

# AUTHENTICATION OF CONTINUOUS DATA STREAMS WITHOUT COMMUNICATION OVERHEAD

Tech ID # GMU 07-016

Patent No. US 8,131,998 B2

## Description of Technology:

Researchers at George Mason University have developed a method to provide data stream authentication without adding to the data or altering the data content. The technique works by disrupting packet flow and embedding the MAC (message authentication code) into the inter-packet timing of the data stream.

Current systems for message authentication either incur communication overhead or change the original content of the data; by embedding the MAC into the packets' timing instead of into the packets themselves, one is able to provide message authentication without adding overhead or risking data corruption. Even if a data block is corrupted or missing, this technology can still continue authenticating packet streams.

Possible products for this technology include:

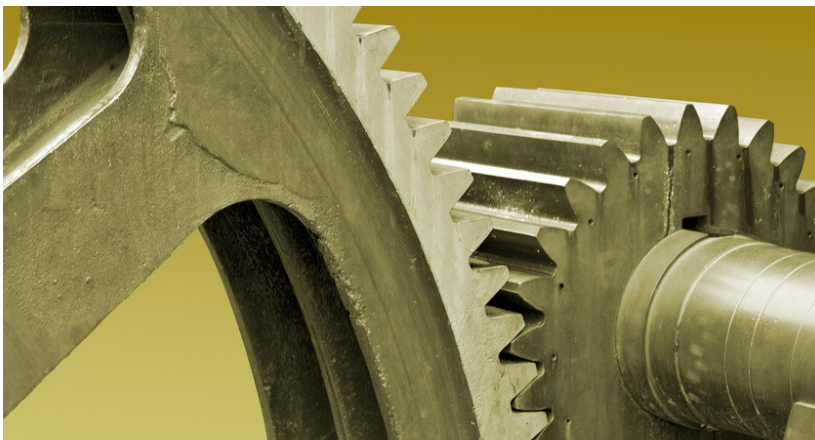
- An authentication tool for VPN
- Authentication of sensitive data streams
- Communication integrity

## Primary Investigator:

Xinyuan (Frank) Wang is the Associate Professor of Computer Sciences in the Volgenau School of Engineering at George Mason University.

## Advantages:

- No data is altered or added
- Can still work if packets are corrupted or lost
- No communication overhead
- Difficult to detect



## Contact

George Mason University  
Office of Technology Transfer  
4400 University Drive, MS 5G5  
Fairfax, Virginia 22030  
Phone: 703-993-8933  
Email: [hmehta4@gmu.edu](mailto:hmehta4@gmu.edu)