

## Companies Turning to TRIZ

*UCSD Extension Workshop Part of Unlikely Renaissance for Dead Russian Dissident's 60-Year-Old Strategy for Systemizing Innovation*

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Why are companies like Pfizer, Motorola and Washington Mutual turning to TRIZ? Why are magazines like *Forbes* and *Business Week* touting the innovation theories of a dead Russian dissident?

Former USSR patent examiner Genrich Altshuller organized the research effort that has systematized innovation to the point where it could be taught. The system of analysis techniques and 40 principles for solving problems called TRIZ (pronounced "treese"), the Russian acronym for Theory of Inventive Problem Solving, is enjoying an unlikely American renaissance including a three-day workshop at UC San Diego Extension July 19-21.

Participants attend class from 8 am to 5 pm Thursday through Saturday to generate solutions to their own company's technical and business problems in product, system, and process design, development and implementation while learning the concepts and methods of TRIZ. Past UCSD Extension TRIZ innovation workshops have drawn students from across the country and around the globe.

"Twelve people from our class were actually going to their patent attorney on Monday to patent innovations they came up with during the workshop," says newly converted TRIZ-nik Steve Phinney, a project manager with Washington Mutual who traveled from Seattle to take the UCSD Extension class in March of 2007. "We immediately began translating TRIZ into the bank's Six Sigma program."

The list of other American companies that have recently applied Altshuller's system includes Boeing, Dow Chemical, Ford, Hewlett Packard, IBM, Motorola, Pfizer, Raytheon, and Xerox, just to name a few.

Teaching the workshop is noted TRIZ expert Ellen Domb, Ph.D., co-founder of The TRIZ Institute, editor of *The TRIZ Journal*, and co-author of three books about TRIZ. Prior to becoming president of the consulting firm the PQR Group, she was a director with Aerojet Electronic Systems Division with specific responsibility for Total Quality Management implementation. Dr. Domb's academic background ranges from Stanford University's Executive Management Program to a Ph.D. in physics from Temple University and a bachelor's degree from MIT.

"TRIZ research began with the hypothesis that there are universal principles of creativity that are the basis for creative innovations and that advance technology," says Domb. "The idea was that if these principles could be identified and codified, they could be taught to people to make the process of creativity more predictable. The short version of this is: Somebody someplace has already solved this problem (or one very similar to it.) Today, creativity involves finding that solution and adapting it to this particular problem."

TRIZ almost never saw the light of day. In 1948 Altshuller, a 22-year-old naval lieutenant and inventor, wrote a personal letter to Joseph Stalin critiquing the Soviet system and saying that he had devised a systematic approach by which any technical problem could be solved, thereby improving life in the USSR. For that he was

sentenced to 25 years in the gulag. After his release 18 months after Stalin's death in 1953, Altshuller published what he called the TRIZ contradiction matrix, which recommends a handful of principles for innovation, keyed to the type of problem that requires the innovative solution.

Altshuller, who died in 1998, and his colleagues in the former USSR developed the method between 1946 and 1985, and a growing world-wide TRIZ community has continued the development from 1985 through the present. TRIZ relies on the study of the patterns of problems and solutions, not on the spontaneous and intuitive creativity of individuals or groups. More than 3 million patents have been analyzed to discover the patterns that predict breakthrough solutions to problems, and these have been codified within TRIZ.

For more information on the "TRIZ: Practical Innovation" workshop go to the Web site [www.extension.ucsd.edu/engineering](http://www.extension.ucsd.edu/engineering) or call 858-534-3400. The fee for the 3-unit workshop is \$999.

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