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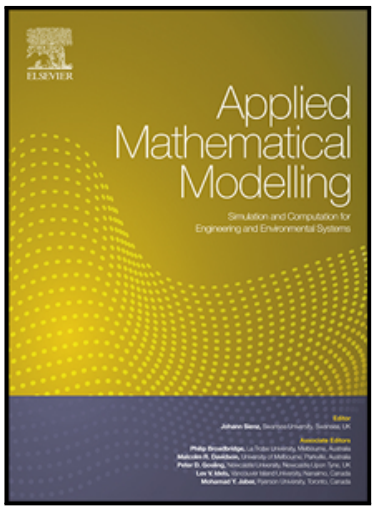

Static plane-strain deformation of transversely isotropic magneto-electro-elastic and layered cylinders to general surface loads

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Static plane-strain deformation of transversely isotropic magneto-electro-elastic and layered cylinders to general surface loads by Nixdorf and Pan

Highlights

- The separation of variables and eigenfunction expansion methods are first introduced.
- Static response of layered anisotropic cylinders made of multi-phase materials is solved analytically.
- The present solutions can be reduced to the well-known results in layered isotropic cylinders.
- Numerical examples are presented to demonstrate the dependence of the field responses on material anisotropy and layering.
- Coupling and interaction among elastic, piezoelectric and piezomagnetic fields are further studied.

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