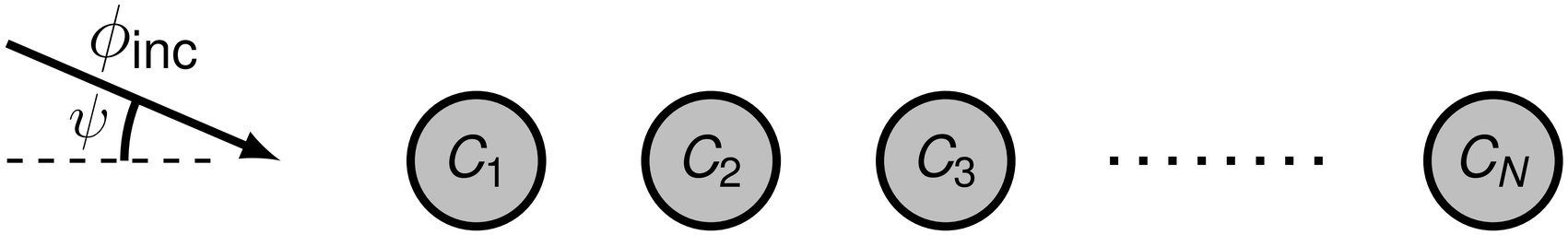
Problem considered

- Straight-line array of N vertical cylinders.
- Plane incident wave $\phi_{\text{inc}} = \varphi(x, y : \psi)$: $\varphi = \exp\{\mathrm{i}\, k\, (x \cos\psi + y \sin\psi)\}$.
- Time-harmonic conditions at angular frequency ω.



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- Reduce to 2D problem shown below: $k\, \tanh(k\, H) = \omega^2 \,/\, g$.

$$\phi_{xx} + \phi_{yy} + k^2\, \phi = 0$$