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Mini-conference Opening

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INFOCOM Conference Opening Session and Keynote

Plenary

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Pan and scan: configuring cameras for coverage
M. Johnson and A. Bar-Noy

pp. 1071-1079

TS48: Cloud/Grid computing and networks 2

Minimizing Retrieval Latency for Content Cloud
M. Björkqvist, L. Chen, M. Vukolić and Xi Zhang
pp. 1080-1088

A QoS Aware Multicore Hash Scheduler for Network Applications
D. Guo and L. Bhuyan
pp. 1089-1097

Dynamic right-sizing for power-proportional data centers
M. Lin, A. Wierman, L. Andrew and E. Thereska
pp. 1098-1106

TS59: Wireless cross-layer design 2

Multicast Video Delivery with Switched Beamforming Antennas in Indoor Wireless Networks
H. Zhang, Y. Jiang, S. Rangarajan and B. Zhao
pp. 1107-1115

Approximation algorithms for throughput maximization in wireless networks with delay constraints
G. Pei, V. Anil Kumar, S. Parthasarathy and A. Srinivasan
pp. 1116-1124

Physical Layer Wireless Security Made Fast and Channel Independent
S. Gollakota and D. Katabi
pp. 1125-1133

Contrabass: Concurrent Transmissions without Coordination for Ad Hoc Networks
S. Yoon, I. Rhee, B. C. Jung, B. Daneshrad and J. Kim
pp. 1134-1142

TS69: Wireless network monitoring and measurement 2

A Highly Scalable Bandwidth Estimation of Commercial Hotspot Access Points
X. Xing, J. Dang, S. Mishra and X. Liu
pp. 1143-1151

Sequential Learning for Optimal Monitoring of Multi-channel Wireless Networks
P. Arora, C. Szepesvári and R. Zheng
pp. 1152-1160

Fingerprinting 802.11 Rate Adaptation Algorithms
M. Mirza, P. Barford, X. Zhu, S. Banerjee and M. Blodgett
pp. 1161-1169

17:30 - 18:00

NSF information talk

Topic: SEES (Science, Engineering and Education for Sustainability)

18:00 - 20:00

RECEPTION

Wednesday, April 13

08:30 - 10:00

TS03: Mobile ad hoc networks (MANET) 3

TurboSync: Clock Synchronization for Shared Media Networks via Principal Component Analysis with Missing Data
R. Ben-El-Kezadri, G. Pau and T. Claveirole
pp. 1170-1178

Dissemination in opportunistic mobile ad-hoc networks: The power of the crowd
G. Zyba, S. Ioannidis, C. Diot and G. Voelker
pp. 1179-1187

Experimental Evaluation of Optimal CSMA
B. Nardelli, J. Lee, K. Lee, Y. Yi, S. Chong, E. Knightly and M. Chiang
pp. 1188-1196

TS07: Peer-to-peer networks 3

Asymptotic Optimality of Randomized Peer-to-Peer Broadcast with Network Coding
Di Niu and B. Li
pp. 1197-1205

Exploring the Optimal Replication Strategy in P2P-VoD Systems: Characterization and Evaluation
W. Wu and J. C. S. Lui
pp. 1206-1214

Self-repairing Homomorphic Codes for Distributed Storage Systems
F. Oggier and A. Datta
pp. 1215-1223

On the Efficiency of Collaborative Caching in ISP-aware P2P Networks
J. Dai, Bo Li, F. Liu, B. Li and H. Jin
pp. 1224-1232

TS11: Performance analysis and modeling 3

Index-Based Sampling Policies for Tracking Dynamic Networks under Sampling Constraints
T. He, A. Anandkumar and D. Agrawal
pp. 1233-1241

The Impact of Link Scheduling on Long Paths: Statistical Analysis and Optimal Bounds
Y. Ghiassi-Farrokhfal, J. Liebeherr and A. Burchard
pp. 1242-1250

Scheduling for Small Delay in Multi-rate Multi-channel Wireless Networks
S. Bodas, S. Shakkottai, L. Ying and R. Srikant
pp. 1251-1259

Delay Asymptotics with Retransmissions and Fixed Rate Codes over Erasure Channels
J. Tan, Y. Yang, N. Shroff and H. El Gamal
pp. 1260-1268

TS21: Network Quality of Service

ESPN: Efficient Server Placement in Probabilistic Networks with Budget Constraint
D. Yang, Xi Fang and G. Xue
pp. 1269-1277

QoSoDoS: If You Can't Beat Them, Join Them!
M. Geva and A. Herzberg
pp. 1278-1286

Scheduling in Wireless Ad Hoc Networks with Successive Interference Cancellation
S. Lv, W. Zhuang, X. Wang and X. Zhou
pp. 1287-1295

TS29: Wireless sensor network design 3

Analysis of Event Detection Delay in Wireless Sensor Networks
Y. Wang, M. Vuran and S. Goddard
pp. 1296-1304

PW-MAC: An Energy-Efficient Predictive-Wakeup MAC Protocol for Wireless Sensor Networks
L. Tang, Y. Sun, O. Gurewitz and D. B. Johnson
pp. 1305-1313

Delay-Bounded MAC with Minimal Idle Listening for Sensor Networks
Y. Peng, Zi Li, D. Qiao and W. Zhang
pp. 1314-1322

Multiple Task Scheduling for Low-Duty-Cycled Wireless Sensor Networks
S. Xiong, J. Li, Mo Li, J. Wang and Y. Liu
pp. 1323-1331

TS50: Energy-efficient networks 1

Managing Cost, Performance, and Reliability Tradeoffs for Energy-Aware Server Provisioning
B. Guenter, N. Jain and C. Williams
pp. 1332-1340

On Optimal Throughput-Energy Curve for Multi-hop Wireless Networks
C. Jiang, Yi Shi, T. Hou and S. Kompella
pp. 1341-1349

On Renewable Sensor Networks with Wireless Energy Transfer
Yi Shi, L. Xie, T. Hou and H. Sherali
pp. 1350-1358

Energy-aware Scheduling Algorithms for Network Stability
M. Andrews, S. Antonakopoulos and L. Zhang
pp. 1359-1367

TS60: Data center networking 1

Exploring Efficient and Scalable Multicast Routing in Future Data Center Networks
D. Li, J. Yu, J. Yu and J. Wu
pp. 1368-1376

Modeling and Understanding TCP Incast in Data Center Networks
J. Zhang, F. Ren and C. Lin
pp. 1377-1385

Routing-as-a-Service (RaaS): A Framework For Tenant-Directed Route Control in Data Center
C. C. Chen, L. Yuan, A. Greenberg, C. N. Chuah and P. Mohapatra
pp. 1386-1394

Channel Allocation in Wireless Data Center Networks
Y. Cui, H. Wang and X. Cheng
pp. 1395-1403

TS70: Wireless network security 1

Device Fingerprinting to Enhance Wireless Security using Nonparametric Bayesian Method
N. Nguyen, G. Zheng, Z. Han and R. Zheng
pp. 1404-1412

Delay-Bounded Adaptive UFH-based Anti-jamming Wireless Communication
Q. Wang, P. Xu, K. Ren and X. Y. Li
pp. 1413-1421

Fast and Scalable Secret Key Generation Exploiting Channel Phase Randomness in Wireless Networks
Q. Wang, H. Su, K. Ren and K. Kim
pp. 1422-1430

On the Vulnerability of the Proportional Fairness Scheduler to Retransmission Attacks
U. Ben-Porat, A. Bremler-Barr, H. Levy and B. Plattner
pp. 1431-1439

10:00 - 10:30

Video-Live Demonstration-1

Stegano-CryptoSystem for enhancing Biometric-Feature Security With RSA
P. Sonsare and S. Sapkal

Demo: BACChat: A Building Automation Control Client for Sensor Data Collection
A. H. y. Lam, D. Wang and D. W. t. Chan

Demo: A Long-range High-rate Communication Module for Imote2
P. Dawei, Y. Yi, D. Wang, Yu Peng and X. Peng

WineStreamer(s): Flexible P2P-TV Streaming Applications
L. Abeni, A. Bakay, R. Birke, G. Ciccarelli, E. Leonardi, R. Lo Cigno, C. Kiraly, M. Mellia, S. Niccolini, J. Seedorf, T. Szemethy and G. Tropea

Opportunistic Content-Centric Networking: The Conference Case Demo
S. Kouyoumdjieva, E. Yavuz, O. Helgason, L. Pajevic and G. Karlsson

10:00 - 18:00

Poster Presentation

Common Cloud:A Framework to Realize Platform Migration Between Mainstream Cloud

Platforms
H. Su

Networking Smart Toys with Wireless ToyBridge and ToyTalk
S. Schmid, M. Gorlatova, D. Giustiniano, V. Vukadinovic and S. Mangold

Service-Oriented Future Internet Architecture (SOFIA)
G. G. Xie, Yi Sun, Y. Zhang, Z. Li, H. Zheng and X. Zheng

Extending the Access Network through Mesh-Phones: A practical perspective
A. Iera, A. Molinaro, S. Paratore, R. Ranieri and G. Ruggeri

Backpressure Approach for Bypassing Jamming Attacks in Wireless Sensor Networks
A. Dvir and L. Buttyan

Compressing Trajectories Using Inter-Frame Coding
C. Y. Lin and L. J. Chen

Configurable Hardware-Based Virtual Router With Complete Isolation
Z. Liu, Y. Mao, Y. Li, D. Jin, Li Su and L. Zeng

10:30 - 12:00

TS08: Peer-to-peer networks 4

Predicting the Impact of Measures Against P2P Networks on the Transient Behaviors
E. Altman, P. Nain, A. Shwartz and Y. Xu
pp. 1440-1448

The Streaming Capacity of Sparsely-Connected P2P Systems with Distributed Control
C. Zhao, X. Lin and C. Wu
pp. 1449-1457

Utility Optimization for Dynamic Peer-to-Peer Networks with Tit-for-Tat Constraints
M. Neely and L. Golubchik
pp. 1458-1466

TS12: Performance analysis and modeling 4

Modeling the Economic Value of the Location Data of Mobile Users
F. Baccelli and J. Bolot
pp. 1467-1475

Throughput and Delay Analysis of Hybrid Wireless Networks with Multi-Hop Uplinks
D. Manikantan Shila, Yu Cheng and T. Anjali
pp. 1476-1484

The Capacity of Three-Dimensional Wireless Ad Hoc Networks
P. Li, M. Pan and Y. Fang
pp. 1485-1493

The Impact of Storage Capacity on End-to-End Delay in Time Varying Networks
G. Iosifidis, I. Koutsopoulos and G. Smaragdakis
pp. 1494-1502

TS22: Optical networks

A Study of the Routing and Spectrum Allocation in Spectrum-sliced Elastic Optical Path Networks

Y. Wang, X. Cao and Yi Pan
pp. 1503-1511

A Robust Optimization Approach to Backup Network Design with Random Failures
M. Johnston, H. W. Lee and E. Modiano
pp. 1512-1520

The Resilience of WDM Networks to Probabilistic Geographical Failures
P. Agarwal, A. Efrat, S. Ganjugunte, D. Hay, S. Sankararaman and G. Zussman
pp. 1521-1529

Packet Scheduling in a Low-Latency Optical Switch with Wavelength Division Multiplexing and Electronic Buffer
L. Liu, Z. Zhang and Y. Yang
pp. 1530-1538

TS30: Wireless sensor network design 4

Self-Diagnosis for Large Scale Wireless Sensor Networks
K. Liu, Q. Ma and Y. Liu
pp. 1539-1547

Agnostic Diagnosis: Discovering Silent Failures in Wireless Sensor Networks
X. Miao, K. Liu, Y. He and Y. Liu
pp. 1548-1556

Construction of Directional Virtual Backbones with Minimum Routing Cost in Wireless Networks
L. Ding, W. Wu, J. Willson, H. Du and W. Lee
pp. 1557-1565

Maximizing Lifetime for the Shortest Path Aggregation Tree in Wireless Sensor Networks
D. Luo, X. Zhu, X. Wu and G. Chen
pp. 1566-1574

TS51: Energy-efficient networks 2

Energy-Latency Tradeoff for In-Network Function Computation in Random Networks
P. Balister, B. Bollobás, A. Anandkumar and A. Willsky
pp. 1575-1583

Information Delivery in Large Wireless Networks with Minimum Energy Expense
Yi Xu and W. Wang
pp. 1584-1592

WiZi-Cloud: Application-transparent Dual ZigBee-WiFi Radios for Low Power Internet Access
T. Jin, G. Noubir and Bo Sheng
pp. 1593-1601

Networking Low-Power Energy Harvesting Devices: Measurements and Algorithms
M. Gorlatova, A. Wallwater and G. Zussman
pp. 1602-1610

TS61: Data center networking 2

SMITE: A Stochastic Compressive Data Collection Protocol for Mobile Wireless Sensor Networks
L. Guo, R. Beyah and Y. Li
pp. 1611-1619

A First Look at Inter-Data Center Traffic Characteristics via Yahoo! Datasets
Y. Chen, S. Jain, V. Adhikari, Z. L. Zhang and K. Xu
pp. 1620-1628

Mahout: Low-Overhead Datacenter Traffic Management using End-Host-Based Elephant Detection
A. Curtis, W. Kim and P. Yalagandula
pp. 1629-1637

TS71: Wireless network security 2

An Analytical Approach to Real-Time Misbehavior Detection in IEEE 802.11 Based Wireless Networks
J. Tang, Yu Cheng and W. Zhuang
pp. 1638-1646

Secure Friend Discovery in Mobile Social Networks
W. Dong, V. Dave, L. Qiu and Y. Zhang
pp. 1647-1655

Maintaining Source Privacy under Eavesdropping and Node Compromise Attacks
K. Pongaliur and Li Xiao
pp. 1656-1664

Defending Against Vehicular Rogue AP
H. Han, F. Xu, C. Tan, Y. Zhang and Q. Li
pp. 1665-1673

Panel on The Challenges of Cloud Computing

13:30 - 15:00

TS13: Performance analysis and modeling 5

On the achievable throughput of CSMA under imperfect carrier sensing
T. H. Kim, J. Ni, R. Srikant and N. Vaidya
pp. 1674-1682

Optimal Control of Epidemic Evolution
M. H. R. Khouzani, S. Sarkar and E. Altman
pp. 1683-1691

Performance Modeling of Hybrid Optical Packet Switches with Shared Buffer
Z. Guo, Z. Zhang and Y. Yang
pp. 1692-1700

TS23: Cyber-physical systems and networks

Aggregation Capacity of Wireless Sensor Networks: Extended Network Case
C. Wang, Y. Liu, X. Y. Li and S. J. Tang
pp. 1701-1709

Protection of Query Privacy for Continuous Location Based Services
A. Pingley, N. Zhang, X. Fu, H. A. Choi, S. Subramaniam and W. Zhao
pp. 1710-1718

Exploiting Sensing Diversity for Confident Sensing in Wireless Sensor Networks
M. Keally, G. Zhou, G. Xing and J. Wu

pp. 1719-1727

TS25: Network algorithms and calculus 1

Opportunistic Scheduling with Worst Case Delay Guarantees in Single and Multi-Hop Networks
M. Neely
pp. 1728-1736

Constant Approximation for Virtual Backbone Construction with Guaranteed Routing Cost in Wireless Sensor Networks
H. Du, Q. Ye, W. Wu, W. Lee, D. Li, D. Z. Du and S. Howard
pp. 1737-1744

One Memory Access Bloom Filters and Their Generalization
Y. Qiao, T. Li and S. Chen
pp. 1745-1753

Approximate Distance Queries and Compact Routing in Sparse Graphs
R. Agarwal, B. Godfrey and S. Har-Peled
pp. 1754-1762

TS31: Wireless sensor network design 5

Secure Continuous Aggregation via Sampling-based Verification in Wireless Sensor Networks
L. Yu, J. Li, S. Cheng and S. Xiong
pp. 1763-1771

Sensor Localization with Deterministic Accuracy Guarantee
R. Sugihara and R. Gupta
pp. 1772-1780

On Full-View Coverage in Camera Sensor Networks
Yi Wang and G. Cao
pp. 1781-1789

Minimizing Service Delay in Directional Sensor Networks
Yi Wang and G. Cao
pp. 1790-1798

TS53: Internet monitoring and measurement 1

Fast and Compact Per-Flow Traffic Measurement through Randomized Counter Sharing
T. Li, S. Chen and Y. Ling
pp. 1799-1807

Modeling Residual-Geometric Flow Sampling
X. Wang, X. Li and D. Loguinov
pp. 1808-1816

A Foundation for Stochastic Bandwidth Estimation of Networks with Random Service
L. Ralf, M. Fidler and J. Liebeherr
pp. 1817-1825

Network-wide monitoring through self-configuring adaptive system
I. Lassoued, A. Krifa, C. Barakat and K. Avrachenkov
pp. 1826-1834

TS65: Firewalls and network intrusion detection 1

SOAP: A Social Network Aided Personalized and Effective Spam Filter to Clean Your E-mail Box
Ze Li and H. Shen
pp. 1835-1843

Good Guys vs. Bot Guise: Mimicry Attacks Against Fast-Flux Detection Systems
M. Knysz, X. Hu and K. G. Shin
pp. 1844-1852

Space-Time Tradeoff in Regular Expression Matching with Semi-Deterministic Finite Automata
Y. H. Yang and V. Prasanna
pp. 1853-1861

TS72: Wireless network security 3

IMDGuard: Securing Implantable Medical Devices with the External Wearable Guardian
F. Xu, Z. Qin, C. Tan, B. Wang and Q. Li
pp. 1862-1870

From Jammer to Gambler: Modeling and Detection of Jamming Attacks against Time-Critical Traffic
Z. Lu, W. Wang and C. Wang
pp. 1871-1879

Identity-Based Attack Detection in Mobile Wireless Networks
K. Zeng, K. Govindan, D. Wu and P. Mohapatra
pp. 1880-1888

APPLAUS: A Privacy-Preserving Location Proof Updating System for Location-based Services
Z. Zhu and G. Cao
pp. 1889-1897

Panel on Sustainable Computing and Networking

15:00 - 15:30

Video-Live Demonstration-1

15:30 - 17:00

TS18: Network optimization

Optimizing Network-Coded Cooperative Communications via Joint Session Grouping and Relay Node Selection
S. Sharma, Yi Shi, T. Hou, H. Sherali and S. Kompella
pp. 1898-1906

Consort: Node-constrained Opportunistic Routing in Wireless Mesh Networks
Xi Fang, D. Yang and G. Xue
pp. 1907-1915

An Optimal Link Layer Model for Multi-Hop MIMO Networks
Yi Shi, J. Liu, C. Jiang, C. Gao and T. Hou
pp. 1916-1924

On Progressive Network Recovery After a Major Disruption
J. Wang, C. Qiao and H. F. Yu
pp. 1925-1933

TS24: Miscellaneous topics

A Novel Family of Geometric Planar Graphs for Wireless Ad Hoc Networks
Xu Li, N. Mitton, I. Simplot-Ryl and D. Simplot-Ryl
pp. 1934-1942

Keep your friends close: Incorporating trust into social network-based Sybil defenses
A. Mohaisen, N. Hopper and Y. Kim
pp. 1943-1951

Secure Group Key Management Using Uni-Directional Proxy Re-Encryption Schemes
Y. R. Chen, J. D. Tygar and W. G. Tzeng
pp. 1952-1960

Stable Throughput Tradeoffs in Cognitive Shared Channels with Cooperative Relaying
S. Kompella, G. Nguyen, J. Wieselthier and A. Ephremides
pp. 1961-1969

TS26: Network algorithms and calculus 2

Pay Bursts Only Once Holds for (Some) Non-FIFO Systems
J. Schmitt, N. Gollan, S. Bondorf and I. Martinovic
pp. 1970-1978

On Expressing Networks with Flow Transformations in Convolution-Form
F. Ciucu, J. Schmitt and H. Wang
pp. 1979-1987

On the Convergence to Fairness in Overloaded FIFO Systems
F. Ciucu, O. Hohlfeld and L. Chen
pp. 1988-1996

Optimal Sampling Algorithms for Frequency Estimation in Distributed Data
Z. Huang, Ke Yi, Y. Liu and G. Chen
pp. 1997-2005

TS32: Wireless sensor network design 6

Energy Provisioning in Wireless Rechargeable Sensor Networks
S. He, J. Chen, F. Jiang, D. K. Y. Yau, G. Xing and Y. Sun
pp. 2006-2014

Robust Coverage under Uncertainty in Wireless Sensor Networks
K. Vu and R. Zheng
pp. 2015-2023

KIPDA: k-Indistinguishable Privacy-preserving Data Aggregation in Wireless Sensor Networks
M. Groat, W. He and S. Forrest
pp. 2024-2032

TinyLTS: Efficient Network-Wide Logging and Tracing System for TinyOS
R. Sauter, O. Saukh, O. Frietsch and P. Marrón
pp. 2033-2041

TS37: Wireless mesh networks

A High-Throughput Routing Metric for Reliable Multicast in Multi-Rate Wireless Mesh Networks
X. Zhao, J. Guo, C. T. Chou, A. Misra and S. Jha
pp. 2042-2050

Multi-Path Routing and Rate Allocation for Multi-Source Video On-Demand Streaming in Wireless Mesh Networks
Y. Ding, Y. Yang and Li Xiao
pp. 2051-2059

DARP: Distance-Aware Relay Placement in WiMAX Mesh Networks
W. Zhang, S. Bai, G. Xue, J. Tang and C. Wang
pp. 2060-2068

Network Warehouses: Efficient Information Distribution to Mobile Users
A. Motskin, I. Downes, B. Kusy, O. Gnawali and L. Guibas
pp. 2069-2077

TS54: Internet monitoring and measurement 2

Network-Aware Behavior Clustering of Internet End Hosts
K. Xu, F. Wang and L. Gu
pp. 2078-2086

Compressive Sensing over Graphs
W. Xu, E. Mallada and K. Tang
pp. 2087-2095

On the Growth of Internet Application Flows: A Complex Network Perspective
X. Wu, Ke Yu and X. Wang
pp. 2096-2104

Sampling vs Sketching: An Information Theoretic Comparison
P. Tune and D. Veitch
pp. 2105-2113

TS66: Firewalls and network intrusion detection 2

FEACAN: Front-End Acceleration for Content-Aware Network Processing
Y. Qi, K. Wang, J. Fong, W. Jiang, Y. Xue, J. Li and V. Prasanna
pp. 2114-2122

Firewall Verification and Redundancy Checking are Equivalent
H. Acharya and M. Gouda
pp. 2123-2128

An efficient regular expressions compression algorithm from a new perspective
T. Liu, Y. Yang, Y. Liu, Y. Sun and Li Guo
pp. 2129-2137

TS73: Wireless network security 4

A Dynamic Game Solution to Malware Attack
M. H. R. Khouzani, S. Sarkar and E. Altman
pp. 2138-2146

STAP: A Social-Tier-Assisted Packet Forwarding Protocol for Achieving Receiver-Location Privacy Preservation in VANETs
X. Lin, R. Lu, X. Liang and S. Shen
pp. 2147-2155

Towards Wireless Security without Computational Assumptions — An Oblivious Transfer Protocol Based on an Unauthenticated Wireless Channel
Z. Hao, S. Zhong and L. Li
pp. 2156-2164

Adaptive Wireless Channel Probing for Shared Key Generation
Y. Wei, K. Zeng and P. Mohapatra
pp. 2165-2173

17:00 - 18:00

Video-Live Demonstration-2

LiveSec: OpenFlow-based Security Management for Production Networks
Y. Qi, F. He, K. Wang, X. Chen, J. Fong, F. Xie, Shao, Y. Gao, Y. Xue and J. Li

TPE-CMS: A Comfort Measuring System for Public Bus Service in Taipei City
C. Y. Lin and L. J. Chen

Peer-to-Peer Traffic Localization as a Service
M. Steiner and M. Varvello

vFlow: A GUI-Based Tool for Building Batch Applications for Cloud Computing
K. Ahmat and H. Gobjuka

BitTorrent Traffic Localization using a Multi-layered DHT
K. H. Kim, M. Steiner and M. Varvello

Thursday, April 14

08:30 - 10:00

TS04: Vehicular networks

Human Factors-aware Service Scheduling in Vehicular Cyber-Physical Systems
Xu Li, X. Yu, A. Wagh and C. Qiao
pp. 2174-2182

Trajectory Improves Data Delivery in Vehicular Networks
Y. Wu, Y. Zhu and Bo Li
pp. 2183-2191

Exploiting Temporal Dependency for Opportunistic Forwarding in Urban Vehicular Networks
H. Zhu, S. Chang, M. Li, S. Naik and S. Shen
pp. 2192-2200

ETP: Encounter Transfer Protocol for Opportunistic Vehicle Communication
Bo Yu and F. Bai
pp. 2201-2209

TS14: Cognitive radio and software defined radio 1

Throughput and Delay Scaling of General Cognitive Networks
W. Huang and X. Wang
pp. 2210-2218

To Preempt or Not: Tackling Bid and Time-based Cheating in Online Spectrum Auctions
L. Deek, X. Zhou, K. Almeroth and H. Zheng
pp. 2219-2227

Pricing-based Spectrum Access Control in Cognitive Radio Networks with Random Access
L. Yang, H. Kim, J. Zhang, M. Chiang and C. W. Tan
pp. 2228-2236

Joint Routing and Link Scheduling for Cognitive Radio Networks under Uncertain Spectrum Supply
M. Pan, C. Zhang, P. Li and Y. Fang
pp. 2237-2245

TS33: Wireless sensor network design 7

Ubiquitous Data Collection for Mobile Users in Wireless Sensor Networks
Z. Li, J. Wang, Z. Cao and Mo Li
pp. 2246-2254

Sparse Target Counting and Localization in Sensor Networks Based on Compressive Sensing
B. Zhang, X. Cheng, N. Zhang, Y. Cui, Y. Li and Q. Liang
pp. 2255-2263

Connected Coverage in Wireless Networks with Directional Antennas
Z. Yu, J. Teng, X. Bai, D. Xuan and W. Jia
pp. 2264-2272

Finite-Horizon Energy Allocation and Routing Scheme in Rechargeable Sensor Networks
S. Chen, P. Sinha, N. Shroff and C. Joo
pp. 2273-2281

TS36: Online social networks

Adaptive Algorithms for Detecting Community Structure in Dynamic Social Networks
N. Nguyen, T. Dinh, Y. Xuan and My Thai
pp. 2282-2290

Relationship Classification in Large Scale Online Social Networks and Its Impact on Information Propagation
S. J. Tang, J. Yuan and W. Chen
pp. 2291-2299

SocialFilter: Introducing Social Trust to Collaborative Spam Mitigation
M. Sirivianos, K. Kim and X. Yang
pp. 2300-2308

Prevalence and Mitigation of Forum Spamming
Y. Shin, M. Gupta and S. Myers
pp. 2309-2317

TS43: Scheduling, flow, and congestion control 1

Queue Length Asymptotics for Generalized Max-Weight Scheduling in the presence of

Heavy-Tailed Traffic
K. P. Jagannathan, M. Markakis, E. Modiano and J. Tsitsiklis
pp. 2318-2326

Weighted Wireless Link Scheduling without Information of Positions And Interference/Communication Radii
P. J. Wan, C. Ma, Z. Wang, B. Xu, M. Li and X. Jia
pp. 2327-2335

Low-Complexity Scheduling Algorithm for Sum-Queue Minimization in Wireless Convergecast
V. V.j. and X. Lin
pp. 2336-2344

Maximizing Throughput in Wireless Networks with Finite Internal Buffers
C. M. Lien, C. S. Chang, J. Cheng and D. S. Lee
pp. 2345-2353

TS55: Internet monitoring and measurement 3

RelSamp: Preserving Application Structure in Sampled Flow Measurements
M. Lee, M. Hajjat, R. R. Kompella and S. Rao
pp. 2354-2362

Efficient Network-wide Flow Record Generation
J. Sommers, R. Bowden, B. Eriksson, P. Barford, M. Roughan and N. Duffield
pp. 2363-2371

Estimating the Performance of Hypothetical Cloud Service Deployments: A Measurement-Based Approach
A. Wang, C. Huang, J. Li and K. W. Ross
pp. 2372-2380

TS64: Future Internet architectures

VIRO: A Scalable, Robust and Namespace Independent Virtual Id ROuting for Future Networks
S. Jain, Y. Chen, Z. L. Zhang and S. Jain
pp. 2381-2389

Handling Network Uncertainty in Heterogeneous Wireless Networks
T. Oliveira, S. Mahadevan and D. Agrawal
pp. 2390-2398

Forwarding Anomalies in Bloom Filter-based Multicast
M. Särelä, C. Esteve Rothenberg, T. Aura, A. Zahemszky, P. Nikander and J. Ott
pp. 2399-2407

TS74: Network privacy and trustworthiness

Location Privacy Protection from RSS Localization System Using Antenna Pattern Synthesis
T. Wang and Y. Yang
pp. 2408-2416

Scheduling Design and Analysis for End-to-End Heterogeneous Flows in an Avionics Network
Yu Hua and X. Liu
pp. 2417-2425

Long PN Code Based DSSS Watermarking
J. Huang, X. Pan, X. Fu and J. Wang
pp. 2426-2434

FindU: Privacy-Preserving Personal Profile Matching in Mobile Social Networks
M. Li, N. Cao, S. Yu and W. Lou
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TS15: Cognitive radio and software defined radio 2

Jump-stay Based Channel-hopping Algorithm with Guaranteed Rendezvous for Cognitive Radio Networks
Z. Lin, H. Liu, X. Chu and Y. W. Leung
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Wi-Fi 2.0: Price and Quality Competitions of Duopoly Cognitive Radio Wireless Service Providers with Time-varying Spectrum Availability
H. Kim, J. Choi and K. G. Shin
pp. 2453-2461

Online Learning in Opportunistic Spectrum Access: A Restless Bandit Approach
C. Tekin and M. Liu
pp. 2462-2470

ETCH: EfficienT Channel Hopping for Communication Rendezvous in Dynamic Spectrum Access Networks
Y. Zhang, Q. Li, G. Yu and B. Wang
pp. 2471-2479

TS34: Wireless sensor network design 8

On-Demand Time Synchronization with Predictable Accuracy
Z. Zhong, P. Chen and T. He
pp. 2480-2488

Visual Correlation-Based Image Gathering for Wireless Multimedia Sensor Networks
Pu Wang, R. Dai and I. Akyildiz
pp. 2489-2497

Optimal Multiple-Coverage of Sensor Networks
X. Bai, Z. Yun, D. Xuan, B. Chen and W. Zhao
pp. 2498-2506

r-Kernel: An Operating System Foundation for Highly Reliable Networked Embedded Systems
Q. Cao, X. Wang, H. Qi and T. He
pp. 2507-2515

TS38: Wireless resource/spectrum management 1

Joint Distributed Access Point Selection and Power Allocation in Cognitive Radio Networks
M. Hong, A. Garcia and J. Barrera
pp. 2516-2524

Distributed Power Control in the SINR Model
Z. Lotker, M. Parter, D. Peleg and Y. A. Pignolet

pp. 2525-2533

Traffic-Tracing Gateway (TTG)
H. Liu, X. Qiu, D. Ghosal, C. N. Chuah, X. Liu and Y. Fan
pp. 2534-2542

Belief Propagation Methods for Intercell Interference Coordination
S. Rangan and R. Madan
pp. 2543-2551

TS41: Wireless cellular networks 1

Optimal Power Control in Rayleigh-fading Heterogeneous Networks
C. W. Tan
pp. 2552-2560

Downlink Power Control for Variable Bit Rate Videos over Multicell Wireless Networks
Y. Huang and S. Mao
pp. 2561-2569

Multicell Coordination via Joint Scheduling, Beamforming and Power Spectrum Adaptation
W. Yu, T. Kwon and C. Shin
pp. 2570-2578

TS44: Scheduling, flow, and congestion control 2

Delay-Based Back-Pressure Scheduling in Multi-Hop Wireless Networks
Bo Ji, C. Joo and N. Shroff
pp. 2579-2587

A Low-Complexity Congestion Control and Scheduling Algorithm for Multihop Wireless Networks with Order-Optimal Per-Flow Delay
P. K. Huang, X. Lin and C. C. Wang
pp. 2588-2596

On the Limitations of Randomization for Queue-Length-Based Scheduling in Wireless Networks
B. Li and A. Eryilmaz
pp. 2597-2605

Overflow Management with Multipart Packets
Y. Mansour, B. Patt-Shamir and D. Rawitz
pp. 2606-2614

TS56: Internet monitoring and measurement 4

Public DNS System and Global Traffic Management
C. Huang, D. Maltz, A. Greenberg and J. Li
pp. 2615-2623

I-seismograph: Observing and Measuring Internet Earthquakes
J. Li and S. Brooks
pp. 2624-2632

Measurement and Analysis of Global IP-Usage Patterns of Fast-Flux Botnets
X. Hu, M. Knysz and K. G. Shin
pp. 2633-2641

TS62: Wireless LAN/MAN 1

New Insights into the Stochastic Geometry Analysis of Dense CSMA Networks
G. Alfano, M. Garetto and E. Leonardi
pp. 2642-2650

Identifying Mobiles Hiding behind Wireless Routers
Y. Chen, Z. Liu, B. Liu, X. Fu and W. Zhao
pp. 2651-2659

Feasibility and Optimization of Delay Guarantees for Non-homogeneous Flows in IEEE 802.11 WLANs
Y. Gao, C. W. Tan, Y. Huang, Z. Zeng and P. R. Kumar
pp. 2660-2668

CHAIN: Introducing Minimum Controlled Coordination into Random Access MAC
Z. Zeng, Y. Gao, K. Tan and P. R. Kumar
pp. 2669-2677

TS75: Network economics and pricing

Multi-hop Access Pricing in Public Area WLANs
Y. Cui, T. Ma and X. Cheng
pp. 2678-2686

A Packet Dropping-Based Incentive Mechanism for M/M/1 Queues with Selfish Users
Yi Gai, H. Liu and B. Krishnamachari
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User Subscription Dynamics and Revenue Maximization in Communications Markets
S. Ren, J. Park and M. van der Schaar
pp. 2696-2704

The wireless multicast coalition game and the non-cooperative association problem
C. Singh and E. Altman
pp. 2705-2713

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TS16: Cognitive radio and software defined radio 3

Exploiting MIMO Antennas in Cooperative Cognitive Radio Networks
S. Hua, H. Liu, M. Wu and S. Panwar
pp. 2714-2722

Optimal Cooperative Sensing Scheduling for Energy-Efficient Cognitive Radio Networks
T. Zhang and D. Tsang
pp. 2723-2731

Transport Throughput of Secondary Networks in Spectrum Sharing Systems
C. Li and H. Dai
pp. 2732-2740

Network Selection for Secondary Users in Cognitive Radio Systems
C. Wang, K. Sohraby, R. Jana, L. Ji and M. Daneshmand
pp. 2741-2749

TS35: Wireless sensor network design 9

BodyT2: Throughput and Time Delay Performance Assurance for Heterogeneous BSNs
Z. Ren, G. Zhou, A. Pyles, M. Keally, W. Mao and H. Wang
pp. 2750-2758

A Framework for Mobile Data Gathering with Load Balanced Clustering and MIMO Uploading
M. Zhao and Y. Yang
pp. 2759-2767

Energy Efficient Clustering for WSN-based Structural Health Monitoring
X. Liu, J. Cao, Yi Lai, C. Yang, H. Wu and Y. L. Xu
pp. 2768-2776

Many-to-One Deliverability of Greedy Routing in 2-D Wireless Sensor Networks
Y. Yang, Y. Li and M. Hou
pp. 2777-2785

TS39: Wireless resource/spectrum management 2

Network Modulation: a New Dimension to Enhance Wireless Network Performance
Z. Yang, Y. Luo and L. Cai
pp. 2786-2794

Dynamic Channel Allocation for Wireless Zone-Based Multicast and Broadcast Service
Z. C. Lin, H. L. Fu and P. Lin
pp. 2795-2803

On Adaptive-Width Channel Allocation In Non-Cooperative, Multi-Radio Wireless Networks
F. Wu, N. Singh, N. Vaidya and G. Chen
pp. 2804-2812

Truthful Spectrum Auctions With Approximate Revenue
M. Al-Ayyoub and H. Gupta
pp. 2813-2821

TS42: Wireless cellular networks 2

Optimal relay location and power allocation for low SNR broadcast relay channels
M. Thakur, N. Fawaz and M. Médard
pp. 2822-2830

Capacity Scaling of Multihop Cellular Networks
P. Li, X. Huang and Y. Fang
pp. 2831-2839

Taming User-Generated Content in Mobile Networks via Drop Zones
I. Trestian, S. Ranjan, A. Kuzmanovic and A. Nucci
pp. 2840-2848

TS45: Scheduling, flow, and congestion control 3

A Nearly-Optimal Index Rule for Scheduling of Users with Abandonment
U. Ayesta, P. Jacko and V. Novak
pp. 2849-2857

Content-Aware Caching and Traffic Management in Content Distribution Networks
M. Amble, P. Parag, S. Shakkottai and L. Ying
pp. 2858-2866

Throughput-Optimal Random Access with Order-Optimal Delay

M. Lotfinezhad and P. Marbach
pp. 2867-2875

Which Protocol? Mutual Interaction of Heterogeneous Congestion Controllers
V. Ramaswamy, D. Choudhury and S. Shakkottai
pp. 2876-2884

TS57: Network protocols

Adaptive Delay-based Congestion Control for High Bandwidth-Delay Product Networks
H. Jung, S. g. Kim, H. Y. Yeom, S. Kang and L. Libman
pp. 2885-2893

TCP-FIT: An Improved TCP Congestion Control Algorithm and its Performance
W. Jingyuan, J. Wen, J. Zhang and Y. Han
pp. 2894-2902

A Cross-Domain Privacy-Preserving Protocol for Cooperative Firewall Optimization
F. Chen, B. Bezawada and A. Liu
pp. 2903-2911

Adaptive Flow Control for TCP on Mobile Phones
S. Sanadhya and R. Sivakumar
pp. 2912-2920

TS63: Wireless LAN/MAN 2

Modeling and Characterization of Large-Scale Wi-Fi Traffic in Public Hot-Spots
A. Ghosh, R. Jana, V. Ramaswami, J. Rowland and N. Shankaranarayanan
pp. 2921-2929

Improving Energy Efficiency of Wi-Fi Sensing on Smartphones
K. H. Kim, A. Min, D. Gupta, P. Mohapatra and J. Singh
pp. 2930-2938

PeerCast: Improving Link Layer Multicast through Cooperative Relaying
J. Xiong and R. Roy Choudhury
pp. 2939-2947

TS76: Internet routing

IP Fast ReRoute: Loop Free Alternates Revisited
G. Rétvári, J. Tapolcai, G. Enyedi and A. Császár
pp. 2948-2956

Local Transit Policies and the Complexity of BGP Stability Testing
M. Chiesa, L. Cittadini, G. Di Battista and S. Vissicchio
pp. 2957-2965

BGP Safety with Spurious Updates
M. Suchara, A. Fabrikant and J. Rexford
pp. 2966-2974

There's something about MRAI: Timing diversity can exponentially worsen BGP convergence
A. Fabrikant, U. Syed and J. Rexford
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TS17: Cognitive radio and software defined radio 4

Guaranteed Opportunistic Scheduling in Multi-Hop Cognitive Radio Networks
D. Xue and E. Ekici
pp. 2984-2992

Opportunistic Spectrum Access for Mobile Cognitive Radios
A. Min, K. H. Kim, J. Singh and K. G. Shin
pp. 2993-3001

Optimal Scheduling in Cooperate-to-Join Cognitive Radio Networks
K. Khalil, M. Karaca, O. Ercetin and E. Ekici
pp. 3002-3010

Performance Analysis of Spectrum Handoff for Cognitive Radio Ad Hoc Networks without Common Control Channel under Homogeneous Primary Traffic
Yi Song and L. J. Xie
pp. 3011-3019

TS40: Wireless resource/spectrum management 3

Strategyproof Auctions for Balancing Social Welfare and Fairness in Secondary Spectrum Markets
A. Gopinathan, Z. Li and C. Wu
pp. 3020-3028

On a Game Theoretic Approach to Capacity Maximization in Wireless Networks
E. Ásgeirsson and P. Mitra
pp. 3029-3037

Base-Station Selections for QoS Provisioning Over Distributed Multi-User MIMO Links in Wireless Networks
Q. Du and Xi Zhang
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When Compressive Sampling Meets Multicast: Outage Analysis and Subblock Network Coding
C. Thejaswi PS, T. Tran and J. Zhang
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TS46: Scheduling, flow, and congestion control 4

Exploiting Channel Memory for Joint Estimation and Scheduling in Downlink Networks
W. Ouyang, S. Murugesan, A. Eryilmaz and N. Shroff
pp. 3056-3064

Scheduling for End-to-End Deadline-Constrained Traffic with Reliability Requirements in Multi-Hop Networks
R. Li and A. Eryilmaz
pp. 3065-3073

Scheduling in MapReduce-like Systems for Fast Completion Time
H. Chang, M. Kodialam, R. R. Kompella, T. V. Lakshman, M. Lee and S. Mukherjee
pp. 3074-3082

Pipelining Packet Scheduling in a Low Latency Optical Packet Switch
L. Liu, Z. Zhang and Y. Yang
pp. 3083-3091

TS49: Wireless communications - Short-range(UWB,RFID,...)

Season: Shelving Interference and Joint Identification in Large-scale RFID Systems
L. Yang, J. Han, Y. Qi, C. Wang, T. Gu and Y. Liu
pp. 3092-3100

Efficient Information Collection Protocols for Sensor-augmented RFID Networks
S. Chen, M. Zhang and B. Xiao
pp. 3101-3109

Making Wireless Networks MORAL
N. Tas, T. Nadeem and A. Agrawala
pp. 3110-3118

TS52: Delay tolerant networks

User-Centric Data Dissemination in Disruption Tolerant Networks
W. Gao and G. Cao
pp. 3119-3127

Delay-Capacity Tradeoffs for Mobile Networks with Lévy Walks and Lévy Flights
K. Lee, Y. Kim, S. Chong, I. Rhee and Y. Yi
pp. 3128-3136

When Does Content Float? Characterizing Availability of Anchored Information in Opportunistic Content Sharing
E. Hyytiä, J. Virtamo, P. Lassila, J. Kangasharju and J. Ott
pp. 3137-3145

Risk sensitive optimal control framework applied to delay tolerant networks
E. Altman, V. Kavitha, F. De Pellegrini, V. Kamble and V. Borkar
pp. 3146-3154

TS67: Localization

Distinguishing Locations Across Perimeters Using Wireless Link Measurements
J. Zhang, S. Kasera, N. Patwari and P. Rai
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Scalable and Fully Distributed Localization With Mere Connectivity
M. Jin, Su Xia, H. Wu and D. Gu
pp. 3164-3172

Spotter: A Model Based Active Geolocation Service
S. Laki, P. Mátray, P. Hága, T. Sebők, I. Csabai and G. Vattay
pp. 3173-3181

Implications of Device Diversity for Organic Localization
J. g. Park, D. Curtis, S. Teller and J. Ledlie
pp. 3182-3190

TS77: Router and switch design

Providing Performance Guarantees in Multipass Network Processors
I. Keslassy, K. Kogan, G. Scalosub and M. Segal
pp. 3191-3199

Scan Detection in High-Speed Networks Based on Optimal Dynamic Bit Sharing

T. Li, S. Chen, W. Luo and M. Zhang
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A Real-Time Multicast Routing Scheme for Multi-Hop Switched Fieldbuses
L. Chen, X. Liu, Q. Wang and Y. Wang
pp. 3209-3217

TS78: Overlay networks and distributed computing

Optimal Sybil-resilient node admission control
N. Tran, J. Li, L. Subramanian and S. Chow
pp. 3218-3226

Client Assignment for Improving Interactivity in Distributed Interactive Applications
Lu Zhang and X. Tang
pp. 3227-3235

Cost Effective Resource Allocation of Overlay Routing Relay Nodes
R. Cohen and D. Raz
pp. 3236-3244