

Santa Clara Valley Science and Engineering Fair Association

P.O. Box 307, Los Altos, California 94023 • 650-856-1289

www.science-fair.org

Celebrating Consecutive Regional Science Fairs Since 1960

Affiliated with the Intel International Science and Engineering Fair

MENTOR PROFILE FOR STUDENTS TO REVIEW

Please fill in the appropriate information boxes below, and email this document to rwwcw1@yahoo.com for posting on our website www.science-fair.org.

Last name: Reasenber

First name: Paul

College and degree(s) earned: Cornell (BS in physics, 1967), M.I.T. (MS in geophysics, 1971)

Email address: contact mentors@science-fair.org

Web page (if applicable):

Phone number and available hours to call:

Your background summary: (Please limit to 200 words) Before retiring, I was a research seismologist at the U.S. Geological Survey for 32 years. My research areas included investigations and data analysis using point data (earthquake locations, times and magnitudes), waveform data (seismograms), GIS mapping, and atmospheric ions. My research required mathematical and statistical data analysis. I built statistical models to estimate earthquake probabilities and their uncertainties. I used genetic algorithms to solve under-constrained geophysical (gravity) models, and have lectured on the use of genetic algorithms in geophysics.

Briefly write about your science and/or engineering interests: Beside the earthquake, mathematical and statistical work, I have studied biology, genetics, evolution, and origins of life theory. I have taught young students how to prepare and reconstruct vertebrate skeletons. I'm particularly interested in the analysis of data of any kind (biology, physics, geophysics, lab observations, etc.) to test hypotheses, and favor quantitative and statistical inferences from data whenever possible (as opposed to qualitative, descriptive observations). I will insist on fully understanding and representing the uncertainties in your data. I have a working knowledge of and experience in analog electronics.

Projects from which scientific category (one or more) would you be interested in mentoring? Categories are explained in detail at <http://synopsys.championship.googlepages.com/scientificcategoriesforprojects>. Physics, Biology (genetics and evolution especially); Earth Science (especially geophysics and tectonics); General chemistry, Computers and mathematics.

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If you are a past Science Fair Judge, list scientific categories which you judged: Best as I can remember, physics and math.

If you are a past Science Fair Judge, list fairs by name in which you participated (local school fair, Synopsys Championship, CSSF, ISEF, etc.) Santa Clara Valley Science and Engineering Fair, and a regional fair in San Mateo County (held at Coyote Point).
