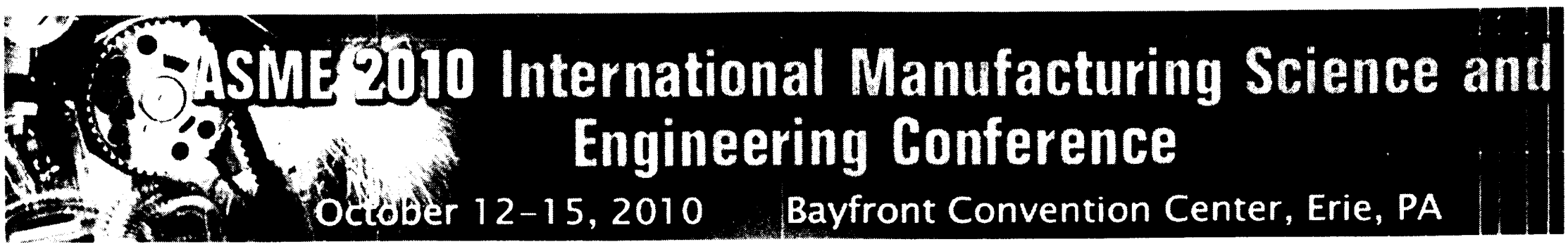
Behrend hosts ASME manufacturing Conference



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The School of Engineering is currently hosting the American Society of Mechanical Engineers Manufacturing Science and Engineering Conference.

The conference ran from Wednesday, Oct. 13 to today, Friday, Oct. 15 at the Bayfront Convention Center.

Jack McDougle gave the key note speech on Thursday after speakers like Dave Grzelak (CEO of Komatsu America) and U.S. Representative Kathy Dahlkemper.

"What do 400 CEOs and business executives around the world think about the state of U.S. manufacturing and prospects for the future," said McDougle, Senior Vice President of U.S. Council on Competitiveness.

McDougle explained the history of manufacturing and stressed the importance to increase the innovation of manufacturing.

The U.S. is currently the 4th leading country in manufacturing, but McDougle worries that it will slip to 5th if we don't address the concerns about our position and develop solutions to our possible decrease.

"We do not want to lose the know how to manufacture, lose the know how to invent things, lose the know how to innovate things," said McDougle.

According to McDougle working in manufacturing, is beneficial. This sector is the highest paid output of the economy, sitting at a $1.40 rate compared to others, such as information technology, which is at $1.

He explained how the United States has 11 million workers in manufacturing, compared to China's 70-100 million.

On Oct. 14, the conference featured 20 symposia topics.

David Loker (Assistant Professor of Engineering) and John Roth (Assistant Professor of Mechanical Engineering) directed research on a Bluetooth transmitter during the spring of 2010. Loker and Roth worked with students Derek Suen and Richard Sowles.

Using a spectrum analyzer with an EMC antenna, they received signal strength and collected data. A Bluetooth board was also used in their research, which was designed by a former student.

The logic of the program was to allow users to type and transmit text to a different device.

The testing was done in a rural area, and they then compared the signal strength to that in obstructed areas with buildings and machines.

The research concluded the large area equipment operation is not a contributing factor to the signal and there was no significant noise emission relative to distance.

"Wireless transmission can potentially be important when you are interested in tool health, in wireless labs," said Loker.

The conference also featured organizations such as Boeing, Caterpillar, Cummins and GE.

This was the first time Behrend hosted the three-day conference.

Amanda Snyder / Behrend Beacon

McDougle speaks before introducing the panel.

Amanda Snyder / Behrend Beacon

McDougle gives keynote address to CEOs and Engineers.

Indonesian professor loses doctorate for plagiarism

CHRIS HENLEY
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When one hears plagiarism, writing is always the first subject that comes to mind.

Across the Pacific, at Institute Teknologi Bandung (ITB), in Indonesia, plagiarism was spotted.

A lecturer at the school was found guilty of plagiarism. The penalty - losing his doctorate degree.

In order for him to gain his degree, it was a requirement that he have a paper published.

The paper was published and posted in The Institute of Electrical and Electronic Engineers' (IEEE) digital library. The offense was realized after an allegation had been made and IEEE further investigated.

They concluded that he submitted a nearly complete copy of an Austrian scholar's work.

He has now stepped down from his position at ITB and also, IEEE has flagged his article in their library.

Now, the whole world can know about this guy's mistake. Not only that, but he is also banned from publishing anything in any IEEE publications for three years (beginning in April 2009).

Plagiarism and engineering are typically not topics we associated with one another.

It is the same as stealing a candy bar from the grocery store. You get caught, you face the consequences.

Not all cases are like this one though. The professor copied another's work because he needed a paper to get his degree, but imagine a situation that most, if not all, students have been in.

It's Sunday night. You have spent the entire weekend doing everything, besides your project (that was assigned two weeks ago). You are so stressed. You feel rushed and don't believe that you have enough time to finish.

The problem is a lack of time. Since you don't have enough time to think of anything on your own, the motive is there to plop on that computer and look up something that will get you a good grade and require much less effort on your part.

"When there is plagiarism in the engineering field, what do you think motivates it," asks Mrs. Melanie Ford, Head of the Engineering Outreach Center and Lecturer here at Behrend's school of Engineering.

"It can be summed up in one word, time. Many cases we see here in the School involves students who ran out of time to get an assignment done, or felt that when you work with someone, it's okay to copy each other's work. When it comes time to do the problem, or write the computer program, it should be your own work."

For many of the cases, a simple question to the professor or to a tutor would have avoided the situation.

"Do you want a student who copies others to design the medical equipment to keep you alive, said Ford. "Or the car you drive? Or the bridge your cross?"

Time management is crucial as a student and in life. Every professor on campus would agree that they want more than a few hours of work done on the programming sheet before the day it's due, no matter the topic.

"If you are given any length of time to complete any assignment, then it should not be hastily done the night before or as you sit in class," said Ford.

Time management, that's the key. If time is rationed carefully, any moment that there is to cheat or copy can be prevented.

> "Do you want a student who copies others to design the medical equipment to keep you alive? Or the car you drive? Or the bridge your cross?"
>
> **-Melanie Ford**

Quote of the week:

"Engineers like to solve problems. If there are no problems handily available, they will create their own problems."

-Scott Adams

Question of the Month:

Do you feel Professors with tenure become less effective at teaching students?

send us your opinion!

Email Engineering editor, Ryan Frankowski: rsf5054@psu.edu

One engineer's frustrations with SCALE-UP physics

EDITORIAL

LOUIS ROBINSON
engineering writer •chemical engineering

SCALE-UP Physics, an acronym for Student Centered Activities for Large Enrollment Undergraduate Programs.

Most engineers hear this and almost immediately want to throw up. SCALE-UP Physics is Penn State Erie's gift to every aspiring engineer or scientist.

Inspiring every engineer to think about becoming a business major since 2007. Arriving at Behrend a few years ago this program "is an innovative approach to teaching introductory physics. Using an innovative pedagogical approach and a unique classroom design, SCALE-UP seeks to reduce physics courses traditionally high drop-out rate by giving students greater responsibility in the classroom, not less" says an article on the Penn State Erie website.

Did everyone really think this was such a great idea? All the professors sitting around a table saying, "hey guys, the students aren't doing very well we need a new approach," and another one said, "I got it! Let's not teach them at all! They can learn on their own then everybody wins!"

Most students understand the thought process behind it on how giving students more responsibility is a good thing, but in a complex subject like physics is extremely difficult and time consuming.

For anyone who has not taken Physics 211 or 212 at Behrend, here's the low-down. You walk into a giant room with round tables and fancy equipment and sit down at a table with two other partners.

When class starts the professor throws worksheets at you and tells you to crack away at them and turn them in when you're done. There you go, that's the class!

The worksheets consist of oddly worded questions that don't make any sense and end in frustration and headaches.

If you get stuck though you can raise your hand to ask the professor or a TA for help, this usually results in two different scenarios.

One, they could spin you in circles and reword the question you asked them and throw it back at you and walk away leaving you clueless.

Or, two, after some emotional abuse on how "it's just basic algebra," or "if you would have read the book you would know" they actually show you and what's left of your dignity how to find the answer.

A professor told a class "we are more your coaches than we are your teachers." So, when people ask them what they do for a living, they should tell them, "oh we're physics coaches at Penn State Erie." Physics is a class not a sport.

Some professors truly believe that a class that throws away instruction completely and forces students to learn it themselves is the better alternative. The United States Army does not tell their troops, "we're going to just skip the whole boot camp thing and send you guys right into the action, so you can learn more efficiently."

Approximately 65 percent of the population learns visually as opposed to only 5% who are kinesthetic learners. Students need to see the information. Students need to see how to approach such problems that arise in physics, not just try and guess at it and be completely wrong. That doesn't solve anything.

Now, if the SCALE-UP program consisted of a lecture one day and the lab stuff another day I think that would be a lot better because it would incorporate visual and kinesthetic learning.

When scheduling make sure you as a student have the choice to attend a Physics lecture class at a branch over the summer.

Any student within the School of Engineering benefits from involvement in a publication. The Beacon is currently recruiting writers for our new Humanities page, which covers all majors within the school.

What are you waiting for?

Cover news that *you* care about!

To write for the Engineering page, e-mail Engineering Editor Ryan Frankowski at rsf5054@psu.edu.