会议范围和会议年份

用excel做成表，冯超、刘雨田、王璇

1 AOA based; 2 TOA based; 3 learning based;

RF-based device-free localization/tracking (谢彬彬)

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| 题目及会议信息 | 精度  (及测试目标数，如有也写上) | 区域大小  (或实验规模) | 信标个数(或者密度) | 用的设备 | 信号源  (RSS or CSI or Phase or 复信号) | 用的方法  (xx学习方法、xx模型计算) | 作者argue的主要创新点  (原文摘抄1~2个点) |
| 2015NSDI  Multi-Person Localization via RF Body Reflections 2 | 平均精度为11.7cm；  （4人） | 8m\*8m | 8个天线（4发4收） | USRP | TOF | 1. 依据人的呼吸区分静态的人和家具； 2. 多个椭圆相交即为人的位置 | 1. 能识别多个定位静态的人（目前许多依据人反射信号的方法只能定位1人，而且人必须动起来）； 2. 不需要密部署和提取训练； |
| 2015NSDI  WiDeo: Fine-grained device-free Motion Tracing using RF Backscatter 1\2 | 运动跟踪平均精度7cm；  最多达5人（运动且间隔大于0.5m）； | 22cm\*33cm | 1~3个AP，每个Ap上有4根天线 | WARP软件无线电， wifi AP； | 振幅，TOF，AOA | 1. 从接收到的混合信号中提取每个反射信号（多径，即从不同反射物反射回来的信号）中的信号强度、ToF、AoA； 2. 消除从静态物体反射回来的信号； 3. 根据从动态的人反射回来信号估计人的轨迹； | 1、目前被动式方法有限，视距条件，2~4m工作范围；  2、主动式需要人携带设备，8个天线组成的阵列；  Our key contribution here is a novel algorithm that accurately estimates  these backscatter components in spite of the constraints  that the humans are device-free, and the limited spatial  resolution of the compact antenna arrays. |
| 2015Mobicom  See Through Walls with COTS RFID System! 3 | 在X，Y轴方向的平均误差为7.8cm和20cm；  （单目标） | 5英寸的空心墙和8英寸的混凝土墙；人与reader的距离小于7.5m | 4根天线，12\*8标签矩阵 | Passive RFID system | 相位 | 1. 对反向散射建模，去除墙的反射信号，推导人的反射； 2. 马尔科夫模型进行追踪； | 1. 低代价； 2. 适用于多径情况； 3. 标签反射信号易受环境干扰，别人都尽量避免以上情况，本文却利用此情况。 |
| 2014NSDI  3D Tracking via Body Radio Reflections2 | 在X、Y轴的平均误差为13.1cm，10.25cm在Z轴上的平均误差为21cm；  跌倒检测准确率为96.9%（单目标） | 6m\*5m，6英寸厚的空心墙； | 4根天线，1发3收 | USRP | TOF | 1. 3个椭圆相交即为人的位置； | 1. 无需携带设备，即可实现定位和跌倒检测； 2. 其他方法在多径情况下失效； |
| 2013Sigcomm  See Through Walls with Wi-Fi! 1 | 1、6英寸厚的空心墙，检测0~3人的精度为100%，100%，85%，90%；  2、一个目标做姿势（前进或者后退），人距离墙5m、8m、9m的解码精度为100%，75%，0%。  （多目标：3人） | 6英寸空心墙；  7m\*4m空间；  11m\*7m空间； | 3根天线（2发1收） | USRP N210 | AOA | 1. 将运动中的人作为天线阵列，计算出人的方向； 2. MUSIC算法； 3. 姿势识别用的是平滑MUSIC算法； | 以前工作：1、设备庞大，功率和带宽（GHz级别）要求高，2.4m的天线阵列；2、宽频谱是军事级别要求，一般用户使用不了； |

RF-based device-free gesture recognition/imaging (王举、常俪琼)

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| WiDraw: Enabling Hands-free Drawing in the Air on Commodity WiFi Devices, Mobicom151 | track the user’s hand with 5 cm error | 24cm\*90cm  2 feet distance from the laptop’s antenna | A laptop with 3 antennas | Atheros 9590 chipset | CSI | AoA estimation by Music | first hand motion tracking system using commodity WiFi cards；  identify the opportunity to utilize the AoA information to enable hands-free drawing in the air。 |
| Keystroke Recognition Using WiFi Signals, Mobicom153 | more than 97.5% detection rate for detecting the keystroke and 96.4% recognition accuracy | laptop at a distance of 30 cm from the keyboard;  WiFi router from the target keyboard is 4 meters. | A laptop with 3 antennas | Intel  5300 NIC | CSI | PCA、DWT， 去噪  DTW，匹配 | First WiFi signal based keystroke recognition approach |
| mTrack: High-Precision Passive Tracking Using Millimeter Wave Radios s, Mobicom151 | error below 8 mm | 30cm\*50cm | 1个Tx  2个Rx | 60 GHz RF | 复信号 | 波束形成  (track target by steering the beam direction) | fine-grained, sub-centimeter scale object localization/tracking；  A phase-based approach to track small objects。 |
| Snooping Keystrokes with mm-level Audio Ranging on a Single Phone, Mobicom152 | recover 94% of keystrokes | keyboard is 47mm × 17mm) | three microphones | Galaxy Note 3 | Audio | TDOA | a single off-the-shelf phone can recover keystrokes by exploiting mm-level acoustic ranging and fine-grained acoustic features. |
| Understanding and Modeling of WiFi Signal Based Human Activity Recognition, Mobicom153 | average accuracy of greater than 96% | 7.7m × 6.5m | A laptop with 3 antennas;  2 APs | Intel  5300 NIC | CSI | DWT, 去噪  HMM, 分类 | propose the CSI-speed model and the CSI-activity model to quantify the correlation between CSI value dynamics and a specific human activity |
| E-eyes: Device-free Location-oriented Activity Identification Using Fine-grained WiFi Signatures, Mobicom143 | achieve over 96% average true positive rate | 24ft × 36ft with two bed rooms | 3 laptops with 9 antennas; | Intel  5300 NIC | CSI | Multiple-Dimensional Dynamic  Time Warping | channel state information (CSI) from off the-shelf 802.11n devices can be utilized to identify and distinguish in-place activities |
| We Can Hear You with Wi-Fi! , Mobicom14 | accuracy of 91% on for single speaking | open area 9m×16m | 2×2 MU-MIMO | USRP N210 | 复信号 | dynamic time warping (DTW) | the first effort using Wi-Fi signals to hear people  talk |
| Whole-Home Gesture Recognition Using Wireless Signals, Mobicom13 | average accuracy of 94% | 32 feet ×24feet | 1个Tx  5个Rx | USRP N210 | 复信号;  Doppler | HMMs and DTW | first wireless system that enables gesture  recognition |
| Bringing Gesture Recognition to All Devices, NSDI’14 | achieves classification  accuracies 97% |  | 1个Rx | 自己设计的 | 复信号; | 直接对手势进行0、1编码 | the first gesture-recognition system that  can run on battery-free devices |
| WiDeo: Fine-grained Device-free Motion Tracing using RF Backscatter, NSDI’151\2 | error less than 7cm | 22cm\*33cm | 1个特殊的TX；  1个4天线阵列作为RX | WARP | 复信号 | 自己设的算法来估计：amplitude, ToF and AoA | We invent novel backscatter measurement techniques that work in spite of the low bandwidth and dynamic range of WiFi radios, new algorithms that separate out the moving backscatter from the clutter that static reflectors produce and then trace the original motion that produced the backscatter in spite of the fact that it could have undergone multiple reflections. |
| Reusing 60GHz Radios for Mobile Radar Imaging s, Mobicom15 | achieves high  accuracy (cm level) in a variety of dimensions | TX is  2m away from the object and RX is 3.5m away | A 10×10 array with 1dBi elements and 21dBi gain | 60 GHz RF | 复信号 | AOA，及RSS分析 | Achieves high accuracy (cm level) in a variety of dimensions, and is highly robust against noises in device position and trajectory tracking. |

Device-based localization/tracking/navigation (刘晨、陈丽丽、张鹏燕，其中用wifi等无线信号的刘晨总结，用相机、图片等图像信息的陈丽丽总结，用加速度传感器、陀螺仪等的张鹏燕总结)

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| Mobisys2013  Guoguo: Enabling Fine-grained Indoor Localization via  Smartphone2 | centimeter-level  测试地点：  an office and classroom environment |  |  |  | 用的声音信号 |  |  | |
| Mobisys2013：  FM-based Indoor Localization via Automatic Fingerprint  DB Construction and Matching3 | 精度：  89% room identification and accuracy of 6 m | 7 different locations with over 1,100 indoor spots | 8 FM broadcast signals | USRP1 assembled with basic-RX daughterboard and FM Terk Pro antenna. | RSS+FM | RSS传播模型修改 | 1. does not require proactive site proling | |
| Mobisys2013：  Avoiding Multipath to Revive Inbuilding WiFi Localization1 | 精度：  Improve the median localization error to 2.7m | Office 4500m2 | 5 APs | Atheros 9390 wireless card and Google Nexus S phone | WIFI  CSI | AOA | 1 is free from these restrictions:  cumbersome fingerprinting  the deployment of additional infrastructure  2 utilizes physical layer (PHY) information to extract the signal strength and the angle of only the direct path, successfully avoiding the effect of multipath reflections. | |
| Mobisys2014:  Tracking Human Queues Using Single-Point Signal Monitoring3? | 精度：  the estimation error of the service period is only about 11% | coffee shop  and an airport | 1 AP  5 participants in the service queue with the queue length ranging from 7 to 12 people | The WiFi monitor is made of an Alix system including two 100M Ethernet interfaces and two Wistron NeWeb CM9 802.11a/b/g-based WiFi radio modules connecting to two separated antennas.  Smartphones: HTC 3D, HTC EVO 4G, and Nexus One | WIFI  RSS | feature-driven  simple Bayesian network | a minimum infrastructure | |
| Mobisys2014：  SAIL: Single Access Point-Based Indoor Localization2 | 精度：  Achieves 2−5x accuracy improvements over existing techniques.  a mean error of 2.3m using just a single AP. | an office environment：30,000ft  2 | 1 AP | Smartphone: Samsung Galaxy S3, Samsung Galaxy S4, Nexus 4, Sony Xperia Z, HTC One and iOS-based mobile devices such as the iPhone 5 and iPhone  5s.  HP MSM 460 APs, with Atheros 9590 chipset tuned at 5.805GHz frequency using a 40MHz bandwidth. | WIFI(CSI)+加速度 | geometric methods  TOA  卡尔曼滤波 | Avoid：a dense deployment of access points (APs), manual fingerprinting, energy hungry WiFi scanning | |
| MobiCom2014：  Tagoram: Real-Time Tracking of Mobile RFID Tags to High Precision Using COTS Devices（杨磊）3 | 精度：  6.35cm in these  real deployments | A lab environment and used for more than a year in real airline applications.  1Their(两根天线) distances to the track are 670mm and 710mm respectively. The width of belt is 1300mm.  2. diameter is 540mm | speed of 0.176m/s | COTS RFID tags and readers：ImpinJ reader and Alien EPC Gen-2 UHF RFIDs | RFID | a virtual antenna array | Mobile  real time  high precision | |
| MobiCom2014:  Accurate Indoor Localization With Zero Start-up Cost1 | 精度：  39 cm in 3-D device localization and 17 cm in object geotagging in complex indoor settings. | Library; | five unmodified 802.11n access points | HP SplitX2 Tablet running  Ubuntu Linux equipped with Intel 5300 wireless cards and a Yei  Technology motion sensor | WIFI | antenna arrays using a new formulation of Synthetic Aperture Radar (SAR). | No specialized infrastructure or fingerprinting  perform SAR on handheld devices | |
| MobiCom2015:  ToneTrack: Leveraging Frequency-Agile Radios for Time-Based Indoor Wireless Localization（熊杰）2 | 精度：  a median 90 cm accuracy | in an indoor testbed over one floor of an office building | 6 | WARP  hardware radio platform and use six of them served as APs to localize Wi-Fi clients | WIFI | Signal combination algorithm combines time-of-arrival data；  Music；  **Channel combination** | sub-meter accuracy with minimal hardware and antennas | |
| NSDI2013：  ArrayTrack: A Fine-Grained Indoor Location System（熊杰）1 | 精度：  23 centimeters median accuracy；  100 milliseconds latency | indoor  environment | Two；  place the 16 antennas3 attached to the WARP radios | two Rice WARP FPGA-based wireless radios | WIFI | MIMO-based techniques；  AOA | MIMO-based techniques to track wireless clients at a very fine granularity in real time | |
| NSDI2013：  PinPoint: Localizing Interfering Radios1 | 精度：  median error  is 0.97m | an indoor testbed | 4 | WARP software radios | CSI | AOA | multipath components, interference and noise；  very little calibration | |
| SigComm2015：  SpotFi: Decimeter Level Localization Using WiFi1 | 精度：  a median accuracy of 40 cm | Indoor office：16 m ×10 m area  52m×40m | 6  20 | Intel 5300 WiFi NIC | WIFI | MUSIC  OFDM | Does not require any hardware or firmware changes.  技术上：  Accurately compute the angle of arrival when AP has only three antennas.  filtering and estimation techniques to identify AoA of direct path | |
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| Jigsaw: Indoor Floor Plan Reconstruction via  Mobile Crowdsensing  （Mobicom 2014）  3 | 商店标志物的位置和方向：1-2m,5-9度;走廊连接100% correct  三个商店的入口作为标志物，每个收集150张照片；  并在走廊收集96, 106 and 73条用户路径，在商店收集7条。 | 150m x 70m，  140m x 40m |  | use iPhone 4s to collect images and motion sensor data | 利用来自移动用户的crowdsensed data（图像，加速计和陀螺仪数据） | 利用计算机视觉技术与landmark modeling 算法；组合优化和占有概率 | In this paper, we propose Jigsaw, which leverages  crowdsensed data from mobile users to construct the  floor plans of complex indoor environments. It avoids  the intensive effort and time overhead in the business  negotiation process for service providers. They do not need  to talk to building owners/operators one by one, or hire  dedicated personnel to measure indoor environments inch  by inch. This opens up the possibility of fast and scalable  floor plan reconstruction | |
| Luxapose:  Indoor Positioning with Mobile Phones and Visible Light  （Mobicom 2014）1 | 室内 | Cm level,  方向精确到3度。 | 5个LED，高于地面246cm,地面测试间隔为2.54cm. | 一些LED灯  一部智能手机（Nokia Lumia 1020，7712X5360 pixels）, and a Python-based cloudlet | 图像信息 | angle-of-arrival  （相机相当于AOA传感器） | 以前的方法定位精度低，不能定方向。In contrast, we offer decimeter-level accuracy at the 90th-percentile  under typical overhead lighting conditions, provide orientation, use  camera-based localization, require no hardware modifications on  the phone and minor modifications to the lighting infrastructure. | |
| Travi-Navi: Self-deployable Indoor Navigation System  （Mobicom 2014） | >85% when overlapping segment >6m  100%, when overlapping seg >10m  100条路径，0.6s采一次 | 1900平方米，4000平方米  12条路径（覆盖了所有重要通道）；  4个志愿者。总长2.4KM. |  | 安卓手机  (图片分辨率320X240) |  | ORB algorithm提取图片特征信息，  bag-ofvisual-words algorithm，  linear SVM  磁场失真和WiFi信号中的粒子滤波 | The Travi-Navi design naturally avoids the dependency on any  pre-deployed localization services or even the floor maps | |
| Magnetic MIMO:  How To Charge Your Phone in Your Pocket  （Mobicom 2014）  手机充电 | MagMIMO maximum  charging distance is 40 cm | 发：total area of 0.38平方米  on Office desk surface（conductive），收：0.005平方米 | 6发1收 | Coils；  iPhone 4s | 复信号 | 感应共振 | Current systems use a single transmit coil and hence the receiving coil in the phone has to be close and well aligned with the transmit coil in the pad to collect the energy in the magnetic field. In contrast, MagMIMO uses multiple coils on the transmitter side in a manner similar to multi antenna wireless communication systems. | |
| Human Sensing Using Visible Light Communication  （Mobicom 2015）  利用人的影子重建3D骨架 | mean 10度  angular error | 3 m × 3 m area | 5个LED,  324个photodiodes | off-the-shelf LEDs and photodiodes | 复信号 | We design algorithms to extract the shadow of each individual  light source and reconstruct 3D human skeleton posture continuously using only a stream of low-resolution shadow information; | Unlike conventional RF radio systems  that require complex signal processing, VLC uses low-cost, energy efficient Light Emitting Diodes (LEDs) to transmit data. Any devices equipped with light sensors (photodiodes) can recover data by  monitoring light changes. | |
| Reusing 60GHz Radios for Mobile Radar Imaging（Mobicom 2015） | cm level | in a classroom  of size 8m×12m with concrete walls | 一发一收 | 60GHz HXI | RSS | RSS Series Analysis | 1. One attractive approach is RF imaging radar that reuses commodity 60GHz networking radios to “image” the environment by capturing 60GHz  transmissions reflected by nearby objects. Such a high frequency  RF radar system has several key advantages over alternatives | |
| Extending Mobile Interaction Through  Near-Field Visible Light Sensing  （Mobicom 2015） | around one-centimeter | 9cm×7cm area | 一发两收  100个测试点on 1cm×1cm  grid | two PDs and an  LED, a 3D-printed shroud, an embedded  microcontroller, a Nexus 7  Android tablet and a Serial-To-Bluetooth module | Visible light RSS | Okuli，uses a model-driven approach  to localize a finger with minimal user training | 1. In contrast to prior fine-grained input sensing systems that learn  location-dependent acoustic/RF signal features [5], Okuli adopts a  model-driven framework for finger positioning, which is free of runtime training overhead; | |
| Error Minimizing Jammer Localization Through Smart Estimation of Ambient Noise  (MobiHoc 12) |  | 300-by-300 meter network | 1 | MicaZ motes with multiple sender-receiver pairs | JSS(the strength of jamming signal) | Estimating the JSS is considered challenging since they are usually embedded in other signals. Our estimation scheme derives ambient noise floors as the JSS leveraging the available signal strength measuring capability in wireless devices. | In this work, we localized jammer by exploiting directly the strength of jamming signals (JSS). | |
| **A Matrix-Completion Approach to Mobile** **Network Localization**  **(MobiHoc)** |  | 5m×5m | 25 | TelosB motes  /CC2420 | RSS | In this paper, we present a novel localization scheme based on matrix completion, MALL, that utilizes the collected connectivity and distance information to achieve high-precision localization. | | i) We propose a novel localization scheme, MALL, that formulates mobile network localization as a series of matrix completion problems with several carefully-designed constraints. This approach ensures that MALL results in the same high level of precision as centralized localization mechanisms. ii) MALL only involves convex optimization and low-complexity non-convex optimization. As a result, MALL can achieve high-precision localization at a fast pace. iii) MALL only makes use of the information from anchor nodes within two hops and normal nodes within one hop. Consequently, MALL leads to high localization precision at a low communication cost. |
| **Cut-and-Sew: A Distributed Autonomous Localization Algorithm for 3D Surface Wireless Sensor Networks**  **（MobiHoc13）** |  |  |  | Wireless sensor node | 复信号 | proposes the *cut-and-sew* algorithm that takes a divide-and-conquer approach by partitioning a general 3D surface network into SV patches, which are localized individually and then merged into a unified coordinates system. The algorithm is optimized by discovering the minimum SV partition, an optimal partition that creates a minimum set of SV patches. | | First, it proposes a theoretically-proven algorithm for the 3D surface localization problem.  Second, it develops practically-viable solutions for real-world sensor network settings where the inputs are often noisy. |
| **EV-Loc: Integrating Electronic and Visual Signals for Accurate Localization**  **(MobiHoc 14)** | In a friendly environment without too much environment interference, we can chieve high accuracy with median error around 0.5 m and 90 percentile error around 1 m. | outdoor (10.7 18.3 m ) and indoor experiments (5 10 m ) | Six Aps/Six mobile phones/  Several photo cameras | Camera/laptop/mobile phone | Visual information/electronic information | EV-Loc: **propose a new localization technique called EV-Loc. In EV-Loc, we make use of visual signals to help improve the accuracy of wireless localization.** | | 1) We have proposed a methodology that leverages the accuracy of visual localization to help wireless localization achieve more accurate result. 2) We proposed an effective approach for E-V matching.  3) We have implemented the proposed approach on mobile devices and conducted real-world experiments. |
| **Localization Using Bluetooth Device Names**  **(MobiHoc12)** | an approximate accuracy of 1.83m with a standard deviation of 1.41m | 20m\*20m | 3 | Blackberry 9800 smart phone and a Nexus s phone | RSS | **Using Bluetooth Device Names** | | We presented a Bluetooth device name based approach to sharing location information , without lookup tables or service connections, by suggesting the use of a :geo: tag in the friendly device name. |
| **SmartGuide: Towards Single-image Building Localization with Smartphone** | The approach recognizes buildings ranging from 20m to 520m and achieves 92*.*7% accuracy in downtown areas |  |  | 有摄像头的手机，谷歌地图 | 图像 | SmartGuide first extracts a partial top view contour of a building from its side-view photo by applying vanishing point and the Manhattan World Assumption, and then fetches a candidate building set from a local 2D Google map based on smartphone’s GPS readings. Partial top view shape,orientation and distance relative to the camera are used as input parameters in a probability model, which adversely recognizes the best candidate building in the local map. | | **1.Identified the possibility of localizing a remote building via top view feature matching.**  2. Introduced a kernel-based probability model to deal with the smartphone’s sensor noises. 3. Implemented a prototype of our system with  evaluation. |

Device-based gesture recognition (金梦：手机、腕表、GPS等)

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| Mobicom15  MoLe: Motion Leaks through Smartwatch Sensors | 30%，rank<=1  50%。Rank<=6 | 键盘 |  | 智能手表（三星Gear live） | 加速度 | Bagged决策树  贝叶斯模型 | 第一个用只能手表检测键盘（解决了加速度传感器噪声，智能手表右手信息缺失的问题） |
| Mobicom14  Use It Free: Instantly Knowing Your Phone Attitude | 走路时：  姿势估计误差<5°  跑步时：  姿势估计误差<10°  提高三倍 | 实验区域：校园 |  | HTC Sensation, Samsung i9100, and LG Google Nexus 4 | 加速度传感器，陀螺仪，compass |  | 1. 研究了各个环境因素（温度，时间累积，手机加速度，角速度等）对手机姿势识别的影响 2. 能够更巧妙地结合各个传感器的数据来对手机的姿势进行估计 |
| Mobisys15  TypingRing: A Wearable Ring Platform for Text Input3 | 正确率：  98*.*67% |  |  | MCU  加速度传感器  近距离传感器  位移传感器  低功耗蓝牙 | 传感器信息 | HMM  贝叶斯分类 | 虚拟键盘  利用了各种传感器信息，利用HMM模型估计人手的移动以及手指动作 |
| Mobisys15  LookUp: Enabling Pedestrian Safety Services via Shoe Sensing3 | 正确率：  90% | 城市 |  | MPU 9150 sensor | 加速度，角速度信息 | 学习，分类  互补滤波 | 对行走路况的检测（能够区分平路行走，下楼梯，下坡） |
| Mobisys15  AccelWord: Energy Efficient Hotword Detection through Accelerometer | 静态环境85%  动态环境80% |  |  | 三星 galaxy S4手机 | 加速度传感器信息 | 学习，分类  高通滤波（人运动的情况下进行语音检测） | 证明了加速度传感器对语音信号敏感  第一个用加速度传感器做关键词检测（并且在人运动的情况下也可以达到80%的准确率） |
| Mobisys 14  A Wearable System That Knows Who Wears It | 正确率  98% |  |  | Shimme传感器  Nexus S手机 | 生物阻抗信息 | NB  SVM | 利用生物阻抗进行识别 |
| Mobisys 14  RisQ: Recognizing Smoking Gestures with Inertial Sensors on a Wristband3 | 正确率  95.7% |  |  | IMU  加速度传感器  陀螺仪  Compass | 加速度，角速度信息 | 分类：决策树  Label：条件随机场模型 | 1能够区分和“吸烟”很像的姿势  2 在运动状态下也可以识别 |
| Mobisys 13  Sensing Vehicle Dynamics for Determining Driver Phone Use3 | 正确率  利用单个turn：90%  利用多个turn：95% |  |  | 手机：iphone4 and HTC 3D | 加速度，角速度信息 | 利用角速度信息判断拐弯方向  对比左拐和右拐的线速度大小判断手机位置 | 1 用单个手机检测  2 解决了手机姿势对检测的影响 |
| Mobisys 13  NuActiv: Recognizing Unseen New Activities Using Semantic Attribute-Based Learning3 | 正确率：79%  列举了10种动作 |  |  | 手机：Nexus S  腕表：MotoACTV | 加速度信息 | 语义属性学习  分类：SVM | 能够识别位标记过的动作 |
| Mobisys 13  MoodScope: Building a Mood Sensor from Smartphone Usage Patterns3 | 正确率：93%  （针对单独用户训练时长2个月）  66%（针对所有用户） |  |  | 手机 | 手机API使用信息（SMS, email, phone call, application usage, web browsing, and location） | 学习，分类 | 1 证明了人的情绪是怎样影响手机的使用的  2 系统不需要用摄像头，麦克风等设备 |

Cross-technology Communication

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| 题目及会议信息 | 精度  (及测试目标数，如有也写上) | 区域大小  (或实验规模) | 信标个数(或者密度) | 用的设备 | 信号源  (RSS or CSI or Phase or 复信号) | 用的方法  (xx学习方法、xx模型计算) | 作者argue的主要创新点  (原文摘抄1~2个点) |
| Mobicom15  FreeBee: Cross-technology Communication via Free Side-channel |  |  |  |  |  |  |  |
| Mobicom10  ZiFi: Wireless LAN Discovery via ZigBee Interference Signatures |  |  |  |  |  |  |  |
| Sensys14  ZiSense: Towards Interference Resilient Duty Cycling in Wireless Sensor Networks |  |  |  |  |  |  |  |