with the Functional Recruiting Leaders (FRL) and the Talent Acquisition Manager to better target future hires. Potential recruits can now identify PACE as the organization with which they are affiliated through the GM Student Center external website [http://www.gm.com/corporate/careers/usa/student\\_center.jsp](http://www.gm.com/corporate/careers/usa/student_center.jsp).

## PACE Faculty Perspectives

“The Partnership for the Advancement of Collaborative Engineering Education has strongly impacted the students’ abilities in engineering design, analysis and production.”

Dr. Xiaobo Peng, Prairie View A & M University

“PACE Program has become the most important central player of engineering/industrial design education in several departments that are concerned with product design and manufacturing at Hongik University.”

Dr. Hae Seong Jee, Hongik University

“The best part of the PACE Program has been to get involved in collaborative projects with other institutions, like the SUT.”

Professor Pedro Orta, ITESM Monterrey

“The PACE Program has been key enabler for the state-of-the-art CAX education of students.... We would be very glad to equally strengthen our collaboration with all PACE Partners and participate in more international university projects...”

Dipl.-Ing. Manuel Löwer, RWTH Aachen University

“The best part of the program is that our students are exposed to the state-of-the-art technologies during their undergraduate studies.”

Dr. William Cleghorn and Mr. Berhane Sertu, University of Toronto

“The whole PACE program provides a stage in which we can communicate with engineers from different countries.... The international view is the best part of the program.”

Dr. Zhang Yingchao, Jilin University

“It is a great asset to be able to meet with other PACE Universities and discuss with them how they integrate the PACE software tools into their curriculum.”

Mr. Robert Warner, Dalhousie University

“The PACE Program has opened up students’ interest and career paths that have traditionally been neglected by students in the fine arts.”

Dr. C. C. Lee, Howard University.

## PACE “Wins” from Siemens PLM Software

- Jilin University in China and SJCE in India certified 151 students in NX, enabling the students to “hit the ground running” for regional customers.
- Michigan Tech and University of Ontario Institute of Technology demonstrated the value of Siemens PLM products and saved customers \$1.85M ([http://www.plm.automation.siemens.com/en\\_us/about\\_us/success](http://www.plm.automation.siemens.com/en_us/about_us/success)).
- Siemens PLM Software hired 70 teammates from PACE Institutions in 2009 and 2010.
- An NX version 7.5 online tutorial was developed by Missouri University of Science and Technology, and is in use by numerous global institutions with great success.

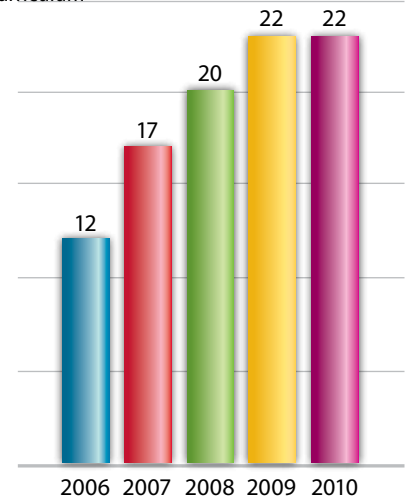
## PACE Curriculum in Engineering

- 13 PACE Institutions increased the number of CAD/CAM/CAE-related courses in their curriculum in the past year.
- 22 PACE Institutions restructured the CAD/CAM/CAE-related courses in their curriculum in the past year.
- 151 Students from PACE Institutions achieved the Siemens GO PLM NX certification.
- 5 students from PACE Institutions achieved other CAD certification.

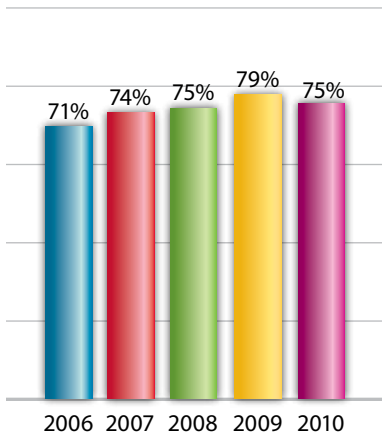
**“We feel that the PACE program is very important for our students, the software and hardware resources are very useful.”**

Dr. David Fernando Muñoz, Instituto Tecnológico Autónomo de México

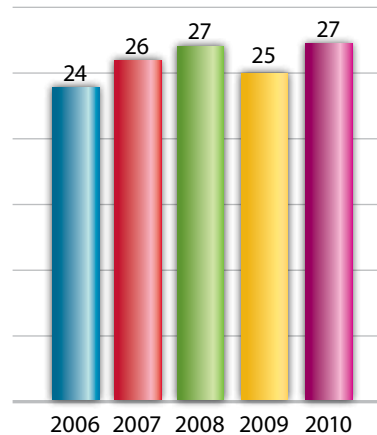
PACE Institutions with an Automotive Engineering Curriculum



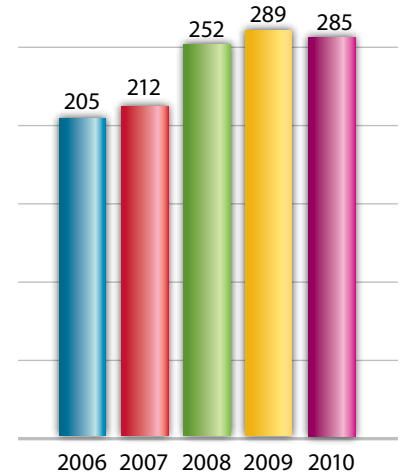
Percentage of Students Who Used NX Versus a Competitive Software



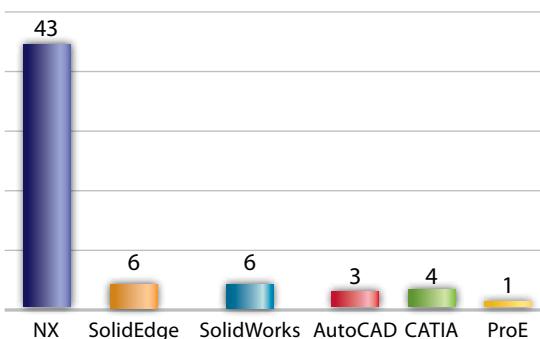
Number of PACE Engineering Institutions that Introduced NX in the First Year



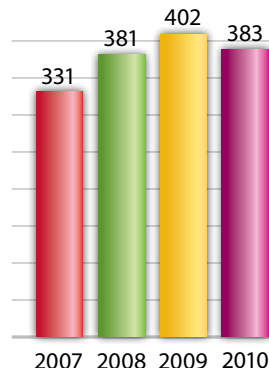
Number of Engineering Courses that Utilized NX Software



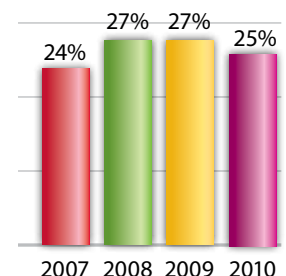
Primary CAD System in PACE Engineering Institutions



Number of CAE-Related Course Offerings



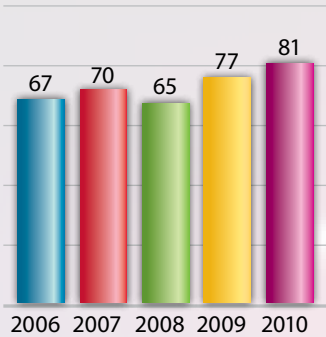
Percent of CAE Courses that Tie the CAE Function Back to NX Offers an Integrated Product Development Process



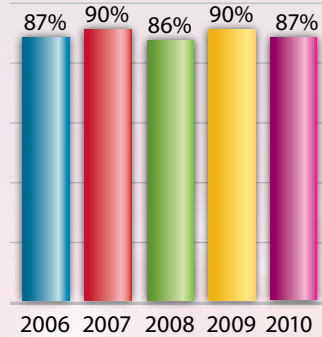
## PACE Curriculum in Creative Design

93% of PACE Design Institutions used Autodesk Alias Automotive Software as their primary CAD system

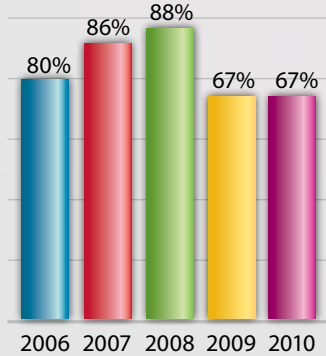
Number of Creative Design Courses that Utilize Alias Automotive Software



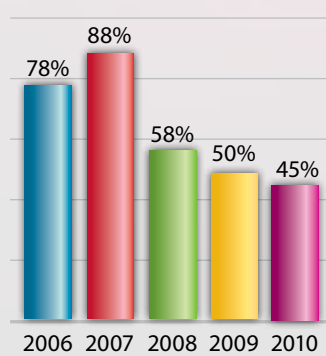
Percentage of Design Students Who Used Alias Automotive Versus a Competitive Software



Percentage of PACE Design Institutions that Introduce Sketchbook Pro in the First or Second Year

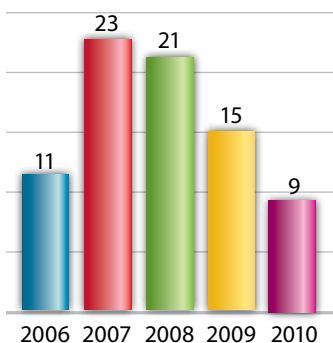


Percentage of PACE Design Institutions that Introduce Alias Automotive in the First or Second Year

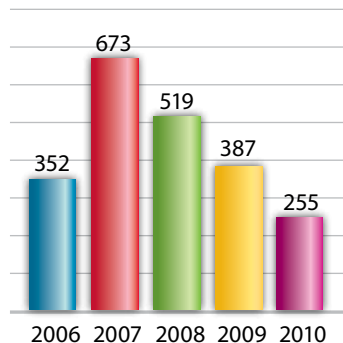


## PACE Curriculum in Manufacturing

Number of Digital Manufacturing Courses Using Tecnomatix



Number of Students Who Used Tecnomatix



“The best part of the PACE Program at Georgia Tech is that students have opportunities to gain hands-on experiences of engineering software that is currently being used in industry.”

Dr. Yan Wang, Georgia Tech

## PACE Courseware

Faculty and support staff developed numerous PACE-inspired textbooks, tutorials and other unique teaching materials in the past year. Some examples include:

- ITAM developed a tutorial for using Alias Automotive Studio
- RPI created tutorials for NX 7.5 Introductory Solid Modeling and Assemblies
- RPI created a tutorial for Simple Projectile Motion using MSC Adams
- University West developed teaching material for Tecnomatix Process Designer and Process Simulate
- University of Puerto Rico developed a tutorial for NX in an engineering design course
- University of Puerto Rico created tutorials for using FLUENT in an undergraduate fluid dynamics course
- MST developed the “NX7 for Engineering Design” self-paced, step-by-step tutorial
- PVAMU created MotionView tutorials for the Kinematics Design and Analysis course
- SJCE updated teaching materials and exercises for using NX in a CAD course, and for using HyperWorks in an FEM course
- Tongji University created a series of teaching materials for Alias Studio
- RWTH Aachen updated tutorials to NX 7.5
- SJTU updated the tutorial “The Parameter Design of Mechanical Engineering” to NX6

## PACE Students Use Software

Number of Students Who Utilized PACE Software				
PACE Software	Students 2007	Students 2008	Students 2009	Students 2010
MSC Adams	1,748	2,605	2,797	1,816
Altair HyperWorks	1,504	2,303	2,220	3,014
MSC Nastran	1,839	2,340	2,194	3,408
FLUENT	1,758	1,946	1,854	1,492
Teamcenter Engineering	1,241	1,354	1,710	1,185
AutoDesk Direct Connect	490	495	1,391	72
Teamcenter Community	794	837	1,343	793
Sketchbook Pro	760	369	1,055	456
JT Open	36	833	765	84
Tecnomatix	673	509	387	255
RTT DeltaGen	n/a	238	275	25
GT Power	54	242	256	201
LS-DYNA	92	890	210	330
Isight	50	53	67	124

## Training On PACE Software

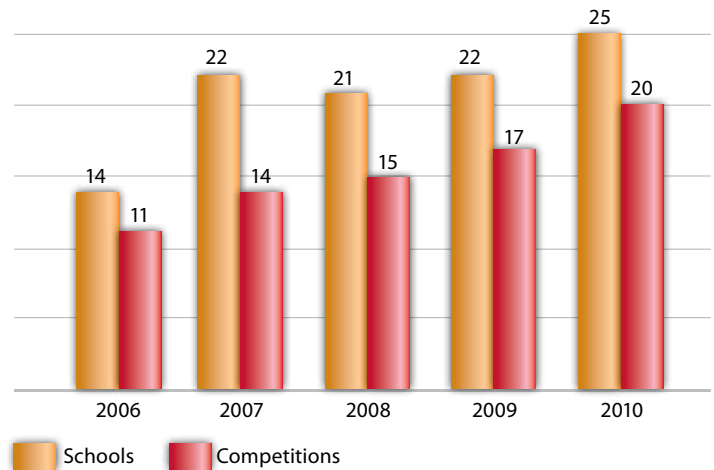
Over 400 Faculty, Teaching Assistants and Administrators Participated in PACE-Sponsored Training this Year.

Siemens PLM Software	81
Siemens PLM Software Teamcenter	5
Autodesk Alias Automotive	35
Autodesk Maya	22
Autodesk Sketchbook Pro	20
Altair HyperWorks	134
ANSYS Fluent	49
CD-adapco STAR-CCM+ & STAR-CD	6
Gamma Technologies GT Power	2
LSTC LS-Dyna	20
MSC Software Adams	23
MSC Software Nastran	19
RTT DeltaGen	21



## PACE Competitions

PACE sponsored 20 competitions at 25 institutions in 2010. More than 1,390 students participated in these competitions.



## 2010 Course Competitions

Institution Name	Course Name	Student Year
Georgia Institute of Technology	Interactive Computer Graphics and Computer-Aided Design	4th-year students
Hongik University	Automotive Chassis Design	4th-year students
Inha University	General Design of Mechanical Engineering	3rd/4th-year students
Instituto Tecnológico Autónomo de México	Computer Aided Design	3rd-year students
Korea University	Computer Aided Mechanical Drawing	2nd-year students
Lehigh University	Manufacturing Process	3rd-year students
Michigan State University	Computer Aided Design Tools	2nd/3rd/4th-year students
Michigan Technological University	Engineering Modeling and Design	1st-year students
Michigan Technological University	Computer Aided Design Methods	3rd/4th-year students
Northwestern University	Computer Integrated Manufacturing	3rd-year students
Purdue University	Contemporary Problems in Computer Graphics	4th-year students
Sri Jayachamarajendra College of Engineering	CAD/CAE	3rd-year students
Sungkyunkwan University (SKKU)	CAD/Product Information Management	2nd/3rd/4th-year students
Tuskegee University	Capstone Design	4th-year students
Tongji University	Fundamentals of CAGD	2nd-year students
University of Ontario Institute of Technology	Engineering Graphics and Design	1st-year students
University of São Paulo	Engineering Graphics Design	1st-year students
University of São Paulo	Best Automotive Engineering Capstone Project	4th/5th-year students
Brigham Young University, University of São Paulo, ITESM-Toluca, Hongik University, Tongji University, Universidad Iberoamericana, University of British Columbia, Wayne State University	CAX Engineering Applications	Varied
Virginia Tech, Technische Universität Darmstadt, ITESM-Monterrey, and Shanghai Jiao Tong University	Global Collaborative Engineering Design	4th/5th-year students

## PACE Global Annual Forum

The 2010 PACE Global Annual Forum was co-hosted in Seoul, Korea by GM Daewoo, Hongik University, Inha University, Korea University, and Sungkyunkwan University. Delegates reported on successful PACE activities, exchanged best practices, planned global collaboration projects for the new academic year, and toured the GM Daewoo Cheong-Na proving grounds and Bupyoung plant.



- 177 Attendees from 48 PACE Institutions and Companies in 11 countries
- 28 Faculty presentations and 20 posters from 30 PACE Institutions around the world
- 13 Industry presentations from 9 companies, including keynote addresses by:
  - Steve Clarke, Vice President GMIO Engineering
  - Dongyoun Sohn, Vice President GM Daewoo Vehicle Engineering
  - Tim Hsu, Director Asia Pacific, Siemens PLM Software
  - Joon Sik Lee, National Chairman Green Technology Committee
- 20 Student teams from 15 PACE universities reported their results from the engineering and manufacturing phases of the Emerging Market Vehicle global collaborative project



- 6 Presentation awards for outstanding presentations in the areas of:
  - Engineering: Robert Smith and Ashan Perera of Monash University
  - Design: Brigid O’Kane of University of Cincinnati
  - Manufacturing: S. V. Satish and Manjunath S. S. of PESIT
  - Curriculum: Greg Jensen of Brigham Young University



- 2 Outstanding poster awards given to collaborative posters by Hongik University, RWTH Aachen University, University of Texas at El Paso, and Prairie View A & M University

- 3 Outstanding performance awards were given to Marcelo Alves of the University of São Paulo, Jan Helge Bøhn of Virginia Tech, and Guruprasad D. V. of GM India



- Panel discussion and global project rollout engaged faculty discussion to ensure new project integrates well into curricula at PACE Institutions

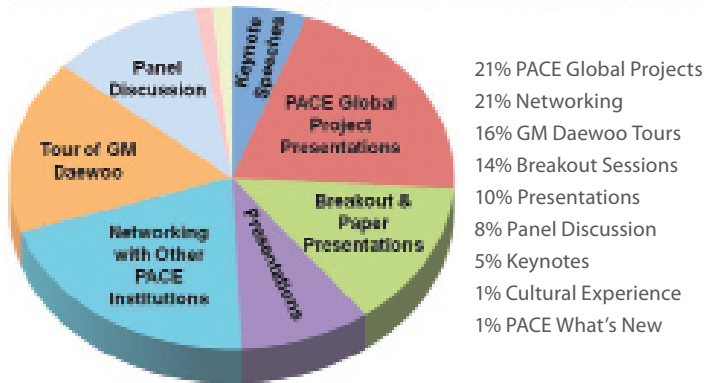
- Cultural activities promoted networking, cultural awareness and global goodwill

- 96% of attendees found the 2010 PACE Forum to be productive use of their time



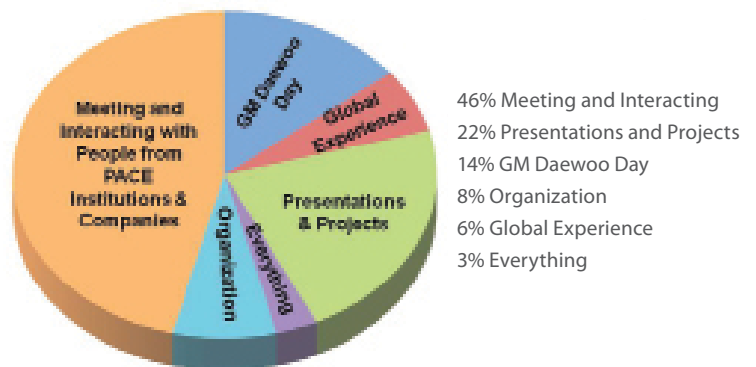
## Participant Feedback

What part of the Forum was most valuable to you?



## Participant Feedback

What did you like best about the PACE Forum?



## PACE Laboratory Award

The annual PACE Laboratory Award recognizes one PACE Institution for creating a superior laboratory environment for its students. The University of Ontario Institute of Technology is the recipient of the 2010 PACE Lab Award.



The UOIT PACE Lab features excellent flexibility in layout and equipment, which allows the space to be used simultaneously for classes or collaborative project work. Prizes include a recognition plaque, hardware from HP and Wacom, a custom PACE sign from Autodesk, and software from Siemens PLM Software.

## PACE Laboratories

PACE Institutions have a Variety of PACE Labs

Type of PACE Lab	2007	2008	2009	2010
CAD Laboratories	40	43	43	47
CAE Laboratories	27	32	30	21
Collaboration Laboratories	15	21	20	17
Digital Manufacturing Laboratories	3	7	10	12
Prototype Laboratories	11	14	19	4
Multi-disciplinary Design Lab	n/a	1	1	1

## PACE Global Collaborative Projects

PACE offers students the opportunity to participate in collaborative product development projects and experience many of the same challenges that designers, product engineers and manufacturing engineers encounter in industry today. Through global projects, students work in distributed virtual teams and hone the collaboration and team-building skills required by global companies.

### PACE Sustainable Urban Transport Project

By 2030, urban areas will be home to more than 60% of the world’s 8 billion people, putting tremendous pressure in the form of pollution, congestion, energy security and traffic safety, on a public infrastructure that is already struggling to meet the growing demand for transportation and basic services. The importance of and need for sustainable mobility is critical.

The PACE Sustainable Urban Transport (SUT) addresses the future of urban transportation by challenging students to design and engineer a sustainable urban transport solution for a specific urban area. Seven global teams of engineering and design students from 30 PACE Institutions are engaged in the SUT project. The SUT team structure promotes collaboration between design and engineering students, as well as between schools.

Professor Marcelo Alves of the University of São Paulo is the global project leader for engineering, and Professor Brigid O’Kane of the University of Cincinnati is the global project leader for design. Individual team leadership is shared by the faculty and students comprising each team. The project is structured as a competition with team presentations and judging at the 2011 PACE Forum. Prizes will be awarded in the areas of market research, design, product engineering, manufacturing engineering, and collaboration.

Inspiration for the project came from the GM Electric-Networked Vehicle (EN-V) concepts unveiled at the Shanghai Expo. A team of PACE Institution professors and GM engineering and design mentors formulated the project plan, adjusting overall project timing to make the project more easily integrated into academic courses and senior design projects.

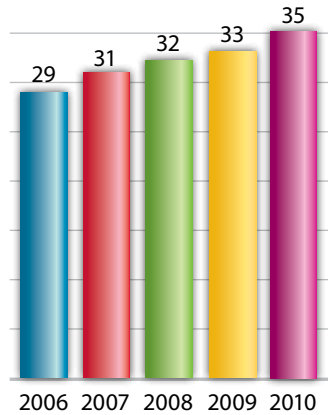


Team #1	Team #2	Team #3	Team #4	Team #5	Team #6	Team #7
University of Cincinnati (USA)	Monash U (Australia) & Hongik U. (Korea)	National Institute of Design (India)	Tongji University (China)	ITESM Monterrey (Mexico)	College for Creative Studies (USA)	Howard University (USA)
University of Cincinnati (USA)	Hongik University (Korea)	POST Institute of Technology (Japan)	Tongji University (China)	ITESM Monterrey (Mexico)	Instituto Politécnico Nacional (Mexico)	University of Toronto (Canada)
University of Pennsylvania (USA)	Northwestern University (USA)	Sri Jayachamarajendra College of Engineering (India)	Alln University (China)	ITESM Toluca (Mexico)	Queen's University (Canada)	University of Ontario Institute of Technology (Canada)
Mohiaber University (Canada)	Tulseege University (USA)	Michigan Tech (USA)	Songkrunkwan University (Thailand)	Michigan State (USA)	Prattview A.B.M. University (USA)	University West (Sweden)
University of British Columbia (Canada)	Inha University (Korea)	Universitat Internacional (Spain)	University of São Paulo (Brazil)	Virginia Tech (USA)	University of Puerto Rico (USA)	Pohang Steel (Korea)

## PACE Institutions Collaborate

- 17 PACE Institutions have collaboration labs
- 23 PACE Institutions have video-conferencing systems
- 793 students use Teamcenter Community

Number of PACE Institutions that collaborated on projects/programs with other PACE Institutions



“Very positive program for Wayne State.”

Dr. Michele Grimm, Wayne State University

### PACE Emerging Market Vehicle Project:

## Manufacturing Engineering Phase

The Manufacturing Engineering Phase is the third and final phase of the multi-year PACE Emerging Market Vehicle (EMV) global collaboration project. The objective of the project was to design, engineer and build a manufacturing system for mass production of the EMV using math-based global collaboration. This phase integrated manufacturing engineering with the earlier concept design and product engineering phases, and provided a manufacturing-oriented project that simulated the real-world development of manufacturing processes and environments.

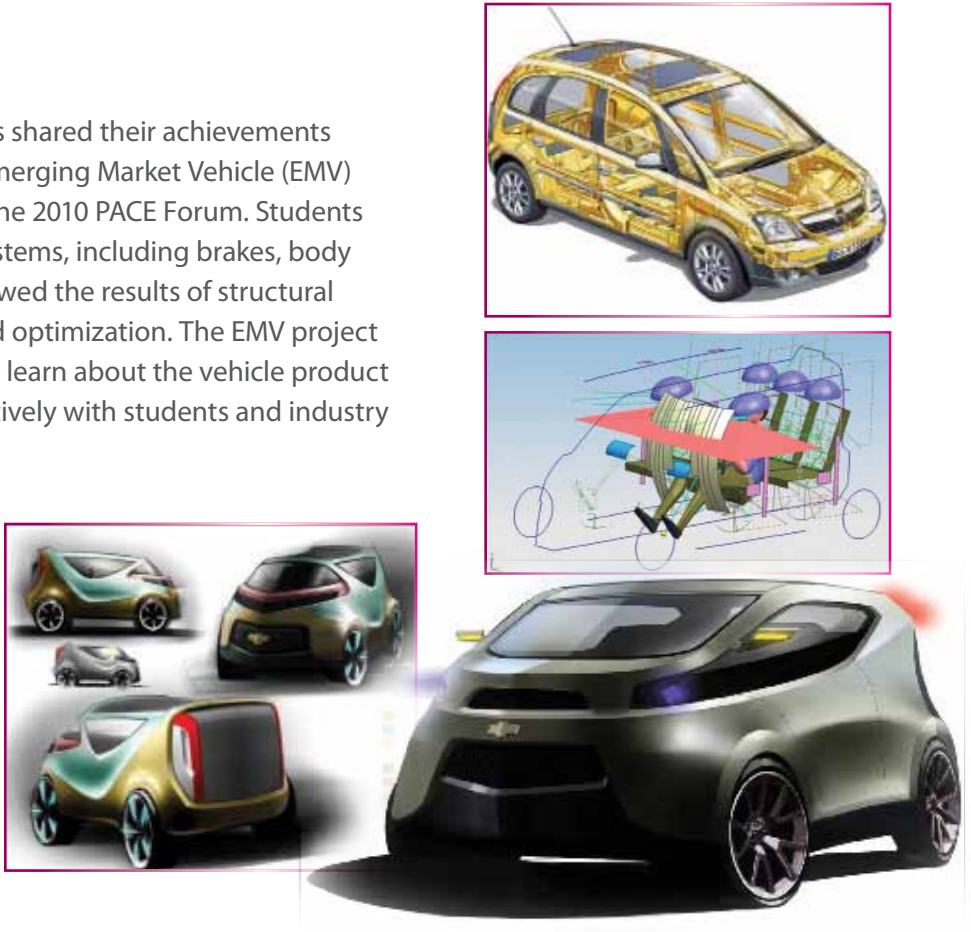
Twelve student teams from seven PACE Institutions demonstrated the results of the Manufacturing Phase at the 2010 PACE Forum. Teams addressed a variety of vehicle manufacturing areas including general assembly, body assembly, paint, stamping press engineering, die design, and door, chassis, wheel, suspension, and steering system assembly. The capstone of the project was a video of the entire virtual plant showing the assembly of each subsystem and the final vehicles. This phase of the project was led by Professor Sang Do Noh of Sungkyunkwan University in Korea.



**PACE Emerging Market Vehicle Project:  
Engineering Phase**

Student teams from eight PACE Institutions shared their achievements from the Engineering Phase of the PACE Emerging Market Vehicle (EMV) global collaboration project on July 27 at the 2010 PACE Forum. Students presented their work on a variety of subsystems, including brakes, body structure, transmission and HVAC, and showed the results of structural analysis, computational fluid dynamics and optimization. The EMV project provided students with the opportunity to learn about the vehicle product development cycle, and to work collaboratively with students and industry mentors in other countries.

The student presentations were the culmination of the EMV project, which began with a conceptual design phase in 2008. The engineering phase of the EMV project spanned two years, and was lead by Projessor Marcelo Alves of the University of São Paulo in Brazil. Throughout the project, faculty leaders integrated the project into their classes and coordinated project objectives with their own academic goals.



**PACE Formula-1 Race Car Project**

Brigham Young University and Hongik University maintained the momentum of the PACE Race Car project in 2010. The focus of the project, now in its fourth year, was to prepare the vehicle for time trials at the Mid-Ohio Sports Car Course prior to the August 2010 AMLS challenge. This required analysis and redesign of a suspension upright and the diffuser. Professor Greg Jensen of BYU and Professor Kwanju Kim of Hongik University presented the highlights of the project at the 2010 PACE Forum. The vehicle was also displayed at the GM Technical Center in Warren Michigan in September.



## PACE Institutions\* – 2010

- |   |  |   |
|---|--|---|
|  <b>Australia</b><br>Monash University  |  <b>India</b><br>National Institute of Design<br>PES Institute of Technology<br>Sri Jayachamarajendra<br>College of Engineering   |  <b>United States</b><br>Art Center College of Design<br>Brigham Young University<br>College for Creative Studies<br>Georgia Institute of Technology<br>Howard University<br>Kettering University<br>Lehigh University<br>Massachusetts Institute<br>of Technology<br>Michigan State University<br>Michigan Technological University<br>Missouri University of<br>Science & Technology<br>New Mexico State University<br>Northwestern University<br>Prairie View A&M University<br>Purdue University<br>Rensselaer Polytechnic Institute<br>Tuskegee University<br>University of Cincinnati<br>University of Michigan – Ann Arbor<br>University of Pennsylvania<br>University of Texas at El Paso<br>Virginia Tech<br>Wayne State University |
|  <b>Brazil</b><br>University of São Paulo   |  <b>Mexico</b><br>Instituto Politecnico Nacional<br>Instituto Tecnologico Autonomo<br>de Mexico (ITAM)<br>ITESM – Estado de Mexico<br>ITESM – Monterrey<br>ITESM – Toluca<br>Universidad Iberoamericana |   |
|  <b>Canada</b><br>Dalhousie University<br>Queen’s University<br>University of British Columbia<br>University of Ontario Institute<br>of Technology<br>University of Toronto<br>University of Waterloo |  <b>South Korea</b><br>Inha University<br>Hongik University<br>Korea University<br>Sungkyunkwan University  |   |
|  <b>China</b><br>Jilin University<br>Shanghai Jiao Tong University<br>Tongji University   |  <b>Sweden</b><br>University West   |   |
|  <b>Germany</b><br>RWTH-Aachen University<br>Technische Universität<br>Darmstadt   |  |   |

\*Institutions formally announced

“The PACE program has been very successful in promoting CAD/CAE/CAM education at our university and in providing powerful computer software tools that students can use in the design of mechanical components and products, analysis of their suitability, and realization of the design through computer-aided prototyping and manufacturing.”

Dr. Xiaoping Du, Missouri University of Science and Technology



Autodesk®



ORACLE

SIEMENS

Additional Contributors



# PACE

Partners for the Advancement of Collaborative Engineering Education

## moving the needle

PACE Office  
General Motors Company  
6442 East 12 Mile Road  
Mail Code: 480-303-110  
Warren, MI 48090  
USA

[www.pacepartners.org](http://www.pacepartners.org)