

Matave Identification ToolBox

A State Space Approach

Version 2.0

State Space Realization Algorithms

<i>Function name</i>	<i>Description</i>	<i>Status</i>	<i>Model</i>
hokalman	Ho-Kalman-Kung Realization Algorithm	Done	MIMO
era	Eigensystem Realization Algorithm	Done	MIMO
eradc	Eigensystem Realization Algorithm Data Correlation	Done	MIMO
sbr	Step-Based Realization Algorithm	Done	MIMO
okid	Observer Kalman Filter IDentification	Done	MIMO

State Space Subspace Identification algorithms

<i>Function name</i>	<i>Description</i>	<i>Status</i>	<i>Model</i>
moesp	Multivariable Output-Error State Space	Done	MIMO
pimoesp	Past Input Multivariable Output-Error State Space	Done	MIMO
n4sid	Numerical Algorithms For Subspace State Space System IDentification	Done	MIMO
asa	Arbitrary Subspace Algorithm	Done	MIMO
ort	Orthogonal Decomposition	Done	MIMO

Polynomial model algorithms

<i>Function name</i>	<i>Description</i>	<i>Status</i>	<i>Model</i>
arx	Autoregressive with exogenous input	Done	MISO
armax	Autoregressive Moving Average with Exogenous Input	Done	MISO
oe	Output Error estimation model	Done	MISO
tfest	Estimate a transfer function of time doman data	Done	SISO

Analysis and filtering

<i>Function name</i>	<i>Description</i>	<i>Status</i>	<i>Model</i>
spa	Plot bode spectral analysis plot using Fast Fourier Transform	Done	NO
smoothing	Use the mouse cursor to do a hand-made-curve fitting	Done	NO
moavg	Use moving average filtering	Done	NO
lineq	Minimize the least square cost function to curve fit a straight line	Done	NO