

A modified creep index and its application to elastic viscoplastic model for soft clays

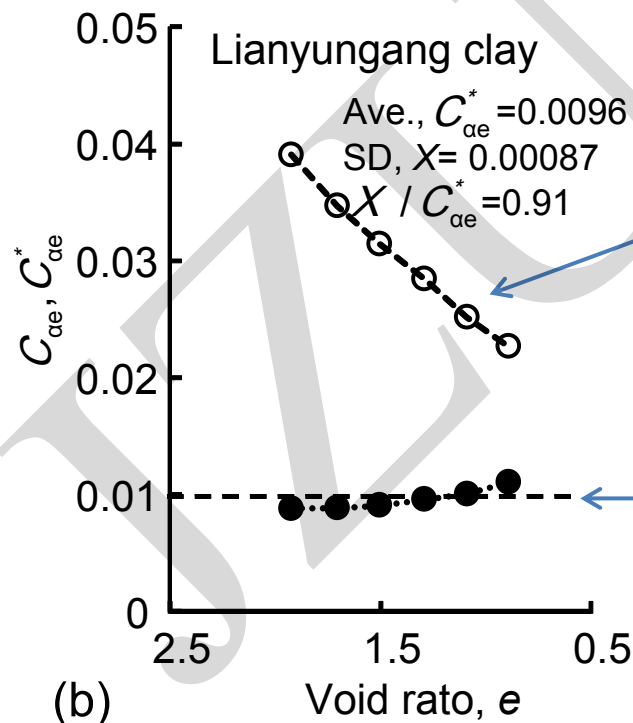
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Main goal

To improve the simulation ability of a elastic viscoplastic model by incorporating a modified creep index.

Method

Creep index $C_{\alpha e}$ is decreasing with a decreasing of the void ratio for all clays. The modified creep index $C_{\alpha e}^*$ can be assumed as constant.



Original: $C_{\alpha e}$ is considered as constant which is incorrect

This paper: $C_{\alpha e}^*$ is considered as constant which is **perfect**!

Evidence of $C_{\alpha e}$ variation with void ratio

EVP model using a modified creep index

Substitute the creep index C_{ae} with $e \times C_{ae}^* \times \ln 10$

Verification

Simulation on a 1D conventional oedometer test with the enhanced model comparing with the original EVP.

