

### 1994 Management Committee

The recent elections for the 1994 Management Committee resulted in the following being elected unopposed:

Category 1 (Geologist)	AG Hull
Category 2 (Geophysicist or Seismologist)	AJ Haines
Category 3 (Research Scientist)	JB Berrill
Category 5 (Architect)	AW Charleson

The election held for the five members required in Category 5 (Ordinary) resulted in the following members being elected:

BJ Davidson  
RD Jury  
AB King  
R Park  
JH Wood

### Obituary

#### EMILIO ROSENBLUETH

1926-1994

The international community received with great sadness the news of the death in Mexico on January 11, 1994 of Dr Emilio Rosenblueth, long serving professor, renowned earthquake engineer and researcher.

Emilio Rosenblueth was born in Mexico City. He pursued his civil engineering studies at the National Autonomous University of Mexico (UNAM) and subsequently earned his PhD at the University of Illinois.

Before embarking on his illustrious academic career he gained practical experience in design and construction with consulting engineering practices and the Federal Electricity Commission and the Ministry of the Navy. He further enriched his experiences with research work in the soil mechanics laboratories of the Ministry of Hydraulic Resources and the Institute of Geophysics of UNAM. From 1956 onwards he was active as a professor at the College of Engineering and particularly in research within the Institute of Engineering of UNAM, of which he subsequently became the director. He remained an active member of the institute for the remainder of his life.

He responded generously to appeals for his expertise by becoming a member, a director, a trustee or a president of numerous national, foreign and international professional engineering, scientific and educational societies and authorities. He also joined panels established for special engineering projects, research foundations and boards promoting indigenous culture. He served on the editorial board of numerous scientific journals and review boards of organisations supporting research. From 1977 to 1982 he was vice-minister of educational planning and from 1989 a member of the President's Advisory Science Board in Mexico.

Emilio Rosenblueth was particularly active and influential in developments relevant to earthquake engineering in Mexico as well as internationally. From 1973 to 1977 he was

president of the International Association for Earthquake Engineering. He delivered lectures and keynote addresses in numerous countries, including New Zealand.

His interests encompassed an extremely broad field. His books, major contribution to coauthored books and over 300 publications, reveal his original thoughts on risk analysis, concepts of reliability, all aspects of response to earthquakes, hydrodynamics, architecture, behaviour of structures and theoretical mechanics, education, geomechanics, optimisation in seismic design and ethics in technology. His definitive work in 1971 with N.M. Newmark "Fundamentals of Earthquake Engineering" (Prentice Hall) was a landmark. It was translated into several languages. His published work, characterised by conceptual formulation of rational frameworks and probabilistic theories, the use of innovative mathematical models and the application of precise conclusions to the practice of structural engineering, had a major influence on developments in seismic design. He was also instrumental in developing relevant building codes.

The enormous contributions were recognized world wide, the listing of which within this space is not possible. He was elected honorary member of the American Society of Civil Engineers, the American Concrete Institute, and the International Association for Earthquake Engineering. He was also elevated to membership, foreign honorary or life membership, respectively, of the National Academy of Sciences of the United States, the American Academy of Arts and Sciences, the New Zealand National Society for Earthquake Engineering.

Academic honors bestowed on Emilio Rosenblueth, to name only a few, include the Huber Research Prize, the Moiseff Award, the Freudenthal Medal and the Newmark medal of the American Society of Civil Engineers, the National Science Prize of the President of Mexico, the Miguel Urquijo National Prize for Research and the Nabor Carrillo Award of the Mexican Society of Civil Engineers, the Bernardo Hussay Interamerican Science Prize, the Prince of Asturias Prize received from the King of Spain, and honorary doctorates from the University of Waterloo, National University of Mexico and Carnegie Mellon University.

His students remember him as a dedicated, demanding and inspiring teacher with a flair for provoking novel ideas and utmost intellectual efforts.

Engineers and scientists all over the world, and particularly those who have had the privilege to know him, will miss his incredible infusion of innovative ideas. His work is preserved for posterity.

Emeritus Professor Emilio Rosenblueth will also be remembered the world over, but especially in his beloved Mexico, for his contribution to improvements of the quality of life and the promotion of science and technology in the service of mankind, particularly in less privileged societies.

T. Paulay

*Editor's Note: Mr Bill Stephenson was in Mexico at the time of Professor Rosenblueth's death and attended the funeral, along with many high level technical and government*

mourners. He expressed the condolences of our Society to Emilio's widow.

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## PUBLICATIONS

The following **Earthquake Commission** sponsored research reports have recently been received by the Editor. Copies should be available by contacting the respective authors.

### Research project 91/15

R Park, "*Strengthening and/or Repair of Existing Reinforced Concrete Columns*", Department of Civil Engineering, University of Canterbury. (Final report to EQC).

M Rodriguez and R Park, "*Strengthening of Reinforced Concrete Buildings for Seismic Resistance*", *Earthquake Spectra*, Vol. 7, No. 3, pp439-459, 1991.

M Rodriguez and R Park, "*Seismic Load Tests on Reinforced Concrete Columns Strengthened by Jacketing*", Research Report 92-9, Department of Civil Engineering, University of Canterbury, November 1992.

### Research Project 91/18

Xian Zuo Xin (Supervised by R Park and H Tanaka), "*Behaviour of Reinforced Concrete Interior Beam-column Joints Designed Using High Strength Concrete and Steel*", Research Report 92-3, Department of Civil Engineering, University of Canterbury, July 1992.

### Research Project 91/30

AJ Haines, RA Benites, J Marsh and TJ Larkin, "*Comparison of Linear and Non-linear Seismic Response of 2-dimensional Alluvium Basins*", IGNS, Wellington and Department of Civil Engineering, University of Auckland.

### Research Project 91/56

IF McCahon, MD Yetton and DRL Cook, "*The Earthquake Hazard in Dunedin*", Soils and Foundation Ltd, Christchurch.

### Research Report 91/77

JJ Taber, S Sritharan, GH McVerry and JH Ansell, "*Site Effects from Seismic Shaking: A Comparison of Strong and Weak Ground Motion in Wellington City and the Hutt Valley*", Inst. of Geophysics, Victoria University of Wellington and IGNS, Lower Hutt, May 1993.

### Ph.D research scholarship funded by EQC

JJ Restrepo-Posada (supervised by R Park and AH Buchanan), "*Seismic Behaviour of Connections Between Precast Concrete Elements*", Research Report 93-3, Department of Civil Engineering, University of Canterbury, April 1993.

The **International Society for Soil Mechanics and Foundation Engineering** announce two recent publications: the "Manual of Zonation of Seismic Geotechnical Hazards" is available at US \$25 while the special volume of papers entitled "Behaviour of Ground and Structures during Earthquake" is available at US \$45.

Both of these may be ordered from the following:

Japanese Society of Soil Mechanics and Foundation Engineering,  
Sugayama Building,  
2-23, Kanda Awaji-cho, Chiyodaku,  
Tokyo, JAPAN

The 1992 volume (Vol. 22) of the **Abstract Journal in Earthquake Engineering** is now available, price US\$100 to addresses outside Canada, U.S. and Mexico. For further information, write to:

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