Avi Wiezel, PhD, PE

Assistant Dean for Facilities, Ira A. Fulton Schools of Engineering Associate Professor, Del E. Webb School of Construction

Last updated: 6 December 2021

Education

Technion - Israel Institute of Technology, Ph.D., 1993 Civil Engineering Technion - Israel Institute of Technology, M.S.C.E., 1989 Civil Engineering The Polytechnic Institute of Timisoara – Romania, B.C.E., 1981, Civil Eng.

Academic Experience

Del E. Webb School of Construction School of Sustainable Engineering and the Built Environment Ira A. Fulton Schools of Engineering Arizona State University Tempe, AZ	
Assistant Dean for Facilities, Ira A. Fulton Schools of Engineering and Associate Professor, Del E. Webb School of Construction.	2013 - 2013
Associate Professor, Del E. Webb School of Construction. Interim Chairman of the Del E. Webb School of Construction Programs and Associate Professor	2012 - 2013 2011-2012
Coordinator of Construction Graduate Programs and Associate Professor (nomenclature change after reorganization)	2009 – 2011
Director of Graduate Studies and Associate Professor, Del E. Webb School of Construction	2006 - 2009
Associate Professor	2001 - 2006
Acting Director for the Undergraduate Studies at Del E. Webb School of Construction (while the titular was on sabbatical leave)	Spring 1999
Assistant Professor	1995 – 2001
Charles E. Via Department of Civil Engineering Virginia Tech, Virginia Polytechnic Institute and State University Blacksburg, VA	ersity,
Visiting Assistant Professor	1993 - 1995
Faculty of Civil Engineering Technion, Israel Institute of Technology Technion City, Haifa, Israel	
Adjunct Teacher (faculty associate)	1990 - 1993
Teaching Assistant	1988 - 1990

Industrial Experience

Israel National Building Research Institute

Haifa, Israel

Research Fellow 1993 - 1993 Research Engineer 1987 - 1992

Yutbin - Engineers and Contractors Ltd Haifa, Israel

Project Manager. Special responsibility: computerization of the firm. 1986 - 1987

Maramures General Building Contracting Corporation (5000 employees) Baia Mare, Romania

Various managerial positions, culminating with Senior VP for 1981 - 1985 planning, scheduling and production control.

Professional Licensure

Romania Civil Engineer – PE # 430997, 1981 Israel Civil engineer – PE # 36375, 1986

Areas of Expertise

Teaching

- Leadership (academic, outreach, and industry seminars)
- Transdisciplinary Research Analysis
- Information Technology in Construction
- Robotics and Automation in Construction
- Strength of Materials
- Structures

Research

- Leadership in Construction
- Information Technology in Construction
- Constructability Modeling
- Building Performance
- Construction Education
- Sports Engineering

Honors and Awards

2007 - 2023	Recognition as Top 5% of best teachers in the Ira A. Fulton School
	of Engineering, Arizona State University (2005, 2007, 2011, 2013,
	2017, 2018, 2022, 2023).
2010	Appointed reviewer by Massachusetts Department of Higher
	Education for establishing a Master of Science in Construction
	Management program at Wentworth Institute of Technology (WIT)

2005	Outstanding Faculty Member Award (teaching performance), Ira A. Fulton School of Engineering, Arizona State University.
2005	Reviewer for the Council for Higher Education of Israel regarding
	the establishing of a B.Sc. Degree in Construction Management and Engineering in Israel.
1997	Outstanding Service Award for advising the National Association of
	Minority Contractors, ASU Leadership Development Team and
	Student Organization.
1994	Recognition of Dean of College of Engineering for outstanding
	teaching performance at Virginia Tech
1990	Netzer Prize for achievements during the research for M.Sc. thesis.
1989	Gutwirth Prize for excellence in studies for M.Sc.
1988, 1989	The Israeli Cement Fund Prize for research in the area of building
	materials, technologies and building processes.
1988	Gutwirth Special Prize for excellence in studies for M.Sc.
1976-1981	Eight prizes and honors in connection with the studies for the B.Sc.,
	including:
	 National First Prize at the students competition in building
	mechanics (Romania – 1977 and 1978).

PUBLICATIONS, INTELLECTUAL PROPERTY, AND PRESENTATIONS

mathematics (Romania - 1977).

Refereed Archival Journal Papers

1. <u>Maghiar, M.,</u> Grabil, H., **Wiezel, A.**, Cobirzan, N., "BIM Quantity Take-offs Analysis for Accurate Estimates of Concrete Volume in Buildings", *BSCES Civil Engineering Practice Journal*, Vol 29, No. 1, pp 8-16, 2021

- Special Prize for excellence in the national competition in

- 2. Lines, B., Sullivan, K, **Wiezel, A.**, "Support for Organizational Change: Change-Readiness Outcomes among AEC Project Teams", *ASCE Journal of Construction Engineering and Management*, Vol. 142, No. 2, pp. 1-11, Feb 2016
- 3. Maghiar, M, **Wiezel, A.**, Using BIM to Manage Wood-Framing Construction Crews, Journal of the National Institute of Building Sciences (JNIBS), Vol 3, No. 3, pp 1-11, June 2015.
- 4. Maghiar, M., Livingston, L., **Wiezel, A.** "BIM-Enabled Estimating through Technology Ontology for Owners and Contractors", *Journal of Civil Engineering and Architecture*, Dec. 2014, Vol. 8, No. 12, pp. 1495-1505
- 5. <u>Maghiar, M.</u>, **Wiezel, A.** "Descriptive Construction Methods through BIM-based aCollaboration" The Professional Constructor Journal, American Institute of Constructors Vol 37, No.2, pp. 37-44, 2013
- 6. Badger, W., **Wiezel, A.**, <u>Adams, D.</u>, <u>Bopp, P.</u>, "Superintendent's Leadership: a Key Factor in Project Success", *International Journal of Project Organisation and Management*, Int. J. Project Organisation and Management, Vol. 4, No. 4, pp.414–424, 2012
- 7. Yang, S., Fafitis, A., Wiezel, A., "Nonlinear impact model of a tennis racket and a ball" *Journal of Mechanical Science and Technology* 26 (2) pp 315-321, 2012

- 8. <u>Yang, S.</u>, Fafitis, A., **Wiezel, A.**, "Analytic study on structural behavior of the string bed in a tennis racket", *Journal of Mechanical Science and Technology*, 25 (10) pp 2615-2621, 2011
- 9. Badger, W., **Wiezel, A.**, <u>Bopp, P.</u>, <u>Dunn, S.</u>, "Leadership Transition and Growth", *International Journal of Construction Education and Research*, Vol. 6 No. 1, pp 46 69, 2010
- Badger, W., Sullivan, K., Wiezel, A., Bopp, P., "Profiling the Leadership of Project Managers", International Journal of Construction Education and Research, Vol. 5 No. 2, pp 121-146, 2009
- 11. <u>Senevirante, I.</u>, Schexnayder, C., **Wiezel, A.**, "Establishing a Word Wide Presence", *Practice Periodical of Structural Design and Construction*, ASCE, Vol. 4, No.2 pp.69-74, 1999.
- 12. **Wiezel, A.**, Walsh, K., <u>Brena, J.</u>, "A critical Analysis of an introductory computer course for constructors", *Journal of Construction Education*, Vol. 3, no 1, pp. 52-63, 1999.
- 13. Wiezel, A., Becker, R., "CAD model for performance evaluation," *Building and Environment*, Elsevier Science Ltd., Vol. 31, No.4, pp. 345-361, 1996.
- 14. Becker, R., **Wiezel**, A., "A Computerized System for Performance Integrated Computer Aided Design, "*Architectural Science Review,* Vol. 36, pp. 113-119, 1993.

Note: <u>Underlined names</u> represent student contributors. <u>Double underlined names</u> represent industry contributors.

National Conference Proceedings Refereed Papers:

- 1. Lines, B., Sullivan, K, **Wiezel, A**., "The Economic Impact and Cost Savings of Job Order Contracting", Proceedings of 2016 ASCE Construction Research Congress, CIB, ASCE, San Juan, Puerto Rico (abstract accepted Paper#: 393)
- 2. Lines, B., Sullivan, K, **Wiezel, A**., "Preparing for the Shift in Industry Demographics", Proceedings of 2016 ASCE Construction Research Congress, CIB, ASCE, San Juan, Puerto Rico (abstract accepted Paper# 399)
- 3. **Wiezel, A.**, Badger, W., "Project Managers Competencies Needed in 2022 and Beyond", Proceedings of the 51st Annual International Conference of the Associated Schools of Construction, College Station, Texas, April 22 25, 2015, pp. 1-8
- 4. <u>Gunnoe, J, Sullivan, K., Wiezel, A., "Profiling Succession Planning Methods in the Construction Industry"</u>, Proceedings of the 51st Annual International Conference of the Associated Schools of Construction, College Station, Texas, April 22 25, 2015, pp. 1-8
- 5. Maghiar, M, **Wiezel, A**, <u>Livingston, L</u>, "Technology Ontology and BIM-enabled Estimating for Owners and Contractors", 2014 International Conference on Computing in Civil and Building Engineering (ICCCBE), Orlando, FL, USA, June 23-25, 2014, pp. 2200-2207
- Maghiar, M, Wiezel, A, "Descriptive Construction Methods through BIM-based Collaboration", BIM Academic Education Symposium - Setting the Course for a BIM Educational Strategy, National Institute of Building Sciences, Washington D.C., January 7-11, 2013, pp 1-8

- 7. **Wiezel, A**, <u>Maghiar, M</u>, <u>Jain, S</u>., "Automatic sizing of wood-framing crews through BIM for training and educational purposes", Ecobuild America Conference, National Institute of Building Sciences, Washington D.C., December 5-9, 2011, pp 1-9
- 8. **Wiezel, A.**, Badger, W., <u>King, C.</u>, "New Research Methods in CII" 3rd International/9th Construction Specialty Conference, Canadian Society of Civil Engineering (CSCE), Ottawa, O ntario June 14-17, 2011 pp CN-197-1-10
- 9. <u>Maghiar, M., Jain, S., Wiezel, A.</u> "Crew Sizing Using BIM" Proceedings of the 47th Annual International Conference of the Associated Schools of Construction, Lincoln, Nebraska, April 6 9, 2011 (pp. 1-8)
- 10. Badger, W., Wiezel, A., <u>Adams, D.</u>, <u>Bopp, P.</u>, "Construction Superintendents need Leadership", PM-05 Advancing Project Management for the 21st Century Concepts, Tools & Techniques for Managing Successful Projects, Heraklion, Crete, Greece 29-31 May 2010
- 11. Maghiar, M., Jain, S., Wiezel, A. "Priority rules and relationships in microscheduling of construction wood-framing tasks", Proceedings of the 46th Annual International Conference of the Associated Schools of Construction, Boston, Massachusetts, April 7 10, 2010, pp. 1-8, also at http://ascpro.ascweb.org/chair/paper/CPRT212002010.pdf
- 12. <u>Bonanno, K.</u>, Badger, W., Sullivan, K., **Wiezel, A.**, <u>Bopp, P.</u>, "Servant Leadership in Construction", International Proceedings of the 44th Annual Conference of the Associated Schools of Construction, Auburn, Alabama, April 2 5 (paper # CPRT253002008 CD), pp 1-12, 2008
- 13. Badger, W., <u>Bonanno, K.</u>, Sullivan, K, **Wiezel, A.**, <u>Bopp, P.</u>, "Wisdom Based Leadership Competencies", International Proceedings of the 44th Annual Conference of the Associated Schools of Construction, Auburn, Alabama, April 2 5 (paper # CERT288002008 CD), pp 1-14, 2008
- 14. Wiezel, A., "Customising rackets to compensate for atmospheric conditions", the 3rd International Congress on Tennis Science & Technology, London, pp. 87-92, 10-12 September 2007
- 15. Badger, W., <u>Bopp, P.</u>, **Wiezel, A.** "Leadership Research Enhanced Leadership Skills Improves Performance", Proceedings of 2007 ASCE Construction Research Congress, (Songer et al.), CIB, ASCE, Grand Bahama Island, Bahamas, May 6-8, Academic Event Planners, LLC, Louisville, Colorado, USA, ISBN 0-9707869-1-3, (paper# 189 CD), pp. 1-12, 2007.
- 16. Badger, W., **Wiezel, A.**, <u>Bopp, P.</u>, "Leadership Education and Training Leadership Skills Truly Make a Difference", Associated Schools of Construction, Proceedings of the 43rd Annual Conference, Flagstaff, AZ, Apr. 12-14, (CD) 2007
- 17. **Wiezel, A.**, "Empowering PowerPoints Using Mind Maps in Construction Education", Proceedings of the 2nd Specialty Conference Leadership and Management in Construction, (Songer et al.), CIB, ASCE, Grand Bahama Island, Bahamas, pp. 334-341, May 2006.
- 18. **Wiezel, A.**, Kulahci, M., "Sensitivity of tennis players to racquet characteristics", the 5th International Engineering of Sport, Davis, CA (Hubbard et al. ed)

- International Sports Engineering Association, Sheffield, BB, CA, 9/13-9/16 Vol 1., pp.458-464, 2004
- 19. **Wiezel, A.**, Fafiftis, A., "Calculation of dwell time for tennis racquets", the 5th International Engineering of Sport, Davis, CA (Hubbard et al. ed) International Sports Engineering Association, Sheffield, BB, CA, 9/13-9/16 Vol 2., pp.347-353 2004
- 20. **Wiezel, A.**, <u>Pappu, A.</u> "Successful Failures: Who is to Blame?", Towards a Vision for Information Technology in Civil Engineering, Proceedings Of The Fourth Joint International Symposium On Information Technology In Civil Engineering, ASCE, November 15-16, Nashville, Tennessee, 2003
- 21. Wiezel, A., Oztemir, E. "The Influence of Design Methods on Construction Productivity", Construction Research Congress In Construction Wind of Change: Integration and Innovation, Proceedings of ASCE Construction Research Congress, March 19-21, Honolulu, Hawaii, 2003
- 22. <u>Smith, G.</u>, **Wiezel, A.**, "The Construction Industry's Adoption of the Internet", ASCE Construction Congress VI, Orlando, FL, pp.224-233, 2000
- 23. Schexnayder, C., **Wiezel, A.,** Rawankapura, J., "Using the WWW to Transfer knowledge", Annual Conference of Canadian Society of Civil Engineering (CSCE), Regina, Saskatchewan, Canada, Vol. IV, pp. 21-30, 1999.
- 24. **Wiezel, A.**, Chasey, A., Schexnayder, C., "Building a Web Site for Construction Organizations", Associated Schools of Construction, Proceedings of the 35th Annual Conference, San Luis Obispo, Ca, Apr. 7-10, pp. 285-398, 1999
- 25. Schexnayder, C., **Wiezel, A.**, <u>Senevirante, I.</u>, "The use of the Internet by Construction Students and Professionals", Associated Schools of Construction, Proceedings of the 35th Annual Conference, San Luis Obispo, Ca, Apr. 7-10, pp. 349-362, 1999
- 26. **Wiezel, A.**, "Measuring the success of virtual tutoring", Proceedings of Frontiers in Education '98, IEEE, ASEE, Tempe, AZ, November 4-7, pp 987-991, 1998
- 27. **Wiezel, A.**, "The Real Benefits of the Multimedia-based Educational Environment", Proceedings of the Fifth Congress of Computing in Civil Engineering, Boston, ASCE, pp 288-296, 1998
- 28. Schexnayder, C., **Wiezel, A.**, Construction Education Using the World Wide Web, Proceedings of ASEE (CD-ROM), 1998
- 29. **Wiezel, A.**, Walsh, K., <u>Brena, J.</u>, "A critical Analysis of an introductory computer course for constructors", Associated Schools of Construction, Proceedings of the 33rd Annual Conference, Seattle, WA, April, pp. 153-162, 1997

Note: <u>Underlined names</u> represent student contributors. <u>Double underlined names</u> represent industry contributors.

National and International Conference Proceedings Reviewed Papers, Abstracts and Presentations

- 30. MHK Jamali, Avi Wiezel, <u>The Effect of Organization Structure on Relationship</u>

 <u>Management in Project Management</u>, 2020 CSCE Annual Conference,
 Saskatoon Conference, May 2020
- 31. MHK Jamali, Avi Wiezel, The Relationship with the boss In Project-Based Industries, 2019 CSCE Annual Conference, Laval (Greater Montreal) Conference, June 2019, http://www.csceproceedings.ca/index.cfm?AbID=3268&CID=855#CSCEConf
- 32. W.T. Tsai, Y. H. Lee, **A. Wiezel**, X. Sun, W. Li, "Ontology-based Service Composition for Syndicating Building Intelligence", Proc. Of IEEE Conference on Commerce and Enterprise Computing, Vienna, Austria, pp. 445 452, July 2009.
- 33. **Wiezel, A.** "Nonlinear Dynamic Behavior of Elasto-Plastic Tensioned Meshes under Impact Can Tennis Strings Compensate for Natural Hygrothermal Conditions?", Continuum Physics and Engineering Applications Conference (CPEA07), Budapest University of Technology and Economics, Ráckeve (Budapest), Hungary, http://cpea07.mm.bme.hu/ocs/index.php?cf=1, June 2 11, 2007
- 34. **Wiezel, A.** McDaniel, A., "Effect of Air Conditions on the Game of Tennis", Finno-Ugric International Conference of Mechanics With ESI Group Symposium (FUDoM 05), 29 May - 4 June, Rackeve (Budapest), Hungary, http://www.mm.bme.hu/FUDoM, 2005
- 35. **Wiezel, A.**, "Skill-Driven Optimization of the Housing Industry", Proceedings of the NSF-PATH Housing Research Agenda, , Position Papers, NSF/HUD, Orlando, FL, February 12-14, Vol. 2, pp. 19-26, 2004
- 36. <u>Pappu, A.</u>, **Wiezel, A.**, "Influence of the Size of Manufacturing Tools and Floor Penetrations on Installation Productivity", The Institute of Environmental Sciences and Technology (IEST) ESTECH 2003 Conference, May, Phoenix, AZ, 2003
- 37. **Wiezel, A.**, <u>Arellano, H.</u>, "Contractors Are Using Data Mining to Increase Profits" 29th Annual Conference of CSCE, Victoria, BC, (C-54, D), 2001
- 38. Oztemir, E., Wiezel, A., "Productivity Model for Manufacturing Tool Installation", The Institute of Environmental Sciences and Technology (IEST) ESTECH 2001 Conference, April Phoenix, AZ, 2001
- 39. **Wiezel, A.**, Mayo, R., "e-Ducation for e-Construction?", Proceedings of the Eight International Conference of Computing in Civil Engineering, Palo Alto, CA, ASCE, pp 651-658, 2000
- 40. Schexnayder, C., **Wiezel, A.**, The use of the Internet as a Tool to Transfer Knowledge, Education in Construction Management, ISBN 695-90209-0-2, Proceedings of the Second A.J. Etkin International Seminar, Haifa, Israel, May 4-6, pp. 63-72, 1998.
- 41. **Wiezel, A.**, Schexnayder, C., Walsh, K., Meeting the Computer Expectations of the Construction Industry, Proceedings of 1997 IEEE International Conference on Microelectronic Systems Education, Arlington, VA, IEEE, pp.39-40, 1997.
- 42. **Wiezel, A**, Enhancing cooperative learning using distance education, Proceedings of the fifth Congress of Computing in Civil Engineering, Philadelphia, PA, ASCE, June, pp. 65-72, 1997

- 43. Wiezel, A. "Performance Integrated Design: A Value Approach", 3rd International Symposium on Applications of the Performance Concept in Building, CIB-ASTM-ISO_RILEM, Tel-Aviv, Israel, Dec. 1996
- 44. **Wiezel, A.**, and Becker, R., "Integration of Performance Evaluation in Computer Aided Design" The SUNY Buffalo 3rd International Symposium on CAD, Buffalo, NY, March 1990. (also published in "Evaluating and Predicting Design Performance" edited by Kalay, Y. E., John Wiley & Sons, New York, pp. 171-181, 1992
- 45. **Wiezel, A.**, and Becker, R, "Development of a Computerized System for Evaluation of the Overall Performance of a Building" The International Conference on CAD/CAM and AMT, Jerusalem, Dec. Vol III section F-4-5, 1989

Note: <u>Underlined names</u> represent student contributors.

Other Publications

- 1. **Wiezel, A.**, Sullivan, K., Gunnoe J., Perrenoud, A., "RR325-11 Best Practices for Project Manager Succession", Construction Industry Institute (CII) Research Report, December 2016, 128p. (https://kb.construction-institute.org/More-Filter-Options/result/Topics/RT-325/pubs/RR325-11)
- Badger, W., Wiezel, A., "The Guided Discovery Concept", Bottom Lines, Construction Financial Management Association (CFMA), April 2015 (http://www.cfma.org/content.cfm?ltemNumber=3489)
- 3. **Wiezel, A.**, Badger, W., King, C, "RS281-2 Project Management Skills of the Future", Construction Industry Institute (CII) Research Summary, December 2012, 31p (https://kb.construction-institute.org/knowledge-areas/human-resource-management/topics/rt-281/pubs/rs281-1)
- Wiezel, A., Badger, W., King, C, "IR281-2 Project Management Competency Development: Tools, Games, and Exercises", Construction Industry Institute (CII) Implementation Resource, March 2013, 132p. (https://kb.construction-institute.org/knowledge-areas/human-resource-management/Topics/rt-281/pubs/IR281-2)
- Wiezel, A., Badger, W., King, C, "RR281-11 Project Management Skills of the Future", Construction Industry Institute (CII) Research Report, December 2012 (https://kb.construction-institute.org/More-Filter-Options/result/Topics/RT-381/pubs/RR281-11)
- 6. Chasey, A., **Wiezel, A.**, Bryan, H., "Life-cycle model of mission-ready and sustainable facilities, planning space resource utilization: COBie representation of resource demands for mission-ready and sustainable facilities", US Army Engineer Research and Development Center, Construction Engineering Research Laboratory, May 2012, 48p (http://acwc.sdp.sirsi.net/client/search/asset/1006780)
- 7. Wiezel, A., "Position Paper" CII Research Needs Workshop, Houston, TX, 11-12 Dec. 2007
- 8. Sawhney, A. Wiezel, A. Pappu, A., "Impact of Incompatible Software on HVAC and Sheet Metal Contractors", New Horizons Foundation Chantilly, VA, 2007

- 9. Sawhney, A., **Wiezel, A**., "Investigating Interoperability Initiatives from Sheet Metal and Air Conditioning Contractors' Perspective", Final Report, New Horizons Foundation, January 2007.
- 10. **Wiezel, A**., Sawhney, A., "Intelligent Estimating Templates for T&D Construction", Research Report, SRP, Tempe, AZ, August 2006.
- 11. **Wiezel, A.**, "Defining A Research Agenda For AEC", Berkeley-Stanford CE&M Workshop: Defining a Research Agenda for AEC Process/Product Development in 2000 and Beyond, (white paper), Aug. 1999, http://www.ce.berkeley.edu/~tommelein/CEMworkshop/Wiezel.pdf
- 12. **Wiezel, A.**, "The Del E. Webb School of Construction World Wide Web Pages", Published on the *World Wide Web*, 1995-1996
- 13. **Wiezel, A,** "Space Station As-Built modeling in real time" internal research report for Spatial Positioning Systems Inc., *Center for Innovative Technologies*, Blacksburg, VA, Aug. 1994.
- 14. **Wiezel, A.**, Beliveau, Y.J., "Human factors for integration of CAD and real time positioning" Report to the *Center for Innovative Technologies*, Blacksburg, VA, Dec. 1994.
- 15. **Wiezel, A.**, Warszawski, A, "Automatic Building Design", *National Building Research Institute*, Haifa, Israel, (Hebrew) 1993
- 16. **Wiezel, A.**, Becker, R., "Development of a Computerized System for Performance Oriented Design During the Entire Design Process", *National Building Research Institute*, Haifa, Israel, (Hebrew) 1993
- 17. Becker, R., **Wiezel, A**., "Development of a Computerized System for the Performance Evaluation of Final Designs", *National Building Research Institute*, Haifa, Israel, (Hebrew) 1992

Invited Presentations

- **1. Wiezel, A.,** Perrenoud, A. **et. al,** Preparing for the Great Succession Recession, CII Annual Conference, National Harbor, MD, 2 August 2016
- **2. Wiezel, A.,** Future Skills for Project Managers, CII Annual Conference, Baltimore, MD, 24 July 2012.
- 3. <u>Maghiar, M, Wiezel, A.</u>, BIM-based Collaboration through Construction Methods Representation, FIATECH 2012 Conference, Miami, FL, 3 April, 2012
- 4. Badger, W., **Wiezel, A.**, <u>Bopp, P.</u>, <u>Dunn, S.</u>, "Leadership Education", ASC 45th Annual International Conference, Gainesville, FL, 3 April, 2009
- 5. Badger, W., **Wiezel, A.**, "Teaching Leadership to Academia and Industry", ASC Student Competition, Reno, NV, 12, Feb. 2009
- 6. Wiezel, A., "Graduate Studies for Project Managers", ADOT, Feb. 8, 2007.
- 7. Sawhney, A., **Wiezel, A.**, "Compatible Software —How Much Can You Save? (A New Horizons Foundation Project)", SMACNA annual Convention, Scottsdale, AZ, Oct 11, 2006.
- 8. **Wiezel, A.**, "Sports Engineering at ASU", Ira A. Fulton School of Engineering Sneaker Tours, ASU, Tempe AZ, (twice a year, starting) 5 May, 2004,

- 9. **Wiezel, A.** "Lessons learned form using Camtasia in distance education", the Teaching Technology Fellowship Program, Worchester Polytechnic Institute (WPI), MA, March 24, 2004
- 10. **Wiezel, A.**, Skill driven optimization of construction operations, Virginia Tech, Blacksburg, VA, Feb. 6, 2004.
- 11. **Wiezel, A.**, <u>Arrelano, H.</u>, Datamining for Construction Companies, Markham Contracting, Inc., April 23, 2000.
- 12. **Wiezel, A**, Bougas, A., " Sharing information in Construction Current and future trends", Information Technology Committee of the Sheet Metal and Air Conditioning Contractors' National Association (SMACNA), Strategic Planning Session, Tempe, AZ, 29 Oct., 1999
- 13. **Wiezel, A.**, "The Future of Information Technology in Construction", ADP Marshall, Inc., Strategic Planning Session, Phoenix, AZ, 26 Jan., 1999
- 14. **Wiezel, A.**, Mulligan, D., "Range Estimating", American Society of Professional Estimators, AZ Chapter, Phoenix, 1 Dec., 1998
- 15. **Wiezel, A.**, "Benchmarking the WWW of Schools of Construction", Associated Schools of Construction, *the National Leadership Conference*, Portland, Maine, 14 April, 1998
- 16. Teicholz, P., Wiezel, A., "Information Technology for Integrated Teams", Advanced Techniques in Design-Build Delivery and Finance, Alliance for Construction Excellence at ASU and Design-Build Institute of America, Tempe, AZ, 11 Dec. 1997
- 17. **Wiezel, A.**, "The Future of Construction", presentation for '97 Leadership Development Forum, Arizona Builder's Alliance, Phoenix, AZ, 1 Aug., 1997
- 18. **Wiezel, A.**, "Internet Fast-Tracking", presentation for '97 Leadership Development Forum, Arizona Builder's Alliance, Phoenix, AZ, May, 1997
- 19. **Wiezel**, A., "Information Technology A Peek into the Future", *Arizona Builder's Alliance Annual Convention*, Oct. 18, 1996, Tucson, AZ.
- 20. **Wiezel**, A., "Construction A Profession of the Future", CEAS Day, October 11 and 25, 1996, Arizona State University, Tempe, AZ.
- 21. Schexnayder, C., **Wiezel,** A., "Project Management", a one day instruction for the *Engineer Officer Advance Course, US Army Engineer School*, Fort Leonard Wood, MO, Aug 27, 1996. Via T-net (Satellite TV) from Luke Airforce Base, Phoenix, AZ.
- 22. **Wiezel**, A., "Information Transfer Using the Internet", Part in the *Presentation of Del E. Webb School of construction to Associated Builders and Contractors (ABC) for the National Center for Construction Education & Research*. January 1996, Phoenix, AZ
- 23. **Wiezel**, A., "Short overview of CPM", Part in the Presentation of Del E. Webb School of construction to NAPHCC Educational Foundation, August 1995, Phoenix, AZ.

Book Publishing (Book Chapters)

Wiezel, A., and Becker, R., "Integration of Performance Evaluation in Computer Aided Design" in "Evaluating and Predicting Design Performance" edited by

Kalay, Y. E., John Wiley & Sons, New York, 1992, pp. 171-181. (based on presentation at The SUNY Buffalo 3rd International Symposium on CAD).

RESEARCH SUPPORT

Sponsored Research – External Grants

- 1. **Wiezel, A.**, Sullivan, K, Best Practices for Project Manager Succession, Construction Industry Institute (CII), \$ 229,724 (50%), 1/2015 12/2016
- Chasey, A., Wiezel, A., Bryan, H., "Life-cycle model of mission-ready and sustainable facilities, planning space resource utilization: COBie representation of resource demands for mission-ready and sustainable facilities", US Army Engineer Research and Development Center, Construction Engineering Research Laboratory (CERL), \$69,990, 50% 1/2011-8/2011
- Tsai, W.T, Wiezel, A. (+ 12 other researchers from US, Romania and China), Ontology-based Service Composition Framework for Syndicating Building Intelligence, National Authority for Scientific Research, Romania, 5,725,580 RON (approx. \$2M) (10%), 5/2010-6/2013
- 4. Badger, W., **Wiezel, A.**, *Project Management Skills of the Future*, Construction Industry Institute (CII), \$198,367 (50%), 1/2010 12/2012
- 5. Phelan, P., Golden, J., **Wiezel. A.**, Lee, T., Bryan, H., Quantifying the Impacts of Nearby Land Cover on Building Energy Performance and Urban Heat Island, APS, \$150,000 (20%), 1/2008 12/2009
- Rogers, T., Wiezel, A., Collaborating to complete the course suite for on-line delivery of an existing Masters Degree in Construction Management, ABOR, \$99,135 (70%) 1/2007-12/2008
- 7. Sawhney, A., **Wiezel, A.**, *Investigating Interoperability Initiatives From Sheet Metal And Air Conditioning Contractors' Perspective*, New Horizons Foundation (NHF), \$65,000, 7/2005 7/2006 (50%)
- 8. **Wiezel, A.**, Sawhney, A., *Intelligent Estimating Templates For T&D Construction*, SRP, \$39,972, 8/2005 8/2006 (50%)
- 9. **Wiezel, A.**, *Integration of 4D modeling in the bidding process*, Kinetics, \$18,000, 9/2003 5/2004
- 10. **Wiezel, A.**, *4D modeling*, DPR, \$18,000, 1/2002 8/2003
- 11. **Wiezel, A.**, Weber, S., Hinrichs, R., Jackson, N., *Skill-Driven optimization of Construction Operations*, **NSF** (PATH Program), \$199,970 (Includes \$50,000 matching funds form ASU) PI-60%, 8/2000-7/2001
- 12. **Wiezel, A**, *Bulk Specialty Gas Decision Management Tool Phase II*, Construction Research and Education for Advanced Technology Environments (CREATE), \$54,000, 12/2000-5/2001
- 13. Wiezel, A, DITC Design and Installation Time Calculator- Phase II, Construction Research and Education for Advanced Technology Environments (CREATE), \$54,000, 10/2000-12/2001

- 14. **Wiezel, A**, Chasey, A., *Bulk Specialty Gas Decision Management Tool*, Construction Research and Education for Advanced Technology Environments (CREATE), \$50,151, co_PI, 50% 11/1999-12/2000
- 15. **Wiezel, A**, *DITC Design and Installation Time Calculator*, Construction Research and Education for Advanced Technology Environments (CREATE), \$54,000, 10/1999-12/2000
- 16. **Wiezel**, **A.**, *Data mining for Construction Corporations*, Markham Contractiong Co. Inc., \$19,913 4/1999-6/2000
- 17. **Wiezel, A**, "Effects of Advanced Design tools (ADT) on Construction Productivity", Construction Research and Education for Advanced Technology Environments (CREATE), \$52,285, 10/1998-5/2000
- 18. Schexnayder, C., **Wiezel**, A., *WWW Development Strategy for Construction Organizations*, ORCA 94-1087, \$6,850, 5/97-5/99.
- 19. **Wiezel,** A., *Development and Implementation of the Engineering Tutor Master Program,* Fluor Daniel, Inc., \$40,000, 20/9/96-20/9/98
- 20. **Wiezel**, A., *Laboratory of Advanced Computing Applications in Construction*, Bechtel Corporation, \$100,000, 10/10/96-10/10/97
- 21. **Wiezel**, A.(90%), Beliveau, Y., (10%), *Human Factors for Adoption of Real-Time Spatial Positioning with CAD-CAE*, Spatial Positioning Systems, Inc. Blacksburg, VA, \$22,500, 1994
- 22. Wiezel, A., Automatic Building Design, Ministry of Housing, Israel, \$30,000, 1993
- 23. **Wiezel**, A., *Development of a Computerized System for Performance Oriented Design During the Entire Design Process*, Ministry of Housing, Israel, \$15,000, 1990-1992
- 24. **Wiezel, A.**(80%), Becker, R.(20%), Development of a Computerized System for the Performance Evaluation of Final Designs, Ministry of Housing, Israel, \$40,000, 1987-1989

Sponsored Research – Internal Grants

- 1. Schexnayder, C.(50%), **Wiezel**, **A**(50%)., *Electronic Aids & Collaborative Learning in Support of Knowledge Transfer*, Center for Innovation in Engineering Education, College of Engineering and Applied Sciences, \$6,000, 4/16/97-4/16/98
- 2. **Wiezel**, A., *Introduction of Cooperative Learning through an Electronic Course Management Tool*, Center for Innovation in Engineering Education, College of Engineering and Applied Sciences, and Del E. Webb School of Construction, Arizona State University, \$7,382, 4/16/96-4/16/97

PERSONNEL: STUDENT SUPERVISION / MENTORING, TEACHING, DISSERTATION COMMITTEES, RESEARCHERS, AND OUTREACH

List of Courses Taught at ASU

CON 251 Computer Applications for Constructors

CON 221 Applied Statics

CON 223 Strength of Materials

CON 424 Structural Design

CON 495 Construction Planning and Scheduling

CON 557 Leadership Principles for Project Managers

CON 561 International Construction

CON 575 Information Technology in Construction

CON 591 Construction Research Analysis Seminar

CON 598 Construction Industry Best Practices

CON 700 Interdisciplinary Research Methods

CON 740 Informatics in Construction

CON 790 Independent Study

Chair for completed Ph.D. Dissertations:

- 1. Chang Recavarren ,Luis, "Building's Index of Complexity", December 2023.
- 2. K. Jamali, M.Hossein Khoshchehreh, "Special Interpersonal Relationships in Project-Based Organizations" May 2019.
- 3. Gunnoe, Jake A., " Adaptive Talent Management for Project Professionals Early Identification of Future Industry Leaders", May 2017 (co-chair)
- 4. Behzad, Navid, "Leadership and Management Balance for Rehabilitating Distressed Construction Projects" March 2016
- 5. King, Cynthia J., "Project Management Skills of the Future", ASU, December 2012
- Maghiar, Marcel "Crew Coordination Modeling in Wood-Framing Construction", ASU, July 2011
- 7. Oztemir, Ali Erhan, "Skill-Driven Optimization of Construction Operations", ASU, December 2003 (co-chair)

Member of completed PhD Dissertation Committee

- Mischung, Joshua, "Team emotional intelligence as a predictor of project performance: a case study at a college-level construction management course", May 2014
- Bosfield, Roberta Patrice, "Front end planning in the modern construction industry", May 2012
- 10. Gunnoe, Jake A, "Preparing for the talent drought: case study on succession planning methodology in the construction industry", May 2015
- 11. Prigge, Diedrich, "Experimentation of managerial techniques for the optimization of a voluntary construction workforce", May 2013
- 12. Lines, Brian, "Action research approach to implementation of APDMs within owner organizations strategic management and overcoming resistance to change in the AEC industry", August 2014
- Memarian, Babak, "Development of high reliability construction work systems: lessons from production practices of high performance work crews", December 2012
- 14. Hurtado, Kristen, "An andragogically-centered schema for a heuristic approach to post-collegiate development in the built environment", December 2018
- 15. Yussef, Abdulrahman, "Assessing the Maturity and Accuracy of Front End Engineering Design (FEED) for Large, Complex Industrial Projects", May 2019

Chair for completed Master Thesis:

- 1. Saalai, Shivanayaki, "Comprehending Engineering Fundamentals through Elicited Questions", ASU, May 2009
- 2. Maghiar, Marcel, "Technology Ontology for Estimating", ASU, Jul. 2007
- 3. Pappu, Arvind, "Development of ontology for concrete placing process", ASU, Dec. 2004
- 4. Yang, Seongyeong, "Nonlinear dynamic behavior of tensioned meshes under impact", ASU, May, 2004 (co-chair)
- 5. Pandey, Sameer, "Buildability modeling with geometric constraints", ASU July, 2002

- 6. Rajaram, Veena, "Language independent modeling of human activities in construction", ASU, September, 2001
- 7. Arellano, Hugo, "Data Mining for Construction Companies", ASU, , July, 2000
- 8. Uklucu, Mehmet, "Computer-Based Modeling of Constructability Assessment", ASU, April, 2000
- 9. Oztemir, Ali, E., " Effects of Advanced Design Tools on Construction Productivity", ASU, July, 1999
- 10. Killpack, Bruce, W., "The World-Wide-Web: Utilizing it for Construction and Business", ASU, May, 1999.
- 11. Smith, Gerald, F., "Watching the Leap: Reporting the Adoption of Internet Technology by the Construction Industry", ASU, Dec. 1998.
- 12. Calderon, Alfonso, "Construction Project Cash-Flow Optimization", ASU, Aug. 1998
- 13. Niranjan, Thilayanatan, US International Construction in Asia, Master of Science in Construction, Arizona State University, ASU, Aug. 1997
- 14. Ruwanpura, Janaka, Y. "Teaching Construction Management Using Information Technology", ASU, Co-chair, ASU, May, 1997
- 15. Hoon, Koo, "CADD/CIC for Smaller Home Builders", ASU, Dec., 1996

COURSE DEVELOPMENT

New Courses

Introduction to Computing in Building Management (undergraduate level)

Computer Applications for Constructors

Transdisciplinary Research Analysis (graduate level)

Robotics in Construction (graduate level)

Automation in Construction (graduate level)

Information Technology in Construction (graduate level)

Construction Research Analysis (graduate level)

Entrepreneurial Inventorship (graduate level)

Thesis writing (graduate level)

Selected Subjects in Existing Courses

Leadership Communications (graduate level)

Computerized Methods in Construction Planning (graduate level) — CAD, Data Bases,

System Integration, System Management

Construction Research Presentation (graduate level) — Multi-Media

Short Course Development and Instruction

Leadership for Project Managers, three times per year, since 2008

Using Project Management Software, twice a year, since 2007

Planning and Scheduling, twice a year, since 2007

Statics and Mechanics of Materials 2004, 2005

Building Materials, twice a year, since 2005

Internet for Contractors and Suppliers (basics and intermediate level), Arizona Builders' Alliance, twice a year, 1996 -2001.

Instructor at the Transportation Construction Management Institute at Virginia Tech Computer Workshops — Feb. 1994, Feb. 1995.

Initiator and Instructor of "The Paperless Office" internal workshop, National Building Research Institute, Israel, Mar. 1993.

PROFESSIONAL ACTIVITIES AND SERVICE

Leadership at National and International Level

- Appointed First Academic Advisor to the Construction Industry Institute (CII) Sector Leadership Committee (SLC) (2016 – 2018) - Advising the SLC on the research process and on vetting research topics.
- 2. Selected to serve on the International Scientific Committee of the Creative Construction Conference, 2013 (Hungary by invitation only).
- 3. Reviewer of graduate programs in construction for Massachusetts Board of Higher Education (2010)
- 4. Educational Activities Committee, Technical Council on Computing and Information Technology (TCCIT) American Society of Civil Engineers (ASCE), Chair, 2007-2009. (member since 1996)
- 5. HVAC Futures Advisory Group, New Horizons Foundation (2007)
- 6. ASCE Global Center of Excellence in Computing, Vice-Chair for Research (2006)
- 7. Reviewer for the Council for Higher Education of Israel regarding the establishing of Construction Management degrees (since 2005)

University Committee Service

University (ASU)

- 1. University Laboratory Safety Committee, Member, 2016 2023
- 2. Safety Rules, Roles, and Responsibilities Committee 2016 2019
- 3. University Research and Creative Activities Committee, Member, 2010-13
- 4. University Graduate Council, voting member 2008 2011
- 5. Senator at Large for Ira A. Fulton School of Engineering (President of the School Senate), Fall 2005 2010.
- 6. ASU ad hoc Task Force on Research Policies Chair Apr. 2007 Jan. 2008
- 7. ASU Faculty Senate DEWSC, Aug. 1998 2006
- 8. Curriculum and Academic Programs Committee (CAPC) voting member, Fall 2005 2008
- 9. Focus group on the web page prototype, graduate Admissions Reengineering Project Executive Team and the Academic Unit Coordination Team, April 1998
- 10. Committee on Computers and High Technology in the Classroom, Member, Sept. 1996

College

Note: The College of Engineering and Applied Sciences (CEAS) was renamed to Ira A Fulton School in Engineering (IAFSE) in 2005.

- 1. Dean's Faculty Advisory Committee (P&T), member (Aug. 2012 2018)
- 2. President of IAFSE Faculty Senate, Fall 2005 Spring 2009.

- 3. CEAS "super search committee" (initiated all the new positions in the College), member, Spring 2004 Spring 2005
- 4. CEAS Faculty Senate, Secretary, Fall 2000 Spring 2005.
- 5. CEAS Research Advisory Committee, Chair, Fall 2001 Spring 2004
- 6. CEAS Quality of Instruction Committee, Chair, Fall 2000-Spring 2003
- 7. Computerized Classrooms Taskforce, Spring 2000.
- 8. CEAS Faculty Senate Senator, since Aug. 1998
- 9. Web Usage and oversight committee, member, since May, 1998
- 10. Dean's Advisory Council, dean's assistant for 20ation media, June 1996.

School

- 1. DEWSC Parliamentarian, Spring 2005 2009
- 2. Personnel Committee, Chair, Fall 2001 2008.
- 3. Faculty-in-charge for DEWSC computerization (two staff, liaison with ECS and ASU IT Services) Fall 1996 2012)
- 4. Mentor for new faculty 2002 present
- 5. Mentor for faculty associates in CON 232 Fall 2005 present
- 6. Industry Advisory Council, Research Group, Co-Chair, Fall 1996 Spring 2003
- 7. Faculty Advisor, Student Chapter, National Association of Minority Contractors, August 1995-1999
- 8. Member, Curriculum Committee, August 1995-May 2005
- 9. Teaching Assistants distribution and search committee, August 1996.
- 10. Member, Computer Laboratories Committee, August 1995- August 1996
- 11. Computer Laboratories Committee, August 1996-2010. Finished up the remodeling of Computer Laboratory facilities. Responsible for computer lab renewal (\$80,000) during summer 1998.
- 12. Faculty Office Improvement Committee, February 1995-2007
- 13. Construction Recognition Program Committee Media Program sub-committee, 1995-2000
- 14. Advisor for the International Exchange Program for Engineering Professional and Honorary Societies on behalf of the Civil Engineering Department, School of Engineering, Virginia Tech, 1994-1995.

Local Professional Committees

- 1. Arizona Consulting Engineers Association Technical Excellence Awards Judge (1996)
- 2. Alliance for Construction Excellence Performance Task Force Member (1995-2016)
- 3. Industry Advisory Council Task Force for Construction Education Member (1996)
- 4. National Association of Minority Contractors Award Committee Member, 1995

Scientific and Professional Society Membership

- Construction Research Council, American Society of Civil Engineers (ASCE), Member since 1994
- 2. Educational Activities Committee, American Society of Civil Engineers (ASCE), Member since 1996

- 3. Artificial Intelligence and Expert Systems Committee, American Society of Civil Engineers (ASCE), Member since 1996
- 4. International Sports Engineering Association (ISEA), Member 2004

Journal Referee Service

- 1. Journal of Computing in Civil Engineering
- 2. Automation in Construction
- 3. Journal of Construction Education
- 4. Construction Management and Economics

External Program Reviews

Massachusetts Department of Higher Education

for establishing a Master of Science in Construction Management program at Wentworth Institute of Technology (WIT - 2010)

Council for Higher Education of Israel

to review the establishing of a B.Sc. Degree in Construction Management and Engineering in Israel (2005). See attached CV for further details.