Scot A. Gill, M.S., CXLT, PAEMST
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LICENSE:

Certified XL Tribometrist (CXLT), 2023-Present
By the International Safety Academy

I completed the training course that included a written examination on slip resistance, including the challenges of getting quality measurements on lubricated surfaces. The course included a hands-on proficiency test using the accurate and precise *English XL Variable Incidence Tribometer* for measuring both wet and dry slip resistance values.

EDUCATION:

M.S. in Science Education, University of Kentucky, 1994 (4.0 GPA)
Teaching Major: Physics; Teaching Minor: Mathematics

M.S. in Physics, University of Kentucky, 1993 (3.7 GPA)
Received Areas of National Need Fellowship

B.A., Transylvania University, 1991 (3.9 GPA)
Double Major in Physics and Mathematics; Minor in Computer Science

PROFESSIONAL ASSOCIATIONS:

National Association of Professional Accident Reconstruction Specialists (NAPARS), 2022-Present: I have been an active member of this professional organization for accident reconstruction specialists.

PROFESSIONAL EXPERIENCE:

Accident Modeling and Calculations, Applied Cognitive Sciences, 1998-Present: I model the physics of accident scenarios in various personal injury cases. Modeling includes a wide range of scenarios such as emergency stopping, rounding curves, swerving to avoid obstacles, negotiating roadway edge drops, slipping ladders, sliding doors, rope tension, tipping shopping carts, tipping rollators, structure stability, and more. Some cases have gone beyond simply modeling to data collection and analysis of similar scenarios. I have done calculations for both plaintiff and defense cases. I model systems behavior using first principles of physics and engineering.

Physics Teacher, Fayette County Public Schools, 1994-Present: I designed and implemented a physics curriculum based on laboratory experience. Following physics education research, I require students to design and conduct their own experiments. Students must collect quantitative data, fit the data mathematically, and develop a generalized model for each major concept. These models must be tested against mother nature to confirm the predictions are reliable when compared to real-world results; kinesthetic experiences are incorporated regularly. Due to my extensive graduate coursework in physics, I started dual credit offerings at two high schools. I taught a two-year *International Baccalaureate* physics course where my students consistently scored 25% higher than the international average. I currently teach *Advanced Placement Physics 1* to all students in the district *Math Science and Technology Center* magnet program where my students continue to score well above national and international averages. I continue to teach *Dual Credit Physics* and *Dual Credit Astronomy*.

Physics Workshop Leader, 1996-Present: I offered professional development workshops for teachers at the school, district, regional, state, and national levels. Some of the workshops, such as the two-year summer program at Eastern Kentucky University, allowed participants to earn graduate credit. I have worked on several projects funded by the *National Science Foundation* and have presented at the *American Association of Physics Teachers* national conference.

Summer Project Specialist, EG&G (1990) and Rockwell International (1989): I designed a database for logging safety incidents at the Rocky Flats nuclear facility. The system allowed for plant-wide reporting and connection to other nuclear facilities to help identify and correct national issues. During this time, I received a Department of Energy Q-Level security clearance.

HONORS AND AWARDS:

- *Massachusetts Institute of Technology (MIT) Most Influential Teacher Award*, 2023. Given by MIT to a teacher identified as the most influential for an incoming student.
- *Fayette County Merit of Excellence Award*, more than a dozen times 1998-2018. Top graduating seniors nominate their most influential teacher. I have received multiple nominations several times, including three nominations in 2014.
- *Ashland Teacher Achievement Award*, 2013. Approximately 250 teachers were nominated for the *2014 Kentucky Teacher of the Year*. I was among the 10 finalists.
- *Woodford County Public Schools Hall of Fame*, 2013. I was inducted for my academic work.
- *Presidential Award for Excellence in Mathematics and Science Teaching (PAEMST)*, 2002. I was selected as the science winner for the state of Kentucky.
- *Governor's Scholar Program Teacher Award*, several times 2001-2002. I was nominated by multiple students as their most innovative teacher.
- Graduated *Summa cum Laude*, 1991. I graduated with top honors while earning a double major and a minor in STEM fields.

SPECIAL PROJECTS:

- *Governor's Science, Technology, Engineering, and Mathematics Task Force, 2006-2008.* I worked with a group of educators, legislators, and business professionals to develop a state-wide plan to encourage more students to pursue STEM-related careers.
- *Kentucky Content Advisory Committee, 2005-2006.* I helped review and develop questions for the annual state-wide science exams that were used to measure the progress of schools across the Commonwealth.
- *Interactive Multi-Media Exercises (IMMEX) Project, 2003-2006.* I worked with under-represented students to develop context-rich problems on UCLA's IMMEX website. This project received funding from the *National Science Foundation* and included designing an interactive exhibit for the *Explorium*, a local children's museum.
- *PRAXIS Review Committee, 2003.* I helped set standards for secondary teachers seeking physics certification in the state of Kentucky.
- *Appalachian Explorers, 1998-2002.* I worked with students from the Appalachian region in eastern Kentucky. My portion of the program included teaching students how to use graphing calculators to model and solve complex problems.