Project title: Blockchain-based tamper-proof logging and tracking in ad-hoc networks for emergency response and digital agriculture applications.

Brief Description of Design Project Goals:
Overview: The goal of this project is to develop EMR and digital agriculture applications for tamper-proof log using blockchains. The blockchain must tolerate intermittent loss of connectivity to other members of the blockchain network as well as to the rest of the Internet. The ad-hoc nature of the network means that IP addresses will not be stable. Blocks will have to be propagated around the network using protocols that account for unstable IP addresses, such as gossip-style protocols.

Specific MEng Contribution:
The M.Eng. student(s) will help design, code, and test the blockchain in collaboration with senior PhD students and faculty in a large-scale, multidisciplinary effort.

ECE Field Advisor Name: Steve Wicker
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- Phone – 607 255 8817
- Office – 386 Rhodes Hall

Number of MEng Students Needed: 2

Required Skills:
Students will need to have solid coding skills and some familiarity with C/C++. They will also need some familiarity with, or willingness to learn, basic networking, security, and cryptography concepts.

Estimated Project Time Frame:
2018-19 Academic Year, Two (2) Semesters