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PREFACE

The Flat Dilatometer measures the insitu stiffness, strength, and stress history parameters of soil for better site characterization, reducing overall project cost and improving design reliability. It also gives the engineer nearly continuous depth-profiles of these important soil properties. Both researchers and practitioners have complemented the accuracy and breadth of the Dilatometer, now in wide spread use throughout the world.

Dr. Silvano Marchetti invented the Flat Dilatometer in 1975. He performed tests at ten well-documented research sites and developed empirical correlations with classical soil properties. In 1980, he published a classic paper presenting those correlations, many of which are still routinely used today. In 1981, Marchetti traveled to the United States on sabbatical and worked with Drs. John Schmertmann and David Crapps. While they were initially skeptical of Dr. Marchetti's invention, the impressive accuracy of the results won them over.

In 1983, a small group of engineers convened in Edmonton, Canada to present their findings at the "First International Conference on the Flat Dilatometer." In April 2006, over two decades later, we met again to share experiences and new developments in the use, implementation, and application of the DMT to geotechnical engineering.

This book is organized by the conference themes:

- Case studies of projects using dilatometer tests,
- Correlations and comparisons with other lab or insitu tests,
- New testing developments (seismic and other instrumentation),
- Theoretical and numerical evaluations of the DMT, and
- Applications in difficult geomaterials

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