

INPUT-OUTPUT RELATION FOR NOISE

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$$N_y(u) = H(u, \theta) E(u) + T_H(u, \theta) + \sigma(u)$$

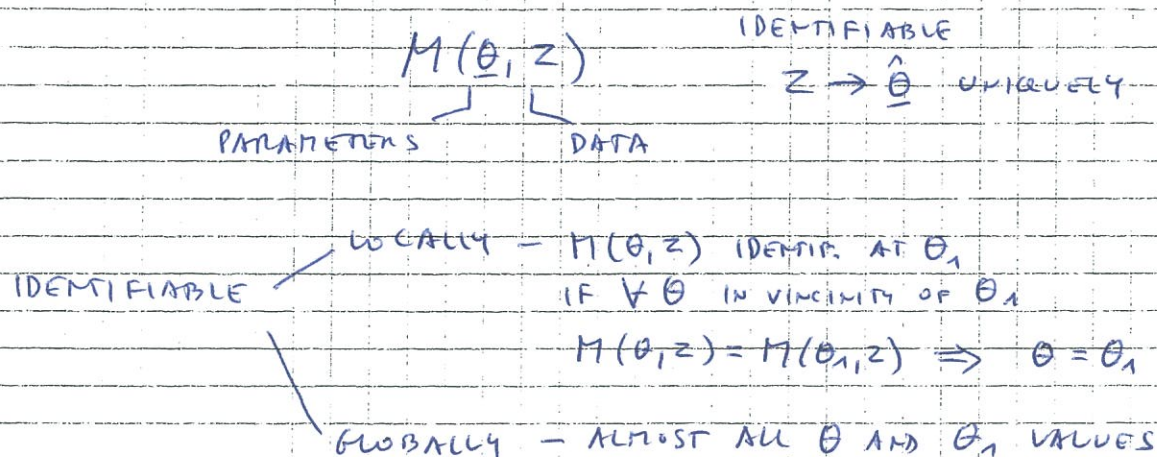
$\left\{ \begin{array}{l} \text{CIRCUIT NOISE} \\ \text{NORMALLY DISTRIBUTED } N/\infty \end{array} \right.$

$$T_H(u, \theta) = \frac{J(u, \theta)}{D(u, \theta)}$$

$$u_f = \max(u_c, u_o) - 1$$

J_r - FUNCTION OF DIFFERENCE OF INIT/FINITE CONDITIONS

MODEL IDENTIFIABILITY



PERIODIC SIGNALS

- RATIONAL FORM $\frac{B}{A}$ NOT IDENTIFIABLE $G(z, \theta) = G(z, \theta)$

CONSTRAINTS NEEDED: $\theta_{(1)} = 1 \rightarrow a_0 = 1$

$$\|\theta\|_2 = 1$$

- PFE - IDENTIFIABLE

- STATE-SPACE REPRESENTATION

$$(A, B, C, D) \leftrightarrow (TA\bar{T}^{-1}, TB, C\bar{T}^{-1}, D)$$

GENERALLY

SAME $G(z, \theta)$

$$|T| \neq \emptyset$$

NOT IDENTIFIABLE

$\hookrightarrow n_a^2$ CONSTRAINTS ON θ

SO CALLED IDENTIFIABLE S-S REPRESENTATION