

- Let

$$g_i = \frac{1}{\sqrt{2W}} g \left( \frac{i}{2W} \right)$$

and

$$\psi_i(t) = \sqrt{2W} \operatorname{sinc}(2Wt - i).$$

- Then

$$g(t) = \sum_{i=-\infty}^{\infty} \textcolor{red}{g}_i \psi_i(t).$$