

# **“Demonstrations with Physics and Convergence in Technical Problem Solving”**

Nicholas J. Periat, Technical Problem Solving - Master Black Belt, FCA US LLC

Convergence has been around for 1000's of years. Many of the great thinkers in history were convergent thinkers. Taking this thinking and applying it to Physics can be extremely powerful. One area of interest is the conflict that sometimes arises between Physics and Statistics. Convergence based on physics will sometimes bring to light problems that otherwise would go unnoticed. The question of how do you figure out what went wrong on an engine that misfired one time in 100,000 starts would be difficult to understand from a statistical standpoint but I will show with convergence based on physics and functional thinking that we can understand what drove the problem. Fortunately, I was introduced to convergent techniques in my 3rd week of employment and have enjoyed applying such techniques ever since. I will show with a few examples such as the misfire example and a torque converter balancer problem how this can be beneficial in certain technical applications and where statistics may lead you astray.

## **Speaker Biography**



Nick Periat is a practitioner of convergent technical problem solving. He is a certified Kepner Tregoe Instructor, a Shainin Red X Master, The New Science of Fixing Things expert, Six Sigma Green Belt, and has significant experience with TRIZ, TPS, WCM, and 8D problem solving. He has also mastered convergent proactive strategies that complement but are different than Design for Six Sigma. He has made it a goal to master all reactive and proactive problem solving techniques identifying the principles/functions each are based on to highlight the benefits and weaknesses of each and the similarities of all. He has traveled the globe solving complex problems in many industries and technical arenas refining strategy and techniques to assure quick containment of all problems and robust solutions to follow.