Problem considered

- Straight-line array of N vertical cylinders.
- Plane incident wave $\phi_{\text{inc}} = \varphi(x, y : \psi)$: $\varphi = \exp\{i k (x \cos \psi + y \sin \psi)\}$.
- ullet Time-harmonic conditions at angular frequency ω .
- Reduce to 2D problem shown below: $k \tanh(kH) = \omega^2 / g$.
- Nondimensionalised

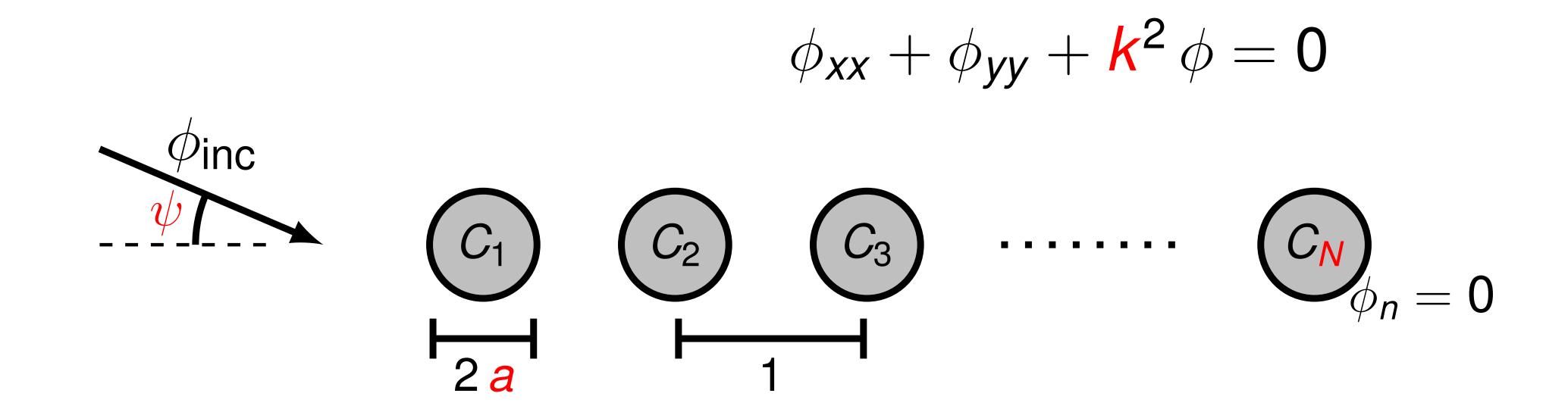
$$\phi_{XX} + \phi_{yy} + k^2 \phi = 0$$

$$\downarrow^{\phi_{\text{inc}}}$$

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- Nondimensionalised \longrightarrow parameters: k, ψ , N, a.



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