



Bowling Green State University  
 East Carolina University  
 Indiana State University  
 North Carolina A&T State University  
 University of Central Missouri

# PhD in Technology Management Newsletter

Spring 2011

## STUDENT AND ADVISOR

A positive relationship among a doctoral student, advisor and committee members is critical for success. The primary measure of success for the student is that they graduate with advanced knowledge and skills in research and their content area. Success for the advisor and committee member is the same with the addition of knowing that they have helped steward a new member into the community of scholars and perhaps, a new addition to our professional leagues.

Clearly, our PhD in Technology Management Program invests a great deal of faith into the role and function of advisors and committee members. Feedback from our graduates indicates that we are doing okay on this matter. In fact, a fair number of our graduates report that they considered more than one of our faculty members as an advisor or mentor. This is a positive indicator for our Program.

Barnes and Austin (2009) write that the key functions of advisors in this relationship are: 1.) collaborating, 2.) mentoring, 3.) advocating, and 4.) chastising. Each function is expressed as being “action-oriented.” For example, the act of collaborating connotes participation on behalf of the advisor and student, not just talking about it. In our case, the number of faculty and students co-authoring conference papers or journals articles is increasing. This is a good example of collaboration. Mentoring occurs when a student gets a chance to witness a professional act by an advisor and perhaps practicing a similar act with guidance from the advisor. Advocating for students is also a function of advisors and committee members. Advocating in a positive way, within the policies and guidelines of the Program and university, may assist the student in a number of subtle ways. The final function identified by Barnes and Austin is chastising. The word itself is a little harsh, in reality, this function is typically expressed through critique, suggestions and questions based on the professional judgment of advisors and committee members. The goal of this function is to help the student sustain quality in all that they do by encouraging self-critique and improvement.

### TABLE OF CONTENTS

#### Student and Advisor

*Dr. George Maughan*-----1

#### Our Graduates

*Mahmoud Al-Odeh*-----2-3

#### Updates in Specializations

##### *Human Resource Development*

*Petulia Blake*-----4

##### *Quality*

*Eli Aba*-----4

##### *Construction Management*

*Eli Aba*-----4

##### *Digital Communication*

*Mahmoud Al-Odeh*-----5

##### *Manufacturing Technology*

*Mahmoud Al-Odeh*-----5

#### Campus News

*Eli Aba & Petulia Blake*-----6-7

#### Special Feature: Dr. Marion Schafer

*Mahmoud Al-Odeh*-----8

#### Featured University: University of Central Missouri

*Eli Aba* -----8

#### Program News

*Dr. George Maughan*-----9

#### General Program Information

*Dr. George Maughan*-----9

Advisors, committee members and doctoral students must engage in the process as active partners. By paying attention to the basic functions described by Barnes and Austin, we will continue to mature as a doctoral degree-granting Program.

Barens, B.J. and Austin, A.F. (2009). The role of doctoral advisors: A look at advising from the advisor's perspective. *Innovation in Higher Education*, 33(5), 297-315.

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## OUR GRADUATES

### Spring 2010

- ✓ **Dr. Leonard Pederson** specialized in Manufacturing Systems at his home institution of Indiana State University. He successfully defended his dissertation, "Tasks and Responsibilities of a First Line Supervisor in a Job Shop Manufacturing Environment in Northwest Wisconsin" January 2010 and graduated in Spring 2010.
- ✓ **Dr. Greg Anderson** specialized in HRD and Industrial Training at his home institution of Indiana State University. He successfully defended his dissertation, "The Impact of Cooperative Video Games on Team Cohesion" March 2010 and graduated in Spring 2010.

### Summer II 2010

- ✓ **Dr. Rafael Villegas** specialized in Digital Communication at his home institution of Indiana State University. He successfully defended his dissertation, "An Empirical Measure of Computer Security Strength for Vulnerability Remediation" March, 2010 and graduated in Summer II, 2010.
- ✓ **Dr. Barbara Lach-Smith** specialized in Digital Communication at her home institution of Indiana State University. She successfully defended her dissertation, "Application of Strategic Institutional-information Technology Alignment Model in Four-Year Institutions of Higher Education" March, 2010 and graduated in Summer II, 2010.
- ✓ **Dr. Diane Olson** specialized in Quality Systems at her home institution of Bowling Green State University. She successfully defended her dissertation, "A Study of the Relationships in Financial Performance, Organization Size, Business Classification and Program Maturity of Six Sigma Systems" April 2010 and graduated in Summer II, 2010.
- ✓ **Dr. David Heiser** specialized in HRD and Industrial Training at his home institution of Bowling Green State University. He successfully defended his dissertation, "Union Members Attitudes Toward Online Learning" May 2010 and graduated in Summer II, 2010.

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## OUR GRADUATES

### Fall 2010

- ✓ **Dr. William Smith** specialized in Quality Systems at his home institution of Indiana State University. He successfully defended his dissertation, "Comparing the Relevance of Informal and Formal Learning in Skill Acquisition in a Leadership Development Program" July 2010 and graduated in Fall 2010.
  - ✓ **Dr. Dawna Drum** specialized in HRD & Industrial Training at her home institution of Indiana State University. She successfully defended her dissertation, "Effectiveness of Communication During Large-Scale IT Changes" August 2010 and graduated in Fall 2010.
  - ✓ **Dr. Mark Fenton** specialized in HRD & Industrial Training at his home institution of Indiana State University. He successfully defended his dissertation, "A Status Study of Selection, Training and Host Country Cultural Adaptation Experiences of Expatriate Faculty from United States ASCUE Universities" August 2010 and graduated in Fall 2010.
  - ✓ **Dr. Affoue Konan** specialized in HRD & Industrial Training at his home institution of Indiana State University. He successfully defended his dissertation, "The HRD Competencies as Perceived by the Human Resource Development Professionals in Banks in Cote D'Ivoire" October 2010 and graduated in Fall 2010.
  - ✓ **Dr. Jon Persinger** specialized in Digital Communication Systems at his home institution of Indiana State University. He successfully defended his dissertation, "A Study of the Effectiveness of ITIL Process Implementations by Information Technology Departments within U.S. Organizations" September 2010 and graduated in Fall 2010.
  - ✓ **Dr. Evan Wood** specialized in HRD & Industrial Training at his home institution of Indiana State University. He successfully defended his dissertation, "Post-Arrival Performance Interventions that Assist North American Expatriates Adjustment and Performance" September 2010 and graduated in Fall 2010.
  - ✓ **Dr. Jeffrey Cunion** specialized in Manufacturing Systems at his home institution of Indiana State University. He successfully defended his dissertation, "Sustainable Practices in Defense Aircraft Manufacturing" graduated in Fall 2010.
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## UPDATES IN THE SPECIALIZATIONS

### Quality Systems

Quality systems have a wide range of techniques incorporated into it of which the Deming Cycle is one. The Deming cycle, or PDSA cycle, is a continuous quality improvement model consisting of a logical sequence of four repetitive steps for continuous improvement and learning: Plan, Do, Study (Check) and Act. Deming Cycle is a problem solving process for business improvement and a continuous feedback loop. It was popularized by Deming. Other names for Deming Cycle are PDCA, PDSA, DMAIC (six-sigma).

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### *Human Resource Development & Industrial Training*

Many of our students who attended the Academy of Human Resource and Development 2011 Conference in Chicago were exposed to the diversity of thoughts and topics within the human resource development discipline. PhD Students are encouraged to collaborate and develop research ideas relevant to the scholarly community. With research topics covering innovation, sustainability, learning, performance, social networking, diversity, career development, work-life, community resource development, equity, and globalization, it is evident that human resource development is a vital function within any organization seeking to perform effectively and compete in our global market.

## Manufacturing Systems

The Manufacturing Technology Specialization is in the process of mapping and validating our specialization to include: 1) statements that characterize the expected accomplishments of graduates during the first few years following graduation, 2) statements that characterize what our graduates are expected to know and be able to do at graduation, and 3) statements that characterize the expected skills, knowledge, and accomplishments of our students upon completion of selected courses. A solicitation has gone out to meet sometime this summer probably, at a neutral location to finalize the updates to the manufacturing specialization.

## Digital Communication Specialization

Students in the PhD in Technology Management program and especially in the digital communication specialization will be given the opportunity to study important areas within the digital communication science. They will be able to conduct applied research using the cutting-edge technology resources in our consortium universities. One of the topics that can be used for the applied research is innovation on Radio Frequencies Identification or RFID. Innovation on RFID is based on wireless technology.

The recent innovation technology has evolved from RFID is Near Field Communication or NFC. NFC is a short-range, low-power communications protocol between two devices, one of which is the initiator. New generations of iPhone, iPod, and iPad products are equipped with NFC capability which enables small-scale monetary transactions. The digital communication students are encouraged to work with professors who are experts in the RFID technology to develop and improve this technology which finally is being implemented in United States. Professors within the consortium program are supportive of students and strive to ensure their success in their field.

## CAMPUS NEWS

### Bowling Green State University

After two national searches, BGSU has just announced the name of the new dean for the College of Technology. Dr. Faris Malhas will be dean of the College of Technology, effective June 15, 2011. He is a professor and dean of the Leonard C. Nelson College of Engineering and Sciences at West Virginia University-Institute of Technology. Dr. Malhas has an excellent record of program building and of the involvement with industry necessary to bring students the critical professional experiences that enhance classroom learning. The College of Technology has found a leader who shares its commitment to placing the College of Technology at the leading edge of education and research in the integrated fields of science, engineering and technology.

### East Carolina University

The Department of Construction Management in the College of Technology and Computer Science is in the process of adding to its curriculum as an infrastructure concentration that provides training in highway, bridges, pipelines, and heavy civil construction. Reports from the American Society of Civil Engineers (ASCE) have indicated that the aging and over burdened highway, road, and bridge infrastructure is threatened to the economy and quality of life all across the U.S. The proposed concentration is part of growing trend in the field of construction as the nation's infrastructure system is aging and will be in need of major rehabilitation over the next 20-30 years. Students will learn the fundamentals of infrastructure construction using effective and efficient core modules with five courses, two courses already in place and three to be developed.

### Indiana State University



Dr. Graham (left) with other professors and students at the AHRD Banquet.

Dr. Carroll Graham, Assistant Professor of Human Resource Development and Performance Technologies (HRDPT) was charged with the responsibility of Program Chair Academy of Human Resource Development 2011 Conference in Chicago. He contributed to, and coordinated multiple elements of the program. Some of his responsibilities involved recruiting Track, Co-Track Chair Editors, and symposium chairs. For this event, he supervised all editorial processes and provided guidance, input, and feedback regarding policy and supportive communications such as the 2011 Call for Papers and Reviewer Feedback Forms and informing the board of the review and revisions processes and progress prior to the conference. Dr. Graham received invaluable literary support from his colleagues as manuscript reviewers and symposium chairs. ISU is also pleased that two of its students submitted, revised, co-authored and collaborated on two different research papers with four ISU professors: Dr. Barbara Eversole, Dr. Carole Yaw, Dr. Cindy Crowder, and Dr. Tad Foster.

## University of Central Missouri

The University of Central Missouri announced the final approval of two Graduate Certificate programs in the School of Technology. They are: The Lean Six-Sigma program consists of 15 semester hours intended for industrial and service managers, supervisors and others who desire to bridge their companies' productivity to "Lean-Six Sigma" methods; and The Network Security program includes 15 semester hours designed for networking professionals seeking to enhance their skill set in designing and implementing Cisco Systems hardware-based network security measures. Here are a few papers published from Fa09 through Su10:

- ✓ Ulmer, J.M., Wilson, S., & Sutton, J (2010, July). Market Pay: A National Academic Struggle to Compensate a High Demand Discipline. *Journal of Industrial Technology*, 26(3).
- ✓ Ulmer, J.M., (2010, April). Professional Certification: A Study of Significance. *Journal of Industrial Technology*, 26(2).
- ✓ Ollison, T.E., & Ulmer, J.M., (2010, April). Success! Award Fundamentals of a Society of Manufacturing Engineers Grant. *The Technology Interface Journal*, 10(3).
- ✓ Berisso, K., & Ollison, T. (2010, January March). Coordinate Measuring Machine Variables for Selected Probe Head Configurations. *Journal of Industrial Technology*, 26(3).
- ✓ Ollison, T., & Berisso, K. (2009, December). Three-Dimensional Printing Build Variables That Impact Cylindricity. *Journal of Industrial Technology*, 25(4).
- ✓ Ulmer, J.M., Wilson, S., & Sutton, J (2009, Sept). Faculty Compensation: Competitive (Market) Pay Survey Results of Midwestern United States Industrial Technology and Engineering Technology College and University Programs. *Journal of Industrial Technology*, 25(3).

## North Carolina Agricultural & Technical University

On April 3 – 4, North Carolina A & T State University Chancellor, Harold L. Martin hosted a meeting with other university leaders to discuss Science, Technology, Engineering, and Math academic and research partnership. The goal of the meeting was to create a strategy to ensure the effectiveness of the STEM Initiative as a national model of collaboration between Historically Black Colleges and Universities (HBCU) to: 1) addresses the critical national need to create more African-American scientists in the STEM disciplines; 2) provides tangible mutual benefits for all partners through enhanced opportunities for students and faculty, including inter-institutional research collaborations, faculty and student exchanges, and advanced STEM capabilities; and 3) engages all partners in the Initiative's programming and funding. The strategy will provide specific recommendations for programs, funding, and implementation. The objective of the innovative collaboration is to help channel students into graduate school and research programs with the ultimate goal of increasing the number of faculty and academic researchers traditionally underrepresented in the STEM disciplines.

## SPECIAL FEATURE



**Marion D Schafer, PhD**

ISU PhD Program Campus Coordinator  
Associate Professor  
College of Technology

Currently, Dr. Schafer is an Associate Professor of Packaging and Technology Management and Director Indiana Packaging R & D Center, College of Technology, Indiana State University (The coordination of the ISU activities within the PhD consortium is part of his portfolio of responsibilities). Dr. Schafer has a PhD in Curriculum and Instruction from Indiana State University and MS in Industrial Professional Technology, Indiana State University. His research interest is packaging and its environmental impacts along with accident and damage prevention through proper packaging.

Dr. Schafer has 19 years experience working in industry in many different capacities including packaging, manufacturing, machine design and fabrication, quality control, training, and supervision. Since 1992 he has taught at the university level and done hundreds of consulting projects with numerous companies in widely varying industries, including Otis Elevator, SonyDADC, Bemis, Biomet, Boston Scientific, Johnson Controls, and numerous others. This eclectic industrial background enables him to assist in many different areas of technology and engineering.

Dr. Schafer served on dissertation and program planning committees for 13 Ph.D. students. From his experience he found the PhD consortium program is valuable based on the following:

1. This program is a unique program designed to enable highly skilled professionals to develop as researchers in various fields of technology management.
2. Strength of the program is the diversity of views students gain from professors in five different universities. The ability to focus on one of five different concentration areas provides students with both a board overview of technology management and the ability to target these skills to a particular a real of specialization.

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## FEATURE UNIVERSITY

### UNIVERSITY OF CENTRAL MISSOURI

**The University of Central Missouri (UCM)** is a four-year publicly supported and richly diverse institution in Warrensburg, Missouri. Founded in 1871, UCM is a state leader in program-specific accreditations through national associations, and is fully accredited by the North Central Association of Colleges and Schools. UCM has over 150 career-building programs of study. UCM remains committed to preparing its students to excel as they enter the professional world as the teachers, business professionals, scientists, artists and aviators of tomorrow.

UCM's six-month job-placement rate for undergraduates is 92 percent. This reflects its excellent financial support packages, students benefit from one of the lowest student-debt ratios in the state.

The School of Technology at UCM prides itself on providing students with a high quality education. Faculty members with the School are qualified academically, and they are experienced industry professionals. The School of Technology's education programs blend high quality formal education, hands-on-learning, research, work experience and co-curricular activities. Graduates are firmly grounded in their majors and specializations in preparation for the workforce.

## PROGRAM NEWS

Each PhD in Technology Management Program Consortium Campus scheduled a PhD Faculty Workshop during the spring 2011. The title of this Spring's workshop was "Program Evolution and Faculty Roles." The workshop was conducted during a half or full-day period and was lead by the Campus Coordinator at each site and Dr. George Maughan. Topics covered were: Program status, curriculum revision efforts, operational policy changes, assessment, advisor and committee member roles and responsibilities, and student retention. This faculty workshop is one of several that have been conducted during the past few years. If you are a PhD faculty member and would like to suggest future topics for faculty workshops, please email the Director at [George.maughan@indstate.edu](mailto:George.maughan@indstate.edu).

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### The Newsletter Staff

Editor: Dr. George Maughan  
Co-editor/Writer: Petulia Blake, PhD Fellow  
Writer: Eli Aba, PhD Fellow  
Writer: Mahmoud Al-Odeh, PhD Fellow

### Profile

Dr. Maughan is Director of the PhD program in the Consortium.

Eli Aba was admitted to the PhD program in 2010. He specializes in Quality Systems.

Mahmoud Al-Odeh was admitted to the PhD program in 2010. He specializes in Manufacturing Systems.

Petulia Blake was admitted to the PhD program in 2010. She specializes in Human Resource Development & Industrial Training.

## General Information About the Program

The consortium program is offered in cooperation with Bowling Green State University, East Carolina University, Indiana State University and the University of Central Missouri.

The doctoral program meets the needs of today's technical professionals. An academically rigorous program of study, the Doctor of Philosophy Program in Technology Management offers research and scholarship experiences and in-depth study in a specialization selected from the areas of:

- Construction Management
- Digital Communication System
- Human Resource Development and Industrial Training
- Manufacturing Systems
- Quality Systems

For Additional information about the PhD in Technology Management, visit our website at <http://technology.indstate.edu/consortphd/>  
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