Dana Stewart Scott

Born October 11, 1932, Berkeley, Calif.; logician; joint creator with Christopher Strachey of a theoretical system for the study of program properties and language definitions--denotational semantics; joint recipient of the 1976 ACM Turing Award with Michael Rabin.

Education: BA, University of California, Berkeley, 1954; PhD, Princeton University, 1958.

Professional Experience: instructor, University of Chicago, 1958-1960; assistant professor of mathematics, University of California, Berkeley, 1960-1962; associate professor of mathematics, University of California, Berkeley, 1962-1963; associate professor of logic and mathematics, Stanford University, 1963-1967; professor of logic and mathematics, Stanford University, 1967-1969; visiting professor of mathematics, University of Amsterdam, 1968-1969; professor of philosophy and mathematics, Princeton University, 1969-1972; professor of mathematical logic, Oxford University, 1972-1981; University professor of computer science, mathematical logic, and philosophy, Carnegie Mellon University, 1981-present (on leave); Hillman Professor of Computer Science, Carnegie Mellon University, 1989-present (on leave); Osterreich University Professor, symbolic computation and logic, University of Linz, 1992-present.

Honors and Awards: Bell Telephone fellow, Princeton University, 1956-1957; Miller Institute fellow, University of California, Berkeley, 1960-1961; Alfred P. Sloan research fellow, 1963-1965; Guggenheim Foundation fellow, 1978-1979; visiting scientist, Xerox Palo Alto Research Center, 1978-1979; professorial fellow, Merton College, Oxford, 1972-1981; LeRoy P. Steele Prize, American Mathematical Society, 1972; Turing Award, Association for Computing Machinery (with Michael Rabin), 1976; Drhc, Rijksuniversiteit Utrecht, the Netherlands, 1986; Harold Pender Award, University of Pennsylvania, 1990; Academy Fellowships: American Association for the Advancement of Science, American Academy of Arts and Sciences, British Academy, Finnish Academy of Sciences and Letters, New York Academy of Sciences, US National Academy of Sciences; fellow, ACM, 1994.

Dana Scott's work in logic has concerned the theories of models, automata, and sets, modal and intuitionistic logic, constructive mathematics, and connections between category theory and logic. His interests in philosophy concern the foundations and philosophy of logic and mathematics and the semantical analysis of natural language. Scott's work in computer science has been directed principally toward the development of denotational semantics of programming languages and the mathematical foundations of a suitable theory of computability. His current projects aim at unifying the semantical approach with constructive logical formalisms to be able to give rigorous and machine-implementable proof methods and development tools for the inferential construction of correct programs. Part of the technique is based on modeling computational structures as partially ordered sets in special categories enjoying extensive closure conditions (the theory of domains). Other current projects involve work in information retrieval, electronic publishing (and generally studies on the structure of electronic text), computational linguistics, and computer algebra. Scott has supervised 36 PhD theses within this range of subjects.

QUOTATIONS

"Learn as much as you can while you are young, since life becomes too busy later."

"Try to regard mathematics as an experimental science.

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Significant Publications

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Scott, Dana, and C. A. Gunter, "Semantic Domains," in Van Leeuwenjan, ed., *Handbook of Theoretical Computer Science; Formal Models and Semantics,* Vol. B, Elsevier/MIT Press, 1980, pp. 633-674.

UPDATES

Portrait added (MRW, 2013)