

A Message to Graduate Students and Research Scientists / Engineers

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Two Famous Quotes from Great Giants 1/3

“Doubt is the Father of Invention” by Galileo Galilei (1564 to 1642)

Akagi’s comment on this quote:

“Doubt” would be the most suitable for science.

“Question” would be more suitable for technology and engineering.

The following difference between a “doubt” and a “question” would exist:

A doubt is a specific question arising from uncertainty and suspicion.

A question is a direct inquiry that is not motivated by suspicion.

Akagi did theoretical and experimental research on cycloconverters using thyristors from 1974 to 1979 for five years. Akagi’s questions about the cycloconverters inspired him to initiate the p - q theory in 1983.



Two Famous Quotes from Great Giants 3/3

“**Necessity is the Mother of Invention**” by Isaac Newton (1643 to 1727).

This quote contributed **directly** to the emergence of the three-level neutral-point-clamped (NPC) inverter from the Technological University of Nagaoka, Japan, in 1980.

Recall the two famous quotes before considering your research targets, themes, and/or proposals!

