

Essam Zaneldin, Associate Professor

1. ACADEMIC RANK AND SPECIALTY: Associate Professor of Construction Engineering and Management

2. DEGREES

Ph.D. in Civil Engineering,	University of Waterloo, Canada	2000
M.Sc. in Civil Engineering,	King Saud University, Saudi Arabia	1987
B.Sc. in Civil Engineering,	King Saud University, Saudi Arabia	1982

3. EXPERIENCE AS A FACULTY MEMBER:

- August 2008 to Present: Associate Professor, Department of Civil and Environmental Engineering, Al Ain, United Arab Emirates University
- July 2007 to August 2008: Associate Professor, Indiana University-Purdue University, USA.
- August 2001 to June 2007: Assistant Professor, Department of Civil and Environmental Engineering, Al Ain, United Arab Emirates University

4. COURSES TAUGHT

- Construction Management – CIVL 445
- Advanced Construction Management – CIVL 547
- Special Topic in Construction Management – CIVL 540
- Graduation Project I – CIVL 585
- Graduation Project II – CIVL 590
- Graduation Project I seminar
- Project Management and Planning, Graduate Course – CIVL 702
- Construction Equipment and Methods, Graduate Course – CIVL 718
- Construction Cost Estimating, Graduate Course – CIVL 720
- Independent Studies in Civil Engineering, Graduate Course – CIVL 731
- Surveying for Architecture – CIVL 3573
- Surveying for Geography – CIVL 235
- Engineering Practice and Entrepreneurship – GENG 315
- Introduction to Engineering Design and Ethics – GENG 215
- Fundamentals of Engineering 1A – GENG 225
- Introduction to Engineering Management – IND 312
- Constructed Project Quality I – CNE 344
- Engineered Construction – CNE 443
- Construction Project Management – CNE 445
- Quantity Estimating – CNE 280
- Cost Estimating – CNE 442

5. OTHER RELATED EXPERIENCE

- Head of the Engineering Requirements Unit, Faculty of Engineering, UAE University, 2010 – present.
- Associate Professor, Indiana University – Purdue University, Fort Wayne, USA, 2007 – 2008.
- Post Doctoral, Department of Civil Engineering, University of Waterloo, Canada, 2000 – 2001.
- Teaching and Research Assistant, University of Waterloo, Canada, 1997 – 2000.
- Teaching and Research Assistant, Memorial University of Newfoundland, St. John's, Canada, Fall 1996.

6. CONSULTING EXPERIENCE

- Engineering Database Requirements Analyst, Acronym Software Inc., Waterloo, Canada, 2000-2001.
- Technical Manager, Arch. Center Consulting Engineers, Saudi Arabia, 1992-1996.
- Design Division Manager, Arch. Center Consulting Engineers, Saudi Arabia, 1987-1992.
- Chief Engineer, Applied Computer Services Company, Saudi Arabia, 1986-1987.
- Structural Engineer, Arch. Center Consulting Engineers, Saudi Arabia, 1982-1986.

7. SELECTED JOURNAL PUBLICATIONS

- **Zaneldin, E.** and El-Ariss, B. (2013). "An Interactive Spreadsheet Framework for the Design of Structural Steel Members." *International Journal of Civil Engineering and Science (JCES)*, Vol. 2, No. 1, pp. 30-36.
- Ahmed, Waleed and **Zaneldin, Essam** (2013). "E-Learning as a Stimulation Methodology to Undergraduate Engineering Students." Paper Accepted for Publication in the *International Journal of Emerging Technologies in Learning (IJET)*, Volume 8, Issue 3, pp. 4-7.
- El-Ariss, B. and **Zaneldin, E.** (2012) "Fiber Reinforced Polymer Materials in Construction Applications." *International Journal of Civil Engineering Science (JCES)*, Vol. 1, No. 4, pp. 47-51
- **Zaneldin, E.** (2011). "A Dynamic System to Manage Changes in Course Material." *The International Journal of Educational Management, Emerald*, Vol. 25, No. 5, pp. 509-527.
- **Zaneldin, E.** and El-Ariss, B. (2011) "Using Spreadsheets and VBA for Teaching Civil Engineering Concepts." *Journal of Education, Informatics and Cybernetics (JEIC)*, Vol. 2, No. 1, pp. 28-36 (August 26, 2011).
- El-Ariss, B. and **Zaneldin, E.** (2011). "Design Spreadsheets and Structural Steel Database." *The European Journal of Scientific Research*, Vol. 50, No. 4, pp. 503-513.
- **Zaneldin, E.** and El-Ariss, B. (2011). "Modelling Some Civil Engineering-Related Problems Using Spreadsheets and VBA." *The European Journal of Scientific Research*, Vol. 48, No. 3, pp. 370-380.
- **Zaneldin, E.** (2010). "A Dynamic Database System to Support the Teaching of Civil Engineering Courses." *The European Journal of Scientific Research*, Vol. 48, No. 1, pp 72-84.
- **Zaneldin, E.** (2009). "A Dynamic System to Improve Constructability of Building Projects." *The International Journal of Project Organization and Management*, Vol. 1, No. 4, pp. 375-397.
- **Zaneldin, E.** (2008). "Resource Optimization of Construction Operations Using AOA-Based Simulation." *International Journal of Simulation Modeling*, Vol. 7, No. 3, pp. 146-157.
- Ashur, S. and **Zaneldin, E.** (2007). "Resource Optimization of Repetitive Construction Operations for High-Rise Buildings Using Simulation." *Journal of Engineering and Applied Sciences*, Vol. 1, Issue 1, pp. 209-220.
- **Zaneldin, E.** (2007). "Trenchless Construction: An Emerging Technology in United Arab Emirates." *The Journal of Tunnelling and Underground Space Technology, Elsevier*, Vol. 22, Issue 1, 96-105.
- **Zaneldin, E.** (2006). "Construction Claims in the United Arab Emirates: Types, Causes, and Frequency." *International Journal of Project Management, Elsevier*, Vol. 24, Issue 5, 453-459.
- **Zaneldin, E.** (2005). "AOA-Based Modeling and Simulation of Construction Operations." *International Journal of Simulation Modeling*, Vol. 4, No. 4, pp. 184-195.
- Hegazy, T., **Zaneldin, E.**, and Grierson, D. (2001). "Improving Design Coordination for Building Projects: I – Information Model." *Journal of Construction Engineering and Management, ASCE*, Vol. 127, No. 4, pp. 322-329.
- **Zaneldin, E.**, Hegazy, T., and Grierson, D. (2001). "Improving Design Coordination for Building Projects: II – A Collaborative System." *Journal of Construction Engineering and Management, ASCE*, Vol. 127, No. 4, pp. 330-336.
- Karray, F., **Zaneldin, E.**, Hegazy, T., Shabib, A., and Elbiltagy, E. (2000). "Tools of Soft Computing as Applied to the Problem of Facilities Layout Planning." *IEEE Transactions on Fuzzy Systems*, Vol. 8, No. 4, pp. 367-379.
- Hegazy, T. Grierson, D., Ayed, A., and **Zaneldin, E.** (December 2000). "Resource Optimization in a Design Office Using Simulation." *Project Management Journal, PMI*, Vol. 31, No. 4, pp. 33-43.
- Hegazy, T., Khalifa, J., and **Zaneldin, E.** (1998). "Towards Effective Design Coordination: A Questionnaire Survey." *Canadian Journal of Civil Engineering, CSCE*, Vol. 25, No. 03, pp. 595-603.
- Turhan, D., Celep, Z., **Zain-Edden, I.K.** (1991). "Transient Wave Propagation in Layered Media Conducting Heat." *Journal of Sound and Vibration, Elsevier*, Vol. 144, No. 2, pp. 247-261.

8. SELECTED CONFERENCE PUBLICATIONS

- Waleed K. Ahmed and **Essam Zaneldin** (2013). "Teaching Engineering Economy Using the Internet." Embracing Mobile Learning Conference, November 20-21, 2013, United Arab Emirates University, Al Ain, United Arab Emirates.
- Kamran A., Al-Zoubi, K., and **Zaneldin, E.** (2012). "Evaluation of Effectiveness of Portable Variable Message Signs in Reducing Speed on Rural Highway in Abu Dhabi, UAE." The 92nd Transportation Research Board Meeting, January 13-17, 2013, Washington, D.C., USA.
- **Zaneldin, E.** and El-Ariss, B. (2012). "A Spreadsheet Model for Time-Cost Tradeoff Analysis and Project Control." The First Australasia and South-East Asia Structural Engineering and Construction Conference(ASEA-SEC-1), November 28-December 2, 2012, Perth, Australia, pp. 979-984.
- El-Ariss, B. and **Zaneldin, E.** (2012). "Modelling Scaffold Support System for Linear Analysis." The First Australasia and South-East Asia Structural Engineering and Construction Conference(ASEA-SEC-1), November 28-December 2, 2012, Perth, Australia, pp. 165-170.
- **Zaneldin, E.** (2012). "A System for Managing Changes in Course Material." The 4th International Conference on Computer Supported Education (CSEDU 2012), April 16-18, 2012, Porto, Portugal, pp. 247-252.
- **Zaneldin, E.** and El-Ariss, B. (2011). "A Dynamic Teaching System to Support the Design of Structural Steel Members." The 3rd International Conference on Computer Supported Education (CSEDU 2011), May 06-09, Noordwijkerhout, The Netherlands, pp. 349-354.
- **Zaneldin, E.** and El-Ariss, B. (2010). "Using Spreadsheets and VBA for Teaching Civil Engineering Concepts." The International Conference on Education, Training and Informatics (ICETI 2010), April 06-09, 2010, Orlando, USA.
- El-Ariss, B. and **Zaneldin, E.** "Using Microsoft Visual Basic as a Tool to Support the Design of Structural Steel Members." ED-MEDIA 2010 Conference, June 29-July 02, 2010, Toronto, Canada.
- **Zaneldin, E.** (2009). "An Information System for the Management of Changes During the Design of Building Projects." The 11th International Conference on Enterprise Information Systems, May 06-10, 2009, Milan, Italy, pp. 49-55.
- **Zaneldin, E.** (2009). "The Use of Trenchless Technologies in United Arab Emirates for New Construction and Rehabilitation Projects." Abstract accepted in the 11th Arab Structural Engineering Conference, King Fahd University of Petroleum and Minerals (KFUPM), Dhahran, Saudi Arabia.
- **Zaneldin, E.** and Ashur, S. (2008). "Using Spreadsheets as a Tool in Teaching Construction Management Concepts and Applications." The 2008 American Society of Engineering Education (ASEE) Annual Conference, June 22-25, 2008, Pittsburgh, PA, USA.
- M. Regina Leffers, **Essam Zaneldin**, and Reynaldo Pablo (2008). "The Center for the Built Environment at IPFW and the Northeast Indiana Green Build Coalition and Habitat for Humanity Collaborate to Create a Sustainable Residential Construction Project." The 2008 American Society of Engineering Education (ASEE) Annual Conference, June 22-25, 2008, Pittsburgh, PA, USA.
- Ashur, S. A., Moor, S. S., and **Zaneldin, E.** (2008). "Impact of Remotely Accessing Computer Software in a Commuter Campus on Freshmen Engineering Students." The 2008 American Society of Engineering Education (ASEE) Annual Conference, June 22 - 25, 2008, Pittsburgh, PA, USA.
- Ashur, S., El-Sawy, K., and **Zaneldin, E.** (2008). "A Framework for Substantial ABET Accreditation of an International Civil Engineering Program." The 2008 American Society of Engineering Education (ASEE) Annual Conference, June 22-25, 2008, Pittsburgh, PA, USA.
- **Zaneldin, E.** and Ashur, S. (2007) "Resource Optimization of Repetitive Construction Operations for High-Rise Buildings Using Simulation." The 8th International Conference on Multi-purpose High-Rise Towers and Tall Buildings, December 10-12, 2007, Abu Dhabi, United Arab Emirates.
- **Zaneldin, E.** (2006). "A Model to Improve Constructability of Building Projects." The Seventh Annual Research Conference of the United Arab Emirates University, Al-Ain, UAE.
- **Zaneldin, E.** (2005). "Frequency and Severity of Construction Claims in the United Arab Emirates" The 21st ARCOM Annual Conference, September 07-09, 2005, London, UK, pp. 813-822.

- **Zaneldin, E.** (2004). "Investigate the Impact of Different Resource Allocation Strategies on the Design of Building Projects Using Simulation." The Xth International Conference on Computing in Civil and Building Engineering, June 02-04, 2004, Weimar, Germany.
- **Zaneldin, E.** (2003). "Resource Utilization in Construction Operations Using Object-Oriented Simulation." The 7th World Multiconference on Systemics, Cybernetics and Informatics (SCI 2003), Orlando, Florida, USA.
- **Zaneldin, E.** (2003). "Resource Optimization of Construction Operations Using Object-Oriented Simulation." The Fourth Annual Research Conference of the United Arab Emirates University, Al-Ain, United Arab Emirates.
- **Zaneldin, E.** and Hegazy, T. (2001). "A Collaborative Approach for Improving Constructability." The 2001 CSCE 29th Annual Conference, Victoria, British Columbia, Canada.
- **Zaneldin, E.,** Karray, F., Hegazy, T., Shabib, A., and Elbiltagy, E. (2000). "Tools of Soft Computing as Applied to the problem of Facilities Layout Planning." The Ninth IEEE International Conference on Fuzzy Systems (Fuzz IEEE 2000), 7-10 May 2000, San Antonio, Texas, USA.
- Karray, F., **Zaneldin, E.,** Hegazy, T., Shabib, A., and Elbiltagy, E. (2000). "Computational Intelligence Tools for Solving the Facilities Layout Planning Problem." 2000 American Control Conference, USA.
- **Zaneldin, E.** and Hegazy, T. (2000). "An Information Model to Facilitate the Management of Design Changes in Building Projects." The 2000 NSF Design and Manufacturing Research Conference, Vancouver, British Columbia, Canada.
- **Zaneldin, E.** and Hegazy, T. (1998). "Flowchart-based Simulation of Construction Operations." 1998 AACE Transactions, 42nd International Annual Conference, Cincinnati, Ohio, USA, pp. IT/IM.08.1-IT/IM.08.6.
- **Zaneldin, E.,** Hegazy, T., Grierson, D., and Ayed, A. (1998). "Quantifying Teamwork Benefits to Design Offices Using Simulation." 1998 Transactions of the 7th AIAA/USAF/NASA/ISSMO Symposium on Multidisciplinary Analysis and Optimization, St. Louis, USA, pp. 1843-1852.

9. RESEARCH GRANTS

- Principal Investigator: "A Dynamic Information System to Facilitate Sustainable Design of Building Projects in the UAE." Project funded by the UAEU Program for Advanced Research (UPAR) 2103. A two-year project awarded in January 2014, AED 198,000.
- Principal Investigator: "Modeling and Simulation of Concrete Placing Operations to Optimize Resource Use." Project funded by the UAEU College of Engineering, 2014, AED 20,000.
- Principal Investigator: "Investigating the Use of Trenchless Technology Methods in New, Deteriorating, and Under Capacity Underground Construction in the United Arab Emirates." Project accepted by the UAEU Faculty of Engineering, 2013, AED 20,000.
- Principal Investigator: "An information Model for Sustainability Feedback During the Design of Building Projects." Project funded by the UAEU Faculty of Engineering, 2012, AED 20,000.
- Principal Investigator: "Optimization of Material Procurement and Resource Use in Construction Using Simulation." Project accepted by the UAEU Faculty of Engineering, 2011, AED 28,700.
- Principal Investigator: "An Integrated Spreadsheet Model for Time-Cost Tradeoff Analysis and Project Control." Project funded by the Scientific Research Affairs at UAEU, 2010, AED 18,500.
- Investigating Coordination-Related Problems During the Design of Building Projects, principal investigator. Project funded by the Scientific Research Affairs at UAEU, January 2008 – April 2009, AED 21,200.
- A Model to Improve Constructability of Building Projects, principal investigator. Project funded by the Scientific Research Affairs at UAEU, January 2005 – May 2006, AED 27,000.
- Construction Claims in the United Arab Emirates: Causes, Severity, and Frequency, principal investigator. Project funded by the Scientific Research Affairs at UAEU, January 2004 – February 2005, AED 20,000.
- Investigate the Impact of Different Resource Allocation Strategies on the Design of Building Projects Using Simulation, principal investigator. Project funded by the Scientific Research Affairs at UAEU, January 2003 – February 2004, AED 12,000.
- Resource Optimization of Construction Operations Using Object-Oriented Simulation, principal investigator. Project funded by the Scientific Research Affairs at UAEU, January 2002 – February 2003, AED 22,500.

10. SCIENTIFIC AND PROFESSIONAL MEMBERSHIP

- Professional Engineers of Ontario (PEO), Canada, Professional Engineer.
- American Society of Engineering Education (ASEE), USA, Member.
- American Society of Civil Engineers (ASCE), USA, Member.
- The Society for Computer-Aided Engineering (SCAE), USA, Member.
- The Engineering Committee, Riyadh, Saudi Arabia, Member.

11. HONORS, AWARDS AND FELLOWSHIPS

- The United Arab Emirates University Merit Award in recognition for exceptional and quality research and services during the academic year 2005/2006, UAE, June 2006.
- College of Engineering best research award, United Arab Emirates University, UAE, April 2005.
- University of Waterloo Graduate Scholarship, Waterloo, Canada, November 1999.
- Faculty of Engineering Graduate Scholarship, University of Waterloo, Waterloo, Canada, July 1999.
- Ontario Graduate Scholarship (OGS), Canada, May 1999.
- Ontario Graduate Scholarship in Science and Technology (OGSST), Canada, January 1999.
- Faculty of Engineering Graduate Scholarship, University of Waterloo, Waterloo, Canada, July 1998.
- University of Waterloo Graduate Scholarship, Waterloo, Canada, April 1998.
- Research and Teaching Assistantship, University of Waterloo, Waterloo, Canada, January 1997 to May 1999.
- University of Waterloo Graduate Scholarship, Waterloo, Canada, November 1997.
- Research and Teaching Assistantship, Memorial University of Newfoundland, St. John's, Canada, September 1996 to January 1997.

12. SERVICES

Member of several department, college, and university committees.