ubicomplab

UNIVERSITY OF WASHINGTON

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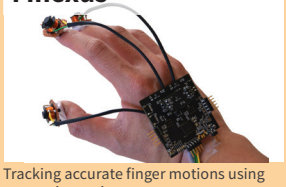
http://ubicomplab.cs.washington.edu

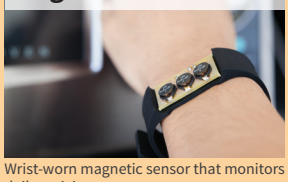
Computer Science & Engineering · Electrical Engineering · Design, Use, Build

Mobile, Virtual Reality, and Wearable Interaction

EyeContact

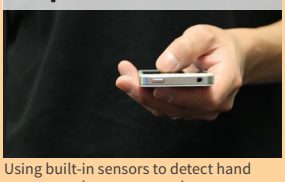
High accuracy scleral coil eye tracking for virtual reality

Finexus

Tracking accurate finger motions using magnetic sensing

MagnifiSense

Wrist-worn magnetic sensor that monitors daily activity

SideSwipe

Detect in-air gestures using unmodified GSM signals

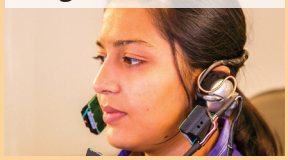
GripSense

Using built-in sensors to detect hand posture and pressure on phones

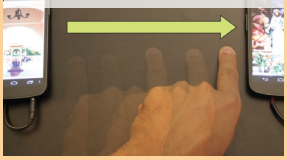
PaperID

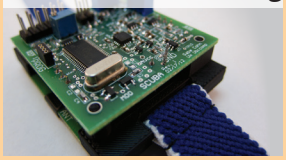
Paper interfaces based on long-range, passive RFID

SwitchBack

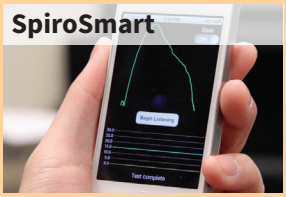
Using gaze tracking on smartphones to guide attention for task resumption

Tongue-in-Cheek

Wireless signals to enable non-intrusive and flexible facial gesture detection

SurfaceLink

Impromptu multi-device interactions on a surface

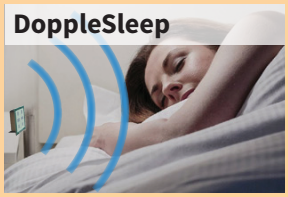
Static E-Field Sensing

Ultra-low power human body motion sensor using static E-field sensing

Health Technologies

SpiroSmart

Spirometery from a mobile phone

BiliCam

Using mobile phones to monitor newborn jaundice

DoppleSleep

Sleep stage estimation through non-contact physiological signal sensing

CoughSense

Automatic, ambulatory cough monitoring from a mobile phone

OsteoApp

Screening for osteoporosis on a smartphone using vibration

iPressure

A smartphone-based system for assessing intraocular pressure

WiBreathe

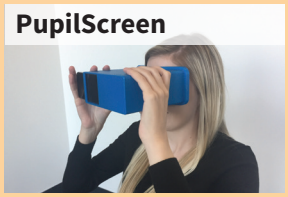
Sensing breathing in natural settings using 2.4GHz wireless signals

HemaApp

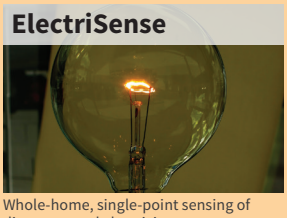
Noninvasive screening of hemoglobin concentration using a smartphone camera

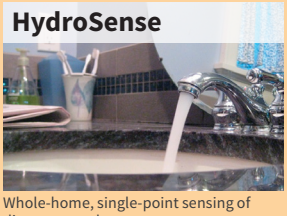
BPSense

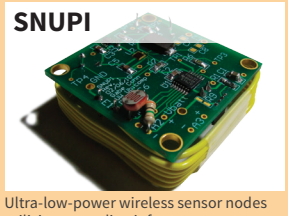
Monitor changes in blood pressure using an unmodified smartphone

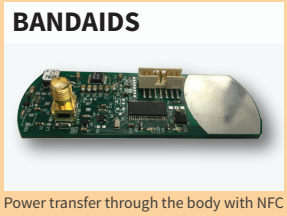
PupilScreen

Using smartphones to assess significant head trauma

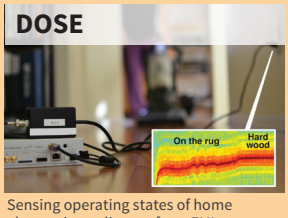
Sustainability and Low-power Sensing

ElectriSense

Whole-home, single-point sensing of disaggregated electricity usage

HydroSense

Whole-home, single-point sensing of disaggregated water usage

SNUPI

Ultra-low-power wireless sensor nodes utilizing powerline infrastructure

BANDAIDS

Power transfer through the body with NFC

DOSE


Sensing operating states of home electronic appliances from EMI

AWARDS

31 best paper awards & nominations in 7 years
4 National Science Foundation Fellows
1 National Defense in Science and Engineering Fellow
4 Microsoft Research Fellows
3 UW College of Engineering Innovator Awards
2 Qualcomm Innovation Fellows

PROFESSOR SHWETAK N. PATEL AWARDED:

MacArthur 'Genius' Award
TR-35 Top innovator
Sloan Research Fellow
Microsoft Research Faculty Fellow
Presidential Early Career Award for Scientists & Engineers (PECASE)

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