

# T. MICHAEL TOOLE

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## EDUCATION

**Ph.D. in Technology Strategy**, Massachusetts Institute of Technology, 1994. Interdepartmental program between the Dept. of Civil and Environmental Engineering and the Sloan School of Management. Thesis: [Task and Environmental Uncertainty and the Adoption of Technological Innovations by Home Builders](#). Courses included doctoral seminars in social science research methods, management of technology, and organizational behavior and graduate courses in operations management, information technology and system dynamics.

**S.M. in Civil Engineering**, Massachusetts Institute of Technology, 1990. Thesis: [Strategic Issues in Stresskin Foam Panels for Residential Construction](#). Courses included structural engineering, wood engineering, project management, failures analysis, construction law, construction finance, construction innovation, strategic management, and product design.

**B.S. in Civil Engineering**, *cum laude*, Bucknell University, 1983.

## PROFESSIONAL EXPERIENCE

### University of Toledo

(Aug 2017-present)

Dean, College of Engineering and Professor of Civil Engineering

Executive in charge of a complex college of engineering at an urban public research university. Student enrollment at the university exceeds 20,000 while enrollment in the College of Engineering includes ~3700 undergraduate and ~380 graduate (master's and PhD) students. Oversees 4 Associate Deans and ~80 full-time faculty, ~30 part-time instructors, a dedicated Career Development Center that places ~750 full-time co-ops per year, and an industrial testing and research center. Responsible for all college operations, ABET accreditation and fundraising activities.

### Bucknell University

(1999 – July 2017)

Professor (2012-2017), Associate Professor (2006-2012), Assistant Professor (1999-2006), [Department of Civil and Environmental Engineering](#). Senior Fellow in the [Society and Technology Residential College](#) (2012-2016). Teaching responsibilities included undergraduate courses entitled Construction Engineering, The Grand Challenges, Social Entrepreneurship in New Orleans, Entrepreneurship and Renewable Energy in Iceland, Innovation in Design and Construction, the Challenges of Green Building, Materials Engineering, Engineering Planning and Project Management, Civil Engineering Design (senior design project), Exploring Engineering, Engineering in a Global and Societal Context, Introduction to Transportation, and the Human Side of Technology. Pursued research in construction safety, construction innovation, and project management simulation.

Associate Dean of Engineering (half-time, 2012-2016). Primary duties included development associated with the university's \$500M [comprehensive campaign](#), contributing to drafting and implementing the College of Engineering's revised strategic plan and ABET self-study report,

-serving as the founding Director of Bucknell’s [Grand Challenges Scholars Program](#), expanding internal and external communications, expanding innovation and entrepreneurship within the College, serving as a founding faculty adviser to the [Entrepreneurship & Innovation Affinity House](#), and serving as the Dean’s representative on various university and college committees.

Director of the [Institute for Leadership in Technology and Management](#) (2007-2008, 2010-2013). ILTM is an intensive, interdisciplinary six-week summer program for 24 highly-motivated rising juniors in engineering, management and the liberal arts. Core topics include strategic management, economics, marketing, organizational behavior, engineering and technology development, global competition, ethics, leadership, and communication. Real-world consulting projects for world-class organizations provide experiential learning to supplement classroom sessions.

**Pennsylvania State University, Dept. of [Architectural Engineering](#)** (2016-2017)  
[PACE](#) Faculty Fellow. Collaborating with faculty and students on research associated with the Partnership for Achieving Construction Excellence. Occasional guest lecturer.

**[Packer Engineering, Inc.](#)** (1996 – 1999)  
Director of Construction Systems for a multi-disciplinary engineering company. Industrial consulting engagements included construction scheduling and change order analysis. Insurance investigations included estimating and negotiating construction costs, national failure investigations associated with heating appliances and building envelopes, and inspections of foundations, walls, roofs, and mechanical systems. Litigation support engagements included property damage associated with flooding, expansive soils and deficient design or construction, and construction safety, including accidents involving concrete, steel erection, carpentry, masonry, plumbing, electrical, cranes, manlifts and ladders.

**HomeCAD, Inc.** (1998 – 1999)  
Vice President of a new unit launched within The Packer Group providing homebuilders and lumberyards with architectural design and rendering and cost estimating using innovative object-oriented CAD software.

**Ryland Homes** (1995 – 1996)  
Purchasing and Construction Services Manager for the Chicago division of one of the nation’s largest homebuilders (now CalAtlantic Homes). Solely responsible for bidding and awarding new contracts totaling \$51 million with material suppliers and union subcontractors. Increased average profit margins by 25% through value engineering, aggressive negotiating, improved supply chain management and other strategic cost reduction programs.

**Tonyan Composites Corporation** (1992 – 1994)  
President and co-founder of a company established to develop and market innovative concrete building panels for residential and commercial construction, starting with a foundation product. Although the venture was never fully launched, completed milestones included a prize-winning business plan, constructing a prototype building, and raising \$125,000 investment capital.

**Massachusetts Institute of Technology** (1992 – 1994)  
Instructor for “Strategy for Engineering and Construction Management,” a full-credit graduate survey course of business and technology strategy. Solely responsible for developing course content, delivering lectures and grading. Awarded teaching prize.

**Brown & Root Services Corporation**

(1988 – 1989)

Estimated and/or negotiated 15 projects (including the most profitable project of a job order contract) and developed 18 bid packages. Temporarily assigned to three contract sites (San Diego, San Nicolas Island, and Honolulu) to troubleshoot operational and client issues at each site.

**U.S. Navy Civil Engineer Corps**

(1983 – 1988)

As Assistant Resident Officer in Charge of Construction, administered 71 fixed-price construction contracts and job order contract delivery orders worth over \$20.7 million. Managed all aspects of contract administration: design review, quality control inspection, partial payments, resolving design deficiencies, estimating and negotiating change orders, claims analysis, and occupancy. Supervised 2 [NAVFAC](#) engineers and 4 field inspectors.

Company Commander in charge of 75 [SEABEES](#) and 8 construction projects worth \$5.5 million. Brought all projects in on time despite the fact that most projects were substantially behind schedule when command assumed.

Assistant Officer In Charge of a 70-SEABEE detachment in Guantanamo Bay, Cuba. Led planning and execution of 7 construction projects worth \$4.1 million.

Material Liaison Officer in charge of 10 SEABEES, 2 civilians, \$800,000 of funds and over \$3.2 million of construction materials in Guam.

**SCHOLARSHIP****Refereed Journal Articles**

Gambatese, J. A., T. M. Toole and D. Abowitz (2017). "[Barriers to Prevention through Design.](#)" *J. of Construction Engineering and Management*. DOI 10.1061/(ASCE)CO.1943-7862.0001296.

Toole, T. M., J. A. Gambatese and D. Abowitz (2016). "[Owners' Role in Facilitating Prevention through Design.](#)" *J. of Professional Issues in Engineering Education and Practice*. DOI 10.1061/(ASCE)EI.1943-5541.0000295.

Toole, T. M. and G. Carpenter (2013). "[Prevention through Design as a Path Towards Social Sustainability.](#)" *J. of Architectural Engineering* 19(3):169-173.

Toole, T. M., M. R. Hallowell, and P. S. Chinowsky (2013). "[A Tool for Enhancing Innovation in Construction Organizations.](#)" *Engineering Projects Organization Journal* 3(1):32-50.

Toole, T., M. P. Heckel, and M. R. Hallowell (2013). "[Public and Organizational Policy: A Key Factor Enabling Prevention through Design.](#)" *Professional Safety* 58(1):41-49.

Toole, T. M. (2011). "[Internal Impediments to ASCE Vision 2025.](#)" *Leadership and Management in Engineering* 11(2):197-207.

Abowitz, D. and T. M. Toole (2010). "[Mixed Method Research: Fundamental Issues of Design, Validity and Reliability in Construction Research.](#)" *J. of Construction Engineering and Management* 136(1): 108-116.

Hallowell, M. R. and T. M. Toole (2009). "[A Contemporary Design-Bid-Build Model.](#)" *J. of Construction Engineering and Management* 135(6): 540-549.

Toole, T. M. and J. Gambatese (2008). "[The Trajectories of Construction Prevention through](#)

[Design.](#)” *J. of Safety Research* 39(2): 225-230.

Toole, T. M. (2007). “[Design Engineers’ Responses to Safety Situations.](#)” *J. of Professional Issues in Engineering Education and Practice* 133(2): 126-131.

Toole, T. M. (2005). “[Increasing Engineers’ Role in Construction Safety: Opportunities and Barriers.](#)” *J. of Professional Issues in Engineering Education and Practice* 131(3): 199-207.

Toole, T. M. (2002). “[Construction Site Safety Roles.](#)” *J. of Construction Engineering and Management* 128(3): 203-210.

Toole, T. M. (2001). “[The Technological Trajectories of Construction Innovation.](#)” *J. of Architectural Engineering* 7(4): 107-114.

Toole, T. M. (1998). “[Uncertainty and Homebuilders’ Adoption of Technological Innovations.](#)” *J. of Construction Engineering and Management* 124(4): 323-332.

Toole, T. M. and T. D. Tonyan (1992). “The Adoption of Innovative Building Systems: A Case Study.” *Building Research Journal* 1(1): 21-26.

**Refereed Proceedings** (since 2008, excludes papers that were expanded into published journal papers)

Toole, T. M. and J. A. Gambatese (2017). “[Levels of Implementation of Prevention through Design in the United States.](#)” *Proceedings of the CIB W099 and TG59 International Safety, Health, and People in Construction Conference*, Cape Town, South Africa, June 11-13, 2017.

Toole, T. M. (2016). “[Strengthening Sustainability Rating Credit for Off-Site Construction.](#)” *Proc. of the 2016 Modular and Offsite Construction (MOC) Summit*, Univ. of Alberta, Canada.

Hallowell, M.R., J.A. Gambatese, and T.M. Toole (2008). “[A Systems Model of Construction Innovation.](#)” *Proc. of the 2008 Conference for Leadership and Management in Engineering*, October 2008.

Gambatese, J., T. M. Toole, and M. Behm (2008). “Prevention through Design Practice and Research: A Construction Industry Perspective.” *Proc. of CIB W99 International Conference 14th Rinker International Conference*, March 2008.

**Book Chapters** (since 2011)

Behm, M., J. Gambatese, and T. M. Toole (2014). “Construction Safety and Health through Design.” *Construction Safety Management and Engineering, 2<sup>nd</sup> Ed.* Darryl C. Hill, Editor. Des Plaines, IL: American Society of Safety Engineers.

Toole, T. M. and T. Berkeley (2014). “Regulatory Requirements.” *Construction Safety Management and Engineering, 2<sup>nd</sup> Ed.* Darryl C. Hill, Editor. Des Plaines, IL: American Society of Safety Engineers.

Toole, T. M. (2012, 2008). “Safety Engineering Cost Analysis and Budgeting” in *Safety Professionals’ Handbook, Second Edition.* Edited by Joel M. Haight. Des Plaines, IL: American Society of Safety Engineers.

Toole, T. M., P. Chinowsky and M. Hallowell (2011). “Strategic Innovation in EPC.” Chinowsky, P. S. and A. D. Songer, Eds. *Organization Management in Construction.* London: Spon Press/Taylor & Francis.

### **Selected Non-Refereed Publications**

- Toole, T. M. (2018). “[PEs should Pursue Integrated Lifecycle Engineering.](#)” *PE*. Published by the National Society of Professional Engineers. May/June. Page 8.
- Toole, T. M. (2017). “[Adding Prevention through Design to Civil Engineering Educational Programs.](#)” *J. of Professional Issues in Engineering Education and Practice*. DOI 10.1061/(ASCE)EI.1943-5541.0000344
- Toole, T. M. and J. Gambatese (2014). “[Prevention through Design: a Path to Social Sustainability.](#)” *COAA Owner’s Perspective* Fall/Winter 2014. Pages 22-25.
- Toole, T. M., J. Gambatese and D. Abowitz (2011). “[Owners’ Role in Facilitating Designing for Construction Safety.](#)” Research report published by the CPWR/NIOSH.
- Chinowsky, P., T. M. Toole and M. Hallowell (2010). “Enhancing Innovation in the EPC Industry Implementation Resource (243-2).” Construction Industry Institute.
- Chinowsky, P., T. M. Toole and M. Hallowell (2009). “Expanding Innovation in Construction.” Research Report for the Construction Industry Institute (Research Team 243).
- Toole, T. M. and R. Marshall (2006). “[Designing for Geoconstruction Safety.](#)” Invited paper presented at the ASCE “Trends Affecting the Geo-Community” workshop held in Reston, VA December 5-8, 2006.
- Toole, T. M., N. Hervol and M. Hallowell (2006). “[Designing for Construction Safety.](#)” *Modern Steel Construction* 46(6): 55-59.
- Toole, T. M. and J. Gambatese (2002). “[A Primer on the Federal OSHA Standards.](#)” *ASCE Practice Periodical in Structural Design and Construction*. 7(2): 56-60.
- Toole, T. M. (2002). “[A Comparison of Site Safety Policies of Construction Industry Trade Groups.](#)” *ASCE Practice Periodical in Structural Design and Construction*. 7(2): 90-95.

### **Scholarship in Progress**

- Toole, T. M. and Erger, K. “Prevention through Design: Promising or Perilous?” Submitted to the *ASCE Journal of Legal Affairs and Dispute Resolution in Engineering and Construction*.
- Toole, T. M., S. S. Eslambolchi and J. A. Gambatese. “A Case Study on Implementing Prevention through Design.”
- Orbison, R. and T. M. Toole. “Conflicts between Steel Connection Design Standards and Practice.”

### **Selected Grants and Grant Proposals (since 2006)**

- Toole, T. M. IPA Assignment to National Institute for Occupational Safety and Health (U.S. Dept. for Health and Human Services/Center for Disease Control) to conduct research on Prevention through Design. 9/1/16-8/31/17. Funded.
- Gambatese, J., M. Behm and T. M. Toole. “Impacts of Prevention through Design on Architecture and Engineering Design” grant proposal submitted to CPWR in October 2010. Total funding requested \$438,600. Not funded.
- Traver, C. and D. Klein, Principle Investigators. “The Integrate to Innovate (**i2i**) Center:

Fostering Innovation & Entrepreneurship through the Integration of Engineering & Liberal Education.” 18-university collaborative STEP Center proposal submitted to the National Science Foundation, January 2011. Not funded.

Toole, T. M., J. Gambatese and D. Abowitz. “Owner’s Role in Facilitating Designing for Construction Safety.” 1/2/2008-6/30/2010. DHHS/NIOSH Coop. Agree. No. U54 OH008307, CFDA # 93.955, Agree. #1030-63. Total grant \$99,396.

Chinowsky, P., T. M. Toole, M. Hallowell and K. Strzepek. “Innovation in the Engineering and Construction Industry.” 2006-2009 research project funded by the Construction Industry Institute. Total grant \$222,400.

Weinstein, M., M. Behm, J. Gambatese and T. M. Toole. “Prevention through Design in Construction: Translating Principles into Practice” grant proposal submitted to NIOSH in April 2007 for the Improving Public Health Practice through Translation Research (R18) program. Not funded.

Toole, T. M. and J. Gambatese. “Effects of Engineering during Construction on Worker Safety.” Grant proposal totaling \$634,000 submitted to NIOSH in February 2006. Not funded.

### **Teaching Resources**

“The Owner’s Role in Construction Safety.” Online educational module to be made available in 2016 by the Construction Industry Institute, Austin, TX. Based on CII Research Report 190.

Bucknell Bidding Simulator (ongoing). Online teaching tool intended for civil engineering and construction management students to learn the dynamics of bidding on fixed-price construction contracts. Users are assigned to construction firm with competitive characteristics such as ideal project types and sizes, overhead rates, and bonding capacities, then compete against other users. Both random and deterministic factors affect a firm’s actual costs on each project, which determines the firm’s net income.

[Project Management Flight Simulator](#) (ongoing). A 1500+ variable simulation model created using Ithink system dynamics software that allows users to virtually manage a hypothetical building construction project. Users hire their assistant project managers, choose the relative priority placed on each project goal (cost, deadline, quality, safety, boss goodwill, client goodwill), and decide which task to accelerate. Created and modified between 2003 and 2011 with the help of a series of Bucknell undergraduate civil & environmental engineering students.

Van Nosedall, S. and T. M. Toole (2011). Prevention through Design examples in strength of materials courses. Educational teaching tool commissioned by NIOSH.

Oelsner, A. and T. M. Toole (2011). Prevention through Design examples in transportation or highway design courses. Educational teaching tool commissioned by NIOSH.

Toole, T. M., D. Treppel, and S. Van Nosedall (2010). “[Prevention through Design in Structural Steel Design](#).” Educational module commissioned by NIOSH.

### **Webinars**

Toole, T.M. “Prevention through Design.” Webinar provided by the National Society of Professional Engineers, April 25, 2018.

Toole, T. M. “[PtD: We need to talk about Safety during Design](#).” Invited webinar for Brasfield & Gorrie, May 1, 2017.

Toole T. M. "Prevention through Design: making Concrete more Socially Sustainable." Invited webinar for the American Concrete Institute University, January 10, 2017.

Toole, T. M. "Prevention through design: Promising or Perilous?" Invited webinar for the American Bar Association Forum on Construction Law, November 3, 2015.

Toole, T. M. "Prevention through Design: A Leadership Opportunity." Invited webinar for the Construction Owners Association of America Training Institute. August 27, 2014.

### **Selected Presentations** (since 2009)

Toole, T. M. "The Business Case for Diversity." Invited presentation at the American Advertising Federation Mosaic Workshop, Toledo Museum of Art, April 26, 2018 and at the University of Toledo Diversity Roundtable, December 7, 2017.

Toole, T. M. "The Triple Bottom Line in Capital Projects." Invited presentation at the Maumee Valley Chapter of the Ohio Society of Professional Engineers on May 15, 2018 and at SSOE Group, Toledo, OH, April 5, 2018.

Toole, T. M. "The Triple Bottom Line in Infrastructure." Invited presentation at the Ohio Department of Transportation District 2, March 21, 2018.

Toole, T. M. "Kern Engineering Entrepreneurship Network-Grand Challenge Scholars Program Synergistic Pathways." Invited keynote presentation at the KEEN Workshop, Arizona State University, Feb. 21-23, 2018.

Toole, T. M. "Social Sustainability: Your Career, UT Engineering, the Engineering Profession." Invited presentation at the Toledo section of the Ohio Society of Professional Engineers, October 31, 2017.

Toole, T. M. "Project Safety and the Triple Bottom Line." Invited presentation at the Toledo section of ASCE, October 25, 2017.

Toole, T. M. "[Prevention through Design: Integrating Design and Construction for Safety.](#)" Invited presentation at the Pennsylvania State University Office of Physical Plant Safety Stand-Down, May 11, 2017.

Toole, T. M. "[Construction Project Safety and the Triple Bottom Line.](#)" Invited presentation at the ASCE-CI Construction Safety Workshop, Reston, VA, April 26, 2017.

Toole, T. M. "[Prevention through Design: A Different Side of Steel's Sustainability.](#)" Invited presentation at the 2017 North American Steel Construction Conf., March 22-25, 2017, San Antonio, TX.

Toole, T. M. "Prevention through Design: Collaborating for Safety and Health in Ohio." Invited presentation at the Ohio Construction Conference, Columbus, OH, March 15, 2017.

Toole, T. M. "Bucknell University's Grand Challenge Scholars Program." Invited snaptalk presented at the White House Office of Science and Technology Policy's workshop entitled "Universities Solving Global Science & Technology Problems by Leveraging Grand Challenges and Sparking Entrepreneurship." July 25, 2016.

Toole, T. M. "Prevention through Design: Accounting for Employee Safety in the Construction Process." Invited presentation at the EHS Today Safety Leadership Conf., October 26-28, 2015.

Toole, T. M. "Prevention through Design: Making Steel more Socially Sustainable." Invited

presentation at the 43<sup>rd</sup> Annual Conf. of the Steel Erectors Association of America. April 24, 2015.

Toole, T. M. “Prevention through Design: Sustainable Innovation in Safety Management.” Invited presentation at the 36th Annual Scientific Meeting of the NY/NJ Jersey Educational Resource Center, Mt. Sinai Hospital, New York, NY, March 20, 2015, and at the Safety Executives of New York Professional Development Conf., New York Univ., New York, NY, March 24, 2015.

Toole, T. M. “Bucknell University’s Grand Challenge Scholars Program.” Invited presentation at “Engineering Education in the 21<sup>st</sup> Century,” a National Academy of Engineering/Indian National Academy of Engineering Joint Symposium. Washington, DC. December 18-19, 2014.

Toole, T. M. “[Safety by Design: A Path towards Sustainable Leadership](#).” Keynote presentation at the WorkSafeBC Safety By Design Symposium, Vancouver, BC. May 22, 2014.

Toole, T. M. “[Prevention through Design: A Leadership Opportunity](#).” Keynote presentation at the Construction Owners Assoc. of America Pennsylvania Chapter Fall 2013 Conf., Penn State Univ., September 12, 2013, at the State System of Higher Education Dixon Center in Harrisburg, PA on November 1, 2013, at the Construction Owners Assoc. of America Spring Leadership Conf., Houston, TX, May 14-16, 2014, and (keynote) at the Construction Owners Assoc. of America Ohio Chapter Conf., Columbus, OH, Oct. 10, 2014.

Toole, T. M. “Safety by Design: A Leadership Opportunity for You.” Invited presentation at the Central Pennsylvania Safety Assoc./American Industrial Hygiene Assoc. Professional Development Conference, Pennsylvania State University, State College, PA, April 3, 2014.

Toole, T. M. and J. Gambatese. “Design for Construction Safety in the U.S. and Abroad.” Invited presentation at *Prevention through Design for Construction*, at the Harvard University School of Public Health, April 1-4, 2013.

Gambatese, J. A. and T. M. Toole. “Engineering for Construction Safety.” Four-hour invited workshop presented at Zachry Engineering, San Antonio, TX, January 24, 2012.

Toole, T. M. and J. A. Gambatese. “Owners’ Role in Facilitating Prevention through Design.” Invited presentation at the NIOSH Prevention through Design Symposium, Washington, DC, August 23-23, 2011.

Gambatese, J. A. and T. M. Toole. “Engineering for Safety.” Invited workshop at the Marine Well Containment System Contractor Safety Leadership Workshop, Houston, TX, April 26-27, 2011.

Toole, T. M. and J. Gambatese. “Design for Construction Safety in the U.S.” Invited presentation at *Safety in Design and Construction: A Lifecycle Approach*, at the Harvard University School of Public Health, Feb. 22-26, 2010 and Feb. 28-Mar 3, 2011, Boston, MA.

Toole, T.M. “A Critical Examination of ASCE Vision 2025.” Plenary presentation at the 2010 Engineering Project Organizations Conference, November 4-7, 2010, Stanford University Conference Center, CA.

Toole, T. M. “Engineering Integrated Education at Bucknell.” Presented at the 2010 Symposium on Engineering and Liberal Education, Union College, June 4-6, 2010.

Toole, T. M., “Engineering Integrated Education.” Class of 1956 Lecture, Bucknell University, February 3, 2010.

Toole, T. M. “Educational Bridge Building 201: Service Learning and Interdisciplinary Initiatives.” Plenary presentation at the second annual Patriot League Academic Conference, Bucknell University, Lewisburg, PA, October 30-31, 2009.

Chinowsky, P., Irwin, H., King, G., Myers, C. and Toole, T. M. “Improving Your Innovation Potential Using the Innovation Maturity Model.” Presented at the Construction Industry Institute annual conf., Reno, NV, July 29-30, 2009.

Toole, T. M. “Safety by Design.” Invited presentation at the 2009 North American Steel Construction Conf., April 1-3, 2009, Phoenix, Arizona and at Blue-Scope Construction, Kansas City, MO, October 12, 2009.

Toole, T. M. and J. Gambatese. “Design for Construction Safety: In Practice.” Invited presentation at *Safety in Design and Construction: A Lifecycle Approach*, at the Harvard University School of Public Health, Feb. 23–27, 2009, Boston, MA.

Gambatese, J. and T. M. Toole. “Design for Construction Safety: Concept and Research.” Invited presentation at *Safety in Design and Construction: A Lifecycle Approach*, at the Harvard University School of Public Health, February 23–27, 2009, Boston, MA.

## **PROFESSIONAL SERVICE (SINCE 2007)**

Initiated and maintaining [www.designforconstructionsafety.org](http://www.designforconstructionsafety.org).

National Academy of Engineering Grand Challenges Scholars Program [Steering Committee](#) (2014-present).

Associate Editor, ASCE [Practice Periodical on Structural Design and Construction](#) (2017-present)

[ANSI A10](#) Prevention Through Design Working Group (2015-present).

Advisory Panelist, HUD project “Strategies for Promoting Innovation in Home Building.” Provided comments to Urban Institute and Virginia Tech University on a research report entitled “Building Even Better Homes: Strategies for Promoting Innovation in Home Building” and served as panelist at March 30, 2018 workshop.

External Examiner in 2017 for a PhD dissertation on Prevention through Design, University of Canberra, Bruce, ACT 2601 Australia.

Technical Chair, 2011 [Engineering Projects Organizations](#) Conference, Estes Park, CO, August 9-12, 2011.

Program Committee, 4th Annual [Symposium on Engineering and Liberal Education](#), held at Union College June 3-4, 2011.

### [American Society of Civil Engineers](#)

Founding Vice Chair of the Prevention through Design Committee within the ASCE Construction Institute (2007-2009).

Vice Chair of the [Construction Safety Committee](#), responsible for initiating and implementing the ASCE-OSHA alliance (2003-2006).

Chairman, Engineering Management Group, Central Pennsylvania Section (2001-2004).

Founding Member, OSHA [Alliance Program Construction Roundtable](#) Design for Construction Safety Workgroup (2004-2009).

Co-Chair, Construction Hazards Prevention Through Design workgroup, [NIOSH NORA Construction Sector Council](#) (helps sets NIOSH's construction research agenda) (2006-2008).

Member of the Planning Committee for the [NIOSH Prevention through Design workshop](#) held July 9-11, 2007 in Washington, DC.

Assistant Specialty Editor for the ASCE [Journal of Construction Engineering and Management](#), (2003-2007).

Reviewer for the *J. of Constr. Eng. and Management*, *Constr. Management and Economics*, *J. of Management in Eng.* and *J. of Professional Issues in Eng. Education and Practice*.

## UNIVERSITY SERVICE

University of Toledo (excluding service performed by all Deans of the Colleges)

Chair, College of Business and Innovation Dean Search Committee (2017-present)

Welltower Gift Advisory Committee (2017-present)

Bucknell University (2009-2017 only)

Director, Bucknell [Grand Challenges Scholars Program](#) (2013-2017)

Engineering Council of Chairs (2013-2016)

Faculty Adviser, Entrepreneurship & Innovation Affinity House (2013-2016)

Committee on Athletics (2013-2016, representing Dean of Engineering)

Engineering Instructional Facilities Committee (2013-2016, representing Dean of Engineering)

Engineering Product Development Lab Committee (2014-2016, representing Dean of Engineering)

Committee on Admissions and Financial Aid (2013-2015, representing Dean of Engineering)

Ecosystem of Entrepreneurship Steering Committee (2013-2015)

Faculty leader for the Bucknell Appalachian Service Project Spring Break trip (March 2015)

Sexual Assault Hearing Adviser (2014-2016)

Service Learning Advisory Board (2013-present)

Residential Colleges Steering Committee (2012-2016)

Middle States Accreditation Working Group 1 (2012-2014)

Engineering Curriculum Committee (2013-2015)

Appointed member of the President's Task Force on Online and Residential Learning (2012-2013)

Elected member of Faculty Council (2006-2009, re-elected 2009-2012)

Appointed member of the President's Task Force on Campus Climate (2010-2011)

Faculty Co-Advisor, men's (2009-2013) and women's varsity soccer teams (2009-2012)

Elected Faculty Representative to the Board of Trustees' Committee on Development and Alumni Relations (2008-2011)

Chair or member of numerous departmental review committees for tenure or promotion.

Member of numerous search committees within the department, College of Engineering and the University.

Initiated departmental [Facebook](#) page (2011)

Mentor to seven new faculty (2006-2017)

Appointed member of Student Engagement Working Group (2010)

Appointed member of the [Bucknell Forum National Speaker Series](#) Task Force (2007-2010)

Participated in the [Suriname fresh water supply](#) senior design project (2010)  
Led the design and construction of a [waterline to a rural community in Nicaragua](#) through the Bucknell Brigade (2006-2009)

## HONORS AND AWARDS

Maxwell Award for cross-functional excellence at Bucknell (Campus Climate Taskforce; 2011)  
Bucknell nominee for the U.S. Professor of the Year award (2011)  
Class of 1956 Lectureship Teaching Award, Bucknell University (2009)  
Friend of Bucknell Award, Women's Varsity Soccer Team (2009)  
[Fellow, American Society of Civil Engineers](#) (2008)  
Best Paper Award, [ASCE Construction Research Congress](#) (2005)  
Best Paper Award, *Journal of Professional Issues in Eng. Education and Practice* (2004-5)  
M.I.T. Civil & Env. Engineering Dept. Teaching Award (1993)  
M.I.T. Program for Advanced Construction Technology Fellow (1989-1992)  
[Navy Achievement Medal](#) (1988)  
Outstanding Graduate, [U.S. Navy CECOS](#) Basic Class 169 (1983)

## OTHER INFORMATION

Professional Civil Engineer since 1987, currently registered in Pennsylvania with inactive registrations in 11 other states.  
Member, [National Society of Professional Engineers](#).  
Member, [American Society of Safety Engineers](#).  
Member, [American Society for Engineering Education](#).  
Member, [Order of the Engineer](#).  
Member, [Phi Kappa Phi](#), [Sigma Xi](#), [Tau Beta Pi](#), [Chi Epsilon](#), [Omicron Delta Kappa](#) and [Mortar Board](#) honor societies.  
Married to [Amy P. Toole](#), Ph.D. Two adult children.  
Worked or traveled within 30 countries.