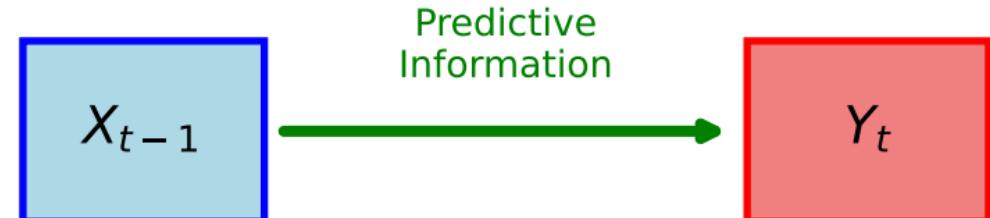
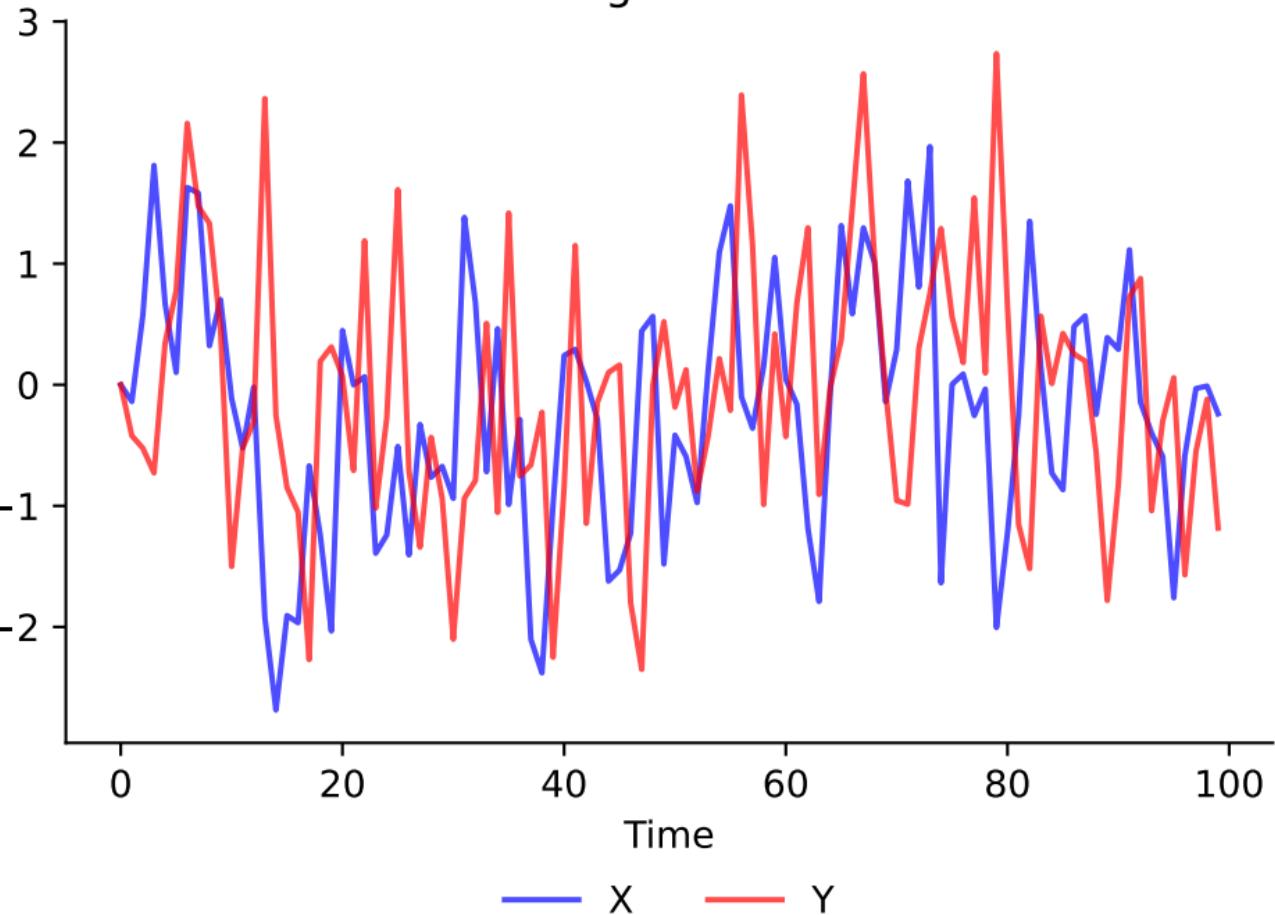


# X Granger-causes Y

Value



*Past X helps predict Y  
(beyond Y's own past)*