

**AUSTRALIAN
GEOMECHANICS
SOCIETY**
South Australian Chapter



AusIMM
AUSTRALASIAN INSTITUTE OF MINING & METALLURGY



February Meeting

**46th Terzaghi Lecture Downunder
GEOSYNTHETIC REINFORCED SOIL:
FROM THE EXPERIMENTAL TO THE FAMILIAR**

**ROBERT HOLTZ
Professor Emeritus,
University of Washington,
Seattle, Washington USA**

SYNOPSIS

The lecture begins with a historical review of reinforced soil technology, from the ancients, the developments by H. Vidal and K. Lee on Terre Armée and Reinforced Earth, the early uses of geosynthetics for soil reinforcement in France (Bidim), Sweden (Wager and Broms), and the USA (USFS, FHWA, J. R. Bell, T. A. Haliburton, B. R. Christopher and others). The advantages and basic behavior of geosynthetic reinforced soil (GRS) are presented along with an overview of current design procedures, and with reference to UW analytical research results. Practical suggestions are given for dealing with creep, pullout, and backfill drainage. Geosynthetic properties are then discussed, again with reference to UW research results. Although GRS is quite a mature development, a few technical and professional issues remain; primarily, too many failures of these structures occur. Reasons for these failures and some suggestions as to what the profession can do about them are presented. The lecture ends with several examples of successful applications of GRS and reinforced soil technology.

ABOUT THE SPEAKER

Bob Holtz, PhD, PE, D.GE, is Professor Emeritus of Civil Engineering at the University of Washington in Seattle. He has degrees from Minnesota and Northwestern, and he attended the Special Program in Soil Mechanics at Harvard under Professor A. Casagrande. Before coming to the UW in 1988, he was on the faculty at Purdue and Cal State-Sacramento. He has worked for the California Dept. of Water Resources, Swedish Geotechnical Institute, NRC-Canada, and as a consulting engineer in Chicago, Paris, and Milano. His research interests and publications are mostly on geosynthetics, soil improvement, foundations, and soil properties. He is a Distinguished Member of ASCE, was President of the ASCE Geo-Institute 2000-1, and currently serves as the International Secretary for the Geo-Institute. He has presented numerous short courses and lectures, including the 46th Terzaghi Lecturer in Feb. 2010.

DATE: Tuesday 14 February 2012

TIME: 6:00 pm to 7:30 pm (light refreshments from 5:30 pm)

**VENUE: Engineers Australia, Level 11, 108 King William Street,
Adelaide**

Please check the AGS web site at <http://www.australiangeomechanics.org/sa> prior to attending for any late changes or contact Brendan Scott on 8303 5073.