You Tube links of videos of State Space Representation, Analysis and Design

Lecture No.	Link	Contents
1	https://youtu.be/A4pFwr7kQ6w	Introduction to state space, its terminology and comparison with transfer function approach
2	https://youtu.be/5I-TVDSaDDU	Physical variable state model of electrical systems
3	https://youtu.be/x5TOItTkf9Y	Physical variable state model of mechanical systems and armature controlled D. C. Motor
4	https://youtu.be/cH9CU6G_F0E	Phase variable forms (Controllable canonical form)
5	https://youtu.be/m2lsYAmP0R4	Phase variable forms (Observable canonical form)
6	https://youtu.be/_j6-Rs9-Gc8	Canonical forms (Diagonal /Jordon canonical form)
7	https://youtu.be/-6JgXl7wbrc	Conversion of state model to transfer function
8	https://youtu.be/8mQMS8BKwo8	Transformation of state model from one form to other form, eigen valus, eigen vectors, computation of eigen vectors by generalized eigen vector approach
9	https://youtu.be/J5SnoKTKxcQ	Computation of eigen vectors by adjoint method, transformation of state model into diagonal/Jordon canonical state model
10	https://youtu.be/siM-Q_pCsuc	Diagonalization of system matrix
11	https://youtu.be/2C5ldDXB7Mk	Solution of homogeneous state equation, state transition matrix, its properties and computation state transition matrix by Laplace transform method
12	https://youtu.be/Jzpn9cNY7hI	Computation of state transition matrix by Caley Hamilton theorem-Sylvestor interpolation formula
13	https://youtu.be/GImSQYr70Mo	Computation of state transition matrix by similarity transformation method and infinite exponential series method
14	https://youtu.be/0oIVKwCwf-M	Solution of non-homogeneous state equation
15	https://youtu.be/r_bRqaasHDw	Concept of state controllability and state observability and their investigation by Kalman test
16	https://youtu.be/JkQl4_65jx8	Investigation of state controllability and state observability by Gilbert test method, Principle of duality
17	https://youtu.be/E4MIyza6sz0	Transformation of state model to controllable canonical and observable canonical form
18	https://youtu.be/s-QvaYMaMFM	Concept of pole placement, state regulator by pole placement via state variable feedback
19	https://youtu.be/VKJXEc8Vh3s	Numerical example on pole placement
20	https://youtu.be/8sKlohgzX-Q	Numerical example on pole placement
21	https://youtu.be/B-IYFLobBFg	Concept of state observer, its necessity, types, dynamic equation
22	https://youtu.be/o-JHRc-5YN8	Design of full order state observer and relation between state feedback gain matrix and observer gain matrix
23	https://youtu.be/DE60B1RtZOo	Example on design of full order state observer
24	https://youtu.be/LxpvNXPtzzE	Example on design of full order state observer