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An analytical investigation of the effect of non-uniformity on the elastic moduli of granular media

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Highlights

- The effect of polydispersity on the small strain elastic moduli is considered.
- For their evaluation an upscaling technique based on the elastic energy is used.
- Two different types of granulometric curves are considered.
- The elastic moduli show a strong dependence of the coefficient of uniformity.
- The model captures well the laboratory results.

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