



The Midland Geotechnical Society
Thursday 8th September 2011, University of Birmingham



ABSTRACT

ELASTIC SETTLEMENT OF SHALLOW FOUNDATIONS ON GRANULAR SOIL—
A CRITICAL REVIEW

Braja M. Das

Elastic settlement of shallow foundations on granular soil is an important subject in geotechnical engineering. Various methods developed over more than six decades for calculating elastic settlement can be placed under three major categories: (i) empirical methods in which observed settlement of structures are linked to in situ test results such as standard penetration test, cone penetration test, and Pressuremeter test; (ii) semi-empirical methods which combine in situ test results with theory of elasticity to a certain degree; and (iii) use of theory of elasticity. A brief review of the important results presently available in literature which fall under the above-stated categories will be presented. Field observations of elastic settlement will be compared with those predicted from various theories. It appears that the discrepancy between the observed and predicted settlement is due primarily to a lack of proper estimation of soil parameters such as modulus of elasticity.

.....

Professor Braja Das is a geotechnical engineer and Dean Emeritus of California State University, Sacramento. He is a Fellow and Life Member of the American Society of Civil Engineers, a Life Member of the American Society for Engineering Education, and an Emeritus Member of the Committee on Chemical and Mechanical Stabilization of Soils and Rocks for the Transportation Research Board (National Research Council, Washington, D.C.).

Professor Das has authored over 250 technical papers published in journals and conference proceedings. He has authored several geotechnical text and reference books, some of which have been translated to Chinese, Korean, Persian, Vietnamese, Spanish and Portuguese. He has received numerous awards for teaching excellence, including the AMOCO Foundation Award, AT&T Award for Teaching Excellence from the American Society for Engineering Education, the Ralph Teetor Award from the Society of Automotive Engineers, and the Distinguished Achievement Award for Teaching Excellence from the University of Texas at El Paso.

After retirement in 2006, he and his wife Janice live in the Las Vegas area.

