



**Exponent**<sup>®</sup>  
Engineering & Scientific Consulting

## Stacy Ross

Associate | Vehicle Engineering

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### Professional Profile

Ms. Ross is an associate in the vehicle engineering practice with a background in automotive and aerospace design, manufacturing, and testing. She specializes in motor vehicle accident reconstruction. Ms. Ross has experience in the collection and preservation of site and vehicle data using advanced data acquisition techniques including 3D laser scans, video analysis, and drones. She is a certified crash data retrieval (CDR) Technician and has experience imaging vehicles both through the diagnostics port as well as direct to module (D2M).

Ms. Ross has experience in the investigation of collisions involving tractor-trailers, passenger vehicles, and yard trucks. She uses advanced computer software to perform photogrammetric analyses (PhotoModeler) of vehicles and sites to determine the location of evidence, determine damage areas, and quantify the depth and directionality of damage. She also makes use of software for simulating planar motor vehicle collisions (HVE) to aid in her analysis when warranted.

Prior to joining Exponent, Ms. Ross conducted research on the fabrication and characterization of electrospun nanofibers. She performed surface modification and destructive testing to characterize mechanical properties including the modulus of elasticity. This research led to Ms. Ross working at a nanofiber manufacturing startup where she was responsible for the electromechanical design and assembly of a custom nanofiber collection system. Ms. Ross was later employed as a structures design engineer at an aerospace company specializing in communication and imaging satellites. She designed structural components in Creo, fabricated large composite structures, programmed mass property calculations using Visual Basic for Application (VBA), and supported thermal vacuum chamber testing. Ms. Ross also gained a great deal of technical and interpersonal experience as the Senior Composites and Structures Engineer of Georgia Tech's IC FSAE team. She leveraged SolidWorks, Fusion 360, autoclaves, and Computer Numeric Control (CNC) milling to design and fabricate custom composite molds while onboarding and training new members. In addition to her technical role in competitive engineering, Ms. Ross also served as the Vice President of Operations and head of the Training and Safety committee for the Student Competition governing board, which oversees the operations of seven competitive engineering clubs comprised of over 750 students. She was responsible for sponsor engagement, recruitment events, and safety policy implementation. The last role Ms. Ross held before joining Exponent was as a Graduate Teaching Assistant in the Woodruff School of Mechanical Engineering at The Georgia Institute of Technology. She served over 300 students as the only teaching assistant for Georgia Tech's Interdisciplinary Capstone design course. Within this role, she managed official course websites, education research, exposition logistics, project bidding, and student support.

### Academic Credentials & Professional Honors

M.S., Mechanical Engineering, Georgia Institute of Technology, 2025

B.S., Mechanical Engineering, Georgia Institute of Technology, 2024

Helen Grenga Outstanding Woman Engineer Award, Woodruff School of Mechanical Engineering Nomination, 2024.

## Prior Experience

Graduate Teaching Assistant, The Georgia Institute of Technology, 2024-2025

Structures Design Engineer, Maxar Space, 2023-2024

Structures Design Engineering Intern, Maxar Space, 2022-2023

Research and Development Intern, Truspin Nanotechnology, 2021-2022

## Professional Affiliations

SAE International (Formerly The Society of Automotive Engineers)

The American Society of Mechanical Engineers (ASME)

## Patents

US Patent 18, 884, 940: Optical Table Cleaning Devices and Methods of Cleaning Optical Tables, September 2024 (Ross S, Bayz A, Carter D, Dague L, Mackes C, Wolfe J).

US Patent 63, 783, 199: Tactile Multimedia Maker Kit Teaching Science, Technology, Engineering, and Math through Art, April 2025 (Ross S, Crockett J).

## Publications

Stanishevsky A, Severino C, Ross SM, Yager R, Armstrong M, Binczarski M, Maniukiewicz W, Witonska I. Nanofibrous glass-ceramic porous structures using high-temperature interface bonding. *Materials Today Communications* 2021; 27:102218.

## Presentations

Ross S, Oliver B, Wu Y, Jariwala A. Initial Layer Characterization for Multilayer Fluid Interface Supported Printing. Oral presentation, 35th Annual International Solid Freeform Fabrication Symposium, Austin, TX, 2024.

Appana S, Ross S, Jariwala A. Process Modeling for Fluid Interface Supported Printing. Oral presentation, 34th Annual International Solid Freeform Fabrication Symposium, Austin, TX, 2023.

Severino C, Tchernov J, Yager R, Ross S, Binczarski M, Witonska I, Stanishevsky A. Nanofibrous Glass-Ceramic Porous Structures Through Surface Modification. Poster presentation, 4th International Conference NANOSMAT-USA, Isla Grand Beach Resort, South Padre Island, TX, 2018.

Lenk M, Yager R, Ross S, Brayer WA, Stanishevsky A. Fabrication and Mechanical Strength of Porous Zirconia Nanofiber Structures. Poster presentation, 4th International Conference NANOSMAT-USA, Isla Grand Beach Resort, South Padre Island, TX, 2018.