

Industrial Technology

ACADEMIC AFFAIRS

NOTES FROM THE REGISTRAR

Early Spring 2013 Registration Dates:
Mon., 11/5 - Wed., 12/12
Early Registration Fee Payment Deadline:
Wed., 12/12
Add/Drop Activity will be closed:
Thur., 12/13 through Mon., 12/17
Open Registration begins:
Tue., 12/18

All tuition and other fees must be paid, or a fee deferment/waiver must be updated, or an installment payment plan paid and submitted by Wed., 12/12. Classes will be canceled for non-payment of fees.

Enrollment Limits:

The following groups of students, approved by the President, will have the 16 unit limit automatically increased:

- 1) Seniors with 95 or more units completed
- 2) Honors program students
- 3) High unit majors (Nursing, Engineering, Music)
- 4) ROTC program students
- 5) 4-year Guarantee Program students

The unit increase will be based on the students' GPA:

Less than 2.50 = 18 units
2.50 - 2.99 = 19 units
3.00 - 4.00 = 22 units

Any exceptions to the enrollment limits will need to be approved on an Excess Units petition form. The Admissions and Records Office will begin accepting the Excess Units petition forms beginning on Thursday, 12/13.

Graduate/Doctorate/Advanced Certificate students = 16 units (*exceptions must be approved with an Academic Overload petition through the Graduate Office*)

NEW CHANCELLOR NAMED

The California State University Board of Trustees named Timothy P. White as the 7th Chancellor to lead the 23 CSU campuses.

Born in Buenos Aires, Argentina, Dr. White immigrated to Northern



California, and is a first-generation college student who has matriculated within every college system in California. After beginning at Diablo Valley Community College, he earned a bachelor's from Fresno State, a master's degree from Cal State Hayward (East Bay), and a Ph.D. at UC Berkeley.

Dr. White said, "As Chancellor, I look forward to engaging with faculty, students, staff, campus presidents and CSU trustees, along with the communities we serve, as we advance this vital system of higher education for California's future." He is expected to start in his new position at the end of December 2012.

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BSIT MAJOR CODE HAS BEEN CONSOLIDATED INTO ONE

Effective 2012-13 Catalog Year, the Industrial Technology (IT) major code is consolidated into one, Industrial Technology (130710BS), from 19 options derived three decades ago from the discipline of Industrial Arts when the focus of the department was to train shop teachers for public schools. With the increased emphasis on multi-disciplinary knowledge, multi-faceted specialties

are being brought under a single umbrella of study, changing the technical areas of study to include areas such as control, automotive, quality, manufacturing and computer applications. The change will encapsulate interdisciplinary content and facilitate optimal delivery of instruction. Students who are under the existing options will continue to be supported by the program and faculty.

FROM THE ADVISORY BOARD CHAIRPERSON, MR. SEAN WOLFE

The Advisory Board of Industrial Technology (ABIT) has met throughout the year with the IT Faculty and Chair and is currently focused on an IT Internship Program. The program is being detailed and we should be releasing information very soon. We hope to have good participation from the IT student body. ABIT truly believes that an internship is key to building experience for the student. The program requires students to be successful in a workplace

environment and organization, provides projects for the students in accordance with curriculum, and helps build exposure of the IT program and education within the community. A new intent for the Board is the exploration of a Modern Agriculture and Applied Technology curriculum. We will be proposing an emphasis that involves GIS/GPS technology with application in agriculture from machinery to field, will involve a water component, internships and farm oriented projects. There is

enormous local, state, national and even international need for applied technologies in the field of modern agriculture and IT is uniquely positioned to educate students in this highly demanding field. The Tulare AgShow in February is an excellent opportunity for interested students to see this in action with real potential employers. Any questions on either of these programs should be directed to the IT Office. The Board also discussed Key Performance

Indicators (KPIs) with the Department, namely Student Enrolment and Curriculum Review and we often discuss the advertisement of the IT Program on campus, other CSU schools and media. Lastly, the passage of Proposition 30, while it does not address the long term State spending problems, does give the CSU and Fresno State some breathing room and should encourage our students to continue to pursue their dreams of education and career success.

STUDENT ACTIVITIES

MSIT graduate **Sheenam**, Dr. Mahalik and Dr. Zhang published a paper on “Bio-inspired data analysis for classification and decision making: Intended for automated systems” in the *International Journal of Computational Vision and Robotics (IJCVR)*, Inderscience Publications, 2012.

MSIT student **Gurjeet Sarao** has been researching in the areas of technology system specification to improve air quality due to the emission of gasses from the glass manufacturing facilities. Guided by Dr. Mahalik, he is examining the glass manufacturing process to understand the origin of all types of emissions and subsequently to try to formulate retrofitting technology solutions.

Surya Kurma, current MSIT student, is working on a project “Automation of Wind Tunnel for Dust Mitigation” under the guidance of Mr. Diganta Adhikari and

Dr. Mahalik at the Center for Irrigation Technology, Fresno State. He is setting up an automation and control system for the wind tunnel, a simulation platform to study and characterize the dust mitigation problem.

Khaled Abualrejal, current MSIT student, who joined us in Spring 2012, was awarded the prestigious Harvey Scholarship/Jordan Assistantship from the Jordan College of Agricultural Sciences and Technology.



Recent BSIT graduate, **John Clark**, is the Senior Technician and Instructor at the College of Engineering, UC Santa Barbara. **Kenny Buzdas** is a Process Manager for Sunsweet Growers, Inc. in Yuba City. Sunsweet is the world leader in processing dried tree fruit as well as juice production.

Robert Ceja, a IT Senior, Mr. Steve Waenke, IT part-time instructor, and Dr. Mahalik are engaged in a sprinkler head project in collaboration with Dr. David Zoldoske, Director of Center of Irrigation Technology (CIT) at Fresno State and Weather Tec’s National Sales Manager, Mr. Dean Parrish.

Graduate Corner

8 MSIT students presented their Independent Study / Final Project work at the Spring 2012 Colloquium held in the Department on May 10, 2012. 5 students graduated in Spring 2012.

STUDENT CLUB ACTIVITIES

Fresno State Motorsports Car Club members are working on a 1989 Mazda Miata with an engine of about 100 hp (on wheel). They will redesign the engine with a target of 15-20% higher hp, then add a turbo to reach about 220 hp.

The Alternative Energy Club members are continuing their project on the Solar Dish, attaching an absorption refrigerator and a fan

to act as an AC system for the car but not belt driven, as well as hot oil pump heated by the solar panels. We look forward its completion.

Advanced Technology Enterprise Club members have been very active with filling engraving orders for the campus community, they have made plaques, name tags, trophies, clocks, pens/pencils, and building directories, etc. The club President, Sargon Kaninya,

would like to let the students know that he is recruiting new members and is available in the room IT 144 throughout the semester. He is looking forward to a meeting in early February 2013, please contact him at ateproducts@gmail.com if you are interested in joining the club or would like to order engraving gifts for the holidays.

STUDENTS ATTEND THE 2012 SEMA SHOW



Dr. Zhang led a group of 15 students to this year’s show with the funding from Instructionally Related Activities (IRA) and the Department of Industrial Technology.

The Specialty Equipment Market Association (SEMA) Show is the premier automotive specialty products trade event in the world. The SEMA Show 2012

drew more than 60,000 domestic and international buyers. The displays were segmented into 12 sections, and a New Products Showcase featured nearly 2,000 newly introduced parts, tools and components. In addition, the SEMA Show provided attendees with educational seminars, product demonstrations, special events, networking opportunities and more.

Thanks to the two local companies - Al’s Distributing, Inc.

and Sun Valley Packing - students were able to register for this special event.

Based on the survey (9 out of the 15 participants have submitted), all students think the SEMA show was meaningful, and think the trip should be continued in the future. They highly recommend this trip to other students. 8 of the 9 students have found new designs, new ideas, and



new products at the show. 3 students also found career information at the show through talking to representatives and professionals.

FACULTY ACTIVITIES

The Department of Industrial Technology is one of the few designated Cisco Academy Training Centers for Sponsored Curriculum (CATC-SC) in the United States. This fall **Dr. Au**, who was instrumental in bringing this special program to the Department, was recognized by CISCO for his 10 year service.

Mr. Austin has been on Sabbatical Leave this fall dividing his time on University Center to Advance Manufacturing (UCAM)'s Fall Manufacturing Conference in October and visiting University of North Carolina, Charlotte and Purdue University in order to learn how they organize centers similar to UCAM. He is expected to return to teaching in the spring.

During Summer of 2012, **Dr. Mahalik** collaborated on research with the faculty from the South Korean universities: Gwangju Institute of Sciences and Technology, Kumho

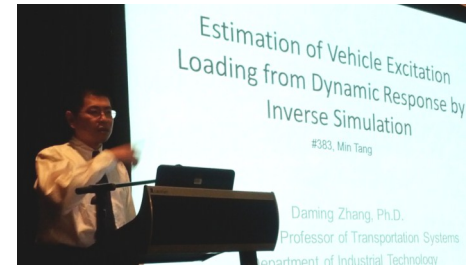
National Institute of Technology, Mokpo University and Chonbuk National University. Some of the areas of collaboration are: Sensor network, underwater technology, radio communication, and agricultural robotics, to develop sound compatible sensor network technology embedded with Kalman filter algorithm for signal estimation via noise correction. Dr. Mahalik is currently collaborating with CNU on an AgRobot project which led to a grant proposal in Ag Robotics. Professor Boem Ryuh from CNU visited IT department and met with Dean Boyer during November 27-30, 2012.

Dr. Nambiar presented his work titled "Holonc Manufacturing Systems: A Current Perspective" at the 2012 IIE Asian Conference held on June 30, 2012 in Singapore. He continues to serve as Graduate Coordinator for 30+ MSIT students as well as represents the Department at the Academic Senate.

Dr. Seth is on personal leave until Fall 2013 semester.

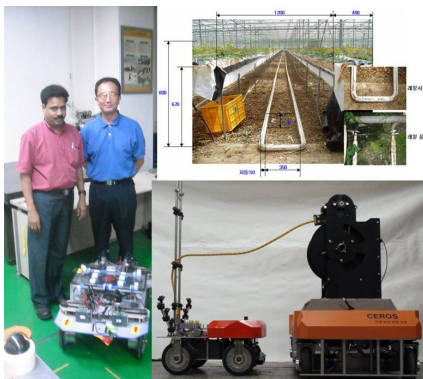
Based on his sabbatical leave experience in China, **Dr. Yen** presented a paper on 'Beyond Perennial Debate of Karl Marx and Adam Smith' at the 2012 Business and Information (BAI) conference on July 4, 2012 in Sapporo, Japan. The paper was also inspired by the concept of 'Dissipative Structures' researched by Ilya Prigogine who was the 1977 Nobel Prize laureate.

Dr. Zhang attended the "4th International Conference on Computational Methods" at Gold Coast, Australia, November 25-28, 2012 to present two papers: "Methodology Comparison for Engine Radiated Noise Analysis" and "Estimation of Vehicle Excitation Loading from Dynamic Response by Inverse Simulation".



During the summer Dr. Zhang visited Huazhong University of Science and Technology in Wuhan, China where he was a Guest Professor. He taught a class in Advanced Finite Element Analysis with Applications in Optoelectronics Devices to more than 50 students.

Dr. Au, Dr. Mahalik, Dr. Yen and Dr. Zhang completed Summer Academy program to redesign online IT courses in June 2012.



FIELD TRIPS



About ten IT students joined the Craig School of Business students on a field trip to the annual **Oracle Openworld Conference 2012** on October 2nd. Dr. Kathleen Moffitt from CSB who led the group to San Francisco said that the students made connections with the professionals in the industry and returned with valuable lessons in database and software technology.

Dr. Mahalik, Dr. Chaudhari and Mr. Waenke took their students to Weather Tec, Inc. in Fresno. The company was established in 1970, and is a manufacturer of agricultural impact-drive sprinkler

heads. Mr. Dwight Benke, Plant Supervisor, who gave the unforgettable tour, is willing to help the department repair IT Materials Lab's polypropylene injection molder.

Students in Dr. Yen's IT 30 had a great experience visiting companies like Blue Dolphin (3D Printing

Technology), Pelco (Imaging and Building Management Technology), FCC (CAD and CNC technology) and Harris Manufacturing. IT 106 class visited energy management companies: Grundfos Pump, PR Farm Olive Oil Processing, Savemart Center HVAC system, WET Lab and CSUF

Plant Operation.

Dr. Mahalik and Jeff Macon, Program Manager at Technology Commercialization, Lyles Center visited Elk Ridge Almonds, a Madera-based almond processing plant which has a unique food pasteurization process and equipment. The company would like to explore potential ways of adapting both to the market and envisions a long-term process that would provide shared benefits to the University and to its organization. Bill Pitman, President of the company, gave a tour and explained the new techniques used in the almond pasteurization system. The fact-finding visit was extremely informative for learning and research.



FRESNO STATE

Discovery. Diversity. Distinction.

Did you know? IT Department is now on Facebook, Twitter and LinkedIn. We urge you to join these social networking sites to stay connected.

IT Graduate Program Blog - <http://gradtech.posterous.com/blog>

LinkedIn - http://www.linkedin.com/groups?gid=2566316&trk=myg_ugrp_ovr

Twitter - <http://twitter.com/IndTechFresno>
Facebook - <http://www.facebook.com/IndTechFresno>

Chair's Corner

Hello IT family: Past year was an exciting year for me while serving for you. It is my pleasure to serve the department for coming years. Last year we accomplished a lot. Our students got jobs in Boeing, Pepsi, JBT, and other big companies because of the hard work shown by the faculty in the class rooms. Faculty members did international collaborations and brought scholars and expertise to the department and class rooms, respectively. We are eventually excelling our goals and objectives with clear mission and vision. Our faculty and staff are excited to see your achievements now and future. My objective is to go above and beyond and work for the department toward center of excellence. It takes time, but the same principle applies -- that is "Individual achievement contributes toward team achievement and vice versa." See you in spring 2013 and have a great winter holidays.
Nitaigour Prem Mahalik

Alumni as Guest Speakers in IT classes:

Mike Vislescu, Electrical Engineer of Paramount Farms shared his experience with the IT 30 class this fall. Mike has a US patent on the automated pistachio inspection technology which he developed with the knowledge from the course IT 284T Applied Imaging Process.

Linda Cederlof, System Engineer of Northern Digital, lectured in IT 30. Linda specializes in Human Machine Interface (HMI) and Supervisory Automated Control and Data Acquisition (SACDA). She also works extensively with water management and related industry.

Lin Anderson, Senior Staff of PG&E, lectured in IT 106. Lin recently designed a bubbling system to prevent jelly fish from sucked into the Diablo nuclear power plant. The system saved PG&E millions of dollars of equipment shut down and damage.

VISITING SCHOLARS FROM CHINA

Mr. Renhua Feng (Andy) is with us from Sept. 1, 2011 till Aug. 31, 2013. He is a Ph.D. Candidate at the Hunan University in China), , doing research on "Advanced Powertrain NVH CAE Technology".

Mr. Min Tang, Dec 23, 2011 – Mar 22, 2012, coming from Huazhong University of Science

and Technology (China), Ph.D. Candidate, doing research on "Simulation of the Control Method for the Random Vibration Response on Dual Testing Table".

Mr. Banglin Deng (Lin), Sep 1, 2012 – Aug 31, 2013, coming from Hunan University (China), Ph.D. Candidate, doing research on

"Vehicle Engine Fatigue and

Reliability Analysis".



Ms. Xiulan Chen (Jennifer), Sep 1, 2012 – Mar 2, 2013, coming from Renmin University of China (China), Ph.D. Candidate, doing research on "Theoretical Basis and Problems of Agricultural Logistics and the Related Economic Analysis Methods". (Co-Supervisor: Dr. Pei Xu)

UNIVERSITY CENTER TO ADVANCE MANUFACTURING

On October 12, 2012 UCAM (<http://fresnostate.edu/ucam/>) hosted its second annual manufacturing conference.

Over 100 local engineers, technicians and business leaders came for a full day of workshops and presentations. A special thanks goes to the Conference Silver Sponsors - Betts Springs, Fresno Valve

and Castings, California Manufacturing and Technology Consortium (CMTC) and the Fresno Investment Board.

Workshops were organized by the local chapter of professional organizations such as American Society for Quality (ASQ), Project Management Institute (PMI), American Production and Inventory Control Society

(APICS), and Central Valley Safety Society (CVSS).

Guest speakers included Mr. Pete Weber (local business leader), Dr. Carole Goldsmith (Westhills College), Dr. Glenda Humiston (USDA), and Mr. Randy Dhistra (Bank of America).

SPRING 2013 IMPORTANT DATES/EVENTS

Winter Recess (Dec. 24 - Jan. 10)

January 17 (Thur) - Instruction begins.
Degree application period begins.

January 31 (Thur) - Last day to add without permission.

February 14 (Thur) - Last day to add with permission, to drop without permission.

March 25-29 (Mon-Fri) - **Spring Recess**

April 16 (Tue) - Last day to drop from Classes for serious and compelling reasons.

April 23 (Tue) **IT Dept. Annual Banquet** in the Vintage Room.

April 22 (Mon) - Registration for Fall 2013 begins.

May 8 (Wed) - Last day of instruction.

May 13-16 (Mon-Thu) - Final Examinations.

May 17 (Fri) - **JCAST Convocation.** Last day to submit incomplete make-up work for Spring 2012.

May 18 (Sat) - University Commencement.