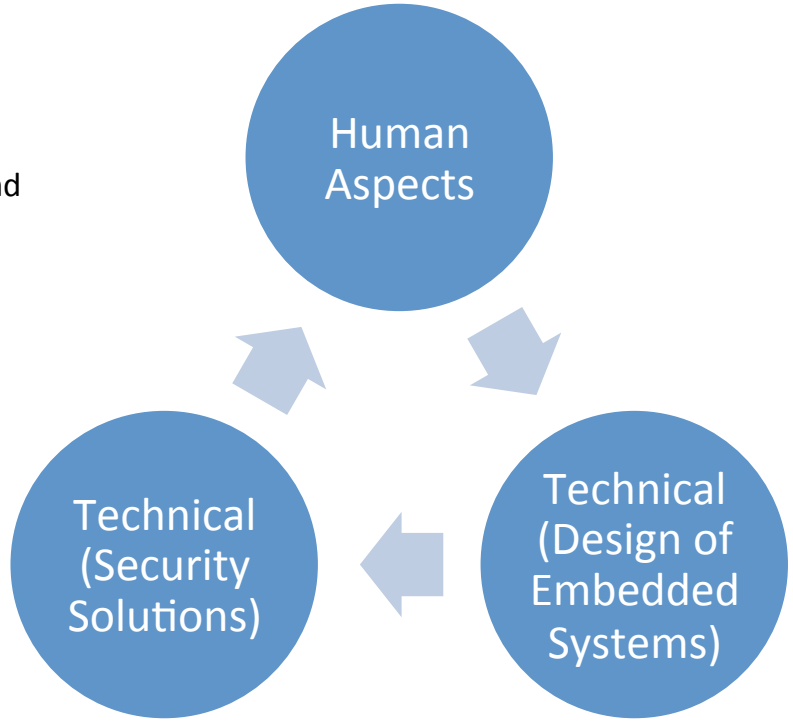
Living in the Internet of Things



Challenge:

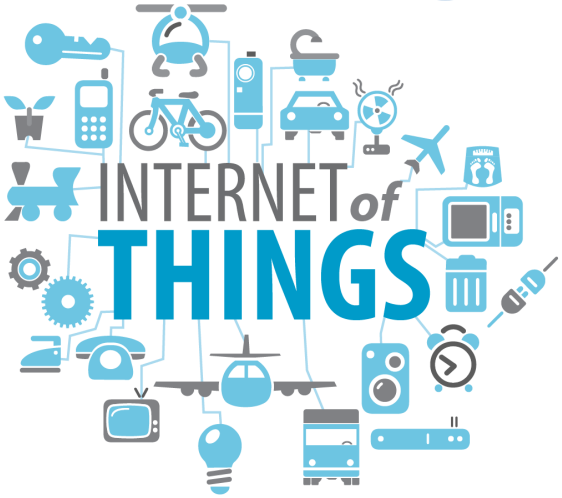
- IoT devices can *positively* and *negatively* impact people's privacy, safety, and security
- Can we achieve the positive benefits of IoT while mitigating the negative security risks?
- Can we do so in ways that are technically strong, and that align with stakeholder needs and values?

Solution:

- Spiral, collaborative design + evaluation approach, involving innovations in embedded systems, technical directions for security, and human-focused elements
- Example (early) work: Exploring benefits + risks with cross-device in-hub security managers

Scientific Impact:

- We seek to provide technical foundations for protecting the security of present and future IoT devices, while minimizing impacts to functionality, cost, and other important factors
- We seek to provide the above foundations while also accounting for stakeholder needs and values
- We seek to enable subsequent, technical- and stakeholder-informed research on new directions for IoT security



Broader Impact:

- IoT devices are destined to integrate deeply into society. We seek to help ensure that the negative privacy, safety, and security impacts are minimized
- We leverage our industry connections to inform our research directions and to impact practice

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