Stanford

# George Toye

Adjunct Professor, Mechanical Engineering - Design

## Bio

### BIO

George Toye, Ph.D., P.E., is adjunct professor in Mechanical Engineering at Stanford University.

While teaching advanced project-based engineering design thinking and STEM-based innovations at the graduate level as part of ME310, he also contributes to research in varied topics in engineering education, and effective globally-distributed team collaborations. As well, he remains active in entrepreneurship and varied advising/consulting work.

George earned his B.S. and M.S. degrees in Mechanical Engineering from U.C. Berkeley, and Ph.D. in Mechanical Engineering with minor in Electrical Engineering from Stanford University.

Since 1983, he has enjoyed volunteering annually to organize regional and state-level Mathcounts competitions to promote mathematics education amongst middle-school aged students.

### ACADEMIC APPOINTMENTS

- Adjunct Professor, Mechanical Engineering - Design

### PROFESSIONAL EDUCATION

- Ph.D., Stanford University , Mechanical Engineering - Design, (minor: Electrical Engineering) (1989)
- M.S., University of California, Berkeley , Mechanical Engineering - Controls (1981)
- B.S., University of California, Berkeley , Mechanical Engineering - Energy Systems (1980)

### PATENTS

- George Toye, Larry J. Leifer. "United States Patent US9516291B2 Television systems incorporating separate A/V processing systems and television displays", Leland Stanford Junior University, Dec 1, 2014
- Jack Hong, George Toye. "United States Patent US5710883A Hypertext document transport mechanism for firewall-compatible distributed world-wide web publishing", Leland Stanford Junior University, Mar 10, 1995

## Teaching

### COURSES

**2026-27**

- Global Engineering Design Thinking, Innovation, and Entrepreneurship: ME 310A (Aut)
- Global Engineering Design Thinking, Innovation, and Entrepreneurship: ME 310B (Win)
- Global Engineering Design Thinking, Innovation, and Entrepreneurship: ME 310C (Spr)

**2025-26**

- Global Engineering Design Thinking, Innovation, and Entrepreneurship: ME 310A (Aut)
- Global Engineering Design Thinking, Innovation, and Entrepreneurship: ME 310B (Win)
- Global Engineering Design Thinking, Innovation, and Entrepreneurship: ME 310C (Spr)

**2024-25**

- Global Engineering Design Thinking, Innovation, and Entrepreneurship: ME 310A (Aut)
- Global Engineering Design Thinking, Innovation, and Entrepreneurship: ME 310B (Win)
- Global Engineering Design Thinking, Innovation, and Entrepreneurship: ME 310C (Spr)

**2023-24**

- Global Engineering Design Thinking, Innovation, and Entrepreneurship: ME 310A (Aut)
- Global Engineering Design Thinking, Innovation, and Entrepreneurship: ME 310B (Win)
- Global Engineering Design Thinking, Innovation, and Entrepreneurship: ME 310C (Spr)

## Publications

### PUBLICATIONS

- **Outcomes of a Longitudinal Administration of the Persistence in Engineering Survey** *JOURNAL OF ENGINEERING EDUCATION*
  Eris, O., Chachra, D., Chen, H. L., Sheppard, S., Ludlow, L., Rosca, C., Bailey, T., Toye, G.
  2010; 99 (4): 371-395
- **Scaling Up: Taking the Academic Pathways of People Learning Engineering Survey (APPLES) National** *IEEE Frontiers in Education Conference 2008*
  Donaldson, K. M., Chen, H. L., Toye, G., Clark, M., Sheppard, S. D.
  IEEE.2008: 1078–1083
- **Targeting undergraduate students for surveys: Lessons from the Academic Pathways of People Learning Engineering Survey (APPLES)** *37th Annual Frontiers in Education Conference*
  Donaldson, K. M., Chen, H. L., Toye, G., Sheppard, S. D.
  IEEE.2007: 1116–1122
- **VisionManager: A computer environment for design evolution capture** *CONCURRENT ENGINEERING-RESEARCH AND APPLICATIONS*
  Fruchter, R., Reiner, K., Leifer, L., Toye, G.
  1998; 6 (1): 71-84
- **Collaborative mechatronic system design** *CONCURRENT ENGINEERING-RESEARCH AND APPLICATIONS*
  Fruchter, R., Reiner, K. A., Toye, G., Leifer, L. J.
  1996; 4 (4): 401-412
- **Tele-service-robot: Integrating the socio-technical framework of human service through the InterNet-World-Wide-Web** *International Workshop on Biorobotics - Human/Robot Symbiosis*
  Leifer, L., Toye, G., VANDERLOOS, M.
  ELSEVIER SCIENCE BV.1996: 117–26
- **Engineering design notebook for sharing and reuse** *4th IEEE Workshop on Enabling Technologies - Infrastructure for Collaborative Enterprises (WETICE 95)*
  Hong, J., Toye, G., Leifer, L. J.
  ELSEVIER SCIENCE BV.1996: 27–35
- **Visionmanager: A computer environment for design evolution capture** *4th International Conference on Artificial Intelligence in Design*
  Fruchter, R., Reiner, K., Leifer, L., Toye, G.
  KLUWER ACADEMIC PUBL.1996: 505–524
- **HELLENIC FAULT-TOLERANCE FOR ROBOTS** *COMPUTERS & ELECTRICAL ENGINEERING*
  Toye, G., Leifer, L. J.

1994; 20 (6): 479-497

- **SHARE - A METHODOLOGY AND ENVIRONMENT FOR COLLABORATIVE PRODUCT DEVELOPMENT** *INTERNATIONAL JOURNAL OF INTELLIGENT & COOPERATIVE INFORMATION SYSTEMS*

  Toye, G., Cutkosky, M. R., Leifer, L. J., Tenenbaum, J. M., GLICKSMAN, J.

  1994; 3 (2): 129-153