



Current Research Areas

Tactile Communication of Speech
with Charlotte M. Reed (MIT)

Human Responses to Motorcycle Handlebar
with George Chiu & Luc Mongeau (ME)

Haptic Texture Perception and Rendering

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Methodologies

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Recent Results

- Tactile Communication of Speech
 - Demonstrated information transmission rate of 12 bits/sec (normal speed)
 - Slow motions and vibrations separable for encoding
- Human Responses to Motorcycle Handlebar
 - Constructed a handlebar
 - Human subject study
- Haptic Texture Perception and Rendering
 - Created real and virtual textures

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Future Directions

- Tactile Communication of Speech
 - Goal is to use tactile cues to supplement lip-reading
 - Coding schemes
 - User training and evaluation
- Human Responses to Motorcycle Handlebar
 - Goal is to predict human responses from engineering measurements
 - Assessment of comfort, fatigue and annoyance
- Haptic Texture Perception and Rendering
 - Goal is to reproduce the feel of surface textures
 - Still a very long way to go

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