

Douglas E. Young, Ph.D.
Principal Scientist

Professional Profile

Dr. Douglas Young is a Principal Scientist in Exponent's Human Factors practice. Dr. Young has over 20 years of experience examining issues related to human performance, human factors, biomechanics, and ergonomics in accidents, injuries, and safety. He has evaluated the human behavior and safety of operation for products manufactured in the automotive and other consumer-product industries, and has studied factors that cause human error and accidents. His scientific expertise includes the analysis of human movement control, coordination, gait, loss of balance, injury assessment, performance in sports and recreational activities, and analysis of accident patterns, as well as reaction time, vision, and the operation of vehicles and machinery. His research examines effectiveness of warnings, safety information, operation of controls, biomechanics, and accident and injury analyses, as well as human error and its determinants, including movement control, information processing, perception, memory, attention, stress, aging, and training.

Dr. Young also holds the position of Professor in Kinesiology at the California State University in Long Beach (CSULB), is a co-investigator on a multi-year research grant sponsored by the National Institute of Health, is a member of the Institutional Review Board for the protection of human subjects at CSULB, and is a recipient of numerous awards for his scientific research. He is an active member of the Human Factors and Ergonomics Society and the Society of Automotive Engineers. Dr. Young has served as a research consultant with the Veterans Affairs Medical Center in Long Beach, California, as a consultant with governmental emergency service agencies, including the Los Angeles Sheriff's Department and Long Beach Fire Department, and as an expert with the Association of Scientific Advisors, Inc.

Academic Credentials and Professional Honors

Ph.D., Kinesiology, University of California, Los Angeles, 1988
M.S., Kinesiology, University of California, Los Angeles, 1987
B.S., Kinesiology, University of California, Los Angeles, 1983

Award for Scholarly and Creative Research, California State University; Young Scholar Award, Western College Physical Education Society; Meritorious Performance and Professional Promise Award, California State University

Publications

Harley E, Scher I, Stepan L, Young D, Shealy J. Reaction times of skiers and snowboarders. *Journal of ASTM International*, Paper ID JAI102829, 2010.

Heckman GM, Harley EM, Scher IS, Young DE. Helmet use in sledding: Do users comply with manufacturer warnings? *Proceedings, Human Factors and Ergonomics Society*, 54th Annual Meeting 2010.

Schmidt, RA, Young, DE. Cars gone wild: The major contributor to unintended acceleration in automobiles is pedal error. *Frontiers in Psychology* 2010, doi: 10.3389/fpsyg.2010.00209.

Heckman GM, Jackson GW, Keefer RE, Ray R, Harley EM, Young DE. Mechanisms of automatic transmission console shift selection and driver egress. *Society of Automotive Engineers 2009 World Congress*, April 2009.

Harley EM, Trachtman D, Heckman GH, Young DE. Driver gear-shifting behaviors and errors. *Proceedings, Human Factors and Ergonomics Society 52nd Annual Meeting*, 2008.

Huntley-Fenner G, Harley E, Trachtman D, Young D. ANSI Z535.6 and conspicuity: A test of the new state of the art format for instructions. *Proceedings, Human Factors and Ergonomics Society 51st Annual Meeting*, 2007.

Scher I, Young D, Trachtman D. The influence of age on the forces produced during normal seat belt buckling. *Proceedings, ASME 2007 Summer Bioengineering Conference (SBC2007)*, Keystone Resort and Conference Center, Keystone, CO, June 20–24, 2007.

Young DE, Trachtman D, Scher I, Schmidt RA. High school and college baseball pitchers' response and glove movements to line drives. *Journal of Applied Biomechanics* 2006; 22(1):25–32.

Vijayakumar V, Scher I, Pierce J, Bove R, Gloeckner D, Young D, Cargill R. Head kinematics and upper neck loading during simulated low-speed rear-end collisions: A comparison with vigorous activities of daily living. *SAE Paper 2006-01-0247*, Society of Automotive Engineers, Inc., Warrendale, PA, 2006.

Young D, Trachtman D, Krauss D. Human performance issues in auditory collision-avoidance systems. *10th Annual International Conference on Industrial Engineering*, Clearwater, FL, 2005.

Scher I, Young D, Trachtman D, Dubey A. Falling objects: Is there really a potential for head injury? *2005 Summer Bioengineering Conference*, American Society of Mechanical Engineers, Vail, CO, 2005.

Trachtman D, Schmidt RA, Young D. The role of pedal configuration in unintended-acceleration and pedal-error accidents. *Proceedings, Human Factors and Ergonomics Society*, 49th Annual Meeting, Orlando, FL, 2005.

Keetch K, Schmidt RA, Lee TD, Young DE. Especial skills: Their emergence with massive amounts of practice. *Journal of Experimental Psychology: Human Perception and Performance* 2005; 31(5):970–978.

Ayres TJ, Li L, Trachtman D, Young DE. Passenger-side rear-view mirrors: Driver behavior and safety. *International Journal of Industrial Ergonomics* 2005; 35:157–162.

Young D, Trachtman D, Dracup B, Al-Tarawneh I. Are seat belt usage rates lower than we think? Proceedings, Human Factors and Ergonomics Society 48th Annual Meeting, New Orleans, LA, 2004.

Arndt SR, Ayres TJ, Li L, Wood CT, Young DE. Human factors in product recall planning. Proceedings, 6th Annual International Conference on Industrial Engineering—Theory, Applications and Practice, 2001.

Young DE, Schmidt RA, Ayres TJ, Trachtman D. Risk and driver behavior with adjustable pedals. Proceedings, Human Factors and Ergonomics Society's 45th Annual Meeting, 2001.

Ayres TJ, Li L, Schleuning D, Young DE. Preferred time-headway of highway drivers. 4th Annual IEEE Conference on Intelligent Transportation Systems, Oakland, CA, 2001.

Ayres TJ, Wood CT, Schmidt RA, Young DE, Murray J. Affordance perception and safety intervention. Proceedings, Human Factors and Ergonomics Society Conference, San Diego, CA, 2000.

Ayres TJ, Arndt SR, Young DE. Product-related risk of falling among the elderly. Proceedings, Silicon Valley Ergonomics Conference and Exposition, San Jose, CA, 1998.

Ayres TJ, Kost G, Schmidt RA, Werner S, Young DE. Risk analysis and bicycling injuries. American Society of Mechanical Engineering Conference, Anaheim, CA, 1998.

Arndt SR, Ayres TJ, McCarthy RL, Schmidt RA, Wood CT, Young DE. Warning labels and accident data. Proceedings, Human Factors and Ergonomics Society Conference, Chicago, IL, 1998.

Ayres TJ, Wood CT, Schmidt RA, Young DE, Murray J. Effectiveness of warning labels and signs: An update on compliance research. Proceedings, Silicon Valley Ergonomics Conference and Exposition San Jose, CA, 1998.

Schmidt RA, Young DE, Ayres TJ. Automotive seat belts: Usage patterns in automatic shoulder belt systems. *Human Factors*; 40(1): 126–135, 1998.

Schmidt RA, Young DE, Ayres TJ, Wong, J. Pedal misapplications: Their frequency and variety revealed through police accident reports. Proceedings, Human Factors and Ergonomics Society Conference, Albuquerque, NM, 1997.

Ayres TJ, Fowler GF, Young DE, Bjelajac VM. Slope perception and slope warnings. Proceedings, Silicon Valley Ergonomics Conference and Exposition, Palo Alto, CA, 1997.

Ayres TJ, Lau EC, Schmidt RA, Young DE. Operator experience and accident risk. Proceedings, Human Factors and Ergonomics Society Conference, Washington, D.C., 1996.

Young DE, Ayres TJ, Schmidt RA, Bjelajac VM. Inherent movement variability as a cause of stair accidents. Proceedings, Silicon Valley Ergonomics Conference and Exposition, Palo Alto, CA, 1996.

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Young DE, Cohen MJ, Husak WS. Contextual interference: On the processes that influence retention. Human Movement Science 1993; 12:577–600.

Teasdale N, Bard C, Fleury M, Young DE, Proteau L. Determining movement onsets from Temporal Series. Journal of Motor Behavior 1993; 25:7–106.

Young DE, Schmidt RA. Augmented kinematic feedback for motor learning. Journal of Motor Behavior 1992; 24:261–273.

Schmidt RA, Young DE. Methodology for motor learning: A new paradigm for kinematic feedback. Journal of Motor Behavior 1991; 23:13–24.

Young DE. Motor learning for physical education. In: Western College Physical Education Society Monograph Series. Peavy RD (ed), Pullman, Washington, Department of Physical Education, p. 26–31, 1991.

Swinnen SP, Young DE, Walter CB, Serrien DJ. Control of asymmetrical bimanual movements. Experimental Brain Research 1991; 85:163–173.

Husak WS, Young DE. Motor learning: How to teach skills. Science of Coaching Swimming, L.K. Garnett (ed), Champaign, Illinois, Human Kinetics, p. 1–22, 1991.

Butler S, Young DE. Promotion of ethnic and cultural diversity in educational institutions and systems. CAHPERD Journal Times 1990; 52(8):13–15.

Schmidt RA, Lange CA, Young DE. Optimizing summary knowledge of results for skill learning. Human Movement Science 1990; 9:13–25.

Schmidt RA, Young DE, Swinnedn S, Shapiro DC. Summary knowledge of results for skill acquisition: Support for the guidance hypothesis. *Journal of Experimental Psychology: Learning, Memory, and Cognition* 1989; 15:152–159.

Books

Young DE, Lacourse MG, Husak WS. *Motor learning: A practical guide laboratory manual*, 2nd Edition. Dubuque, Iowa: E. Bowers Publishing, 1999.

Young DE, Husak WS. *Motor learning: A practical guide*. Dubuque, Iowa, E. Bowers Publishing, 1995.

Young DE, Husak WS. *Motor learning: A practical guide laboratory manual*. Dubuque, Iowa, E. Bowers Publishing, 1995.

Husak WS, Young DE. *Motor control and learning: Laboratory experiments*, Dubuque, Iowa, E. Bowers Publishing, 1988.

Book Chapters

Young DE, Schmidt RA, Lee TD. Skill learning: Augmented feedback. In: *International Encyclopedia of Ergonomics and Human Factors*. Karwowski W (ed), pp. 583–587, London, Taylor and Francis, 2001.

Lee TD, Schmidt RA, Young DE. Skill learning: Conditions of practice. In: *International Encyclopedia of Ergonomics and Human Factors*. Karwowski W (ed), pp. 588–562, London, Taylor and Francis, 2001.

Schmidt RA, Lee TD, Young DE. Principles of simple movement. In: *International Encyclopedia of Ergonomics and Human Factors*. Karwowski W (ed), pp. 293–597, London: Taylor and Francis, 2001.

Schmidt RA, Heuer H, Ghodiason D, Young DE. Units of behavior in bimanual coordinated tasks. In: *Bernstein's Tradition in Motor Control*. Latash M (ed), New Jersey, Elsevier Publishers, 1998.

Young DE, Schmidt RA. Augmented feedback for enhanced skill acquisition. *Tutorials in Motor Behavior II*. Stelmach GE and Requin J (eds), Amsterdam: Elsevier Science Publishers, p. 677–693, 1992.

Young DE, Schmidt RA. Units of motor behavior: Modifications with practice and feedback. *Attention and Performance XIII*. M. Jeannerod (ed), Hillsdale, New Jersey, Laurence Erlbaum, p. 763–795, 1991.

Young DE, Schmidt RA. Motor programs as units of movement control. *Making Them Move: The Mechanics, Control, and Animation of Articulated Figures*. Badler N, et al. (eds), New York, New York, Morgan Kaufman, p. 129–156, 1990.

Schmidt RA, Young DE. Transfer of motor skills, transfer of training. Cormier S and Hagman J (eds), Orlando, Florida, Academic Press, p. 47–79, 1987.

Reports

Young DE, Lacourse MG. A talent identification model for junior tennis players. Technical Report No. 1/95. Motor Behavior Laboratory, California State University, Long Beach, CA, 1995.

Presentations and Published Abstracts

Meir G, Perez J, Judy, R, Young D, Cohen M. Contextual interference and augmented feedback in young and old adults. Proceedings, North American Society for the Psychology of Sport and Physical Activity, Phoenix, AZ, 2010.

Meaders K, Young DE. The scientific method and warnings expert. DRI Product Liability Conference, New Orleans, LA, 2007.

Meaders K, Young DE. Scientific method and warnings analysis. DRI Product Liability Conference, Las Vegas, NV, 2006.

Young DE, Schmidt RA. In-vehicle technology: Safety, automation, and driver behavior. Society of Automotive Engineers In-Car Electronics and Telematics TOPTEC, Long Beach, CA, 2000.

Dzikowski SA, Lacourse MG, Young DE. Perceptual and reproduction scaling of peak movement velocities presented on videotape at different playback speeds. Proceedings, North American Society for the Psychology of Sport and Physical Activity, Monterey, CA, 1995.

McClelland J, Lacourse MG, Young DE. Perception and modeling in motor behavior. Proceedings, Long Beach Research Symposium, Long Beach, CA, 1994.

Serr R, Lavay BL, Young DE, Greene G. Work productivity in adults with mild retardation. Proceedings, American Alliance for Health, Physical Education, Recreation, and Dance, San Diego, CA, 1994.

Zafiroglu NC, Young DE, Lacourse MG. The control of the force-time impulse and variability in sequential limb movements. College of Health and Human Services Research Poster Communications Session, Long Beach, CA, 1994.

Serr R, Lavay BL, Young DE, Greene G. Dexterity and beach assembly work productivity in adults with mental retardation. College of Health and Human Services Research Poster Communications Session, Long Beach, CA, 1994.

Dzikowski SA, Lacourse MG, Young DE. Perceived velocity of golf swings demonstrated in slow motion and fast forward on videotape. College of Health and Human Services Research Poster Communications Session, Long Beach, CA, 1994.

McClelland J, Lacourse MG, Young DE. Perception of velocity in videotapes demonstrations. College of Health and Human Services Research Poster Communications Session, Long Beach, CA, 1994.

McClelland J, Lacourse MG, Young DE. Optimizing the display features of videotaped demonstrations. Proceedings, North American Society for the Psychology of Sport and Physical Activity, Minneapolis, MN, 1993.

Saw L, Lacourse MG, Young DE. Neuromotor control strategies for complex limb movements. Proceedings, Long Beach Research Symposium, Long Beach, CA, 1992.

Sinclair WA, Young DE. On the management of academic programs. Presentation at the Annual Western College Physical Education Society Meeting, Reno, NV, 1992.

Young DE. Motor learning research for physical education. Paper presented at the Annual Western College Physical Education Society Meeting, Reno, NV, 1991.

Young DE, Cohen MJ, Husak WS. Degraded acquisition conditions that enhance skill learning. Paper presented at the annual Long Beach Research Symposium, Long Beach, CA, 1991.

Young DE, Husak WS, Cohen MJ. Schedules of contextual interference and augmented feedback for skill acquisition. Paper presented at the Annual North American Society for the Psychology of Sport and Physical Activity Conference, Asilomar, CA, 1991.

Young DE, Swinnen SP, Beukers M. Temporal constraints and invariant relative time. Paper presented at the Annual North American Society for the Psychology of Sport and Physical Activity Conference, Asilomar, CA, 1991.

Carlson R, Young DE. Selective recruiting: Marketing your programs to potential majors and minors. Paper presented at the Annual Western College Physical Education Society Meeting, Reno, NV, 1991.

Anderson D, Young DE, Husak WS, Cohen MJ. Post-KR delay activities that degrade skill learning. Paper presented at the Annual American Alliance for Health, Physical Education, Recreation, and Dance Conference, San Francisco, CA, 1991.

Young DE. Augmented feedback for motor learning: theoretical and practical applications. Paper presented at the Annual North American Society for the Psychology of Sport and Physical Activity Conference, Houston, TX, 1990.

Young DE, Cohen MJ, Husak WS, McAurther D, Anderson D. The contextual interference effect: A test of theoretical notions. Paper presented at the Annual North American Society for the Psychology of Sport and Physical Activity Conference, Houston, TX, 1990.

Lew DH, Young DE, Husak WS. Contextual interference and amounts of practice. Paper presented at the California Alliance for Health, Physical Education, Recreation, and Dance Conference, Long Beach, CA, 1990.

Anderson D, Young DE, Cohen JJ, Husak WS, McAurther DL, Shandler SL. Maximizing learning with contextual interference. Paper presented at the California Alliance for Health, Physical Education, Recreation, and Dance Conference, San Diego, CA, 1990.

Cohen MJ, Husak WS, Young DE, McAurther DL, Shandler SL. Contextual interference: Elaboration or reconstruction. Paper presented at the Annual Western Psychological Association Convention, Los Angeles, CA, 1990.

Young DE, Schmidt RA. Motor programs as units of movement control. Presentation at the Workshop on Mechanics, Control, and Animation of Articulated Figures, Massachusetts Institute of Technology, 1989.

Young DE, Schmidt RA. The examination of knowledge of performance for insight into information feedback. Presentation at the Annual North American Society for the Psychology of Sport and Physical Activity Conference, Kent, OH, 1989.

Lange CA, Young DE, Schmidt RA. Differences in movement pattern variables with extended practice. Presentation at the Annual North American Society for the Psychology of Sport and Physical Activity Conference, Kent, OH, 1989.

Swinnen SP, Young DE, Walter CB, Serrin D. The role of interlimb interference in the control of bimanual movements. Presentation at the Annual North American Society for the Psychology of Sport and Physical Activity Conference, Kent, OH, 1989.

Young DE, Schmidt RA. The provision of information feedback. Paper presented at the California Alliance for Health, Physical Education, Recreation, and Dance Conference, Los Angeles, CA, 1988.

Young DE, Magill RA, Schmidt RA, Shapiro DC. Motor programs as control structures for reversal movements: An examination of rapid movements and unexpected perturbations. Presentation at the Annual North American Society for the Psychology of Sport and Physical Activity Conference, Knoxville, TN, 1988.

Current Academic Appointments

Professor, Department of Kinesiology, California State University, Long Beach

Editorial and Review Boards

- California Alliance for Health, Physical Education, Recreation and Dance Journal/Times (associate editor)
- Human Factors, Journal of Motor Behavior, Research Quarterly for Exercise and Sport Sciences, Perceptual and Motor Skills, Psychological Reports (reviewer)

Professional Affiliations

- Human Factors and Ergonomics Society (member)
- North American Society for the Psychology of Sport and Physical Activity (member)
- Society of Automotive Engineers (member)