Exponent
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Su-Wei Huang
Lead Programmer/Analyst

Professional Profile

Ms. Su-Wei Huang is a Lead Programmer/Analyst in Exponent's Statistical and Data Sciences practice. Ms. Huang has expertise in specification, development, and testing of applications in mainframe and PC environments. She addresses issues related to the evaluation, processing, and enhancement of large-volume files of computerized data for research on health and safety issues. She has established and maintained standards and procedures for quality assurance in computer programming and data processing. She also handles issues related to the automation of the identification and specification of motor vehicles through vehicle identification numbers and other coding schemes. She is highly proficient in a variety of structured programming languages including PL/I, Pascal, Fortran, Cobol, Perl, and C, SAS, Visual Basic, and SQL.

Besides large database design and management, Ms. Huang has extensive experience with risk analysis; in particular, the design and performance of large-scale studies of risks associated with automotive safety issues, health and injury causes, consumer product safety, and fire incidents. She specializes in evaluating the crashworthiness and effectiveness of automotive components related to design and occupant safety issues, and demographic and environmental risk factors of automotive accidents through the analysis of field performance statistics by using FARS, NASS CDS, NASS GES, Large Truck Crash Causation Study (LTCCS), and motor vehicle accident files from various states, sometimes in conjunction with national vehicle population profile data.

With more than 22 years at Exponent, Ms. Huang also has broad and in-depth knowledge on a variety of data files, such as CPSC NEISS, NFIRS, NHTSA Complaints, NHTSA Recalls, NPTS, NHTS, Multiple Cause of Death, Mortality Detail, Work Injury and Illness, and Smoking Survey. Ms. Huang has provided numerous analyses to help clients in addressing issues relating, but not limited to, fire cause and origin, cause of death and injury, pediatric injury, occupational safety, relationships between cancer and smoking, and safety performance of customer products. Prior to joining Exponent, Ms. Huang served as an instructor at Chung-Chiang Junior High School in Taipei, Taiwan.

Academic Credentials and Professional Honors

M.S., Computer Science, Southern Illinois University (*with distinction*), 1984
M.S., Health Education, Southern Illinois University (*with honors*), 1980
B.S., Health Education, National Taiwan Normal University, Taipei, Taiwan (Outstanding, First Ranking), 1976

Languages

Chinese

Publications

Lange R, Soderborg N, Pearce H, Balavich K, Huang S. Side impact airbag efficacy, injury mitigation performance in vehicle models with and without side impact air bags and inflatable head protection. 22nd International Technical Conference on the Enhanced Safety of Vehicles (ESV), Paper 11-0115, 2011.

Droll J, Kubose T, Huang S-W, Aharoni D, Young DE. An analysis of low-speed pedestrian crashes involving electric powered and combustion powered vehicles. Proceedings, Human Factors and Ergonomics Society, 53rd Annual Meeting, 2009.

Moore T, Ray RM, Raasch C, Huang S-W, Corrigan C. Police accident report restraint usage accuracy and injury severity. Presented at the SAE World Congress, SAE 2009-01-1253, Detroit, MI, April 20–23, 2009.

Ray RM, Ketcham B, Huang S-W, Kelly C. Fire in large truck crashes: Comparing results from the large truck crash causation study with FARS and NASS/GES data. SAE International, SAE 2008-01-0225, 2008.

Donelson AC, Zhao K, Huang S-W. Predicting the future performance of new-model passenger vehicles with historical data on real-world crashes. Presented at the Annual Meeting of the Society for Risk Analysis, Palm Springs, CA, December 5–8, 2004.