# SaTC: STARSS: Design of Secure and Anti-Counterfeit Integrated Circuits

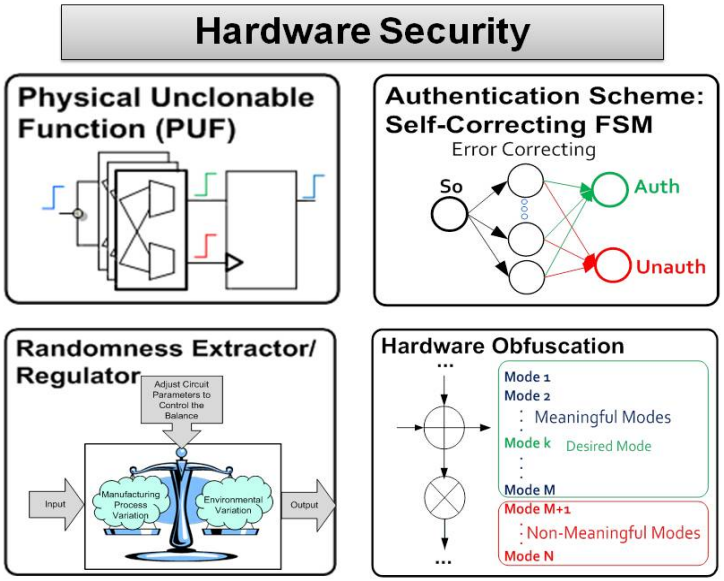
http://people.ece.umn.edu/~parhi/research/security.html

## Challenge:

- Robust authentication
- Hardware obfuscation

## Solution:

- PUF modeling
- Local Authentication
- Key based obfuscation
- Hierarchical authentication and obfuscation




## Scientific Impact:

- - Local robust authentication by built-in finite state machine
- - New True Random Number generators based on modeling
- - Design of obfuscated Chips that cannot be operated correctly without access to key

## Broader Impact:

- Foundries cannot sell excess parts
- IP cannot be reverse engineered by competitors or third parties
- Training of 7 graduate students
- 1 Patent application
- Active engagement with SRC member companies


CNS-1441639
University of Minnesota, Minneapolis
Keshab Parhi parhi@umn.edu (Principal Investigator)
Chris Kim (Co-Principal Investigator)