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

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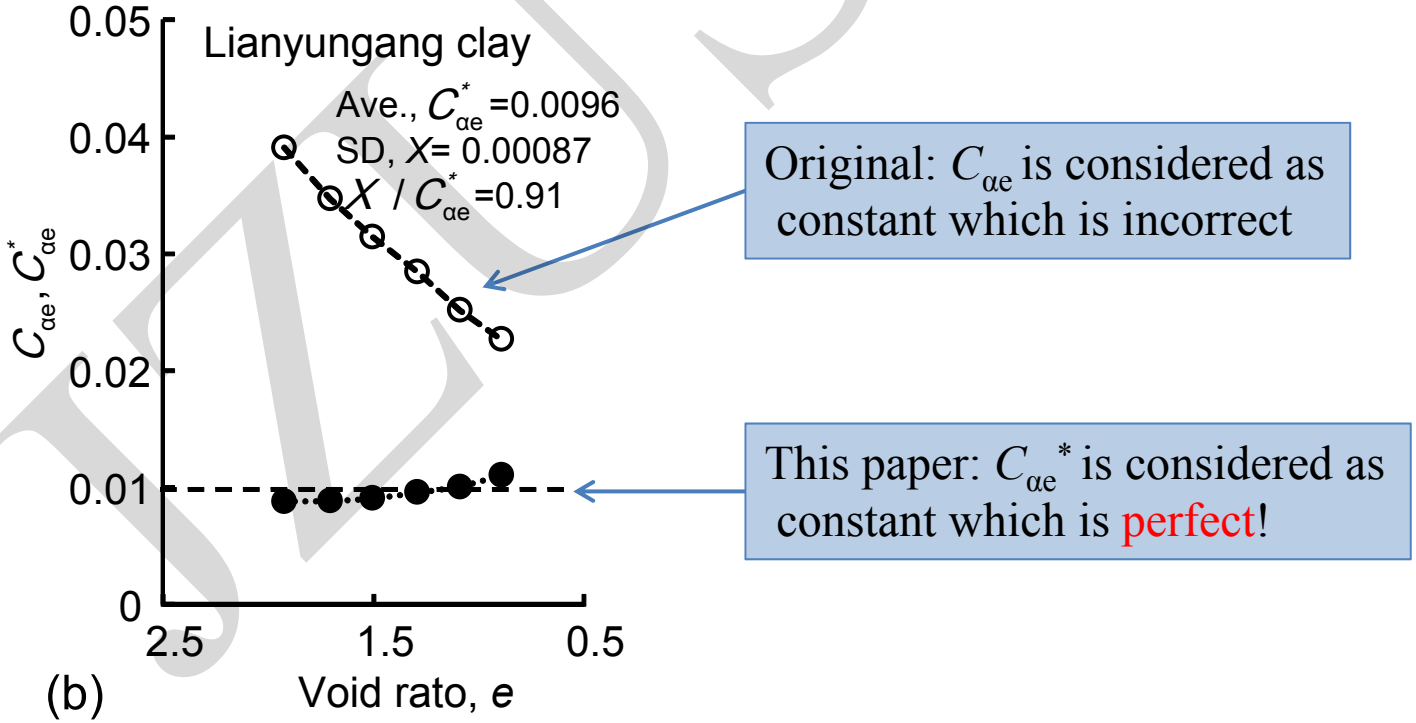
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Main goal

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.



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

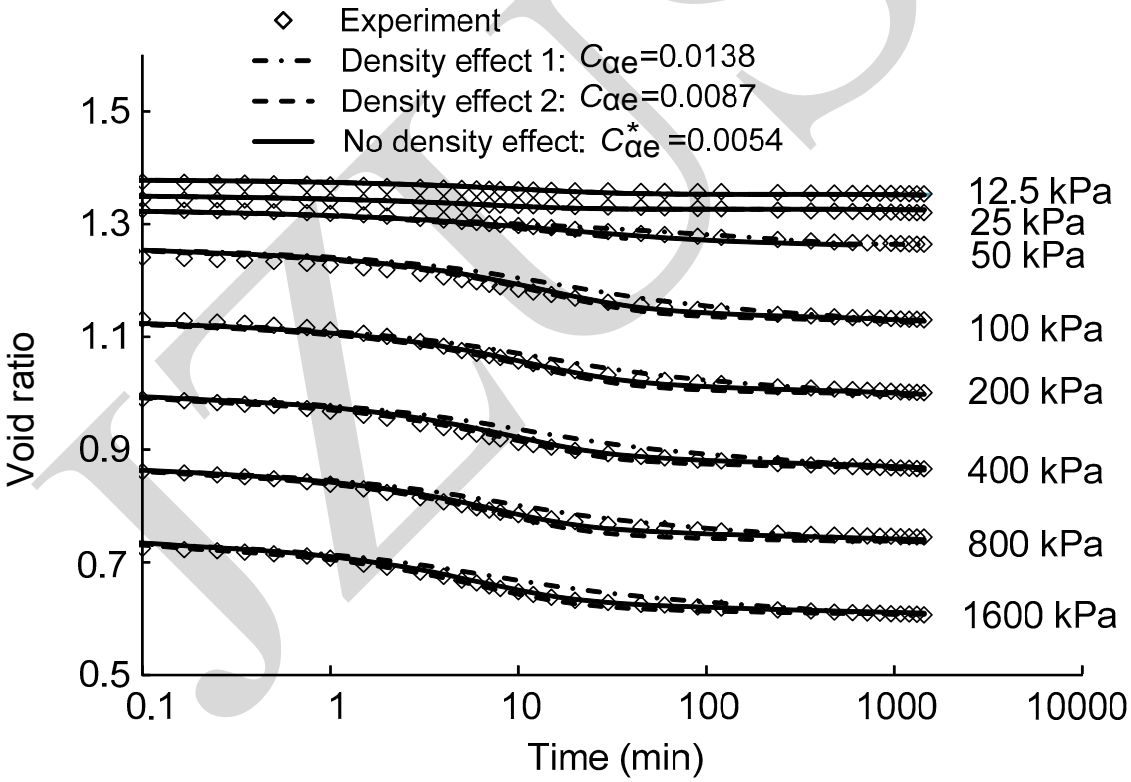
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EVP model using a modified creep index

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

Verification

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



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