

**Andrew M. Kwasniak, Ph.D., P.E., ACTAR
Engineer**

Professional Profile

Dr. Andrew Kwasniak is an Engineer in Exponent's Vehicle Engineering practice. He specializes in the analysis of roadway accidents, including accidents at stop-controlled and signalized intersections, road segments, work zones, and railroad crossings, as well as collisions involving pedestrian and bicycles. He is a certified Traffic Accident Reconstructionist. Dr. Kwasniak specializes in work zones accidents and has knowledge in the area of Manual on Uniform Traffic Devices (MUTCD), Occupational Safety and Health Administration (OSHA) and Traffic Control Plans. Dr. Kwasniak has participated in a wide range of road safety investigations, providing expertise in the areas of roadway geometry design, traffic control and operations, human factors (driver perception and reaction time), and environmental conditions. As part of these investigations, Dr. Kwasniak has proposed and evaluated potential roadway safety improvements to comply with multiple standards, regulations, recommendations, and practices such as A Policy on Geometric Design of Highway and Streets (AASHTO, "Green Book"), Roadside Design Guide, NCHRP 500 series, and Low Cost Safety Improvements. His research includes developing a knowledge-based system for road safety investigations that incorporates uncertainty using Bayesian statistics. He has also been involved in developing and testing computer software that simulates and analyzes the effectiveness of roadway safety countermeasures.

Dr. Kwasniak also specializes in investigation of a compliance with the American with Disability Act (ADA). He is certified Accessibility Inspector and Plan Examiner.

Prior to joining Exponent, Dr. Kwasniak worked as a research assistant at Purdue University, and also held the position of logistics manager for Krak-Speed, LTD.

Academic Credentials and Professional Honors

Ph.D., Civil Engineering, Purdue University, 2008
M.S., Civil Engineering, Cracow University of Technology, Poland, 2003
B.S., Civil Engineering, Cracow University of Technology, Poland, 2001

Edward J. Cox Memorial Transportation Award, ITE, Indiana 2007
Socrates/Erasmus Scholarship, Hannover University, Germany 2003

Licenses and Certifications

Registered Professional Engineer, Arizona, #52919
Certified Traffic Accident Reconstructionist

Licenses and Certifications

Accessibility Inspector / Plan Examiner, July 2010
Traffic Control Supervisor, April 2010
Traffic Control Technician, April 2010
Engineer-in-Training (EIT), Arizona, October 2009
OSHA 10-Hour Training Exclusively for the Roadway Construction Industry, December 2009
Accreditation Commission for Traffic Accident Reconstruction, ACTAR #2160, July 2009
Traffic Accident Reconstruction, Northwestern University Center for Public Safety, September 2008
Certificate Information Systems / Computer Engineering, Cracow University of Technology,
Poland, June 2003

Languages

Polish

Publications

Cades DM, Arndt SR, Kwasniak AM. Driver distraction is more than just taking eyes off the road. *Institution of Transportation Engineers Journal* 2011; 81(7).

Kwasniak A, Kuzel M. French lessons: A review of an effective road safety program. *ITE Journal*, August 2009.

Heller M, Kuzel M, Kwasniak A, Cuadrado J. Individuals' abilities and behaviors and current technologies in intersection crosswalks. *ITE Journal*, December 2008.

Adamski A, Kwasniak A. ITS-hierarchical multi-layer system traffic safety option. *International Conference: Transportation and Logistics Integrated Systems*, Cracow, Poland, October 2007.

Tarko A, Kwasniak A. RSIT-knowledge-based support of high-crash site investigation. *Road Safety International Conference*, Roma, Italy, October 2007.

Kwasniak A, Tarko A, Chivoiu B. Expert system to support site investigation for safety improvements. *SPR-2951, Report No. FHWA/IN/JTRP*, May 2006.

Kwasniak A, Adamski A. Using image processing technology for evaluation of unsafe intersections between vehicles and traffic flow. *Cracow University of Technology, Student Society*, 2002.

Presentations

Kwasniak A. An analysis of trip-fall incidents: A safety process for evaluation of the environment. *Institute of Transportation Engineers*, Alaska 2011.

Kwasniak A. So you want to be an expert?: Perspectives from the Transportation Expert Witness Council. *Indianapolis, IN, (via phone)* 2011.

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Kwasniak A. Driver distractions as a cause of roadway accidents – Cell phone use while driving (Session President) Savannah, GA, 2010.

Kwasniak A. Work zone ahead! Institute of Transportation Engineers / International Municipal Signal Association Spring conference, Phoenix, AZ, 2010.

Kwasniak A, Tarko A. A tool for supporting high—Crash site intersections. Poster presentation, 86th Transportation Research Board, Washington D.C., 2007.

Kwasniak A, Laczny G. Rationalization of the driver working time system. Cracow University of Technology, Scholar Competition, Zakopane, Poland, 2003.

Kwasniak A. Using image processing technology for evaluation of unsafe intersections between vehicles and traffic flow. Cracow University of Technology Scholar Competition, Zakopane, Poland, 2003.

Prior Experience

Research Assistant, Purdue University, Civil Engineering, 2004–2008

Internship, Cambridge Systematics, 2007

Logistics Manager, KRAK-SPED LTD., Cracow, Poland, 2003–2004

Research Assistant, Cracow University of Technology, Civil Engineering, 2001–2003

Internship, Southern Poland Department of Transportation, 2002

Professional Affiliations

- Volunteer Chair of the ITE Transportation Expert Witness Council, 2010–present
- Council of the ITE Transportation Expert Witness, 2008–present
- Chair of the ITE Safety Executive Committee—Technical Gap Project, 2008–2010
- Awards Chair of the ITE Safety Executive Committee, 2007–2009
- Council of the ITE Safety Executive Committee, 2007–present
- Member of TRB RSA subcommittee, 2004–present