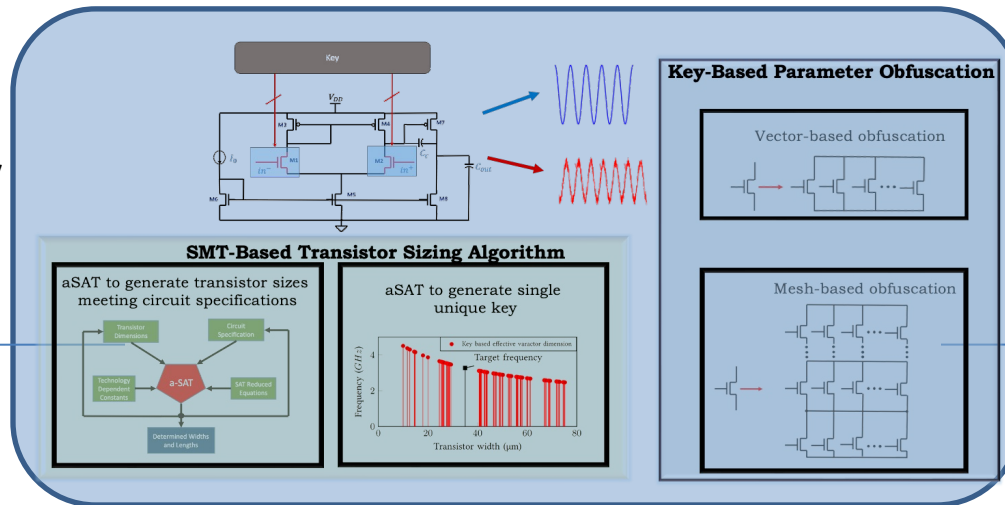


# Parameter Obfuscation: A Novel Methodology for the Protection of Analog Intellectual Property



## Challenge:

- Analog ICs are the third most counterfeited semiconductor component
- AMS IC manufacturer brands most frequently targeted for counterfeiting



## Scientific Impact:

- Proposed technique protects against overproduction and reverse engineering from untrusted foundries
- Mask circuit functionality even for small key size
- Resilient against SAT and side-channel attacks

## Solution:

- Parameter obfuscation techniques secure analog circuit design and IP against various attack vectors
- aSAT based transistor sizing methodology reduces analog design time and complexity when implementing security features

## Broader Impact and Broader Participation:

- Promotes development of new design methodologies with security as the new constraint along with power, area, and performance
- Development of course and discrete modules on hardware security and analog
- Partial support of multiple Ph.D. and M.S. students