

## T. MICHAEL TOOLE

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## SUMMARY

T. Michael Toole has been an entrepreneurial and interdisciplinary leader in the military, industry and academia. From 2017-2024, Dr. Toole served as the Dean of the College of Engineering at the University of Toledo. Previously, Toole spent 18 years at Bucknell University, where his positions included Associate Dean of Engineering, Professor of Civil and Env. Engineering, and Director of the Institute for Leadership in Technology and Management. Previous employment includes Vice President with a multidisciplinary engineering firm, Purchasing and Construction Services Manager with Ryland Homes, and five years of active duty as an officer in the U.S. Navy Civil Engineer Corps that included serving as a Company Commander in a Seabee Battalion. Toole's recent board memberships include the Executive Board of the American Society for Engineering Education Engineering Deans Council, the Board of the Toledo Society of Professional Engineers, and the Board of the Better Business Bureau of NW Ohio and SE Michigan. His scholarship (3100+ Google Scholar citations) focuses on Prevention through Design, in which designers explicitly consider the safety of construction and maintenance workers.

## EDUCATION

### **Massachusetts Institute of Technology, Ph.D. in Technology Strategy.**

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 strategic planning, information systems, management of technology, operations management, system dynamics, business law, organizational behavior, and social science research methods.

### **Massachusetts Institute of Technology, M.S. in Civil Engineering.**

Thesis: [\*Strategic Issues in Stresskin Foam Panels for Residential Construction\*](#). Courses included microeconomics, strategic management, product design, project management, construction law, construction finance, construction innovation, and structural engineering.

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

## PROFESSIONAL EXPERIENCE

### **University of Toledo**

**2017-2024**

#### **Dean, College of Engineering**

#### **Professor of Civil & Environmental Engineering**

The University of Toledo is an urban public research (R2) university with student enrollment exceeding 15,000. Its thirteen colleges offer Bachelors, Masters, JD and PhD degrees in the liberal arts and professional programs. The College of Engineering is the largest college with ~ 2400 undergraduate and 200 graduate (master's and PhD) students. Its D1 sports teams compete

in the Mid-American Conference.

### **Responsibilities:**

- Managed a complex college consisting of 6 departments offering 23 degree programs, ~75 full-time faculty (including faculty providing on-site instruction for a degree program at a partner community college), and ~30 part-time instructors. The 12 undergraduate degree programs are accredited by three different ABET commissions.
- Oversaw dedicated marketing, budgeting, information technology staff, 7 full-time researchers at NASA Glenn Research Center, an industrial testing and research center, and a Career Development Center that places ~1500 full-time co-ops per year.
- Responsible for a \$40+ million annual budget (including tuition revenues, state share of instruction and external grants funding).

### **Selected Key Accomplishments**

- Created new certificate and degree programs in computer science, cybersecurity, mechatronics / automation, manufacturing, and material science.
- Oversaw the College's collaboration with facilities staff associated with the \$22 million complete renovation of the North Engineering building.
- Achieved an unprecedented number of female hires and appointments, including 2 of 3 Associate Deans, 2 of 6 department chairs, 8 of 19 faculty hires, and 10 of 14 staff hires.
- Created a cultural shift within the College through the creation and hiring of an Associate Dean for Diversity, Inclusion and Community Engagement and Manager for Diversity, Inclusion and Community Engagement.
- Received Bronze Award by the ASEE Diversity Recognition Program, the highest level awarded to any institution to date.
- Implemented changes to increase student diversity by changing admissions criteria and processes, creating pathways from other colleges, and securing an NSF grant to strengthen retention of underrepresented students.
- Increased research expenditures from \$7.5M to \$12M.
- Signed Memorandum of Understanding with Oak Ridge National Lab and pursuing federal funding for additive manufacturing and shape-memory alloys.
- Established partnerships with other national labs and regional employers and pursuing federal funding in solar energy, grid modernization, hydrogen production, glass innovation, and advanced manufacturing.
- Launched the Institute for Applied Engineering Research to pursue funded industrial and DOD research projects.
- Led donor cultivation and solicitation (including six 7-figure asks), collaborated with University Foundation fundraising staff to raise over \$2M in donor gifts annually.
- Increased the number and engagement of regional employers who provide annual support as members of the Corporate Partners Program.
- Leveraged the UT Toledo transition from incremental budgeting to responsibility centered management (RCM) to pursue instructional efficiency and equitable faculty workloads.

- Successfully initiated membership in the Kern Engineering Entrepreneurship Network (KEEN) and modified KEEN educational modules to create a successful alternative co-op program during the pandemic.
- Established new enrollment and research partnerships with institutions in Asia, Europe, and Africa.
- Launched the Technology Takes the Wheel series focusing on autonomous vehicles and smart mobility in partnership with regional organizations, which increased the visibility of the College as well as strengthened relationships between the College and state and regional firms and agencies.
- Met weekly with other UToledo academic deans to share best practices and collaborate on university goals.

**Bucknell University**

**1999 – 2017**

**Associate Dean of Engineering**

**Director, Grand Challenges Scholars Program**

**Director, Institute for Leadership in Technology and Management**

**Professor / Associate Professor / Assistant Professor of Civil & Environmental Engineering**

Bucknell University is a private liberal arts university located in Central Pennsylvania with an enrollment of ~ 3600 undergraduate students and ~50 masters students. Bucknell offers 65 majors within three colleges: Arts & Sciences, Management, and Engineering. Its D1 varsity sports teams compete in the Patriot League.

**Associate Dean of Engineering (2012-2016)**

Served three-year term plus one additional year at request of Dean until start of scheduled sabbatical. 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, 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, Grand Challenges Scholars Program (2012-2017)**

Wrote proposal that established Bucknell as the thirteenth *National Academy of Engineering* Grand Challenges Scholars Program, which focuses on undergraduate students demonstrating competencies relating to independent learning, interdisciplinary perspectives, global awareness, service-learning, and entrepreneurship. Initiated and directed all operations relating to admissions, mentoring, administration, and budgeting, collaborating with a 13-member interdisciplinary Steering Committee. Expanded program to include both engineering and liberal arts students. Created and taught interdisciplinary courses entitled The Grand Challenges, Social Entrepreneurship in New Orleans, and Entrepreneurship and Renewable Energy in Iceland. Program success led to three invited presentations at the National Academy of Engineering and appointment on the GCSP National Steering Committee.

**Senior Fellow in the Society and Technology Residential College (2012-2016)**

Collaborated with three liberal arts faculty to teach seminars to first year engineering and liberal arts students. Courses, extracurricular activities, and dorm clusters provided immersive experience that emphasized critical thinking, global awareness, and multidisciplinary perspectives.

**Director, Institute for Leadership in Technology and Management (2007-2008, 2010-2013)**

Led an intensive, interdisciplinary summer program for 24 highly motivated rising juniors in engineering, management, and the liberal arts. Core topics included strategic management, economics, marketing, organizational behavior, engineering and technology development, global competition, ethics, leadership, and communication. Real-world consulting projects for firms such as General Electric, JP Morgan, and Hershey provided experiential learning to supplement classroom sessions. Responsible for all operations, including admissions, curriculum, arranging executive speakers and budgeting.

**Professor (2012-2017) / Assoc. Professor (2006-2012) / Asst. Professor (1999-2006) of Civil & Environmental Engineering**

Teaching responsibilities included undergraduate courses entitled the Human Side of Technology, the Grand Challenges, Social Entrepreneurship in New Orleans, Entrepreneurship and Renewable Energy in Iceland, Exploring Engineering, Engineering in a Global and Societal Context (Argentina), the Challenges of Green Building, Innovation in Design and Construction, Construction Engineering, Materials Engineering, Engineering Planning and Project Management, Civil Engineering Design (senior design project), and Introduction to Transportation. Research and service listed below.

**The Packer Group, Inc. (1996 – 1999)**

**Director of Construction Systems for Packer Engineering and Vice President for HomeCAD, Inc.**

A multi-disciplinary engineering company offering a wide range of technical consulting for litigation support, insurance investigations, and industrial services. Engagements as Director of Construction Systems typically involved failures in the design, construction or maintenance of structures and building systems or occupational accidents and overseeing a team of engineers and engineering technicians. As founding Vice President of HomeCAD, launched new business unit to use parametric CAD to perform estimating and visualization services for building product retailers.

**Ryland Homes (1995 – 1996)**

**Purchasing and Construction Services Manager**

In the Chicago division of firm later acquired by Lennar Homes, solely responsible for bidding and awarding contracts totaling \$51 million with material suppliers and union subcontractors for the construction of ~400 homes in 10 subdivisions.

**Tonyan Composites Corporation (1992 – 1994)**

**President and co-founder**

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”**

Solely responsible for developing course content, delivering lectures, and grading a full-credit graduate course in business and technology strategy.

**Brown & Root Services Corporation (1988 – 1989)**

**Delivery Order Manager**

Accepted six-month position before beginning scheduled graduate study. Assigned to three Job Order Contract sites in California and Hawaii to troubleshoot operational and client issues at each site. Estimated and/or negotiated 15 projects and developed 18 bid packages.

**U.S. Navy Civil Engineer Corps (commissioned officer) (1983 – 1988)**

**Assistant Resident Officer in Charge of Construction**, administering 71 fixed-price construction contracts and job order contract delivery orders worth over \$20.7 million and supervising 2 NAVFAC engineers and 4 field inspectors in California. 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.

**Company Commander** in charge of 75 SEABEES and 8 construction projects worth \$5.5 million in Puerto Rico.

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

**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**

[Google Scholar](#) 3100+ citations, h-index 23, i10-index 30.

### **Refereed Journal Articles**

Toole, T. M. and Erger, K. (2018). “[Prevention through Design: Promising or Perilous?](#)” *ASCE Journal of Legal Affairs and Dispute Resolution in Engineering and Construction*. DOI: 10.1061/(ASCE)LA.1943-4170.0000284.

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.* (now called “*J. of Civil Engineering Education*”)

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. (now called “*J. of Civil Engineering Education*”)

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. (now called “*J. of Civil Engineering Education*”)) Received Best Paper Award for 2005.

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)**

Toole, T. M., “Professional Ethics” (forthcoming). *Construction Safety Management and Engineering, 3<sup>rd</sup> Ed.* Darryl C. Hill, Editor. Des Plaines, IL: American Society of Safety Professionals.

Toole, T. M., “Construction Contracts and Project Delivery Methods” (forthcoming). *Construction Safety Management and Engineering, 3<sup>rd</sup> Ed.* Darryl C. Hill, Editor. Des Plaines, IL: American Society of Safety Professionals.

Toole, T. M., “Construction Safety Regulations and Resources” (forthcoming). *Construction Safety Management and Engineering, 3<sup>rd</sup> Ed.* Darryl C. Hill, Editor. Des Plaines, IL: American Society of Safety Professionals.

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. (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 (now called “*J. of Civil Engineering Education*”)

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.

## **Grants**

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.

## **Teaching Resources**

“The Owner’s Role in Construction Safety.” Online educational module made available in 2017 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 Nisdall, 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 Nisdall (2010). “[Prevention through Design in Structural Steel Design](#).” Educational module commissioned by NIOSH.

## Webinars

Toole, T. M., “[Ethical Issues in Geotechnical Engineering Business Development](#).” Invited presentation to the Delaware Valley Geo Institute, Jan. 28, 2026.

Toole, T. M., “[Ethical Issues in Prevention through Design](#).” Invited webinar presented to the ASCE Central PA Section, Sep. 13, 2023.

Toole, T. M. “[Prevention through Design](#).” Invited presentation to the AIA-Master Builder Association Pittsburgh Chapter Joint Committee, Feb. 22, 2023.

Toole, T. M. and R. O’Callaghan, “[Introduction to Safety by Design in Electric Transmission & Design](#).” Invited webinar presented to the CEATI Intl. SEP Workgroup, Sep. 15, 2020.

Toole, T. M. “Ethics Presentation on Prevention through Design.” Invited webinar presented to the NW Ohio Chapter of the American Council of Engineering Companies, Sep. 16, 2020.

Toole, T. M., “PtD: Reducing construction site and maintenance hazards through design.” Invited panel presentation in the Engineering News Record Webinar “Embedding Safety into Your Project Lifecycle.” May 19, 2020.

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., “[Ethical Issues in Marketing, Bidding and Negotiating](#).” Invited presentation to the Association of Highway Engineers Delaware Valley, Nov. 12, 2025.

Toole, T. M. “[Ethical Issues in Prevention through Design](#).” Invited presentation to the ASCE Philadelphia Section, Oct. 7, 2025.

Toole, T. M. “[Applying the LAPELS, NSPE and ASCE Codes of Ethics to Construction Site Safety](#).” Invited keynote presentation at the Louisiana Civil Engineering Conference, Kenner, LA, Sep. 24, 2025.

Toole, T. M. “[WTF PtD?](#)” Invited keynote presentation at the 2025 Construction Safety Conference, University of Kansas, Lawrence, KS, Aug 6, 2025.

Toole, T. M., “[Applying the DAPE, NSPE and ASCE Codes of Ethics to Business Development and Construction Site Safety](#).” Invited presentation to the Delaware Association of Professional Engineers, Newark, DE, June 9, 2025.

Toole, T. M., “[Ethical Issues in Marketing, Bidding and Negotiating](#).” Invited presentation to the ASCE Central PA Section, Harrisburg, PA, Sep. 18, 2024.

Toole, T. M. "Owner-Designer-Constructor Collaboration to Achieve Prevention through Design." Invited presentation to ENGIE North America Major Partnerships Team, Columbus, OH, September 12, 2023.

Toole, T. M., "[Ethical Issues in Prevention through Design](#)." Construction Institute Summit, St. Louis, March 4, 2023.

Toole, T. M. "[Ethical Issues in Prevention through Design](#)." Invited presentation at the American Concrete Pipe Association Conference, St. Louis, Feb. 9, 2023.

Toole, T.M. "[EV Technologies Overview](#)." Invited presentation at Opportunities for Northwest Ohio in Electric Vehicle Technology, hosted by the Toledo Chamber of Commerce, September 29, 2022.

Toole, T.M. "[UToledo College of Engineering's Pandemic Challenges and Successes](#)." Keynote presentation at the IEEE Toledo Section Institute Night, November 18, 2021.

Toole, T.M. and Relue, P. "UToledo's Smart Mobility Journey." Invited presentation at the Toledo Transportation Summit, hosted by the Regional Growth Partnership, November 16, 2021.

Toole, T. M. "Ethical Issues in Marketing, Bidding and Negotiating." Keynote presentation during the All-Ohio Engineering Conference (held virtually), June 11, 2021.

Toole, T. M. "Prevention through Design." Invited presentation at the Western Council of Construction Consumers Safety Summit, May 19, 2021.

Toole, T. M. "Electric Vehicles 101 and how the Toledo Region can benefit." Invited presentation to select group of Toledo regional leaders from industry and government convened by Rep. M. Kaptur, March 22, 2021.

Toole, T. M. "Applying the NSPE Code of Ethics to re-opening university campuses" and "Comparing the NSPE and ASCE codes of ethics." Recorded presentations during the Engineers Foundation of Ohio Professional Development Conference (held virtually), November 6, 2020.

Toole, T. M. "Ethical Issues in Prevention through Design." Invited presentation for the American Council of Engineering Companies Ohio, September 16, 2020.

Toole, T. M. "Achieving the Triple Bottom Line through Integrated Design and Construction." Invited webinar on July 22, 2020 and invited presentations at the FECON Project S.A.F.E. conference, Jacksonville, FL, Mar. 10, 2020 and the Florida Engineering Society annual conference, Marco Island, Aug. 3, 2018.

Toole, T. M. "Opportunities and Challenges for PtD Education." Invited plenary presentation at the Arizona State University/NIOSH Prevention through Design Workshop, Tempe, AZ, March 11, 2020.

Toole, T. M. "Safety by Design in Power Transmission and Distribution." Invited presentation at Consolidated Edison, New York, NY, Dec. 3, 2019.

Toole, T. M. "Leveraging Industry Trends to Facilitate PtD Adoption." Invited presentation at the Northern Ohio Chapter of ASSP Workshop *Design-In-Safety for Sustainable Business Results*, October 11, 2019.

Toole, T. M. "Introduction to Safety by Design in Electrical Construction." Invited presentation to Toledo Chapter of the Institute for Electrical and Electronics Engineers, September 25, 2019.

Toole, T. M. "Introduction to Design for Safety in the Power Industry" and "Design for Safety 2:

the Triple Bottom Line and Implementation.” Invited presentations at the First Energy-Electrical Power Research Institute Safety by Design Workshop, Akron, OH, June 25-26, 2019.

Toole, T. M. “Prevention through Design and the Triple Bottom Line.” Invited presentation to the Safety Council of Northwestern Ohio, June 19, 2019.

Toole, T.M. “Integrated Lifecycle Engineering.” Invited keynote presentation at the Ohio Engineering Conference, Perrysburg, OH, June 6, 2019.

Toole, T. M. “Design for Safety and the Triple Bottom Line.” Invited presentation at Engineers Foundation of Ohio Fall Professional Development Conference, Powell, OH, November 2, 2018.

Toole, T. M. “Prevention through Design.” Invited presentation at 2018 Pennsylvania Governor’s Occupational Safety & Health Conference, Hershey, PA, October 29, 2018.

Toole, T. M. “Using Prevention through Design to Achieve Project Safety Goals.” Invited presentation to the Project Management Institute, Western Lake Erie Chapter, Toledo, OH, September 11, 2018.

Toole, T. M. “Implementing Prevention through Design to Achieve Life-Cycle Safety.” Invited presentation at SSOE Group, Toledo, OH, July 26, 2018.

Toole, T. M. “Design for Safety and the Triple Bottom Line in Construction Projects.” Invited presentation to the U.S. Army Corps of Engineers, in Saul St. Marie on July 23 and in Detroit District office on July 16, 2018.

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 to 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 snap talk 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 <https://designforconstructionsafety.org>

Associate Editor, ASCE [\*Journal of Structural Design and Construction Practice\*](#) (2017-present)

Director, Engineers Dean Council Executive Board, American Society for Engineering Education (2021-2024)

Board Member, Better Business Bureau of NW Ohio and SW Michigan (2020-2024)

Board Member, Toledo Society of Professional Engineers (2019-2023)

Chair, Ohio Engineering Deans Council (2019-2022)

Board Member, Engineer's Foundation of Ohio (2019-2022)

Member, Grand Challenges Scholars Program Interim Executive Committee (2021-2022)

Member, Board of Directors, World Association of Co-operative Education (2018-2020)

National Academy of Engineering Grand Challenges Scholars Program Steering Committee

(2014-2019)

ANSI A10 Prevention Through Design Working Group (2015-2019)

Advisory Panelist. Provided review comments to Urban Institute and Virginia Tech University on a research report for HUD entitled “Building Even Better Homes: Strategies for Promoting Innovation in Home Building” and participated in 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); Member (2002-Present)

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)

## UNIVERSITY SERVICE

University of Toledo (*excluding service performed by all deans of the colleges*)

Co-Chair, College of Medicine and Life Sciences Dean Search Committee (2023-2024)

Member, Vice President for Development Search Committee (2018-19)

Chair, College of Business and Innovation Dean Search Committee (2017-18)

Welltower Gift Advisory Committee (2017-18)

Bucknell University (2009-2017 only)

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)

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

Engineering Council of Chairs (2013-2016)

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 (by Provost) member of Student Engagement Working Group (2010)  
Appointed member (by President) 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

2024 Engineer of the Year, Toledo Regional Society of Professional Engineers  
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)  
Member, Phi Kappa Phi, Sigma Xi (full), Tau Beta Pi, Chi Epsilon, Omicron Delta Kappa and Mortar Board honor societies.

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 Engineer since 1987, currently registered in Pennsylvania

Fellow, American Society of Civil Engineers

Member, American Society of Safety Professionals

Member, Order of the Engineer