DON=[x, wy, m/x) CN]E R2xD obmonstrated states encoded as DMP (one DoF) UEKJ - [u1 EKJ, ..., U3CK] & [R1x] corresponding control inputs (one DOF)  $\overline{A} \in \mathbb{R}^{2 \times 2}$  obscrebe shale transition matrix of or DMP (one DOF)  $\overline{B} \in \mathbb{R}^{2 \times n}$  obscrebe input matrix (one DOF)  $\overline{G} = \mathbb{R}^{2 \times n}$ XEK]  $\in \mathbb{R}^{2\times 1}$  shock vector  $\times \text{EKJ} = \left[\begin{array}{c} q \text{ EKJ} \\ q \text{ EKJ} \end{array}\right]$  (one DoF) ξ[k] = [X,[k],..., X,[k]] T ∈ R 2.L ×1 convadenated state vector of AEK]  $\in \mathbb{R}^{D\times 1}$  control rector from solving QP (one Dof)

Combined State Model of L DMP  $\mathcal{S}_{CK+17} = \begin{bmatrix} \bar{A} & O \\ O & \bar{A} \end{bmatrix} \mathcal{S}_{CK7} + \begin{bmatrix} \bar{B} & O \\ O & \bar{B} \end{bmatrix} \begin{bmatrix} u_{1}(K7) & O \\ O & u_{L}(K7) \end{bmatrix} \begin{bmatrix} \lambda_{1}(K) \\ \lambda_{L}(K) \end{bmatrix}$ Ø∈R<sup>2L×2L</sup>

B∈<sup>2·L×L</sup>

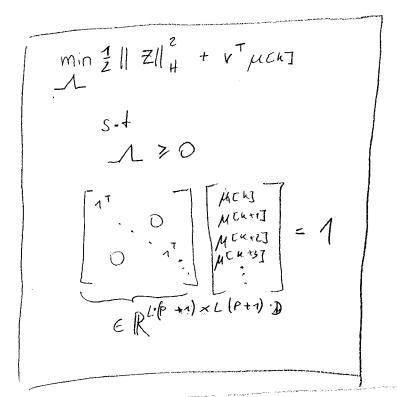
Revise R<sup>L×J·L</sup>

MCKSER

D·L×1 Projection error of time to ASIK] = SCKJ - DIK] MIKT D-[N] ER 2L X DL ASENTI] = SEKTA] - DEKTAJ MCKTAJ = \$ SEKJ + B DEKTAJMEKT - DEKTAJMEKTAJ 15 [K+2] = 5 [K+2] - SLEK+2] MEKRS = \$ STES + \$B\$ CHI HEKT + B\$ CK+ AMEK+1 - SLEK+2] MEK+2] A ([K+3] = SCK+3] - Q CK+3] = \$ 3 CK] + \$ BREW] + \$ BREW + \$ BREW + BREW - 12 [K+3] M(K+3] Preview window size P YER MPC - scheme  $\begin{array}{c|c}
\Delta S[k] \\
\Delta S[k-1] \\
\Delta S[k-2] \\
\Delta S[k-2] \\
\Delta S[k-3]
\end{array} = 
\begin{array}{c|c}
\phi^0 \\
\phi^1 \\
\phi^2 \\
\delta S[k] \\
\delta S[k]
\end{array} + 
\begin{array}{c|c}
\Delta S[k] \\
\delta S[k] \\
\delta S[k]
\end{array}$ Ø - [[Kin] 0 BOR LANJ - SLIKTZ] prolinti] Boliktz] 2L(P+1)×1 [-] ER 2L(P+1) × DL(P+1) 1ZER

N= [lu···lg1, ···, luL····loL] T ∈ R DL×1

distance vector from curren. Shale to stemo shales



> min 2 NTEJHEJAL + 9T.H.EJAL tev pick]

HERZL(P+1)×ZL(P+1)