CURRICULUM VITAE

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EDUCATIONAL DETAILS

1982 - 1984: Ph.D. in Engineering. University of California, Berkeley.
1979 - 1980: M.Sc. (Distinction) & DIC in Engineering Rock Mechanics. Imperial College, London University.
1976 - 1979: B.Sc.(Hons.) in Engineering Geology. Portsmouth Polytechnic. England.

PROFESSIONAL DETAILS

1985 - 1987: Assistant Professor. Department of Mineral Engineering. Pennsylvania State University.
1984 - 1985: Visiting Assistant Professor. Department of Civil Engineering. University of Toronto.
1984: Research Associate. Earth Sciences Division. Lawrence Berkeley Laboratory.
1980 - 1982: Geotechnical Engineer. Komex Consultants, Ltd. and D. R. Piteau Associates, Calgary, Alberta.

PUBLICATIONS

Journal Articles

1. Elsworth, D. (1987). A boundary element-finite element procedure for porous and fractured media flow. Water Resources Research, Vol. 23, No. 4, pp. 551 - 560.

2. Elsworth, D. and Goodman, R. E. (1987). Numerical modelling of fractured rock masses using coupled numerical schemes. Chapter 46 in, Coupled Processes Associated with Nuclear Waste Repositories, Edited by C. F. Tsang, Academic Press.

3. Elsworth, D. (1986). A model to evaluate the transient hydraulic response of three-dimensional sparsely fractured rock masses. Water Resources Research, Vol. 22, No. 13, pp. 1809 - 1819.

4. Elsworth, D. (1986). A hybrid boundary element - finite element analysis procedure for fluid flow simulation in fractured rock masses. International Journal of Numerical and Analytical Methods in Geomechanics, Vol. 10, No. 6, pp. 569 - 584.

5. Elsworth, D. and Doe, T. W. (1986). Application of non-linear flow laws in determining rock fissure geometry from single borehole pumping tests. International Journal of Rock Mechanics and Min. Sci., Vol. 23, No. 3, pp. 245 - 254.

6. Elsworth, D. and Goodman, R. E. (1986). Characterization of rock fissure hydraulic conductivity using idealized wall roughness profiles. International Journal of Rock Mechanics and Min. Sci., Vol. 23, No. 3, pp. 233 - 244.

7. Elsworth, D. (1986). Wedge stability around a circular tunnel: plane strain condition. International Journal of Rock Mechanics and Min. Sci., Vol. 23, No. 2, pp. 177 - 182.

Papers in Conference Proceedings

1. Elsworth, D. and Piggott, A. R. (1987). Physical and numerical analogues to fractured media flow. Proceedings Sixth Congress of the International Society for Rock Mechanics, Montreal, pp. 93 - 97.

2. Elsworth, D., Piggott, A. R., and Ting, J. M. (1986). A hybrid model for the transient hydraulic response of porous-fractured media. Proceedings Second Boundary Element Technology Conference, MIT, Boston. pp. 721 - 732.

3. Elsworth, D. (1986). A hybrid model for the transient hydraulic response of discretely fractured rock masses. Proceedings Sixth International Conference on Finite Elements in Water Resources, Lisbon, pp. 241 - 250.

4. Elsworth, D. and Goodman, R. E. (1985). Hydromechanical characterization of rock fissures of idealized sinusoidal and sawtooth form. Proceedings ISRM Conference on Fundamentals of Rock Joints, Sweden, September, pp. 259 - 268.

5. Elsworth, D. (1985). Coupled FEM/BEM analysis for non-linear fluid flow in rock fissures and fissure networks. Proceedings 26th U.S. Rock Mechanics Symposium, Rapid City, South Dakota, pp. 633 - 642.

6. Elsworth, D., Sitar, N., and Goodman, R. E. (1985). Finite element analysis of laminar/turbulent flow in porous and fractured media. Earth Sciences Division, Lawrence Berkeley Laboratory, Berkeley, California, 23 pages.

Major or Final Reports to Sponsors

1. Saperstein, L.W., D. Elsworth and M. Bai "Subsidence control and refuse stowing in longwall gob areas," Interim report to the Standard Oil Company, 31 pp., 1987.

2. Elsworth, D., "Rock mass hydraulic conductivity enhancement resulting form longwall mining," Final report to the Engineering Foundation, Contract RI-A-86-13, August, 44pp., 1987.

3. Elsworth, D., N. Sitar and R.E. Goodman "Finite element analysis of laminar/turbulent flow in porous and fractured media," LBL-19105, Lawrence Berkeley Laboratory, University of California, p. 34, 1985.

4. Goodman, R.E. and D. Elsworth "Performance evaluation of a prototype dam undercut by a non-extensive foundation crack," Final report to American Electric Power Corporation, September, 92 pp., 1984.

Current Projects

Title	Organization	Duration	Award	Role
Intelligent signal processing applied to remote determination of rock mass parameters	MSA	06/87-06/89	$87,000	Co-PI
Subsidence control and refuse stowing in longwall gob areas	Standard Oil	06/87-06/88	$37,000	PI
Engineering Research Equipment Grant: large scale polyaxial testing apparatus	NSF	03/86-03/88	$32,000	PI
Hydraulic conductivity enhancement from longwall mining	Engineering Foundation	06/86-06/87	$17,000	PI
A physical analog study of fluid flow in discretely fractured media	PA-MMRRI	08/86-07/87	$2,000	PI
Acid mine drainage abatement	RIG-PSU	09/86-12/86	$5,000	PI
Inertial effects in fluid flow within a single fracture	PA-MMRRI	09/85-06/86	$2,000	PI
Self-arrest in toppling susceptible slopes	PA-MMRRI	09/85-06/86	$2,000	PI
Groundwater flow in three-dimensional fractured rock masses	NSERC	04/85-04/88	$34,400	PI

SELECTED PROFESSIONAL ACTIVITIES

1. Elsworth, D. (1987) Thermal permeability enhancement in blocky rock: plane and radial flow. Camborne Geothermal Energy Project, Camborne, United Kingdom, April.

2. Elsworth, D. (1987) Thermal permeability enhancement in blocky rock: plane and radial flow. EEC and CNRS workshop on Forced Fluid Flow in Strong Fractured Rock Masses, Garchy, France, April.