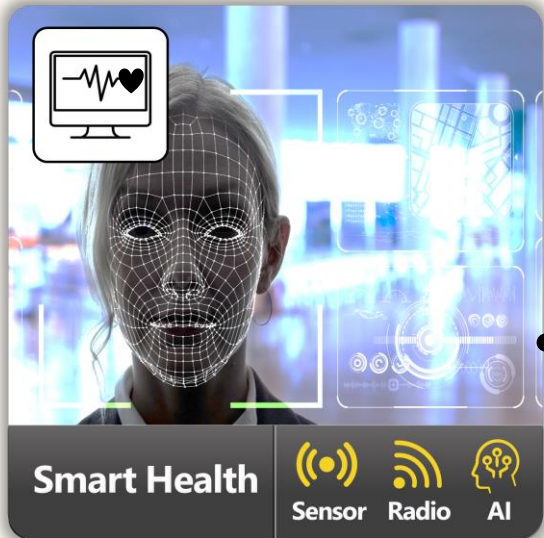


Services and Applications

Multidisciplinary research across verticals



6G technologies **disrupt** businesses

Requires

- Real-time data
- Edge processing
- Process AI

Requires

- Edge analytics
- Wireless sensing
- Machine learning

- Thz **radios**
- Wireless **AI**
- Cyber **security**
- Augmented **UX**
- Smart **sensors**
- IoT **systems**
- Local **processing**

Requires

- Sensing system
- Machine vision
- Preference analytics

Requires

- Multi-radio
- Sensor mesh
- Swarm AI

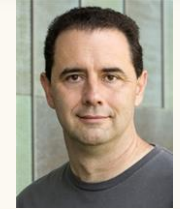


Technology Enablers (example)

Comfortable real-time interactive wireless XR

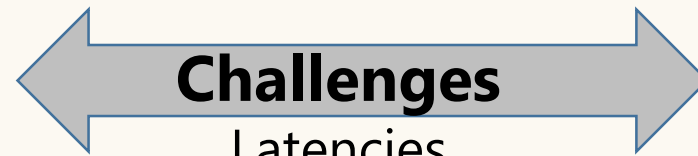
Research approach: **(HUMAN) PERCEPTION ENGINEERING**

Technology and criteria to design, develop, and deliver perceptual experiences tightly integrated with human senses



Lead PI:
Prof. Steve LaValle

Real-time interactive
wireless XR



Challenges

Latencies
Pixel density
Limited field of view
Cybersickness
Perception of stationarity
Mismatched motions
Vision / vestibular mismatch
Vergence-accommodation mismatch
Vestibulo-ocular reflex
Etc.

Human vision system

