$\{X_t, t \in$
$T\}$
T
X
Y
$\rho_{X,Y} = cov(X,Y)\sqrt{var(X).var(Y)}$
(1)
$var(X)$
$var(Y)$
X
Y
$\rho_{X,Y} =$
$\rho_{Y,X}$
$1 \leq$
$\rho_{X,Y} \leq$
1
t
$t-$
l
X_t
X_{t-l}
l
ρ_l
l
$\rho_l = cov(X_t, X_{t-l})var(X_t) = \gamma_l\gamma_0$
(2)
$var(t) =$
$var(t-$
$l)$
$-1 \leq$
$\rho_l \leq$
1
$\rho_l =$
ρ_{-l}
$\rho_0 =$
1
$\{X_t\}$
$\{X_t\}$
X_t
$\{X_t\}$
$(x_{t_1}, x_{t_2}, ..., x_{t_k})$
$(x_{t_{1+t}}, x_{t_{2+t}}, ..., x_{t_{k+t}})$
t
$(t_1, ..., t_k)$
k
$(x_{t_1}, x_{t_2}, ..., x_{t_k})$
$\{X_t\}$
X_t
X_t
X_{t-l}
$_t) =$
$\mu, cov(X_t, X_{t-l}) =$
$\gamma_l(2)$
γ_l
l
μ
$X_t \sim$
$WN(0, \sigma^2)$
$\gamma(l) =$
$cov(X_t, X_{t+l}) =$
0
$\rho(l) =$
$\begin{cases} 1 l = 0 \\ 0 l \neq 0 \end{cases}$
$(\rho_l =$
$0 \forall l >$
$0)$
X_t
$X(t) = \sum_{j=-\infty}^{\infty} \psi_j z_{t-j}$
(3)
$\{z_t\} \sim$
$WN(0, \sigma^2)$
$\{\psi_j\}$
$(\sum_{j=-\infty}^{\infty} |\psi_j| <$
$\infty)$
ψ_j
$\{X_t\}$
$\{X_t\}$
$\gamma_X(h) = \sigma^2 \sum_{i=-\infty}^{+\infty} \psi_i\psi_{i+h}$
(4)
t
$_2\backslash -$