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Measure Chains and LaSalle's Invariance Principle

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Oral Presentation 1.3

MEASURE CHAINS AND LASALLE'S INVARIANCE PRINCIPLE

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Measure chains are special subsets of the real line. The real line itself and all its discrete subsets are examples of measure chains, but many subsets containing combinations of continuous intervals and discrete points are also measure chains. The calculus on measure chains is thus an extension of the differential and difference calculuses. The axioms of defining measure chains will be given, and basic concepts and theorems in the measure chain calculus will be presented. Some results on stability (which culminate in Lasalle's Invariance Principle) will be presented in both a differential calculus and a difference calculus context; the hope is to extend these results to the measure chain calculus.