Reading list for Frontiers of Future Mobile Internet

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# MobiCom 2016

1. AnonyTool: Extracting and Analyzing Cellular Network Information on Smartphones
2. Lasagna: Towards Deep Hierarchical Understanding and Searching over Mobile Sensing Data
3. SPREE: A Spoofing Resistant GPS Receiver
4. 3D Indoor Locating via Broadband Nonlinear Backscatter in Passive Devices with Centimeter Precision
5. Audio-Based Motion Tracker
6. BASIC: Backbone-Assisted Successive Interference Cancellation
7. Proteus: A network service control platform for service evolution in a mobile software defined infrastructure
8. Practical MU-MIMO User Selection on 802.11ac Commodity Networks
9. Communication is Sensing: Making Sense of Mechanical Vibration Period with Sub-millisecond Accuracy Using Backscatter Signals
10. A Reconfigurable Architecture for 60 GHz Communications and Wireless Sensing
11. Gyro in the Air: Tracking 3D Orientation of Batteryless Objects
12. Emotion Recognition Using Wireless Signals
13. Investigation of Multi-device Location Spoofing Attacks on Air Traffic Control and Possible Countermeasures
14. Device-Free Gesture Tracking Using Acoustic Signals
15. Messages Behind the Sound: Real-Time Hidden Acoustic Signal Capture with Smartphones
16. SALVE: Server Authentication with Location Verification
17. LiTell: Robust Indoor Localization Using Unmodified Light Fixtures
18. SafetyNet: GPS Receivers as a Fallback for IMU Failures on Drones
19. An In-depth Understanding of Mobile Multipath: Measurement and System Design
20. Appstract: On-The-Fly App Content Semantics With Better Privacy
21. A Case for Faster Mobile Web in Cellular IPv6 Networks
22. The DarkLight Rises: Visible Light Communication in the Dark
23. QuickC: Practical sub-millisecond transport for small cells
24. Near-Ultrasound Communication Modem Design for TV's 2nd Screen Services
25. DopCard: Acoustic-based Imperceptible Name Card Exchange with Smartphones
26. LiFS: Low Human-Effort Device-Free Localization with Fine-Grained Subcarrier Information
27. LEO: Scheduling Sensor Inference Algorithms across Heterogeneous Mobile Processors and Network Resources
28. Mobile Applications of Secret Handshakes over Bluetooth LE
29. Experience: Accurate Simulation of Dense Scenarios with Hundreds of Vehicular Transmitters
30. RnB: Rate and Brightness Adaptation for Rate-Distortion-Energy Tradeoff in HTTP Adaptive Streaming over Mobile Devices
31. LTE in Unlicensed Spectrum: Are We There Yet?

# INFOCOM 2016

**Flows in SDN**  
 1.Controlling Flow Reconfigurations in SDN  
2.Measurement-based Flow Characterization in Centrally Controlled Networks

3.On Consistent Migration of Flows in SDNs

4.Is Every Flow on The Right Track?: Inspect SDN Forwarding with RuleScope

**Energy Efficiency in Sensor Networks**  
1.A PTAS to Minimize Mobile Sensor Movement for Target Coverage Problem  
2.DualSync: Taming Clock Skew Variation for Synchronization in Low-Power Wireless Networks  
3.Talk More Listen Less: Energy-Efficient Neighbor Discovery in Wireless Sensor Networks  
4.A Hybrid Framework Combining Solar Energy Harvesting and Wireless Charging for Wireless Sensor Networks

**Wireless Access**  
1.Listen Channel Randomization for Faster Wi-Fi Direct Device Discovery   
2.Experimental Evaluation of Large Scale WiFi Multicast Rate Control  
3.MobTrack: Locating Indoor Interfering Radios With A Single Device  
4.The S-Aloha Capacity: Beyond the e-1 Myth

**Datacenter Networks I**  
1.Synergistic Policy and Virtual Machine Consolidation in Cloud Data Centers  
2.Dynamic Scaling of Virtual Clusters with Bandwidth Guarantee in Cloud Data Centers  
3.Deadlock-Free Local Fast Failover for Arbitrary Data Center Networks  
4.Dynamic SDN Controller Assignment in Data Center Networks: Stable Matching with Transfers

**Mobile Security**  
1.Wanda: securely introducing mobile devices  
2.EyeVeri: A Secure and Usable Approach for Smartphone User Authentication  
3.Secure Fingertip Mouse for Mobile Devices  
4.Proactive Patrol Dispatch Surveillance System by Inferring Mobile Trajectories of Multiple Intruders Using Binary Proximity Sensors

**Cellular Networks**  
1.Localization of LTE Measurement Records with Missing Information  
2.Coordinated Multi-Point Transmissions Based On Interference Alignment and Neutralization  
3.An SDR-based Experimental Study of Outband D2D Communications  
4.Resource pooling in CDMA cell-based systems through uplink power control

**Network Science I**  
1.Robust Monitor Placement for Network Tomography in Dynamic Networks  
2.Robust Network Tomography: k-identifiability and Monitor Assignment  
3.Distributed Spectral Decomposition in Networks by Complex Diffusion and Quantum Random Walk  
4.Cost-aware Targeted Viral Marketing in Billion-scale Networks

**Content Distribution Networks**  
1.Coordinated Caching in Planet-Scale CDNs: Analysis of Feasibility and Benefits  
2.Characterizing Caching Workload of a Large Commercial Content Delivery Network  
3.Placing Dynamic Content in Caches with Small Population  
4.Popularity-Driven Content Caching

**Optimization I**  
1.NetCodCCN: a Network Coding approach for Content-Centric Networks  
2.Multicast Traffic Engineering for Software-Defined Networks  
3.Dynamic Virtual Machine Management via Approximate Markov Decision Process  
4.Radiation Constrained Wireless Charger Placement

**Big Data**  
1.Approximate Matching of Persistent LExicon using Search-Engines For Classifying Mobile App Traffic  
2.Macro-scale Mobile App Market Analysis using Customized Hierarchical Categorization  
3.Streaming Big Data meets Backpressure in Distributed Network Computation  
4.Practical and Secure Nearest Neighbor Search on Encrypted Large-Scale Data

**Localization**  
1.FitLoc: Fine-grained and Low-cost Device-free Localization for Multiple Targets over Various Areas  
2.Flash-Loc: Flashing Mobile Phones for Accurate Indoor Localization  
3.AMIL: Localizing Neighboring Mobile Devices Through a Simple Gesture  
4.UrbanEye: An Outdoor Localization System for Public Transport

**WLAN Optimization**  
1.Accurate WiFi Packet Delivery Rate Estimation and Applications  
2.Modeling, Performance Analysis, and Optimization of Single Hop IEEE 802.11 Networks with Large Propagation Delays: Challenges and Solutions  
3.WiFi Can Be the Weakest Link of Round Trip Network Latency In the Wild  
4.An Approximation Algorithm for AP Association under User Migration Cost Constraint

**Mobile Apps**  
1.VADS: Visual Attention Detection with a Smartphone  
2.Smokey: Ubiquitous Smoking Detection with Commercial WiFi Infrastructures  
3.CamK: a Camera-based Keyboard for Small Mobile Devices  
4.Zephyr: Ubiquitous Accurate multi-Sensor Fusion-based Respiratory Rate Estimation Using Smartphones

**Wireless Technologies**  
1.Continuous and Fine-grained Breathing Volume Monitoring from Afar Using Wireless Signals  
2.Decoding Interfering Signals With Less Receiving Antennas  
3.Exploiting Channel Diversity for Rate Adaptation in Backscatter Communication Networks  
4.On Signaling Power: Communications over Wireless Energy

**Routing I**  
1.Rapid Convergence versus Policy Expressiveness in Interdomain Routing  
2.Pop-Routing: Centrality-based Tuning of Control Messages for Faster Route Convergence  
3.Network Utility Maximization with Path Cardinality Constraints  
4.iBGP2: a scalable iBGP redistribution mechanism leading to optimal routing

**Network Management**  
1.SCMon: leveraging Segment Routing to improve network monitoring  
2.Cloudlet Load Balancing in Wireless Metropolitan Area Networks  
3.Reducing Dense Virtual Networks for Fast Embedding  
4.FOCUS: Shedding Light on the High Search Response Time in the Wild

**Scheduling for Cloud Computing**  
1.Scheduling for Cloud-Based Computing Systems to Support Soft Real-Time Applications  
2.Symbiosis: Network-Aware Task Scheduling in Data-Parallel Frameworks  
3.Scheduling with Multi-level Data Locality: Throughput and Heavy-traffic Optimality  
4.Scheduling Jobs with Non-uniform Demands on Multiple Servers without Interruption

**Software Defined Networks I**  
1.Software Defined Networks: It's About Time  
2.FLIP the (Flow) Table: Fast LIghtweight Policy-preserving SDN Updates  
3.Cupid: Congestion-free Consistent Data Plane Update In Software Defined Networks  
4.Compiling Packet Forwarding Rules for Switch Pipelined Architecture

**Energy Awareness for Wireless Networks**  
1.BattTracker: Enabling Energy Awareness for Smartphone Using Li-ion Battery Characteristics  
2.DAFEE: A Decomposed Approach for Energy Efficient Networking in Multi-Radio Multi-Channel Wireless Networks  
3.From Rateless to Sampleless: Wi-Fi Connectivity Made Energy Efficient  
4.Fiber Optic vs. Wireless Sensors in Energy-Efficient Integrated FiWi Smart Grid Networks: An Energy-Delay and TCO Comparison

**Resource Allocation I**  
1.Online Multi-Resource Allocation for Deadline Sensitive Jobs with Partial Values in the Cloud  
2.Efficiency and Optimality of Largest Deficit First Prioritization: Resource Allocation for Real-Time Applications  
3.On the Modeling and Optimization of Short-Term Performance for Real-Time Wireless Networks  
4.Task Allocation for Distributed Stream Processing

**Connected Cars**  
1.How Cars Talk Louder, Clearer and Fairer: Optimizing the Communication Performance of Connected Vehicles via Online Synchronous Control  
2.Multi-source Variable-rate Sampled Signal Reconstructions in Vehicular CPS  
3.L 3: Sensing Driving Conditions for Vehicle Lane-Level Localization on Highways  
4.Detecting Driver Phone Calls in a Moving Vehicle Based on Voice Features

**Wi-Fi**  
1.Augmenting Wide-band 802.11 Transmissions via Unequal Packet Bit Protection  
2.Just-in-time WLANs: On-demand Interference-managed WLAN Infrastructures  
3.Tuning by Turning: Enabling Phased Array Signal Processing for WiFi with Inertial Sensors  
4.A Walk on the Client Side: Monitoring Enterprise Wifi Networks Using Smartphone Channel Scans

**Theory for Sensor Networks**  
1.Multi-View Coding and Routing of Local Features in Visual Sensor Networks  
2.Performance-Guaranteed Strongly Connected Dominating Sets in Heterogeneous Wireless Sensor Networks  
3.Performance-Guaranteed Approximation Algorithm for Fault-Tolerant Connected Dominating Set in Wireless Networks  
4.Pulses in the Sand: Impulse Response Analysis of Wireless Underground Channel

**Datacenter Networks II**  
1.Online and Elastic Resource Reservations for Multi-tenant Datacenters  
2.Sneak-Peek: High Speed Covert Channels in Data Center Networks  
3.A Simple Congestion-Aware Algorithm for Load Balancing in Datacenter Networks  
4.Flutter: Scheduling Tasks Closer to Data Across Geo-Distributed Datacenters

**Wireless Network Optimization**  
1.Heavy-Ball: A New Approach to Tame Delay and Convergence in Wireless Network Optimization  
2.Distributed Optimization in Energy Harvesting Sensor Networks with Dynamic In-network Data Processing  
3.Capacitated Kinetic Clustering in Mobile Networks by Optimal Transportation Theory  
4.Optimal Local Data Exchange in Fiber-Wireless Access Network: A Joint Network Coding and Device Association Design

**Mobile Sensing**  
1.Mosaic: A Low-Cost Mobile Sensing System for Urban Air Quality Monitoring  
2.BlueAer: A fine-grained urban PM2.5 3D monitoring system using mobile sensing  
3.Flowing with the Water: On Optimal Monitoring of Water Distribution Networks by Mobile Sensors  
4.Toward Real-time and Cooperative Mobile Visual Sensing and Sharing

**Data Offloading**  
1.Cooperative Data Offloading in Opportunistic Mobile Networks  
2.Opportunistic WiFi Offloading in a Vehicular Environment: Waiting or Downloading Now?  
3.Competitive Auctions for Cost-aware Cellular Traffic Offloading with Optimized Capacity Gain  
4.Energy-Efficient Dynamic Offloading and Resource Scheduling in Mobile Cloud Computing

**SDN for Security & Management**  
1.Contextual, Flow-Based Access Control with Scalable Host-based SDN Techniques  
2.FOUM: A Flow-Ordered Consistent Update Mechanism for Software-Defined Networking in Adversarial Settings  
3.DDoS Attack Detection under SDN Context  
4.Efficient Round-Trip Time Monitoring in OpenFlow Networks

**Multi-hop Wireless**  
1.Nullification in the Air: Interference Neutralization in Multi-Hop Wireless Networks  
2.Queue-Affectance-based Scheduling in Multi-hop Wireless Networks under SINR Interference Constraints  
3.Interference-Aware Time-Based Fairness for Multihop Wireless Networks  
4.A Decomposition Principle for Link and Relay Selection in Dual-hop 60 GHz Networks

**Scheduling**  
1.MaxWeight Scheduling: "Smoothness" of the Service Process  
2.Timely Wireless Flows with Arbitrary Traffic Patterns: Capacity Region and Scheduling Algorithms  
3.Application-Aware Traffic Scheduling for Workload Offloading in Mobile Clouds  
4.Optimal Wireless Power Transfer Scheduling for Delay Minimization

**Traffic Analysis**  
1.Privacy-preserving Deep Packet Inspection in Outsourced Middleboxes  
2.Heavy-Traffic Analysis of QoE Optimality for On-Demand Video Streams Over Fading Channels  
3.Demographics Inference Through Wi-Fi Network Traffic Analysis  
4.Traffic At-a-Glance: Time-Bounded Analytics on Large Visual Traffic Data

**Sensor Networks**  
1.Taming Collisions for Delay Reduction in Low-Duty-Cycle Wireless Sensor Networks  
2.Murphy loves CI: Unfolding and Improving Constructive Interference in WSNs  
3.No-Cost Distance Estimation Using Standard WSN Radios  
4.DiVA: Distributed Voronoi-based Acoustic Source Localization with Wireless Sensor Networks

**Routing II**  
1.Path computation in multi-layer networks: Complexity and algorithms  
2.Optimizing Restoration with Segment Routing  
3.The Quest for Resilient (Static) Forwarding Tables  
4.Anonymous Addresses for Efficient and Resilient Routing in F2F Overlays

**Cognitive Radio Networks**  
1.Dynamic Control Channel MAC for Underwater Cognitive Acoustic Networks  
2.SpecWatch: Adversarial Spectrum Usage Monitoring in CRNs with Unknown Statistics  
3.A Time-efficient Rendezvous Algorithm with a Full Rendezvous Degree for Heterogeneous Cognitive Radio Networks  
4.Multi-user lax communications: a multi-armed bandit approach

**Software Defined Networks II**  
1.MED: The Monitor-Emulator-Debugger for Software-Defined Networks  
2.Network Functions Virtualization with Soft Real-Time Guarantees  
3.Aggregation Points Planning for Software-Defined Network Based Smart Grid Communications  
4.Deploying Chains of Virtual Network Functions: On the Relation Between Link and Server Usage

**Wireless Scheduling**  
1.Mobility-Aware Real-Time Scheduling for Low-Power Wireless Networks   
2.An Antithetic Coupling Approach to Multi-Chain based CSMA Scheduling Algorithms   
3.Efficient scheduling algorithms for on-demand wireless data broadcast   
4.Approximation Algorithms for Wireless Opportunistic Spectrum Scheduling in Cognitive Radio Networks

**Heterogeneous Networks**  
1.A QoS-enabled Holistic Optimization Framework for LTE-Advanced Heterogeneous Networks  
2.ENCORE: An Energy-Aware Multicell Cooperation in Heterogeneous Networks with Content Caching  
3.Optimal Downlink and Uplink User Association in Backhaul-limited HetNets   
4.Joint Optimization for Cell Configuration and Offloading in Heterogeneous Networks

# SIGCOMM 2016

**SDN&NFV**

1. ClickNP: Highly Flexible and High Performance Network Processing with Reconfigurable Hardware
2. Packet Transactions: High-Level Programming for Line-Rate Switches
3. SNAP: Stateful Network-Wide Abstractions for Packet Processing
4. Programmable Packet Scheduling at Line Rate
5. OpenBox: A Software-Defined Framework for Developing, Deploying, and Managing Network Functions
6. PISCES: A Programmable, Protocol-Independent Software Switch
7. Dataplane Specialization for High-performance OpenFlow Software Switching

**Wide Area Networks**

1. Evolve or Die: High-Availability Design Principles Drawn from Google's Network Infrastructure
2. Optimizing Bulk Transfers with Software-Defined Optical WAN
3. Dynamic Pricing and Traffic Engineering for Timely Inter-Datacenter Transfers

**Monitoring and Diagnostics**

1. One Sketch to Rule Them All: Rethinking Network Flow Monitoring with UnivMon
2. Trumpet: Timely and Precise Triggers in Data Centers
3. The Good, the Bad, and the Differences: Better Network Diagnostics with Differential Provenance

**Scheduling**

1. 2DFQ: Two-Dimensional Fair Queueing for Multi-Tenant Cloud Services
2. CODA: Toward Automatically Identifying and Scheduling Coflows in the Dark
3. Scheduling Mix-flows in Commodity Datacenters with Karuna
4. NUMFabric: Fast and Flexible Bandwidth Allocation in Datacenters

**Datacenters I**

1. Globally Synchronized Time via Datacenter Networks
2. Robotron: Top-down Network Management at Facebook Scale
3. RDMA over Commodity Ethernet at Scale
4. ProjecToR: Agile Reconfigurable Data Center Interconnect

**Verification**

1. Fast Control Plane Analysis Using an Abstract Representation
2. Symnet: scalable symbolic execution for modern networks
3. Don't Mind the Gap: Bridging Network-wide Objectives and Device-level Configurations
4. Jumpstarting BGP Security with Path-End Validation

**Networked Applications**

1. WebPerf: Evaluating What-If Scenarios for Cloud-hosted Web Applications
2. CS2P: Improving Video Bitrate Selection and Adaptation with Data-Driven Throughput Prediction
3. Via: Improving Internet Telephony Call Quality Using Predictive Relay Selection

**Wireless**

1. Inter-Technology Backscatter: Towards Internet Connectivity for Implanted Devices
2. Enabling Practical Backscatter Communication for On-body Sensors
3. Braidio: An Integrated Active-Passive Radio for Mobile Devices with Asymmetric Energy Budgets
4. Real-time Distributed MIMO Systems
5. Eliminating Channel Feedback in Next-Generation Cellular Networks

**Datacenters II**

1. Virtualized Congestion Control
2. AC/DC TCP: Virtual Congestion Control Enforcement for Datacenter Networks
3. Taking the Blame Game out of Data Centers Operations with NetPoirot

SECON 2016

**Sensor Networks**

1.SMARP: A Stochastic MAC Protocol with Randomized Power Control for Underwater Sensor Networks  
2.Message Dissemination for Throughput Optimization in Storage-limited Opportunistic Underwater Sensor Networks  
3.Optimizing Graphical Model Structure for Distributed Inference in Wireless Sensor Networks  
4.On Jointly Constructing and Scheduling Multiple Forwarding Trees in Wireless Sensor Networks

**Security and Authentication**

1.Arpeggio: a Penetration Attack on Glossy Networks  
2.Counteracting Denial-of-Sleep Attacks in Wake-up-based Sensing Systems   
3.TBAS: Enhancing Wi-Fi Authentication by Actively Eliciting Channel State Information  
4.Verification of User-reported Context Claims with Context Correlation Model

**Sensor Networks and RFIDs**

1.Data Ferry Trajectory Planning for Sweep Coverage Problem with Multiple Mobile Sensors  
2.Efficient Scheduling Strategies for Mobile Sensors in Sweep Coverage Problem   
3.Fast Collection of Approximate RFID Information   
4.PLAT: A Physical-layer Tag Searching Protocol in Large RFID Systems

**Energy Neutral Operation**

1.Energy Neutral Activity Monitoring: Wearables Powered by Smart Inductive Charging Surfaces  
2.Maximizing Sensor Lifetime in a Rechargeable Sensor Network via Partial Energy Charging on Sensors  
3.Energy Synchronized Task Assignment in Rechargeable Sensor Networks  
4.Distributed Energy Measurement in WSNs for Outdoor Applications

**Spectrum Management**

1.Performance and Implications of RAN Caching in LTE Mobile Networks: a Real Traffic Analysis  
2.Exploiting Modulation Scheme Diversity in Multicarrier Wireless Networks  
3.Social Welfare Maximization Auction for Secondary Spectrum Markets: A Long-term Perspective

**Location #1**

1.GeoPal: Friend Spam Detection in Social Networks Using Private Location Proofs  
2.WarpMap: Accurate and Efficient Indoor Locating by Dynamic Warping in Sequence-type Radio-map  
3.IntenCT: Efficient Multi-Target Counting and Tracking By Binary Proximity Sensors  
4.Enhancing Smartphone Indoor Localization via Opportunistic Sensing  **Best Paper Award**

**Opportunistic Networking and Offloading**

1.Smart Congestion Control For Delay- and Disruption Tolerant Networks  
2.Deadline-Sensitive Mobile Data Offloading via Opportunistic Communications  
3.QoE-aware Computation Offloading Scheduling to Capture Energy-Latency Tradeoff in Mobile Clouds  
4.Furion: Towards Energy-Efficient WiFi Offloading under Link Dynamics

**Location #2**

1.TravelMiner: On the Benefit of Path-based Mobility Prediction  
2.Squeeze More from Fingerprints Reporting Strategy for Indoor Localization  
3.A Robust Zero-Calibration RF-based Localization System for Realistic Environments  
4.Lightweight Indoor Localization for 60-GHz Millimeter Wave Systems

**Crowdsourcing**

1.Wind Compass: Determine Wind Direction Using Smartphones  
2.Group Buying based Incentive Mechanism for Mobile Crowd Sensing  
3.Confining Wi-Fi Coverage: A Crowdsourced Method Using Physical Layer Information  
4.Bloom-Filter-Based Profile Matching for Proximity-based Mobile Social Networking

**Performance & Reliability #1**

1.The Capability of Error Correction for Burst-noise Channels Using Error Estimating Code   
2.Channel State Information Compression for MIMO Systems based on Curve Fitting   
3.A Mobility Management Scheme to Reduce the Impact of Channel Heterogeneity in Cognitive Radio Femtocell Networks  
4.A Reliable and Scalable Broadcast Protocol for Wireless Multi-hop Networks using Subcarrier-level Tone-signals

**Applications**

1.RadarMAC: Mitigating Radar Interference in Self-Driving Cars

2.Urban Traffic Condition Estimation: Let WiFi Do It  
3.MagBoard: Magnetic-based Ubiquitous Homomorphic Off-the-shelf Keyboard  
4.Feluda: Provenance-enabled Diagnosis of Elusive Network Failures in Wireless Sensor Networks

**Performance & Reliability #2**

1.Distributed Learning for Multi-Channel Selection in Wireless Network Monitoring   
2.QuaRo: A Queue-Aware Robust Coordinated Transmission Strategy for Downlink C-RANs  
3.A Synergistic Architecture for RPL over BLE  
4.Shortest Path Routing in Unknown Environments: Is the Adaptive Optimal Strategy Available?

**Emerging Networks**

1.Regret-Minimizing Exploration in HetNets with mmWave

2.EnLighting: An Indoor Visible Light Communication System based on Networked Light Bulbs  
3.Scalable Multicast in Highly-Directional 60 GHz WLANs  
4.An Empirical Study on Urban IEEE 802.11p Vehicle-to-Vehicle Communication

# NSDI 2016

**Network Architectures and Protocols**

1. An Industrial-Scale Software Defined Internet Exchange Point
2. XFabric: A Reconfigurable In-Rack Network for Rack-Scale Computers
3. Be Fast, Cheap and in Control with SwitchKV
4. Bitcoin-NG: A Scalable Blockchain Protocol
5. Exploring Cross-Application Cellular Traffic Optimization with Baidu TrafficGuard

**Content Delivery**

1. Efficiently Delivering Online Services over Integrated Infrastructure
2. Scalable and Private Media Consumption with Popcorn
3. Speeding up Web Page Loads with Shandian
4. Polaris: Faster Page Loads Using Fine-grained Dependency Tracking
5. CFA: A Practical Prediction System for Video QoE Optimization

**Wireless**

1. Passive Wi-Fi: Bringing Low Power to Wi-Fi Transmissions
2. Decimeter-Level Localization with a Single WiFi Access Point
3. A Scalable Multi-User Uplink for Wi-Fi
4. BeamSpy: Enabling Robust 60 GHz Links Under Blockage
5. iCellular: Device-Customized Cellular Network Access on Commodity Smartphones
6. Diamond: Nesting the Data Center Network with Wireless Rings in 3D Space
7. Ripple II: Faster Communication through Physical Vibration
8. PhyCloak: Obfuscating Sensing from Communication Signals

**Flexible Networks**

1. Compiling Path Queries
2. Simplifying Software-Defined Network Optimization Using SOL
3. Paving the Way for NFV: Simplifying Middlebox Modifications Using StateAlyzr
4. Embark: Securely Outsourcing Middleboxes to the Cloud

**Dependability and Monitoring**

1. BUZZ: Testing Context-Dependent Policies in Stateful Networks
2. Minimizing Faulty Executions of Distributed Systems
3. FlowRadar: A Better NetFlow for Data Centers
4. Sibyl: A Practical Internet Route Oracle
5. VAST: A Unified Platform for Interactive Network Forensics

**Resource Sharing**

1. Ernest: Efficient Performance Prediction for Large-Scale Advanced Analytics
2. Cliffhanger: Scaling Performance Cliffs in Web Memory Caches
3. FairRide: Near-Optimal, Fair Cache Sharing
4. HUG: Multi-Resource Fairness for Correlated and Elastic Demands

**In-Network Processing**

1. Universal Packet Scheduling
2. Maglev: A Fast and Reliable Software Network Load Balancer
3. Enabling ECN in Multi-Service Multi-Queue Data Centers
4. DFC: Accelerating String Pattern Matching for Network Applications

**Security and Privacy**

1. Diplomat: Using Delegations to Protect Community Repositories
2. AnonRep: Towards Tracking-Resistant Anonymous Reputation
3. Mind the Gap: Towards a Backpressure-Based Transport Protocol for the Tor Network
4. Sieve: Cryptographically Enforced Access Control for User Data in Untrusted Clouds
5. Earp: Principled Storage, Sharing, and Protection for Mobile Apps

# IPSN 2016

**Network and Embedded System Architectures**

1. Preamble Counter: Achieving Accurate and Real-Time Link Estimation in Low Power Wireless Sensor Networks

2. DeepX: A Software Accelerator for Low-Power Deep Learning Inference on Mobile Devices

3. System Design for a Synergistic, Low Power Mote/BLE Embedded Platform

4. TinySDM: Software Defined Measurement in Wireless Sensor Networks

**Localization and tracking**

1. Harmonium: Asymmetric, Active UWB for High-Quality Indoor Localization

2. Characterizing the Accuracy of a Self-Synchronized Reverse-GPS Wildlife Localization System (Best Paper Award)

3. Highly Reliable Signal Strength-Based Border Crossing Localization in Outdoor Time-varying Environments

4. Indoor Tracking using Crowdsourced Maps

**Activity and health monitoring**

1. HB-Phone: a Bed-Mounted Geophone-Based Heartbeat Monitoring System

2. Burnout: A Wearable System for Unobtrusive Skeletal Muscle Fatigue Estimation

3. HeadScan: A Wearable System for Radio-based Sensing of Head and Mouth-related Activities

**Robust wireless networks**

1. Oppcast: Exploiting Spatial and Channel Diversity for Robust Data Collection in Dynamic Urban Environments

2. Generic Route Repair: Augmenting Wireless Ad Hoc Sensor Networks for Local Connectivity

3. RNFD: Routing-Layer Detection of DODAG (Root) Node Failures in Low-Power Wireless Networks

4. CrossZig: Combating Cross-Technology Interference in Low-power Wireless Networks

**Biometrics and user identification**

1. Walkie-Talkie: Motion-Assisted Automatic Key Generation for Secure On-Body Device Communication

2. WiWho: WiFi-based Person Identification in Smart Spaces

3. Sensor-assisted Face Recognition System on Smart Glass via Multi-view Sparse Representation Classification

4. VibID: User Identification through Bio-Vibrometry

**Novel Applications**

1. Accurate Power Quality Monitoring in Microgrids

2. MAGIC: Model-Based Actuation for Ground Irrigation Control

3. Topic-Aware Social Sensing with Arbitrary Source Dependency Graphs

4. Recursive Ground Truth Estimator for Social Data Streams

# UbiComp 2016

Unsupervised Recognition of Interleaved Activities of Daily Living through Ontological and Probabilistic Reasoning

Daniele Riboni, Timo Sztyler, Gabriele Civitarese, Heiner Stuckenschmidt

Learning from Less for Better: Semi-Supervised Activity Recognition via Shared Structure Discovery

Lina Yao, Feiping Nie, Quan Z. Sheng, Tao Gu, Xue Li, Sen Wang

Human Respiration Detection with Commodity WiFi Devices: Do User Location and Body Orientation Matter?

Hao Wang, Daqing Zhang, Junyi Ma, Yasha Wang, Yuxiang Wang, Dan Wu, Tao Gu, Bing Xie

A Weakly Supervised Activity Recognition Framework for Real-time Synthetic Biology Laboratory Assistance

Chandrashekhar Lavania, Sunil Thulasidasan, Anthony LaMarca, Jeffrey Scofield, Jeff Bilmes

UniPass: Design and Evaluation of a Smart Device-Based Password Manager for Visually Impaired Users

Natã M Barbosa, Jordan K Hayes, Yang Wang

Finding a Store, Searching for a Product: A Study of Daily Challenges of Low Vision People

Sarit F.A Szpiro, Yuhang Zhao, Shiri Azenkot

CueSee: Exploring Visual Cues for People with Low Vision to Facilitate a Visual Search Task

Yuhang Zhao, Sarit Szpiro, Jonathan Knighten, Shiri Azenkot

Situational Impairments to Mobile Interaction in Cold Environments

Zhanna Sarsenbayeva, Jorge Goncalves, Juan García, Simon Klakegg, Sirkka Rissanen, Hannu Rintamäki, Jari Hannu, Vassilis Kostakos

Selecting Home Appliances with Smart Glass based on Contextual Information

Quan Kong, Takuya Maekawa, Taiki Miyanishi, Takayuki Suyama

AirSense: An Intelligent Home-based Sensing System for Indoor Air Quality Analytics

Biyi Fang, Qiumin Xu, Taiwoo Park, Mi Zhang

It’s like living with a friendly stranger: Perceptions of Personality Traits in a Smart Home

Sarah Mennicken, Oliver Zihler, Frida Juldaschewa, Veronika Molnar, David Aggeler, Elaine Huang

TableTalk: Integrating Personal Devices and Content for Commensal Experiences at the Family Dinner Table

Hasan Shahid Ferdous, Bernd Ploderer, Hilary Davis, Frank Vetere, Kenton O’Hara, Geremy Farr-Wharton, Rob Comber

Exploring the Design Space of Glanceable Feedback for Physical Activity Trackers

Rúben Gouveia, Fábio Pereira, Evangelos Karapanos, Sean A. Munson, Marc Hassenzahl

Verifiable Smart Packaging with Passive RFID

Ge Wang, Chen Qian, Jinsong Han, Wei Xi, Han Ding, Zhiping Jiang, Jizhong Zhao

Device-free Detection of Approach and Departure Behaviors using Backscatter Communication

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