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Multi-loop Hysteresis and Recursive Remnant Control

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Stellingen

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Multi-loop Hysteresis and Recursive Remnant Control

van

Marco Augusto Vasquez Beltran

1. Hysteresis operators with sign-indefinite parameters can describe multi-loop hysteresis.

Chapter 3 & Chapter 5

2. A Lur'e system with a hysteretic non-linearity has an infinite number of equilibrium points.

Chapter 4

3. The existence of periodic input-output pairs in the Duhem hysteresis operator can be guaranteed even when the discontinuous integro-differential equations that compose the model are not restricted to be sign-definite.

Chapter 5

4. The remnant control problem can be solved, up to practical precision, by an input signal with compact support.

Chapter 6

5. The presence of elements with hysteresis in control systems does not always represent an inconvenience.

Chapter 7

6. Phenomenological models of hysteresis are mathematically rich approximations of a complex phenomenon.

7. In order to create a new idea, it is necessary to gather an immense amount of old ideas.

8. When I let go of what I am, I become what I might be.

Lao Tzu