Analysis of Time-Controlled Switched Systems by Stability Preserving Mappings

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Abstract: In this paper, we study the stability of a wide class of switched systems using stability preserving mappings. By considering an existing result and extending it to a general class of switched systems, we show that stability preserving mappings constitute an important and practical tool in stability analysis and design of switched systems.

Keywords: Switched systems; stability analysis; stability preserving mappings. **Mathematics Subject Classification (2000):** 34A37, 34D20, 93D30.