NAVAL AIR WARFARE CENTER WEAPONS DIVISION, CHINA LAKE, Calif. - Benjamin Blazek, a Naval Air Warfare Center Weapons Division aeronautical and mechanical engineer, was recognized as an agency winner for the 2018 Federal Engineer of the Year Awards during a ceremony sponsored by the National Society of Professional Engineers in Washington, D.C. on Feb. 23.

“I have always had an interest in the details of how things work and how to get things to work,” Blazek said. “To deeply learn the constructs and order by which the physical world around us functions, though unachievable, remains a dream.”

Blazek is a 10-year NAWCWD employee currently working in the Warhead Development Branch at China Lake. In the last several years, he has spent time developing an application of modeling and calculating energy fluence in various warheads undergoing insensitive munitions testing. What makes Blazek’s approach different from previous energy fluence methods is that it uses real-world test data to develop reaction severity thresholds and can predict several types of reaction severities. Previous methods only
indicated whether or not a severe reaction would occur, but could not differentiate between minor reactions and no reactions.

Additionally, Blazek developed a method to model, simulate and test a developmental missile system for an Insensitive Munitions Fragment Impact test. He was able to simulate the test event using a simplified mock-up of a production-level test item. According to his nomination, “in doing so, [Blazek] has saved the program several million dollars, and enabled the test to occur significantly earlier in the program schedule ….”

"For me, winning this award signifies that details matter,” Blazek said. “Developing solutions requires hard work in understanding theory, attending to details as appropriate and applying them to real world situations.

Various weapon and platform development programs have all benefitted from Blazek’s work at NAWCWD. He’s co-authored a paper and presentation on fragmentation studies and provided numerous presentations to the Navy Insensitive Munitions Review. His nomination also notes the great deal of time Blazek spends training junior professionals in various modeling and analysis tools.

“One should not underestimate the challenges and importance of gathering data, reading literature, cooperation and communication,” Blazek said. “Only a well-teamed group of collaborative workers can solve today’s problems. I am not superior in any aspect to anyone else, but I have had the opportunity to learn from giants.”