

$$\begin{array}{ccccc}
 C^{i-1} & \longrightarrow & C^i & \longrightarrow & C^{i+1} \\
 \downarrow & \nearrow h^i & \downarrow f, g & \nearrow h^{i+1} & \downarrow \\
 D^{i-1} & \longrightarrow & D^i & \longrightarrow & D^{i+1}
 \end{array}$$