

Steven L. Crouch

Dean of the Institute of Technology



Steven L. Crouch was appointed dean of the Institute of Technology in January 2005.

Born in Los Angeles, Crouch grew up in Sleepy Eye, Minnesota, graduating from its public high school in 1961. He received bachelor's, master's, and doctoral degrees in mineral engineering from the University of Minnesota (in 1966, 1967, and 1970, respectively). He began his career as a research officer with the Mining Research Laboratory of the Chamber of Mines of South Africa in 1968. In 1970 he joined the University of Minnesota faculty as an assistant professor in what is now the Department of Civil Engineering. From 1987 to 1997 he served as head of that department and in 1997 became the college's associate dean for finance and planning.

Crouch holds the Theodore W. Bennett Chair in Mining Engineering and Rock Mechanics. His main area of interest is numerical modeling of problems in solid mechanics using boundary integral equation methods. His early research dealt with the stability of underground mine openings; more recently, he has studied numerical stress analysis techniques for fiber-reinforced and particulate composite materials. In the mid-1970s he developed a special numerical method called the displacement continuity method, a widely used tool for solving problems ranging from crack propagation in elastic solids to the design of underground mining excavations.

He is coauthor (with A. M. Starfield) of the book *Boundary Element Methods in Solid Mechanics*, which has been translated into Chinese and Russian.

As dean, Crouch hopes to strengthen the college's interdisciplinary initiatives in digital technology and nanotechnology, and expand its involvement in the University's Initiative for Renewable Energy and the Environment.

Crouch is a member of the American Society of Civil Engineers, the American Rock Mechanics Association, the International Association for Boundary Element Methods, the International Society for Rock Mechanics, and the Society for Mining, Metallurgy and Exploration. He has served on the editorial boards of *Engineering Analysis with Boundary Elements*, *International Journal of Rock Mechanics and Mining Sciences*, and *Geomechanics Abstracts*.

In 2004 he received the Charles W. Britzius Distinguished Engineer Award from the Minnesota Federation of Engineering, Science, and Technology Societies. Among his other honors are the U.S. National Committee for Rock Mechanics Applied Research Award (with M.G. Mack), the AIME/SME Rock Mechanics Award, and the Minnesota Council on Quality Award.

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