

Mukaddes Darwish

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Education and Post Graduate Training

Ph D, Texas Tech University, 1998.
Major: Interdisciplinary Engineering

MS, Texas Tech University, 1991.
Major: Agricultural Engineering

Postgraduate Specialist Diploma, International Center for Advanced Mediterranean Agronomic Studies, 1982.

BS, Ataturk University, 1978.
Major: Agricultural Engineering
Supporting Areas of Emphasis: Four year B.S and fifth year Advance in Engineering Degree with Specialty in soil mechanics and structures

Academic and Professional Experience

Associate Professor, Texas Tech University. (2009 - Present).

Associate Professor, Texas Tech University. (2004 - 2008).

Assistant Professor, Texas Tech University. (1998 - 2004).

Instructor, Texas Tech University- Department of Mathematics. (1999 - 2002).

Lecturer, Texas Tech University- Department of Engineering Technology and Department of Civil. (1998 - 1999).

Research Assistant, Texas Tech University. (1993 - 1998).

Leadership Awards and Honors

ASEE-Gulf Southwest Section Best Paper Awards-Third Place, ASEE.

TEACHING

Courses Taught

Texas Tech University

CE 5331, Advanced Work in Specific Fields, 4 courses.
CE 8000, Doctor's Dissertation, 1 course.
CONE 3304, Sustainable Building Design and Construction, 3 courses.
CONE 4300, Construction Safety, 2 courses.
CONE 5331, Special Topics in Construction Engineering, 2 courses.
CTEC 4313, Masonry Structures, 2 courses.
CTEC 4343, Construction: Safety and Health, 1 course.

ENGR 5000, Special Topics in Engineering, 2 courses.
GTEC 2311, Applied Mechanics Statics, 1 course.
GTEC 3112, Applied Mechanics III-Fluids Lab, 4 courses.
GTEC 3312, Applied Mechanics III-Fluids, 3 courses.
IS 1100, Tech Transition: Freshman Seminar, 5 courses.

Directed Student Learning

Islam Obeidat, Dissertation Committee Member, Other (Within Texas Tech University). (August 1, 2011 - Present).

Jougiin Jurn, Dissertation Committee Member, "Sustainable development and design," Other (Within Texas Tech University). (November 2010 - Present).

Joseph Imamura, Dissertation Committee Member, "developing/implementing a Design Excellence program at the university-level with the intent to re-evaluate the sustainability of the institution's entire real estate portfolio," Architecture. (July 7, 2010 - Present).

FRANCISCO JAVIER GONZALEZ GONZALEZ, Dissertation Committee Chair, "VEGETATION CHANGES AFTER 12 YEARS IN FOUR PRIVATERANCHES UNDER SHORT-DURATION AND CONTINUOUSGRAZING SYSTEMS IN CHIHUAHUA, MEXICO," Architecture. (August 2006).

Teaching Awards and Honors

Outstanding faculty recognition award, Mortar Board & Omicron Delta Kappa. (October 31, 2009).

RESEARCH

Published Intellectual Contributions

Darwish, M. (2010). *Women in Renewable Energy and Sustainable Development*.

Abstract

Nejat, A., Darwish, M., Ghebrab, T. *BIM Teaching Strategy for Construction Engineering Students*. American Society for Engineering Education 2012 Annual Conference.

Ghebrab, T., Darwish, M., Nejat, A. *Enhancing Construction Engineering Internship to a Viable Learning Mechanism*. American Society for Engineering Education 2012 Annual Conference.

Darwish, M., Nejat, A. *Globalization and the new challenges for construction engineering education*. American Society for Engineering Education 2012 Annual Conference.

Conference Proceeding

Darwish, M., Agnello, M., Olaniran, B. (2011). *Educating Construction Engineering Students for a Sustainable Ethical, Global Practice*. International: LACCEI.

Darwish, M., Agnello, M., Burgess, R. (2010). *Incorporating Sustainable Development And Environmental Ethics*. International: LACCEI Latin American and Caribbean Conference for Engineering and Technology (LACCEI'2010).

Darwish, M., Neelakanta, S. *INTEGRATING LITEE CASE STUDIES IN CONSTRUCTION ENGINEERING AND ENGINEERING TECHNOLOGY EDUCATION*. ASEE Proceedings of the 2010 ASEE Gulf-Southwest.

Darwish, M., Neelakanta, S. *INTEGRATING LITEE CASE STUDIES IN CONSTRUCTION ENGINEERING AND ENGINEERING TECHNOLOGY EDUCATION*. ASEE Proceedings of the 2010 ASEE Gulf-Southwest.

Darwish, M., Agnello, M. (2009). *Enabling Construction Engineering Students in Sustainable*. International (San Cristóbal, Venezuela): Proceedings of Seventh LACCEI Latin American and Caribbean Conference for Engineering and Technology.

Darwish, M. (2005). *Transforming Passive Listeners to Active Listeners in the Engineering Classrooms*.

Conference presentation

Darwish, M. *Empowering Women to Create Sustainable Future*.

Journal Article, Academic Journal

Darwish, M., Agnello, M. (2009). SUSTAINABILITY/GREEN: CHALLENGES AND CHANGES FOR EDUCATORS AND THE ENGINEERING CURRICULUM. *ASEE*.

Gregory, J. M., Wilson, G. R., Singh, B., Darwish, M. (2004). TEAM: Integrated, Process-Based Wind Erosion Model. *Journal of Environmental Modeling & Software*, 19.

Presentations Given

Darwish, M., Ninth LACCEI Latin American and Caribbean Conference (LACCEI'2011), Engineering for a Smart Planet, Innovation, Information Technology and Computational Tools for Sustainable Development, LACCEI/ASEE, Medellin/Columbia. (August 3, 2011).

Darwish, M., Advancements of women in higher education, "The Role of Women Faculty in Engineering in Advancement of Women in Higher Education", TTU, Lubbock. (February 4, 2011).

Darwish, M. (Author Only), Celebi, D. (Presenter & Author), Race, Ethnicity, and Community Engagement in Higher Education, "It takes a Village to Raise Mathematicians" Nesin Math village, TTU, Lubbock, TX. (October 20, 2010).

Darwish, M., TEXO -ASC Educators Conference, "Introducing Green Development and Construction Principles in Construction Engineering Curricula," TEXO-ASC, Dallas-TX. (October 8, 2010).

Darwish, M., Eighth LACCEI Latin American and Caribbean Conference for Engineering and Technology, "Incorporating Sustainable Development And Environmental Ethics," LACCEI, International. (June 4, 2010).

Darwish, M., IS1100-Junction Function, "Teaching Freshman Transition: TTU-IS1100 Freshman Seminar Course Bridging the Gap: helping entering freshmen transition to the university experience," TTU, Junction TX. (April 4, 2010).

Darwish, M. (Presenter & Author), Neelakanta, S. (Author Only), ASEE Gulf-Southwest Annual Conference, "INTEGRATING LITEE CASE STUDIES IN CONSTRUCTION ENGINEERING

AND ENGINEERING TECHNOLOGY EDUCATION.," McNeese State University, Lake Charles. (March 24, 2010).

Darwish, M., Agnello, M., 26th Annual All-University Conference for the Advancement of Women in Higher Education, "Education of Women: Key to Equitable and Sustainable Development," TTU, Lubbock. (March 5, 2010).

Darwish, M., 26th Annual All-University Conference for the Advancement of Women in Higher Education, "Women in Renewable Energy and Sustainable Development," TTU, Lubbock, TX. (March 5, 2010).

Agnello, M. (Author Only), Darwish, M. (Presenter & Author), Buelinckx, H. (Author Only), Construction in the 21st Century, "Why Sustainable Building Design and Construction?: Why Now?," Middle East Technical University, Ankara Turkey and Florida International University, Istanbul, Turkey. (May 22, 2009).

Agnello, M. (Author Only), Darwish, M. (Presenter & Author), Construction in the Twenty-First Century, "Clean, Green and Sustainable Building Elements: Masonry and Brick," Middle East Technical University, Ankara, Turkey and Florida International University, Istanbul, Turkey. (May 22, 2009).

Darwish, M., Agnello, M., Women's Studies Conference, Texas Tech University, Lubbock, TX. (April 2009).

Contracts, Grants and Sponsored Research

Grant

Darwish, Mukaddes (Supporting), "MS(2)Middle School Math and Science: Understanding by Design," Sponsored by Greater Texas Foundation, State, \$3,000,000.00. (June 1, 2008 - August 2013).

Intellectual Contributions in Submission

Conference Proceeding

Darwish, M., Agnello, M., Burgess, R. *Incorporating Sustainable Development and Environmental Ethics into Construction Engineering Education*. LACCEI.

Darwish, M., Agnello, M., Buelinckx, H. (2009). *Why Sustainable Building Design and Construction?: Why Now?*. CITC-V: Proceedings.

Journal Article, Academic Journal

Darwish, M., Agnello, M. Educating Construction Engineering Students for a Sustainable Ethical, Global Practice. *LACCEI International journal*.

Research in Progress

"analytic approaches to understanding complex STEM education issues of national importance"
(Planning)
NSF

"Middle School Math and Science: Understanding by Design"
The goal of the (MS)2 Understanding by Design program is to prepare and increase the

number of highly qualified in-service middle school mathematics and science teachers to become well developed in content knowledge. Through participation in this program, teachers will thrive in an interdisciplinary environment through their experiences in novel learning communities encompassing a team of mathematics and science teachers as well as university STEM (science, technology, engineering, and mathematics) and education faculty. During this six year endeavor, (MS)2 participants will engage in:

1. Tailored professional development experiences as well as STEM and education courses.
2. Community building between Texas Tech University STEM and education faculty, and in-service mathematics and science teachers.
3. Collaborative design and implementation of integrated STEM modules.
4. Grant proposal writing and manuscript productions suitable for publication in STEM-based education journals (e.g., National Science Teachers Association and National Council of Teachers of Mathematics).
5. Development of cyber-enabled support network and dissemination platforms for statewide outreach.

Objectives of the project is

1. To provide research-based, education-related, communication-building experiences and knowledge for middle level mathematics and science teachers.
2. To foster the relationship between STEM (science, technology, engineering, and mathematics) disciplines through the development of innovative learning communities.
3. To develop new contexts, connections, and experiences for thinking about teaching STEM subject matter in the middle school environment, focusing on reaching diverse learners and conquering classic science and math misconceptions (e.g., cause of the moon's phases; force impetus notion; how sound waves travel; why invert and multiply, etc.)
4. To provide professional development, summer research experiences, and enhanced STEM content knowledge for practicing teachers.
5. To create environments that support the advancement of STEM understanding for all learners and create enhanced learning experiences for middle level students.
6. To foster increased collaboration between statewide Texas school districts, and TTU STEM departments and the College of Education.
7. To research and evaluate how experimental, situated learning via (MS)2 influences participants' understandings, communication, and implementation of their own instruction, assessment, and classroom research.
8. To provide a unique experience of how STEM disciplines are applied outside academia (e.g., industry, national research laboratories, etc.)
9. To utilize technological tools such as Facebook and Second Life (educational and social utilities that connect people at a distance) for the purpose of facilitating long distance collaborative learning environments and support networks among all the (MS)2 participants. These cognitive communities are the (MS)2 Learning Circles.
10. To create professional teacher leaders that will return to their respective schools and begin new professional learning communities.

"Teaching Science Informally CRPA NSF grant" (Planning)

This work will focus on the Cavazos Middle School community to foster science engagement among families.

Research Interests

Women's Education, Construction Engineering, Masonry Engineering, Materials Testing, Materials, Engineering Properties, Soil Mechanics and Foundations, Structural Analysis

SERVICE

University Service

Committee Member, Investigator Financial Disclosure Committee. (December 15, 2010 - Present).

Committee Member, University Convocation Committee. (October 2010 - Present).

Committee Member, University Grievance panel/committee. (October 2010 - Present).

University Senate Service, Faculty senate. (September 2010 - Present).

Faculty Advisor, West Texas Turkish –American Student Organization. (May 2010 - Present).

Faculty Advisor, USGBC Student Organization. (March 2009 - Present).

Faculty Mentor, Mentor Tech. (August 2006 - Present).

Committee Member, President's book award committee. (December 2010 - May 2011).

College Service

Coordination between, yedeitepe University and Akdeniz University / turkey and TTU. (April 2011 - Present).

Faculty Advisor, USGBC student Organization. (2009 - Present).

Faculty Advisor, SWE. (December 1998 - December 2011).

Committee Member, Gradute council. (August 2007 - August 2010).

Committee Member, Academic Programs Committee. (August 2007).

Department Service

Committee Member, CEET faculty search committee. (August 2011 - Present).

Committee Member, Tenure and promotion. (September 2010 - Present).

Coach for International ASC/AGC design Build student. (April 3, 2010 - Present).

Coaching a heacy highway Civil Student competetion team. (January 2010 - Present).

Faculty advisor, USGBC student organization. (March 2008 - Present).

Committee Member, CCET-New Faculty search. (March 2009 - July 2011).

Heavy Highway Civil Student competition team coach. (January 2009 - January 2010).

Professional Service

Editorial Review Board Member, LACCEI Latin American and Caribbean Engineering educators association technical advisory committee member, International, International. (March 2, 2011 - Present).

Task Force Member, ASEE-Sharon Keillor Award. (November 2009 - Present).

Reviewer, Conference Paper, Associated Schools of Construction. (2007 - Present).

Reviewer, Conference Paper, ASEE. (December 2004 - Present).

Public Service

Program Organizer, Spring Into GREEN organize Committee. (December 2009 - Present).

GENERAL

Licensures and Certifications

OSHA Trainer certification, OSHA Training Institute.

Professional Engineering Certificate In Turkey, obtained through Turkish Architectural and Engineering Society(TMMOB).

Professional Memberships

Associated School of Construction.

Latin American Caribbean Engineering Educators International. (June 2007 - Present).

The Masonry Society. (March 2000 - Present).

American Society of Engineering Educators. (January 2000 - Present).

Development Activities Attended

Conference Attendance, "LACCEI: Sixth Latin American and Caribbean Conference," LACCEI.

Workshop, "NSF proposal writing," UTEP. (January 22, 2010 - Present).

Conference Attendance, "ASC/TEXO Educators' Conference," ASC/TEXO. (October 7, 2011).

ASC-AGC/TEXO Educators Meeting, "ASC-AGC/TEXO Educators Meeting," ASC-AGC/TEXO. (October 6, 2011).

Symposium, "Women In Leadership Symposium," Texas Tech University. (September 28, 2011).

Conference Attendance, "Texas Masonry Council Annual meeting & Convention," BIA- Texas Masonry Council. (August 10, 2011 - August 12, 2011).

2011 BIA-SW Professors Roundtable meeting, "2011 BIA-SW Professors Roundtable meeting," BIA. (August 10, 2011 - August 12, 2011).

Conference Attendance, "Ninth LACCEI Conference at the Universidad EAFIT," LACCEI/Universidad EAFIT. (August 1, 2011 - August 4, 2011).

Conference Attendance, "Ninth LACCEI Latin American and Caribbean Conference (LACCEI'2011), Engineering for a Smart Planet, Innovation, Information Technology and Computational Tools for Sustainable Development," LACCEI/ASEE. (August 1, 2011 - August 4, 2011).

Workshop, "UNESCO Creative learning workshops," LACCEI/Universidad EAFIT. (August 3, 2011).

Workshop, "LACCEI/ Engineering Accreditation," LACCEI/Universidad EAFIT. (August 2, 2011).

Conference Attendance, "Understanding by Design" Cohort Showcases Projects on Campus," TTU. (June 27, 2011).

Conference Attendance, "Spring into GREEN," TTU, USGBC West Texas Branch, Local businesses,. (April 14, 2011 - April 15, 2011).

Conference Attendance, "ADVANCING TEACHING AND LEARNING CONFERENCE," TTU. (March 3, 2011).

Conference Attendance, "The First Annual Responsible Conduct of Research (RCR) Conference," Texas Tech University Ethics Center, the Teaching, Learning, and Technology Center (TLTC), the Office of the Vice President for Research, and the Graduate School. (March 3, 2011).

Workshop, "Cross-Cultural Teaching Strategies: Developing Syllabi for Inclusive Teaching Across Disciplines", TTU. (March 3, 2011).

Conference Attendance, "Advancement of Women in Higher Education: 2011-Women's Studies Conference," TTU. (February 3, 2011 - February 4, 2011).

Conference Attendance, "GREEN build , international conference and EXPO, 2010," United States Green Building Council. (November 17, 2010 - November 19, 2010).

Conference Attendance, "Race, Ethnicity, and Community Engagement in Higher Education," Texas Tech University. (October 17, 2010 - October 20, 2010).

"ASC-Association of General Contractors and Associated Schools of Construction educators meeting TEXO Educators Meeting," TEXO. (October 7, 2010).

Texas Masonry Council Annual meeting & Texas Masonry professors Round Table Meeting (Industry- university Collaboration), 2010 BIA-SW and Texas Masonry Council. (August 11, 2010 - August 13, 2010).

Conference Attendance, "ASEE Annual Conference & Exposition" Incorporating Diversity and Globalization in Engineering Education," ASEE. (June 14, 2010 - June 16, 2010).

Conference Attendance, "Eighth LACCEI Latin American and Caribbean Conference for Engineering and Technology (LACCEI'2010)," LACCEI. (June 1, 2010 - June 4, 2010).

Conference Attendance, "ASEE-Gulf Southwest Conference Bridge to Industry - Educating the Future," McNeese State university. (March 24, 2010 - March 26, 2010).

Conference Attendance, "Advancement of Women in Higher Education 26th Annual All-University Conference." (March 5, 2010).

Conference Attendance, "6th Annual Conference on Advancing Teaching and Learning," TTU. (February 25, 2010).

Conference Attendance, "Fifth International Conference on Construction in the 21st Century (CITC-V)" "Collaboration and Integration in Engineering, Management and Technology,"

Middle East Technical University and Florida International University. (May 20, 2009 - May 22, 2009).

Conference Attendance, "Water in Arid and Semiarid Lands," ICASALS-TTU. (September 9, 2007 - September 12, 2007).

Workshop, "The Masonry Institute, University Professors Masonry Workshop," University of Kentucky Louisville. (March 11, 2007 - March 13, 2007).

Conference Attendance, "Water in Arid and Semiarid Lands: Innovative Approaches and Informed Decision Making'," ICASALS-TTU. (November 16, 2006 - November 17, 2006).

Workshop, "Laboratory for Innovative Technology and Engineering Education (LITEE), Improving engineering education by bringing real-world issues into classroom," Auburn University. (September 2001).

Workshop, "The Masonry Society University Professors' Masonry Workshop," Washington State University and Gonzaga University. (March 17, 2000 - March 19, 2000).

