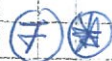


## GENERAL FAMILY OF MODEL STRUCTURES



$$A(q)y(t) = \frac{B(q)}{F(q)}u(t) + \frac{C(q)}{D(q)}e(t)$$

$$\hat{y}(t|\theta) = \frac{D(q)B(q)}{C(q)F(q)}u(t) + \left[1 - \frac{D(q)A(q)}{C(q)}\right]y(t)$$

### POLYNOMIALS USED

B  
AB  
ABC  
AC  
ABD  
ABCD  
BF  
BFCD

### NAME OF MODEL STRUCTURE

FIR  
ARX  
ARMAX  
ARMA  
ARARX  
ARARMAX  
OE  
BJ

PREDICTION ERROR:  $\varepsilon(t|\theta) = y(t) - \hat{y}(t|\theta)$

$$\varepsilon(t|\theta) = \frac{D(q)}{C(q)} \left[ A(q)y(t) - \frac{B(q)}{F(q)}u(t) \right]$$