Melissa Sandlin grew up in Kankakee, Illinois, the third of four children in the Sandlin family. She was adopted from Seoul, South Korea at the age of 5 months and grew up in a household of 4 adopted children. Melissa was always an excellent student and consistently ranked at the top of her class. She graduated valedictorian of Kankakee High School in 1991.

It was a high school summer enrichment program at the University of Illinois, Urbana-Champaign that helped Melissa discover engineering. In her junior year she attended JETS/MITE (Junior Engineering Technical Society/Minority Introduction to Engineering), a two-week camp that introduced minority students to the engineering fields offered by the University. During the camp, Melissa toured a laboratory where one-armed PUMA robots were busy building little plastic replicas of themselves. In that moment, she was hooked. Then and there, she decided on her major – mechanical engineering. Five years later, she was studying in the very same lab.

That summer experience shaped not only Melissa’s career path in manufacturing automation, but also her commitment to discovering and fostering the engineers of tomorrow.

Her dedication to engineering led her to pursue an advanced degree. After graduation from the University of Illinois, she earned a masters degree in mechatronics and automation at the Georgia Institute of Technology. There, she studied machine vision and its applications to automated food processing.

Melissa took her first engineering job with Lucent Technologies, at their telecommunications lab in Makuhari, Japan. In that position, she was able to apply her major studies in engineering to the design of telecommunications equipment, but also her minor studies in Japanese.

She then joined Corvis Corporation, another telecommunications company, and quickly distinguished herself as an expert in her field. At Corvis, she developed a process to generate manufacturing work instructions using Pro/ENGINEER. She trained the entire engineering staff in this process, and managed a contractor during its implementation.

Melissa then joined Northrop Grumman Corporation as a Manufacturing Process Engineer where she again demonstrated her engineering expertise and professional drive as she quickly rose through the ranks. In her first position, she was responsible for an x-ray inspection process, a machine that used x-rays to examine the quality of solder joints in military electronics. She then became a manufacturing Project Engineer, following a single product through its entire life cycle, from introduction to full-rate production. In this role, she addressed a wide range of issues, from material vendor problems, to manufacturing process problems, to problems with test yield.

Melissa led several cost reduction and yield improvement project teams for her product, the Joint Strike Fighter Transmit/Receive (T/R) Module. She earned her Six Sigma Green Belt for an effort to reduce the cycle time for assembly of T/R Modules – a project that will lead to hundreds of thousands of dollars of savings over the lifetime of that program.

The quality of her work has earned her praise and recognition from high level executives, but she is the first to admit that she did not get there on her own. Mentors and coaches played a vital role in opening Melissa’s eyes to the world of engineering, so she readily pays it forward by doing the same for upcoming generations of students. With each step of her engineering career, Melissa has actively participated in efforts to find and foster the engineers of tomorrow.

Melissa has always been active in engineering outreach programs. She has participated in Northrop Grumman’s DiscoverE program for the past five years, introducing engineering as a profession to third, fourth and fifth graders. She served as a mentor in and now leads Northrop Grumman’s WORTHY Program, a high school mentoring program aimed at inner city students interested in pursuing a career in engineering and is now leading the WORTHY program in the Baltimore area. Melissa feels that the opportunities that were afforded to her should be available to every student and that exposing them to these possibilities at a young age increases their chance to develop career goals and strive for the education they need to reach them. She recognizes that nothing is more important than helping future generations shape their future and, at the same time, the future of engineering.