

## Quality Loss Function

This 3-day session will be of interest to practitioners of the Taguchi experimental design technique in acquiring the necessary confidence to carry out mathematical computations for converting performance improvement into dollar savings.

Attendees will receive seminar presentation materials.



**WHERE?** At your facility (For larger group)

**WHEN?** At a mutually convenient time.

**DETAILS:** Please visit for information and registration.

[www.Nutek-us.com/wp-sem.html](http://www.Nutek-us.com/wp-sem.html) - onsite

### WHO SHOULD ATTEND?

- Experienced DOE/Taguchi practitioners in Product/Process Design Engineering
- R&D Scientists, or QA Personnel
- Manufacturing Manager
- Instructor in academic institution

### Background

Evaluating and establishing improvements we achieve in performance, cost or quality is common tasks we perform at end of a project completion. Generally, we also express such improvements achieved in terms of percentage of the current level of performance. However, when asked to quantify the same improvement in terms of dollars we seem to have difficult time. Fortunately, the Loss Function formulation proposed by Dr. Genechi Taguchi allows us to translate the expected performance improvement in terms of savings expressed in dollars. Using the Loss Function concept, the expected savings from the improvement in quality, i.e., reduced variation in performance around the target can be easily transformed into cost.

You would benefit most from this sessions if you have working knowledge of the DOE/Taguchi approach and wish to express improvements in terms of dollars.

### Discussion Topics

- Introduction
  - Concepts
  - Math Model
  - Purpose And Application Areas
- Review Taguchi Experiment Design And Analysis
- Evaluation Of \$ Loss
  - With Target Value
  - General Quality Characteristics
  - When With Known Distribution Parameters
- Computation Of Savings From Changes In
  - S/N Ratio
  - Mean Squared Deviation (Msd)
  - Std. Deviation And Average Value
- Relationships Between Loss And Process
- Capability (Cpk)
- General Application Examples
- Application To Actual Projects

### Learning Objectives:

- Become proficient in manipulating and quantifying product and process design improvements in terms of dollars.
- Compute savings expected from potential variation reductions (in warranty and rejects)

### COURSE INSTRUCTOR

This seminar is led by Ranjit K. Roy, Ph.D., P.E., PMP, and Mechanical Engineer. Dr. Roy specializes in the Taguchi approach to quality improvement and engineering quality improvement topics.



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