

Abstract Submitted  
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**Ultra low-power hybrid spintronics-straintronics clocked with Surface Acoustic Waves (SAW)**<sup>1</sup> MOHAMMAD SALEHI FASHAMI, SUPRIYO BANDYOPADHYAY, JAYASIMHA ATULASIMHA, Virginia Commonwealth University — The study of magnetization dynamics in magnetostrictive materials triggered with surface acoustic waves (SAWs) is of great interest not only from a fundamental point of view, but also for potential applications in energy efficient nanomagnetic computing. In this presentation, we model magnetization dynamics in dipole coupled arrays of nanomagnets clocked by acoustic waves. Specifically, this theoretical work demonstrates the feasibility of sequential logic devices such as flip-flops by showing that NAND gates and information propagation with cross-over of nanomagnet “wires” can be implemented and synchronously clocked with surface acoustic waves.

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