

Research Personnel

Jon F. Claerbout received his education at M.I.T. (B.S. physics, 1960, M.S. geophysics, 1963, Ph.D. geophysics, 1967). He worked for United Electrodynamics (now Teledyne, Inc.) in 1963 and studied in Uppsala, Sweden, in 1964. He joined the geophysics faculty at Stanford University in 1967. From 1967 to 1973, he was a consultant to the Chevron Oil Field Research Company. He is an active member of the Society of Exploration Geophysicists, receiving the Best Presentation Award for a paper, "Extrapolation of Wave Fields," presented at the 1972 international SEG meeting, and receiving the Society's Medal Award in 1973 "in recognition of his outstanding and original pioneering work in seismic wave analysis." During the year 1972-73, he was a visiting research geologist at Princeton University and a visiting lecturer at Sydney University. His textbook **Fundamentals of Geophysical Data Processing** was published in 1976 and translated to Chinese (1979) and Russian (1981). In 1977, he was elected a Fellow of the American Geophysical Union. In 1979, he joined the MIT Corporation Advisory Committee to Earth Sciences. He is professor of geophysics at Stanford University and director of the Stanford Exploration Project. During the 1979-80 year he was on sabbatical leave at the Department of Geodesy and Geophysics, Cambridge University.

Paul Fowler studied at Reed College and Portland State University, receiving a B.S. degree in mathematics and earth sciences in 1981. During 1982 he worked as a seismologist for the U.S. Army Corps of Engineers. He is currently working toward a Ph.D. in geophysics at Stanford and is the recipient of an NSF graduate fellowship. He is a student member of SEP, AGU, and SSA.

William Harlan received a B.S. in geophysics from Texas A & M University in 1981, under a scholarship from the SEG. During the summer of 1980, he worked as a seismic interpreter for Conoco in Midland, Texas. After graduation, he became a Conoco researcher, constructing an interactive three-dimensional ray-tracing package for the modeling and migration of horizon maps. In 1981 he joined the SEP as a Ph.D. candidate at Stanford. His present research includes the application of estimation theory to the extraction of rock parameters from sparse and noisy data.

Stewart A. Levin received a B.A. in Mathematics from Princeton in 1975 and an M.S. in Mathematics in 1978 from Stanford. From 1979-1982 he worked at Western Geophysical, Houston, as a Senior Research Geophysicist. He joined the SEP in September 1982.

Peter Mora received a B.Sc. degree in geophysics (1978) and a B.Sc. Honours degree (1979) from the University of Adelaide, Australia. His Honours thesis involved 2D ray tracing to study moveout functions and interval velocities. He worked for Esso, Australia, as a geophysicist and programmer and later consulted to Delhi Petroleum developing forward modeling software including ray tracing and finite difference schemes. He is currently a Ph.D. student in geophysics at Stanford, working with the SEP.

John Newkirk has been on the faculty of Electrical Engineering at Stanford since receiving his doctorate there in 1979. From 1977 to 1979 he helped run the SEP computer facilities (SEP-14). Along with Robert Matthews he has created and taught core courses in digital integrated circuit design and run Stanford's world famous Very Large Scale Integration design research program. His interests in VLSI design includes finding commercial applications for this technology in the petroleum industry.

Richard Ottolini received a Ph.D in geophysics from Stanford in 1983, M.S. in geophysics in 1978, and B.S. from M.I.T. in 1976. His thesis "Migration in Angle-Midpoint Coordinates" appeared as SEP-33. He is interested in the physics and computation of imaging the earth's interior, particularly migration and tomography. He is also interested in applying the engineering skills of digital integrated circuit design, computer graphics, and artificial intelligence software methodologies to the processing and interpretation of earth images. He is also interested in using reflection seismology to understand crustal geology and Chinese geophysics. He is currently in transition from Ph.D. work to industrial employment.

Joshua (Shuki) Ronen received a B.Sc. in physics and in geology from the Hebrew University at Jerusalem in 1981. During his B.Sc. studies he worked as a research assistant in the Physics Department and spent a summer at the Geology Department in the Hebrew University. He is now working toward a Ph.D. in geophysics at Stanford.

Daniel Rothman received an A.B. in applied mathematics from Brown University in 1979. He then worked for Western Geophysical Company in their research and development group, first in Houston and later in London, developing and testing a variety of data processing algorithms. In March, 1982 he joined the SEP and is currently working toward his Ph.D. in geophysics. He is a member of SEG.

Chuck Sword received a B.S. in physics from Stanford University in 1980. That summer he worked at Marathon Oil Company's Denver Research Center, where he helped process experimental marine data and implement a migration scheme. He joined the SEP in September 1980 and is working toward a Ph.D. in geophysics. During the summer of 1982 he worked at Chevron Research in La Habra. While there he worked on computer graphics for the interpretation of seismic data and studied some forward-modeling methods.

Jeff Thorson received a B.S. degree in geology from the University of Washington in 1973 and an M.S. degree in geophysics from the University of Houston in 1975. He has worked for Getty Oil Company as an interpreter and in the field as a company representative on various seismic surveys. He is a member of SEG and EAEG, and has been the recipient of an N.S.F. graduate fellowship.

John Toldi received a B.S. in physics and an M.S. in geophysics from Stanford University in 1978. He then worked for Chevron Geosciences, Houston, in seismic data processing and later in a programming and evaluation group. In January 1982 he joined the SEP and is currently working toward a Ph.D. in geophysics.

Ronald Ullmann received his B.S. in geophysics from Texas A & M University in 1981. During the summer of 1980, he worked for the Oklahoma Division of Getty Oil Company as an assistant geophysicist. The summer of 1981 he worked at Chevron Oil Field Research Company in La Habra, California, where he wrote computer programs to compute seismic wave velocities in saturated, porous rocks. He joined the SEP in September of 1981 and is working on his Ph.D. in geophysics. He is the recipient of an N.S.F. graduate fellowship and a student member of the SEG.

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