

IEEE INFOCOM 2018 – IEEE Conference on Computer Communications

**Honolulu, Hawaii, USA
16-19 April 2018**

Pages 1-665



**IEEE Catalog Number: CFP18INF-POD
ISBN: 978-1-5386-4129-3**

**Copyright © 2018 by the Institute of Electrical and Electronics Engineers, Inc.
All Rights Reserved**

Copyright and Reprint Permissions: Abstracting is permitted with credit to the source. Libraries are permitted to photocopy beyond the limit of U.S. copyright law for private use of patrons those articles in this volume that carry a code at the bottom of the first page, provided the per-copy fee indicated in the code is paid through Copyright Clearance Center, 222 Rosewood Drive, Danvers, MA 01923.

For other copying, reprint or republication permission, write to IEEE Copyrights Manager, IEEE Service Center, 445 Hoes Lane, Piscataway, NJ 08854. All rights reserved.

****** This is a print representation of what appears in the IEEE Digital Library. Some format issues inherent in the e-media version may also appear in this print version.***

IEEE Catalog Number:	CFP18INF-POD
ISBN (Print-On-Demand):	978-1-5386-4129-3
ISBN (Online):	978-1-5386-4128-6
ISSN:	0743-166X

Additional Copies of This Publication Are Available From:

Curran Associates, Inc
57 Morehouse Lane
Red Hook, NY 12571 USA
Phone: (845) 758-0400
Fax: (845) 758-2633
E-mail: curran@proceedings.com
Web: www.proceedings.com

CURRAN ASSOCIATES INC.
proceedings
.com

TABLE OF CONTENTS

ENABLING WORK-CONSERVING BANDWIDTH GUARANTEES FOR MULTI-TENANT DATACENTERS VIA DYNAMIC TENANT-QUEUE BINDING	1
<i>Zhuotao Liu, Kai Chen, Haitao Wu, Shuihai Hu, Yih-Chun Hu, Yi Wang, Gong Zhang</i>	
BLIND, ADAPTIVE AND ROBUST FLOW SEGMENTATION IN DATACENTERS	10
<i>Francesco De Pellegrini, Lorenzo Maggi, Antonio Massaro, Damien Saucez, Jeremie Leguay, Eitan Altman</i>	
PROACTIVE INCAST CONGESTION CONTROL IN A DATACENTER SERVING WEB APPLICATIONS	19
<i>Haoyu Wang, Haiying Shen</i>	
PRICING FOR REVENUE MAXIMIZATION IN INTER-DATACENTER NETWORKS	28
<i>Zhenzhe Zheng, R. Srikant, Guihai Chen</i>	
OFFLOADING DEPENDENT TASKS WITH COMMUNICATION DELAY AND DEADLINE CONSTRAINT	37
<i>Sowndarya Sundar, Ben Liang</i>	
ENERGY-EFFICIENT COMPUTATION OFFLOADING FOR MULTICORE-BASED MOBILE DEVICES	46
<i>Yeli Geng, Yi Yang, Guohong Cao</i>	
ACCELERATING MOBILE APPLICATIONS AT THE NETWORK EDGE WITH SOFTWARE-PROGRAMMABLE FPGAS	55
<i>Shuang Jiang, Dong He, Chenxi Yang, Chenren Xu, Guojie Luo, Yang Chen, Yunlu Liu, Jiangwei Jiang</i>	
WHEN EDGE MEETS LEARNING: ADAPTIVE CONTROL FOR RESOURCE-CONSTRAINED DISTRIBUTED MACHINE LEARNING	63
<i>Shiqiang Wang, Tiffany Tuor, Theodoros Salonidis, Kin K. Leung, Christian Makaya, Ting He, Kevin S. Chan</i>	
CODRIVE: IMPROVING AUTOMOBILE POSITIONING VIA COLLABORATIVE DRIVING	72
<i>Soteris Demetriou, Puneet Jain, Kyu-Han Kim</i>	
TEMPORAL REACHABILITY IN VEHICULAR NETWORKS	81
<i>Luca Bedogni, Marco Fiore, Christian Glacet</i>	
COOPERATIVE CONTENT TRANSMISSION FOR VEHICULAR AD HOC NETWORKS USING ROBUST OPTIMIZATION	90
<i>Daxin Tian, Jianshan Zhou, Min Chen, Zhengguo Sheng, Qiang Ni, Victor C.M. Leung</i>	
MTS: TEMPORAL- AND SPATIAL-COLLABORATIVE CHARGING FOR WIRELESS RECHARGEABLE SENSOR NETWORKS WITH MULTIPLE VEHICLES	99
<i>Chi Lin, Zhiyuan Wang, Jing Deng, Lei Wang, Jiankang Ren, Wu Guowei</i>	
COVERAGE IN BATTERY-FREE WIRELESS SENSOR NETWORKS	108
<i>Tuo Shi, Jianzhong Li, Hong Gao, Zhipeng Cai</i>	
ENERGY-COLLISION AWARE DATA AGGREGATION SCHEDULING FOR ENERGY HARVESTING SENSOR NETWORKS	117
<i>Quan Chen, Hong Gao, Zhipeng Cai, Cheng Liang lun, Jianzhong Li</i>	
FINDING THE STARS IN THE FIREWORKS: DEEP UNDERSTANDING OF MOTION SENSOR FINGERPRINT	126
<i>Huiqi Liu, Xiang-Yang Li, Lan Zhang, Yaochen Xie, Zhenan Wu, Qian Dai, Ge Chen, Chunxiao Wan</i>	
DAO²: OVERCOMING OVERALL STORAGE OVERFLOW IN INTERMITTENTLY CONNECTED SENSOR NETWORKS	135
<i>Bin Tang</i>	
ENABLING CROSS-TECHNOLOGY COMMUNICATION BETWEEN LTE UNLICENSED AND WIFI	144
<i>Piotr Gaw-owicz, Anatolij Zubow, Adam Wolisz</i>	
TWINBEE: RELIABLE PHYSICAL-LAYER CROSS-TECHNOLOGY COMMUNICATION WITH SYMBOL-LEVEL CODING	153
<i>Yongrui Chen, Zhijun Li, Tian He</i>	
LONGBEE: ENABLING LONG-RANGE CROSS-TECHNOLOGY COMMUNICATION	162
<i>Zhijun Li, Tian He</i>	
STRIPCOMM: INTERFERENCE-RESILIENT CROSS-TECHNOLOGY COMMUNICATION IN COEXISTING ENVIRONMENTS	171
<i>Xiaolong Zheng, Yuan He, Xiuzhen Guo</i>	
IMPROVING UTILIZATION AND PARALLELISM OF HADOOP CLUSTER BY ELASTIC CONTAINERS	180
<i>Yinggen Xu, Wei Chen, Shaoqi Wang, Xiaobo Zhou, Changjun Jiang</i>	
AN ANALYSIS AND EMPIRICAL STUDY OF CONTAINER NETWORKS	189
<i>Kun Suo, Yong Zhao, Wei Chen, Jia Rao</i>	
LOAD BALANCING ACROSS MICROSERVICES	198
<i>Yipei Niu, Fangming Liu, Zongpeng Li</i>	
JOINT SERVICE CACHING AND TASK OFFLOADING FOR MOBILE EDGE COMPUTING IN DENSE NETWORKS	207
<i>Jie Xu, Lixing Chen, Pan Zhou</i>	
CCOMPASSION: A HYBRID CLOUDLET PLACEMENT FRAMEWORK OVER PASSIVE OPTICAL ACCESS NETWORKS	216
<i>Sourav Mondal, Goutam Das, Elaine Wong</i>	

QUICKCAST: FAST AND EFFICIENT INTER-DATACENTER TRANSFERS USING FORWARDING TREE COHORTS	225
<i>Mohammad Noormohammadpour, Cauligi Raghavendra, Srikanth Kandula, Sriram Rao</i>	
TRAFFIC ENGINEERING WITH PRECOMPUTED PATHBOOKS	234
<i>Mathieu Leconte, Apostolos Destounis, Georgios S. Paschos</i>	
FERO: FAST AND EFFICIENT RESOURCE ORCHESTRATOR FOR A DATA PLANE BUILT ON DOCKER AND DPK	243
<i>Balázs Sonkoly, Márton Szabó, Balázs Németh, András Majdán, Gergely Pongrácz, Laszlo Toka</i>	
DISTRIBUTED JOINT AP GROUPING AND USER ASSOCIATION FOR MU-MIMO NETWORKS	252
<i>Wangkit Wong, S.-H. Gary Chan</i>	
PAFD: PHASED ARRAY FULL-DUPLEX	261
<i>Ehsan Aryafar, Alireza Keshavarz-Haddad</i>	
ENABLING INDOOR MOBILE MILLIMETER-WAVE NETWORKS BASED ON SMART REFLECT-ARRAYS	270
<i>Xin Tan, Zhi Sun, Dimitrios Koutsonikolas, Josep M. Jornet</i>	
SCHEDULING AND RESOURCE ALLOCATION IN 802.11AX	279
<i>Kaidong Wang, Konstantinos Psounis</i>	
OPTIMAL CONTENT REPLICATION AND REQUEST MATCHING IN LARGE CACHING SYSTEMS	288
<i>Arpan Mukhopadhyay, Nidhi Hegde, Marc Lelarge</i>	
ON ACHIEVING ZERO DELAY WITH POWER-OF-D-CHOICES LOAD BALANCING	297
<i>Xin Liu, Lei Ying</i>	
PREDICTIVE PRE-ALLOCATION FOR LOW-LATENCY UPLINK ACCESS IN INDUSTRIAL WIRELESS NETWORKS	306
<i>Mingyan Li, Xinping Guan, Cunqing Hua, Cailian Chen, Ling Lyu</i>	
BOOSTING THE THROUGHPUT OF LED-CAMERA VLC VIA COMPOSITE LIGHT EMISSION	315
<i>Yanbing Yang, Jun Luo</i>	
SELF-ADAPTING QUORUM-BASED NEIGHBOR DISCOVERY IN WIRELESS SENSOR NETWORKS	324
<i>Hao Cai, Tilman Wolf</i>	
SYMMETRIC CONNECTIVITY ALGORITHMS IN MULTIPLE DIRECTIONAL ANTENNAS WIRELESS SENSOR NETWORKS	333
<i>Tien Tran, Dung Huynh</i>	
MONITORING LED LIGHTS WITH CURRENT SIGNATURES	342
<i>Johnny Verhoeff, Akshay Uttama Nambi, Marco Zuniga, Bontor Humala</i>	
EYELIGHT: LIGHT-AND-SHADOW-BASED OCCUPANCY ESTIMATION AND ROOM ACTIVITY RECOGNITION	351
<i>Viet Nguyen, M. Ibrahim, S. Rupavatharam, M. Jawahar, M. Gruteser, R. Howard</i>	
ZIGFI: HARNESSING CHANNEL STATE INFORMATION FOR CROSS-TECHNOLOGY COMMUNICATION	360
<i>Xiuzhen Guo, Yuan He, Xiaolong Zheng, Liangcheng Yu, Omprakash Gnawali</i>	
ECT: EXPLOITING CROSS-TECHNOLOGY CONCURRENT TRANSMISSION FOR REDUCING PACKET DELIVERY DELAY IN IOT NETWORKS	369
<i>Wei Wang, Tiantian Xie, Xin Liu, Ting Zhu</i>	
ROBUSTLY SAFE CHARGING FOR WIRELESS POWER TRANSFER	378
<i>Haipeng Dai, Yang Zhao, Guihai Chen, Wanchun Dou, Chen Tian, Xiaobing Wu, Tian He</i>	
PLACEMENT OF CONNECTED WIRELESS CHARGERS	387
<i>Nan Yu, Haipeng Dai, Alex X. Liu, Bingchuan Tian</i>	
FLOWCLOAK: DEFEATING MIDDLEBOX-BYPASS ATTACKS IN SOFTWARE-DEFINED NETWORKING	396
<i>Kai Bu, Yutian Yang, Zixuan Guo, Yuanyuan Yang, Xing Li, Shigeng Zhang</i>	
NEUROVINE: A NEURAL PREPROCESSOR FOR YOUR VIRTUAL NETWORK EMBEDDING ALGORITHM	405
<i>Andreas Blenk, Patrick Kalmbach, Johannes Zerwas, Michael Jarschel, Stefan Schmid, Wolfgang Kellerer</i>	
ONLINE MULTICAST TRAFFIC ENGINEERING FOR SOFTWARE-DEFINED NETWORKS	414
<i>Sheng-Hao Chiang, Jian-Jhih Kuo, Shan-Hsiang Shen, De-Nian Yang, Wen-Tsuen Chen</i>	
CORA: CONFLICT RAZOR FOR POLICIES IN SDN	423
<i>Hao Li, Kaiyue Chen, Tian Pan, Yadong Zhou, Kun Qian, Kai Zheng, Bin Liu, Peng Zhang, Yazhe Tang, Chengchen Hu</i>	
ANALYZING REPLACEMENT POLICIES IN LIST-BASED CACHES WITH NON-UNIFORM ACCESS COSTS	432
<i>Giuliano Casale</i>	
DR-CACHE: DISTRIBUTED RESILIENT CACHING WITH LATENCY GUARANTEES	441
<i>Jian Li, Truong Khoa Phan, Wei Koong Chai, Daphne Tuncker, George Pavlou, David Griffin, Miguel Rio</i>	
ASYMPTOTIC MISS RATIO OF LRU CACHING WITH CONSISTENT HASHING	450
<i>Kaiyi Ji, Guocong Quan, Jian Tan</i>	
LRU CACHING WITH DEPENDENT COMPETING REQUESTS	459
<i>Guocong Quan, Kaiyi Ji, Jian Tan</i>	
SERVICE ENTITY PLACEMENT FOR SOCIAL VIRTUAL REALITY APPLICATIONS IN EDGE COMPUTING	468
<i>Lin Wang, Lei Jiao, Ting He, Jun Li, Max Mühlhäuser</i>	
COINT: PROACTIVE COORDINATOR FOR AVOIDING THE INTERRUPTABILITY HOLDER PREEMPTION PROBLEM IN VSMP ENVIRONMENT	477
<i>Wang Zhang, Xiaokang Hu, Jian Li, Haibing Guan</i>	

ADAPTIVE VNF SCALING AND FLOW ROUTING WITH PROACTIVE DEMAND PREDICTION	486
<i>Xincai Fei, Fangming Liu, Hong Xu, Hai Jin</i>	
ONLINE JOB SCHEDULING IN DISTRIBUTED MACHINE LEARNING CLUSTERS	495
<i>Yixin Bao, Yanghua Peng, Chuan Wu, Zongpeng Li</i>	
PERFORMANCE-AWARE FAIR SCHEDULING: EXPLOITING DEMAND ELASTICITY OF DATA ANALYTICS JOBS	504
<i>Chen Chen, Wei Wang, Bo Li</i>	
COBRA: TOWARD PROVABLY EFFICIENT SEMI-CLAIRVOYANT SCHEDULING IN DATA ANALYTICS SYSTEMS	513
<i>Xiaoda Zhang, Zhuzhong Qian, Sheng Zhang, Xiangbo Li, Xiaoliang Wang, Sanglu Lu</i>	
LAS: LOGICAL-BLOCK AFFINITY SCHEDULING IN BIG DATA ANALYTICS SYSTEMS	522
<i>Liang Bao, Chase Q. Wu, Qi Haiyang, Weizhao Chen, Xin Zhang, Weina Han, Wei Wei, En Tai, Hao Wang, JiaHao Zhai, Xiang Chen</i>	
A HIERARCHICAL SYNCHRONOUS PARALLEL MODEL FOR WIDE-AREA GRAPH ANALYTICS	531
<i>Shuhao Liu, Li Chen, Baochun Li, Aiden Carnegie</i>	
LOW-COMPLEXITY, LOW-REGRET LINK RATE SELECTION IN RAPIDLY-VARYING WIRELESS CHANNELS	540
<i>Harsh Gupta, Atilla Eryilmaz, R. Srikant</i>	
LIGHTWEIGHT RETRANSMISSION FOR RANDOM ACCESS IN SATELLITE NETWORKS	549
<i>Jing Chen, Feilong Tang, Heteng Zhang, Laurence T. Yang</i>	
FULL-DUPLEX METAMATERIAL-ENABLED MAGNETIC INDUCTION NETWORKS IN EXTREME ENVIRONMENTS	558
<i>Hongzhi Guo, Zhi Sun</i>	
REDUCED-STATE, OPTIMAL MEDIUM ACCESS CONTROL FOR WIRELESS DATA COLLECTION NETWORKS	567
<i>Avinash Mohan, Aditya Gopalan, Anurag Kumar</i>	
HYBRID SCHEDULING IN HETEROGENEOUS HALF- AND FULL-DUPLEX WIRELESS NETWORKS	576
<i>Tingjun Chen, Jelena Diakonikolas, Javad Ghaderi, Gil Zussman</i>	
CLOSED FORM EXPRESSIONS FOR THE PERFORMANCE METRICS OF DATA SERVICES IN CELLULAR NETWORKS	585
<i>Paolo Castagno, Vincenzo Mancuso, Matteo Sereno, Marco G. A. Marsan</i>	
NETWORK UTILITY MAXIMIZATION IN ADVERSARIAL ENVIRONMENTS	594
<i>Qingkai Liang, Eytan Modiano</i>	
TIMELY-THROUGHPUT OPTIMAL SCHEDULING WITH PREDICTION	603
<i>Kun Chen, Longbo Huang</i>	
JOINT PLACEMENT AND ROUTING OF NETWORK FUNCTION CHAINS IN DATA CENTERS	612
<i>Linqi Guo, John Z. F. Pang, Anwar Walid</i>	
VERITABLE: FAST EQUIVALENCE VERIFICATION OF MULTIPLE LARGE FORWARDING TABLES	621
<i>Garegin Grigoryan, Yaoqing Liu, Michael Leczinsky, Jun Li</i>	
ONLINE DEADLINE-AWARE BULK TRANSFER OVER INTER-DATACENTER WANS	630
<i>Long Luo, Hongfang Yu, Zilong Ye, Xiaojiang Du</i>	
A CROSS-ARCHITECTURAL QUANTITATIVE EVALUATION OF MOBILITY APPROACHES	639
<i>Vasanta Chaganti, Jim Kurose, Arun Venkataramani</i>	
COMBATING BUFFERBLOAT IN MULTI-BOTTLENECK NETWORKS: EQUILIBRIUM, STABILITY, AND ALGORITHMS	648
<i>Jiancheng Ye, Ka-Cheong Leung, Victor O. K. Li, Steven Low</i>	
A CASE FOR WEB SERVICE BANDWIDTH REDUCTION ON MOBILE DEVICES WITH EDGE-HOSTED PERSONAL SERVICES	657
<i>Yongshu Bai, Pengzhan Hao, Yifan Zhang</i>	
TOWARDS STABILITY ANALYSIS OF DATA TRANSPORT MECHANISMS: A FLUID MODEL AND AN APPLICATION	666
<i>Gayane Vardoyan, C. v. Hollot, Don Towsley</i>	
CURBING TIMEOUTS FOR TCP-INCAST IN DATA CENTERS VIA A CROSS-LAYER FASTER RECOVERY MECHANISM	675
<i>Ahmed M. Abdelmoniem, Brahim Bensaou</i>	
SDN CONTROLLER PLACEMENT AT THE EDGE: OPTIMIZING DELAY AND OVERHEADS	684
<i>Qiaofeng Qin, Konstantinos Poularakis, George Iosifidis, Leandros Tassioulas</i>	
DYNAMIC, LATENCY-OPTIMAL VNF PLACEMENT AT THE NETWORK EDGE	693
<i>Richard Cziva, Christos Anagnostopoulos, Dimitrios P. Pazaros</i>	
ON SCALABLE SERVICE FUNCTION CHAINING WITH O(1) FLOWTABLE ENTRIES	702
<i>Yi Ren, Tzu-Ming Huang, Kate Ching-Ju Lin, Yu-Chee Tseng</i>	
TOWARD THE FIRST SDN PROGRAMMING CAPACITY THEOREM ON REALIZING HIGH-LEVEL PROGRAMS ON LOW-LEVEL DATAPATHS	711
<i>Christopher Leet, Xin Wang, James Aspnes, Y. Richard Yang</i>	
PROPHET: FAST ACCURATE MODEL-BASED THROUGHPUT PREDICTION FOR REACTIVE FLOW IN DC NETWORKS	720
<i>Kai Gao, Jingxuan Zhang, Y. Richard Yang, Jun Bi</i>	
ESTIMATING INFORMATION EXCHANGE PERFORMANCE OF ENGINEERED CELL-TO-CELL MOLECULAR COMMUNICATIONS: A COMPUTATIONAL APPROACH	729
<i>Colton Harper, Massimiliano Pierobon, Maurizio Magarini</i>	

ROBUST LOSS INFERENCE IN THE PRESENCE OF NOISY MEASUREMENTS	738
<i>Yan Qiao</i>	
INFLOW: INVERSE NETWORK FLOW WATERMARKING FOR DETECTING HIDDEN SERVERS	747
<i>Alfonso Iacovazzi, Sanat Sarada, Yuval Elovici</i>	
AN EDGE NETWORK ORCHESTRATOR FOR MOBILE AUGMENTED REALITY	756
<i>Qiang Liu, Siqi Huang, Johnson Opadere, Tao Han</i>	
DEMYSTIFYING THE PERFORMANCE INTERFERENCE OF CO-LOCATED VIRTUAL NETWORK FUNCTIONS	765
<i>Chaobing Zeng, Fangming Liu, Shutong Chen, Weixiang Jiang, Miao Li</i>	
PROVABLY EFFICIENT ALGORITHMS FOR PLACEMENT OF SERVICE FUNCTION CHAINS WITH ORDERING CONSTRAINTS	774
<i>Andrea Tomassilli, Frederic Giroire, Nicolas Huin, Stephane Perennes</i>	
APPLICATION PROVISIONING IN FOG COMPUTING-ENABLED INTERNET-OF-THINGS: A NETWORK PERSPECTIVE	783
<i>Ruozhou Yu, Guoliang Xue, Xiang Zhang</i>	
SEARCHING AN ENCRYPTED CLOUD MEETS BLOCKCHAIN: A DECENTRALIZED, RELIABLE AND FAIR REALIZATION	792
<i>Shengshan Hu, Chengjun Cai, Qian Wang, Cong Wang, Luo Xiangyang, Kui Ren</i>	
REARGUARD: SECURE KEYWORD SEARCH USING TRUSTED HARDWARE	801
<i>Wenhai Sun, Ruide Zhang, Wenjing Lou, Thomas Hou</i>	
DIFFERENTIALLY PRIVATE ACCESS PATTERNS FOR SEARCHABLE SYMMETRIC ENCRYPTION	810
<i>Guoxing Chen, Ten-Hwang Lai, Mike Reiter, Yinqian Zhang</i>	
EPSMD: AN EFFICIENT PRIVACY-PRESERVING SENSOR DATA MONITORING AND ONLINE DIAGNOSIS SYSTEM	819
<i>Xiangyu Wang, Jian-feng Ma, Yinbin Miao, Ruikang Yang, Yijia Chang</i>	
TRIO: UTILIZING TAG INTERFERENCE FOR REFINED LOCALIZATION OF PASSIVE RFID	828
<i>Han Ding, Jinsong Han, Chen Qian, Fu Xiao, Ge Wang, Nan Yang, Wei Xi, Jian Xiao</i>	
RF-DIAL: AN RFID-BASED 2D HUMAN-COMPUTER INTERACTION VIA TAG ARRAY	837
<i>Yanling Bu, Lei Xie, Yinyin Gong, Chuyu Wang, Lei Yang, Jia Liu, Sanglu Lu</i>	
ANONYMOUS TEMPORAL-SPATIAL JOINT ESTIMATION AT CATEGORY LEVEL OVER MULTIPLE TAG SETS	846
<i>Youlin Zhang, Shigang Chen, You Zhou, Yuguang Fang</i>	
ROBUST SPINNING SENSING WITH DUAL-RFID-TAGS IN NOISY SETTINGS	855
<i>Chunhui Duan, Lei Yang, Huanyu Jia, Qiongzheng Lin, Yunhao Liu, Lei Xie</i>	
SCHEDULING COFLOWS OF MULTI-STAGE JOBS TO MINIMIZE THE TOTAL WEIGHTED JOB COMPLETION TIME	864
<i>Bingchuan Tian, Chen Tian, Haipeng Dai, Bingquan Wang</i>	
LEVERAGING ENDPOINT FLEXIBILITY WHEN SCHEDULING COFLOWS ACROSS GEO-DISTRIBUTED DATACENTERS	873
<i>Wenxin Li, Xu Yuan, Keqiu Li, Heng Qi, Xiaobo Zhou</i>	
HYBRID CIRCUIT/PACKET NETWORK SCHEDULING WITH MULTIPLE COMPOSITE PATHS	882
<i>Shih-Hao Tseng, Bo Bai, John Chi Shing Lui</i>	
UTOPIA: NEAR-OPTIMAL COFLOW SCHEDULING WITH ISOLATION GUARANTEE	891
<i>Luping Wang, Wei Wang, Bo Li</i>	
A GENERAL MODEL FOR DOF-BASED INTERFERENCE CANCELLATION IN MIMO NETWORKS WITH RANK-DEFICIENT CHANNELS	900
<i>Yongce Chen, Yan Huang, Yi Shi, Thomas Hou, Wenjing Lou, Sastry Kompella</i>	
INFORMATION FRESHNESS OVER AN INTERFERENCE CHANNEL: A GAME THEORETIC VIEW	908
<i>Gam Nguyen, Sastry Kompella, Clement Kam, Jeffrey Wieselthier, Anthony Ephremides</i>	
IMPACT OF CHANNEL STATE MISREPORTING ON MULTI-USER MASSIVE MIMO SCHEDULING PERFORMANCE	917
<i>Zhanzhan Zhang, Yin Sun, Ashutosh Sabharwal, Zhiyong Chen</i>	
WIFED: WIFI FRIENDLY ENERGY DELIVERY WITH DISTRIBUTED BEAMFORMING	926
<i>Subhramoy Mohanti, Elif Bozkaya, M. Yousof Naderi, Berk Canberk, Kaushik Chowdhury</i>	
QUALITY OF EXPERIENCE-BASED ROUTING OF VIDEO TRAFFIC FOR OVERLAY AND ISP NETWORKS	935
<i>Giacomo Calvigioni, Ramon Aparicio-Pardo, Lucile Sassatelli, Jeremie Leguay, Stefano Paris, Paolo Medagliani</i>	
PREDICTING THE EFFECT OF HOME WI-FI QUALITY ON QOE	944
<i>Diego Neves da Hora, Renata Teixeira, Koen Van Oost, Karel Van Doorselaer</i>	
BAS-360: EXPLORING SPATIAL AND TEMPORAL ADAPTABILITY IN 360-DEGREE VIDEOS OVER HTTP/2	953
<i>Mengbai Xiao, Chao Zhou, Viswanathan Swaminathan, Yao Liu, Songqing Chen</i>	
CLUSTILE: TOWARD MINIMIZING BANDWIDTH IN 360-DEGREE VIDEO STREAMING	962
<i>Chao Zhou, Mengbai Xiao, Yao Liu</i>	
A LIGHT-WEIGHT APPROACH TO OBTAINING NF STATE INFORMATION IN SDN+NFV NETWORKS	971
<i>Bing Leng, Liusheng Huang, Chunning Qiao, Hongli Xu</i>	
BARISTA: AN EVENT-CENTRIC NOS COMPOSITION FRAMEWORK FOR SOFTWARE-DEFINED NETWORKS	980
<i>Jaehyun Nam, Hyeonseong Jo, Yeonkeun Kim, Phillip A. Porras, Vinod Yegneswaran, Seungwon Shin</i>	

SCALABLE QOE-AWARE PATH SELECTION IN SDN-BASED MOBILE NETWORKS	989
<i>Roberto Irajá Tavares da Costa Filho, William R. Lautenschläger, Nicolas Kagami, Marcelo Caggiani Luizelli, Valter Roesler, Luciano Paschoal Gaspary</i>	
POMP: PROTOCOL OBLIVIOUS SDN PROGRAMMING WITH AUTOMATIC MULTI-TABLE PIPELINING	998
<i>Chunhui He, Xinyu Feng</i>	
LARGE-SCALE WIRELESS FINGERPRINTS PREDICTION FOR CELLULAR NETWORK POSITIONING	1007
<i>Xinyu Wu, Xiaohua Tian, Xinbing Wang</i>	
STEERING CROWDSOURCED SIGNAL MAP CONSTRUCTION VIA BAYESIAN COMPRESSIVE SENSING	1016
<i>Suining He, Kang Shin</i>	
RETRO: RETROREFLECTOR BASED VISIBLE LIGHT INDOOR LOCALIZATION FOR REAL-TIME TRACKING OF IOT DEVICES	1025
<i>Sihua Shao, Abdallah A. Khreishah, Issa M. Khalil</i>	
SECURE CROWDSOURCED INDOOR POSITIONING SYSTEMS	1034
<i>Tao Li, Yimin Chen, Rui Zhang, Yanchao Zhang, Terri Hedgpeth</i>	
WHEN UAVS RIDE A BUS: TOWARDS ENERGY-EFFICIENT CITY-SCALE VIDEO SURVEILLANCE	1043
<i>Angelo Trotta, Fabio D'Andreagiovanni, Marco Di Felice, Enrico Natalizio, Kaushik Chowdhury</i>	
VITRACK: EFFICIENT TRACKING ON THE EDGE FOR COMMODITY VIDEO SURVEILLANCE SYSTEMS	1052
<i>Linsong Cheng, Jiliang Wang</i>	
RAINBOW: PREVENTING MOBILE-CAMERA-BASED PIRACY IN THE PHYSICAL WORLD	1061
<i>Lin Yang, Wei Wang, Zeyu Wang, Qian Zhang</i>	
MV-SPORTS: A MOTION AND VISION SENSOR INTEGRATION-BASED SPORTS ANALYSIS SYSTEM	1070
<i>Cheng Zhang, Fan Yang, Gang Li, Qiang Zhai, Yi Jiang, Dong Xuan</i>	
TOWARDS PRIVACY-PRESERVING SPEECH DATA PUBLISHING	1079
<i>Jianwei Qian, Feng Han, Jiahui Hou, Chunhong Zhang, Yu Wang, Xiang-Yang Li</i>	
PRIVSET: SET-VALUED DATA ANALYSES WITH LOCAL DIFFERENTIAL PRIVACY	1088
<i>Shaowei Wang, Lusheng Huang, Yiwen Nie, Pengzhan Wang, Hongli Xu, Wei Yang</i>	
TRUSENSE: INFORMATION LEAKAGE FROM TRUSTZONE	1097
<i>Ning Zhang, Kun Sun, Deborah Shands, Wenjing Lou, Thomas Hou</i>	
PRIVACY-PRESERVING SOCIAL MEDIA DATA OUTSOURCING	1106
<i>Jinxue Zhang, Jingchao Sun, Rui Zhang, Yanchao Zhang, Xia Hu</i>	
PREVENTING UNAUTHORIZED ACCESS ON PASSIVE TAGS	1115
<i>Han Ding, Jinsong Han, Yanyong Zhang, Fu Xiao, Wei Xi, Ge Wang, Zhiping Jiang</i>	
RANGE QUERIES FOR SENSOR-AUGMENTED RFID SYSTEMS	1124
<i>Xiulong Liu, Jiannong Cao, Keqiu Li, Jia Liu, Xin Xie</i>	
FAST AND RELIABLE TAG SEARCH IN LARGE-SCALE RFID SYSTEMS: A PROBABILISTIC TREE-BASED APPROACH	1133
<i>Jihong Yu, Wei Gong, Jiangchuan Liu, Lin Chen</i>	
RFID COUNTING OVER TIME-VARYING CHANNELS	1142
<i>Ziling Zhou, Binbin Chen</i>	
SOCIAL NETWORK DE-ANONYMIZATION WITH OVERLAPPING COMMUNITIES: ANALYSIS, ALGORITHM AND EXPERIMENTS	1151
<i>Xinyu Wu, Zhongzhao Hu, Xinze Fu, Luoyi Fu, Xinbing Wang, Songwu Lu</i>	
HOST PROFIT MAXIMIZATION FOR COMPETITIVE VIRAL MARKETING IN BILLION-SCALE NETWORKS	1160
<i>Yuqing Zhu, Deying Li</i>	
CONTINUOUS TIME OPINION DYNAMICS OF AGENTS WITH MULTI-LEVELED OPINIONS AND BINARY ACTIONS	1169
<i>Vineeth S. Varma, Yezekael Hayel, Iriniel-Constantin Morarescu</i>	
TOWARDS PROFIT MAXIMIZATION FOR ONLINE SOCIAL NETWORK PROVIDERS	1178
<i>Jing Tang, Xueyan Tang, Junsong Yuan</i>	
ONE-HOP OUT-OF-BAND CONTROL PLANES FOR LOW-POWER MULTI-HOP WIRELESS NETWORKS	1187
<i>Chaojie Gu, Rui Tan, Xin Lou, Dusit Niyato</i>	
EXACT IMPLEMENTATION OF ABSTRACT MAC LAYER VIA CARRIER SENSING	1196
<i>Dongxiao Yu, Yong Zhang, Yuyao Huang, Hai Jin, Jiguo Yu, Qiang-Sheng Hua</i>	
OPTIMAL JOINT ROUTING AND SCHEDULING IN MILLIMETER-WAVE CELLULAR NETWORKS	1205
<i>Dingwen Yuan, Hsuan-Yin Lin, Joerg Widmer, Matthias Hollick</i>	
MAKING THE RIGHT CONNECTIONS: MULTI-AP ASSOCIATION AND FLOW CONTROL IN 60GHZ BAND	1214
<i>Fan Zhou, M. Yousof Naderi, Kunal Sankhe, Kaushik Chowdhury</i>	
THE DEATH AND REBIRTH OF PRIVACY-PRESERVING WIFI FINGERPRINT LOCALIZATION WITH PAILLIER ENCRYPTION	1223
<i>Zheng Yang, Kimmo Järvinen</i>	
ALEAK: PRIVACY LEAKAGE THROUGH CONTEXT-FREE WEARABLE SIDE-CHANNEL	1232
<i>Yang Liu, Zhenjiang Li</i>	
SECPROV: TRUSTWORTHY AND EFFICIENT PROVENANCE MANAGEMENT IN THE CLOUD	1241
<i>Shams Zawoad, Ragib Hasan, Kamrul Islam</i>	

COMMUNICATION-EFFICIENT AND PRIVACY-PRESERVING DATA AGGREGATION WITHOUT TRUSTED AUTHORITY	1250
<i>Xuhui Gong, Qiang-Sheng Hua, Lixiang Qian, Dongxiao Yu, Hai Jin</i>	
MOBIRATE: MOBILITY-AWARE RATE ADAPTATION USING PHY INFORMATION FOR BACKSCATTER NETWORKS	1259
<i>Wei Gong, Si Chen, Jiangchuan Liu, Zhi Wang</i>	
EXPLOITING RESIDUAL CHANNEL FOR IMPLICIT WI-FI BACKSCATTER NETWORKS	1268
<i>Taekyung Kim, Wonjun Lee</i>	
WI-FI TEETER-TOTTER: OVERCLOCKING OFDM FOR INTERNET OF THINGS	1277
<i>Wei Wang, Shiyue He, Lin Yang, Qian Zhang, Tao Jiang</i>	
ONLINE ENERGY MANAGEMENT IN IOT APPLICATIONS	1286
<i>Ali Sehati, Majid Ghaderi</i>	
WHO TO CONNECT TO? JOINT RECOMMENDATIONS IN CROSS-LAYER SOCIAL NETWORKS	1295
<i>Jiaqi Liu, Qi Lian, Luoyi Fu, Xinbing Wang</i>	
DEEP USER MODELING FOR CONTENT-BASED EVENT RECOMMENDATION IN EVENT-BASED SOCIAL NETWORKS	1304
<i>Zhibo Wang, Yongquan Zhang, Honglong Chen, Zhetao Li, Feng Xia</i>	
DEEPLINK: A DEEP LEARNING APPROACH FOR USER IDENTITY LINKAGE	1313
<i>Fan Zhou, Lei Liu, Kumpeng Zhang, Goce Trajcevski, Jin Wu, Ting Zhong</i>	
PREDICTING LEARNER INTERACTIONS IN SOCIAL LEARNING NETWORKS	1322
<i>Tsung-Yen Yang, Christopher G. Brinton, Carlee Joe-Wong</i>	
REAL-TIME VIDEO QUALITY OF EXPERIENCE MONITORING FOR HTTPS AND QUIC	1331
<i>M. Hammad Mazhar, M. Zubair Shafiq</i>	
NETWORK MEASUREMENT IN MULTIHOP WIRELESS NETWORKS WITH LOSSY AND CORRELATED LINKS	1340
<i>Chenhong Cao, Wei Gong, Wei Dong, Jihong Yu, Chun Chen, Jiangchuan Liu</i>	
ADAPTIVE CRAWLING WITH MULTIPLE BOTS: A MATROID INTERSECTION APPROACH	1349
<i>Xiang Li, Johnathan Smith, Thang N. Dinh, My T. Thai</i>	
ESTIMATION OF DNS SOURCE AND CACHE DYNAMICS UNDER INTERVAL-CENSORED AGE SAMPLING	1358
<i>Di Xiao, Xiaoyong Li, Daren Cline, Dmitri Loguinov</i>	
LOW-COMPLEXITY LEARNING FOR DYNAMIC SPECTRUM ACCESS IN MULTI-USER MULTI-CHANNEL NETWORKS	1367
<i>Sunjung Kang, Changhee Joo</i>	
OFF-SENSING AND ROUTE MANIPULATION ATTACK: A CROSS-LAYER ATTACK IN COGNITIVE RADIO BASED WIRELESS MESH NETWORKS	1376
<i>Moinul Hossain, Linda Jiang Xie</i>	
FAST RENDEZVOUS FOR SPECTRUM-AGILE IOT DEVICES WITH LIMITED CHANNEL HOPPING CAPABILITY	1385
<i>Sigit Pambudi, Wenye Wang, Cliff Wang</i>	
THE IMPACT OF BUNDLING LICENSED AND UNLICENSED WIRELESS SERVICE	1394
<i>Xu Wang, Randall A. Berry</i>	
FINDING PERSISTENT ITEMS IN DISTRIBUTED DATASETS	1403
<i>Haipeng Dai, Meng Li, Alex X. Liu</i>	
BLOOM FILTER WITH A FALSE POSITIVE FREE ZONE	1412
<i>Sándor Kiss, Éva Hosszu, János Tapolcai, Lajos Rónyai, Ori Rottenstreich</i>	
DEEPDECISION: A MOBILE DEEP LEARNING FRAMEWORK FOR EDGE VIDEO ANALYTICS	1421
<i>Xukan Ran, Haoliang Chen, Xiaodan Zhu, Zhenming Liu, Jiasi Chen</i>	
A COMPUTING PLATFORM FOR VIDEO CROWDPROCESSING USING DEEP LEARNING	1430
<i>Zongqing Lu, Kevin S. Chan, Tom La Porta</i>	
SMART-U: SMART UTENSILS KNOW WHAT YOU EAT	1439
<i>Qianyi Huang, Zhice Yang, Qian Zhang</i>	
WORDRECORDER: ACCURATE ACOUSTIC-BASED HANDWRITING RECOGNITION USING DEEP LEARNING	1448
<i>Haishi Du, Ping Li, Hao Zhou, Wei Gong, Gan Luo, Panlong Yang</i>	
PPG-BASED FINGER-LEVEL GESTURE RECOGNITION LEVERAGING WEARABLES	1457
<i>Tianming Zhao, Jian Liu, Yan Wang, Hongbo Liu, Yingying Chen</i>	
LIPPASS: LIP READING-BASED USER AUTHENTICATION ON SMARTPHONES LEVERAGING ACOUSTIC SIGNALS	1466
<i>Li Lu, Jiadi Yu, Yingying Chen, Hongbo Liu, Yanmin Zhu, Yunfei Liu, Minglu Li</i>	
APPDNA: APP BEHAVIOR PROFILING VIA GRAPH-BASED DEEP LEARNING	1475
<i>Shuangshuang Xue, Lan Zhang, Anran Li, Xiang-Yang Li, Chaoyi Ruan, Wenchao Huang</i>	
UNDERSTANDING ETHEREUM VIA GRAPH ANALYSIS	1484
<i>Ting Chen, Yuxiao Zhu, Zihao Li, Jiachi Chen, Xiaoqi Li, Xiapu Luo, Xiaodong Lin, Xiaosong Zhang</i>	
A NOVEL GRAPH-BASED MECHANISM FOR IDENTIFYING TRAFFIC VULNERABILITIES IN SMART HOME IOT	1493
<i>Yizhen Jia, Yinhao Xiao, Jiguo Yu, Xiuzhen Cheng, Zhenkai Liang, Zhiguo Wan</i>	
GRAPH BASED TENSOR RECOVERY FOR ACCURATE INTERNET ANOMALY DETECTION	1502
<i>Kun Xie, Xiaocan Li, Xin Wang, Gaogang Xie, Jigang Wen, Dafang Zhang</i>	

PUNCTURABLE ATTRIBUTE-BASED ENCRYPTION FOR SECURE DATA DELIVERY IN INTERNET OF THINGS	1511
<i>Tran V. X. Phuong, Rui Ning, Hongyi Wu, Chunsheng Xin</i>	
SECTAP: SECURE BACK OF DEVICE INPUT SYSTEM FOR MOBILE DEVICES	1520
<i>Zhen Ling, Luo Junzhou, Yaowen Liu, Ming Yang, Kui Wu, Xinwen Fu</i>	
SFIRE: SECRET-FREE IN-BAND TRUST ESTABLISHMENT FOR COTS WIRELESS DEVICES	1529
<i>Nirmimesh Ghose, Loukas Lazos, Ming Li</i>	
WALLS HAVE EARS: TRAFFIC-BASED SIDE-CHANNEL ATTACK IN VIDEO STREAMING	1538
<i>Jiayi Gu, Jiliang Wang, Zhiwen Yu, Kele Shen</i>	
TALKING WHEN NO ONE IS LISTENING: PIGGYBACKING CITY-SCALE IOT CONTROL SIGNALS OVER LTE	1547
<i>Kunal Sankhe, Ufuk Muncuk, M. Yousof Naderi, Kaushik Chowdhury</i>	
IOT COMMUNICATION SHARING: SCENARIOS, ALGORITHMS AND IMPLEMENTATION	1556
<i>Chuang Hu, Wei Bao, Dan Wang</i>	
RED: RFID-BASED ECCENTRICITY DETECTION FOR HIGH-SPEED ROTATING MACHINERY	1565
<i>Yihun Zheng, Yuan He, Meng Jin, Xiaolong Zheng, Yunhao Liu</i>	
ACOUSTICCARDIOGRAM: MONITORING HEARTBEATS USING ACOUSTIC SIGNALS ON SMART DEVICES	1574
<i>Kun Qian, Chenshu Wu, Fu Xiao, Yue Zheng, Yi Zhang, Zheng Yang</i>	
ON USER MOBILITY IN DYNAMIC CLOUD RADIO ACCESS NETWORKS	1583
<i>Diala Naboulsi, Assia Mermouri, Razvan Stanica, Herve Rivano, Marco Fiore</i>	
ADAPTIVE DEMODULATION FOR WIRELESS SYSTEMS IN THE PRESENCE OF FREQUENCY-OFFSET ESTIMATION ERRORS	1592
<i>Hanif Rahbari, Peyman Siyari, Marwan Krunz, Jung-Min Park</i>	
ON THE EFFECT OF SHADOWING CORRELATION ON WIRELESS NETWORK PERFORMANCE	1601
<i>Junse Lee, Francois Baccelli</i>	
AN ONLINE APPROACH TO D2D TRAJECTORY UTILITY MAXIMIZATION PROBLEM	1610
<i>Amrit Singh Bedi, Ketan Rajawat, Marceau Coupechoux</i>	
THE CLOUD THAT RUNS THE MOBILE INTERNET: A MEASUREMENT STUDY OF MOBILE CLOUD SERVICES	1619
<i>Foivos Michelinakis, Hossein Doroud, Abbas Razaghpanah, Andra Lutu, Narseo Vallina-Rodriguez, Phillipa Gill, Joerg Widmer</i>	
SQUEEZING THE GAP: AN EMPIRICAL STUDY ON DHCP PERFORMANCE IN A LARGE-SCALE WIRELESS NETWORK	1628
<i>Haibo Wang, Jilong Wang, Weizhen Dang, JingAn Xue, Fenghua Li</i>	
FLUTES VS. CELLOS: ANALYZING MOBILITY-TRAFFIC CORRELATIONS IN LARGE WLAN TRACES	1637
<i>Babak Alipour, Leonardo Tonetto, Aaron Yi Ding, Jörg Ott, Roozbeh Ketabi, Ahmed Helmy</i>	
EMAIL AS A MASTER KEY: ANALYZING ACCOUNT RECOVERY IN THE WILD	1646
<i>Yue Li, Haining Wang, Kun Sun</i>	
RECONN: RECEIVER-DRIVEN OPERATING CHANNEL WIDTH ADAPTATION IN IEEE 802.11AC WLANS	1655
<i>Seongho Byeon, Hwijae Kwon, Youngwook Son, Changmok Yang, Sunghyun Choi</i>	
STABLE COMBINATORIAL SPECTRUM MATCHING	1664
<i>Yanjiao Chen, Long Lin, Guiyan Cao, Zhenzhong Chen, Baochun Li</i>	
AIRVIEW: UNSUPERVISED TRANSMITTER DETECTION FOR NEXT GENERATION SPECTRUM SENSING	1673
<i>Mariya Zheleva, Petko Bogdanov, Timothy Larock, Paul Schmitt</i>	
SPECTRUM PATROLLING WITH CROWDSOURCED SPECTRUM SENSORS	1682
<i>Ayon Chakraborty, Arani Bhattacharya, Samir R. Das, Snigdha Kamal, Himanshu Gupta, Petar M. Djuric</i>	
MULTI-TOUCH IN THE AIR: DEVICE-FREE FINGER TRACKING AND GESTURE RECOGNITION VIA COTS RFID	1691
<i>Chuyi Wang, Jian Liu, Yingying Chen, Hongbo Liu, Lei Xie, Wei Wang, Bingbing He, Sanglu Lu</i>	
ACCURATE AND EFFICIENT WIRELESS DEVICE FINGERPRINTING USING CHANNEL STATE INFORMATION	1700
<i>Jingyu Hua, Hongyi Sun, Zhenyu Shen, Zhiyun Qian, Sheng Zhong</i>	
VERNIER: ACCURATE AND FAST ACOUSTIC MOTION TRACKING USING MOBILE DEVICES	1709
<i>Yunting Zhang, Jiliang Wang, Weiyi Wang, Zhao Wang, Yunhao Liu</i>	
AEGIS: AN INTERFERENCE-NEGLIGIBLE RF SENSING SHIELD	1718
<i>Yao Yao, Yan Li, Xin Liu, Zicheng Chi, Wei Wang, Tiantian Xie, Ting Zhu</i>	
SPECTRAL GRAPH FORGE: GRAPH GENERATION TARGETING MODULARITY	1727
<i>Luca Baldesi, Carter T. Butts, Athina Markopoulou</i>	
QUANTIFYING GRAPH ANONYMITY, UTILITY, AND DE-ANONYMITY	1736
<i>Shouling Ji, Tianyu Du, Zhen Hong, Ting Wang, Raheem Beyah</i>	
CORRECTING THE OUTPUT OF APPROXIMATE GRAPH MATCHING ALGORITHMS	1745
<i>Joseph Lubars, R. Srikant</i>	
FAST BEEPING PROTOCOLS FOR DETERMINISTIC MIS AND $(\Delta + 1)$-COLORING IN SPARSE GRAPHS	1754
<i>Joffroy Beauquier, Janna Burman, Fabien Dufoulon, Shay Kutten</i>	
A FRAMEWORK FOR MIMO-BASED PACKET HEADER OBFUSCATION	1763
<i>Yue Cao, Ahmed Fathy Atya, Shailendra Singh, Zhiyun Qian, Srikanth V. Krishnamurthy, Tom La Porta, Prashant Krishnamurthy, Lisa Marvel</i>	

HERACLES: SCALABLE, FINE-GRAINED ACCESS CONTROL FOR INTERNET-OF-THINGS IN ENTERPRISE ENVIRONMENTS	1772
<i>Qian Zhou, Mohammed Elbadry, Fan Ye, Yuanyuan Yang</i>	
SECRET-FOCUS: A PRACTICAL PHYSICAL LAYER SECRET COMMUNICATION SYSTEM BY PERTURBING FOCUSED PHASES IN DISTRIBUTED BEAMFORMING	1781
<i>Xiaoran Fan, Zhijie Zhang, Wade Trappe, Yanyong Zhang, Richard Howard, Zhu Han</i>	
DYNAMIC DEFENSE STRATEGY AGAINST STEALTH MALWARE PROPAGATION IN CYBER-PHYSICAL SYSTEMS	1790
<i>Kaiming Xiao, Cheng Zhu, Junjie Xie, Yun Zhou, Xianqiang Zhu, Weiming Zhang</i>	
POLYNOMIAL-TIME WHAT-IF ANALYSIS FOR PREFIX-MANIPULATING MPLS NETWORKS	1799
<i>Stefan Schmid, Jiri Srba</i>	
TOWARD OPTIMAL STORAGE SCALING VIA NETWORK CODING: FROM THEORY TO PRACTICE	1808
<i>Xiaoyang Zhang, Yuchong Hu, Patrick Pak-Ching Lee, Pan Zhou</i>	
OPTIMIZING NETWORK RELIABILITY VIA BEST-FIRST SEARCH OVER DECISION DIAGRAMS	1817
<i>Masaaki Nishino, Takeru Inoue, Norihito Yasuda, Shin-ichi Minato, Masaaki Nagata</i>	
NETWORK TIMING, WEATHERING THE 2016 LEAP SECOND	1826
<i>Darryl Veitch, Yi Cao</i>	
COMPETITIVE ONLINE CONVEX OPTIMIZATION WITH SWITCHING COSTS AND RAMP CONSTRAINTS	1835
<i>Ming Shi, Xiaojun Lin, Sonia Fahmy, Dong-Hoon Shin</i>	
OPTIMIZING AGE OF INFORMATION IN WIRELESS NETWORKS WITH THROUGHPUT CONSTRAINTS	1844
<i>Igor Kadota, Abhishek Sinha, Eytan Modiano</i>	
LEARNING AIDED OPTIMIZATION FOR ENERGY HARVESTING DEVICES WITH OUTDATED STATE INFORMATION	1853
<i>Hao Yu, Michael J. Neely</i>	
HIGH-ORDER MOMENTUM: IMPROVING LATENCY AND CONVERGENCE FOR WIRELESS NETWORK OPTIMIZATION	1862
<i>Jia Liu</i>	
EXPERIENCE-DRIVEN NETWORKING: A DEEP REINFORCEMENT LEARNING BASED APPROACH	1871
<i>Zhiyuan Xu, Jian Tang, Jingsong Meng, Weiyi Zhang, Yanzhi Wang, Chi Harold Liu, Dejun Yang</i>	
OPTIMAL CONTROL OF DISTRIBUTED COMPUTING NETWORKS WITH MIXED-CAST TRAFFIC FLOWS	1880
<i>Jianan Zhang, Abhishek Sinha, Jaime Llorca, Antonia Tulino, Eytan Modiano</i>	
YOU CAN DROP BUT YOU CAN'T HIDE: K-PERSISTENT SPREAD ESTIMATION IN HIGH-SPEED NETWORKS	1889
<i>He Huang, Yu-e Sun, Shigang Chen, Shao-Jie Tang, Kai Han, Jing Yuan, Wenjian Yang</i>	
OPPORTUNISTIC MULTICHANNEL ACCESS WITH IMPERFECT OBSERVATION: A FIXED POINT ANALYSIS ON INDEXABILITY AND INDEX-BASED POLICY	1898
<i>Kehao Wang, Lin Chen, Jihong Yu, Moe Win</i>	
MAXIMIZING PROFIT OF CLOUD SERVICE BROKERAGE WITH ECONOMIC DEMAND RESPONSE	1907
<i>Ting Deng, Jianguo Yao, Haibing Guan</i>	
VIRTUAL REDUNDANCY FOR ACTIVE-STANDBY CLOUD APPLICATIONS	1916
<i>Gueyoung Jung, Parisa Rahimzadeh, Zhang Liu, Sangtae Ha, Kaustubh Joshi, Matti Hiltunen</i>	
CONTRACTS AS INVESTMENT BARRIERS IN UNLICENSED SPECTRUM	1925
<i>Yining Zhu, Randall A. Berry</i>	
MARKET YOUR VENUE WITH MOBILE APPLICATIONS: COLLABORATION OF ONLINE AND OFFLINE BUSINESSES	1934
<i>Haoran Yu, George Iosifidis, Binying Shou, Jianwei Huang</i>	
JOINT VNF PLACEMENT AND CPU ALLOCATION IN 5G	1943
<i>Satyam Agarwal, Francesco Malandrino, Carla Fabiana Chiasserini, Swades De</i>	
ENABLING QUALITY-DRIVEN SCALABLE VIDEO TRANSMISSION OVER MULTI-USER NOMA SYSTEM	1952
<i>Xiaoda Jiang, Hancheng Lu, Chang Wen Chen</i>	
FML: FAST MACHINE LEARNING FOR 5G MMWAVE VEHICULAR COMMUNICATIONS	1961
<i>Arash Asadi, Sabrina Müller, Gek Hong Sim, Anja Klein, Matthias Hollick</i>	
JOINT SCHEDULING OF URLLC AND EMBB TRAFFIC IN 5G WIRELESS NETWORKS	1970
<i>Arjun Anand, Gustavo de Veciana, Sanjay Shakkottai</i>	
FROM UNCERTAIN PHOTOS TO CERTAIN COVERAGE: A NOVEL PHOTO SELECTION APPROACH TO MOBILE CROWDSENSING	1979
<i>Tongqing Zhou, Bin Xiao, Zhiping Cai, Ming Xu, Xuan Liu</i>	
NON-INTERACTIVE PRIVACY-PRESERVING TRUTH DISCOVERY IN CROWD SENSING APPLICATIONS	1988
<i>Xiaoting Tang, Cong Wang, Xingliang Yuan, Qian Wang</i>	
SPATIOTEMPORAL SCHEDULING FOR CROWD AUGMENTED URBAN SENSING	1997
<i>Qiuxi Zhu, M. Y. S. Uddin, Nalini Venkatasubramanian, Cheng-Hsin Hsu</i>	
AN ONLINE LEARNING APPROACH TO NETWORK APPLICATION OPTIMIZATION WITH GUARANTEE	2006
<i>Kechao Cai, Xutong Liu, Yu-Zhen Janice Chen, John Chi Shing Lui</i>	

I CAN HEAR MORE: PUSHING THE LIMIT OF ULTRASOUND SENSING ON OFF-THE-SHELF MOBILE DEVICES	2015
<i>Yuchi Chen, Wei Gong, Jiangchuan Liu, Yong Cui</i>	
MOTION-FI: RECOGNIZING AND COUNTING REPETITIVE MOTIONS WITH PASSIVE WIRELESS BACKSCATTERING	2024
<i>Ning Xiao, Panlong Yang, Yubo Yan, Hao Zhou, Xiang-Yang Li</i>	
EFFICIENT JOBS DISPATCHING IN EMERGING CLOUDS	2033
<i>Shimon Bitton, Yuval Emek, Shay Kutten</i>	
ONLINE PARTIAL THROUGHPUT MAXIMIZATION FOR MULTIDIMENSIONAL COFLOW	2042
<i>Sungjin Im, Maryam Shadloo, Zizhan Zheng</i>	
MINING LONG-TERM STEALTHY USER BEHAVIORS ON HIGH SPEED LINKS	2051
<i>Pinghui Wang, Peng Jia, Jing Tao, Xiaohong Guan</i>	
CERTCHAIN: PUBLIC AND EFFICIENT CERTIFICATE AUDIT BASED ON BLOCKCHAIN FOR TLS CONNECTIONS	2060
<i>Jing Chen, Shixiong Yao, Quan Yuan, Kun He, Shouling Ji, Ruiying Du</i>	
ONIS: INFERRING TCP/IP-BASED TRUST RELATIONSHIPS COMPLETELY OFF-PATH	2069
<i>Xu Zhang, Jeffrey Knockel, Jedidiah Crandall</i>	
GAME THEORETIC CHARACTERIZATION OF COLLUSIVE BEHAVIOR AMONG ATTACKERS	2078
<i>Abhishek Roy, Prasant Mohapatra, Charles A. Kamhoua</i>	
PRIVATE DIGGING: ENABLING TREE-BASED DISTRIBUTED DATA MINING WITH DIFFERENTIAL PRIVACY	2087
<i>Lingchen Zhao, Lihao Ni, Shengshan Hu, Yanjiao Chen, Pan Zhou, Fu Xiao, Libing Wu</i>	
DESIGNING OPTIMAL MIDDLEBOX RECOVERY SCHEMES WITH PERFORMANCE GUARANTEES	2096
<i>Yossi Kanizo, Ori Rottenstreich, Itai Segall, Jose Yallouz</i>	
A TRACTABLE STOCHASTIC MODEL OF CORRELATED LINK FAILURES CAUSED BY DISASTERS	2105
<i>János Tapolcai, Balázs Vass, Zalan Heszbeger, Jozsef Biro, David Hay, Fernando A. Kuipers, Lajos Rónyai</i>	
ADELE: ANOMALY DETECTION FROM EVENT LOG EMPIRICISM	2114
<i>Subhendu Khatuya, Niloy Ganguly, Jayanta Basak, Madhumita Bharde, Bivas Mitra</i>	
A TALE OF TWO METRICS IN NETWORK DELAY OPTIMIZATION	2123
<i>Qingyu Liu, Lei Deng, Haibo Zeng, Minghua Chen</i>	
SHORTEST PATH AND MAXIMUM FLOW PROBLEMS UNDER SERVICE FUNCTION CHAINING CONSTRAINTS	2132
<i>Gamal Sallam, Gagan R. Gupta, Bin Li, Bo Ji</i>	
ON THE OPTIMAL MONITOR PLACEMENT FOR INFERRING ADDITIVE METRICS OF INTERESTED PATHS	2141
<i>Rongwei Yang, Cuiying Feng, Luning Wang, Weiwei Wu, Kui Wu, Jianping Wang, Yinlong Xu</i>	
OPTIMIZING NFV CHAIN DEPLOYMENT THROUGH MINIMIZING THE COST OF VIRTUAL SWITCHING	2150
<i>Yaniv Sa'ar, Danny Raz, Marcelo Caggiani Luizelli</i>	
ONLINE KNAPSACK PROBLEM UNDER EXPECTED CAPACITY CONSTRAINT	2159
<i>Rahul Vaze</i>	
TOWARDS REPEATABLE WIRELESS NETWORK SIMULATION USING PERFORMANCE AWARE MARKOV MODEL	2168
<i>Zhiwei Zhao, Wei Dong, Geyong Min, Gonglong Chen, Tao Gu, Jiajun Bu</i>	
A RESOURCE ALLOCATION FRAMEWORK FOR NETWORK SLICING	2177
<i>Mathieu Leconte, Georgios S. Paschos, Panayotis Mertikopoulos, Ulas Can Kozat</i>	
PERCOLATION-BASED NETWORK ADAPTABILITY UNDER CORRELATED FAILURES	2186
<i>Jin-Hee Cho, Terrence J. Moore</i>	
BUILDING GENERIC SCALABLE MIDDLEBOX SERVICES OVER ENCRYPTED PROTOCOLS	2195
<i>Cong Liu, Yong Cui, Kun Tan, Quan Fan, Kui Ren, Jianping Wu</i>	
PAY FOR A SLIDING BLOOM FILTER AND GET COUNTING, DISTINCT ELEMENTS, AND ENTROPY FOR FREE	2204
<i>Eran Assaf, Ran Ben Basat, Gil Einziger, Roy Friedman</i>	
SEAF: A SECURE, EFFICIENT AND ACCOUNTABLE ACCESS CONTROL FRAMEWORK FOR INFORMATION CENTRIC NETWORKING	2213
<i>Kaiping Xue, Xiang Zhang, Qiudong Xia, David Wei, Hao Yue, Feng Wu</i>	
INSTANTCRYPTOGRAM: SECURE IMAGE RETRIEVAL SERVICE	2222
<i>Minghui Li, Mingxue Zhang, Qian Wang, Sherman S. M. Chow, Minxin Du, Yanjiao Chen, Chenliang Li</i>	
DEEP DIVING INTO AFRICA'S INTER-COUNTRY LATENCIES	2231
<i>Agustin Formoso, Josiah Chavula, Amreesh Phokeer, Arjuna Sathiseelan, Gareth Tyson</i>	
CAN WE LEARN WHAT PEOPLE ARE DOING FROM RAW DNS QUERIES?	2240
<i>Jianfeng Li, Xiaobo Ma, Li Guodong, Xiapu Luo, Junjie Zhang, Wei Li, Xiaohong Guan</i>	
INFERRING CARRIER-GRADE NAT DEPLOYMENT IN THE WILD	2249
<i>Ioana Livadariu, Karyn Benson, Ahmed Mustafa Elmokashfi, Amogh Dhamdhere, Alberto Dainotti</i>	
AN EFFICIENT FRAMEWORK FOR DETECTING EVOLVING ANOMALOUS SUBGRAPHS IN DYNAMIC NETWORKS	2258
<i>Minglai Shao, Li Jianxin, Feng Chen, Xunxun Chen</i>	
HIGH THROUGHPUT LOW DELAY WIRELESS MULTICAST VIA MULTI-CHANNEL MOVING WINDOW CODES	2267
<i>Fei Wu, Yin Sun, Lu Chen, Jiaqi Xu, Kannan Srinivasan, Ness B. Shroff</i>	

CHASE++: FOUNTAIN-ENABLED FAST FLOODING IN ASYNCHRONOUS DUTY CYCLE NETWORKS	2276
<i>Zhichao Cao, Jiliang Wang, Daibo Liu, Xin Miao, Qiang Ma, Xufei Mao</i>	
LINEAR BLOCK CODING FOR EFFICIENT BEAM DISCOVERY IN MILLIMETER WAVE COMMUNICATION NETWORKS	2285
<i>Yahia Shabara, Can Emre Koksak, Eylem Ekici</i>	
CAPS: CODING-BASED ADAPTIVE PACKET SPRAYING TO REDUCE FLOW COMPLETION TIME IN DATA CENTER	2294
<i>Jimbin Hu, Jiawei Huang, Wenjun Lv, Yutao Zhou, Jianxin Wang, Tian He</i>	
VIRTUAL NETWORK RECONFIGURATION WITH LOAD BALANCING AND MIGRATION COST CONSIDERATIONS	2303
<i>Lingnan Gao, George N. Rouskas</i>	
JOINT SELECTION AND SCHEDULING OF COMMUNICATION REQUESTS IN MULTI-CHANNEL WIRELESS NETWORKS UNDER SINR MODEL	2312
<i>Peng-Jun Wan, Huaqiang Yuan, Jiliang Wang, Ju Ren, Yaoxue Zhang</i>	
ANALYSIS OF HYBRID GEOGRAPHIC/DELAY-TOLERANT ROUTING PROTOCOLS FOR WIRELESS MOBILE NETWORKS	2321
<i>Riccardo Cavallari, Stavros Toumpis, Roberto Verdone</i>	
INFORMATION THEORETICAL ANALYSIS OF SYNAPTIC COMMUNICATION FOR NANONETWORKS	2330
<i>Hamideh Ramezani, Tooba Khan, Ozgur B. Akan</i>	
COLLABORATIVE UPLOADING IN HETEROGENEOUS NETWORKS: OPTIMAL AND ADAPTIVE STRATEGIES	2339
<i>Wasiur R. KhudaBukhsh, Bastian Alt, Sounak Kar, Amr Rizk, Heinz Koepl</i>	
ONLINE LEARNING BASED UPLINK SCHEDULING IN HETNETS WITH LIMITED BACKHAUL CAPACITY	2348
<i>Zhenhua Han, Haisheng Tan, Rui Wang, Shaojie Tang, Francis C.M. Lau</i>	
PR³: POWER EFFICIENT AND LOW LATENCY BASEBAND PROCESSING FOR LTE FEMTOCELLS	2357
<i>Nishant Budhdev, Mun Choon Chan, Tulika Mitra</i>	
FLUIDRAN: OPTIMAL VRAN/MEC ORCHESTRATION	2366
<i>Andres Garcia-Saavedra, Xavier Costa-Perez, Douglas Leith, George Iosifidis</i>	
FOLLOWING THE SHADOW: AGILE 3-D BEAM-STEERING FOR 60 GHZ WIRELESS NETWORKS	2375
<i>Anfu Zhou, Leilei Wu, Shaoqing Xu, Huadong Ma, Teng Wei, Xinyu Zhang</i>	
INDOOR LOCALIZATION USING COMMERCIAL OFF-THE-SHELF 60 GHZ ACCESS POINTS	2384
<i>Guillermo Bielsa, Joan Palacios, Adrian Loch, Daniel Steinmetzer, Paolo Casari, Joerg Widmer</i>	
EFFICIENT BEAM ALIGNMENT IN MILLIMETER WAVE SYSTEMS USING CONTEXTUAL BANDITS	2393
<i>Morteza Hashemi, Ness B. Shroff, Can Emre Koksak, Ashutosh Sabharwal</i>	
COMMUNICATION-DRIVEN LOCALIZATION AND MAPPING FOR MILLIMETER WAVE NETWORKS	2402
<i>Joan Palacios, Guillermo Bielsa, Paolo Casari, Joerg Widmer</i>	
TOWARDS PERSONALIZED TASK MATCHING IN MOBILE CROWDSENSING VIA FINE-GRAINED USER PROFILING	2411
<i>Shuo Yang, Kunyan Han, Zhenzhe Zheng, Shaojie Tang, Fan Wu</i>	
DYNAMIC TASK ASSIGNMENT IN CROWDSENSING WITH LOCATION AWARENESS AND LOCATION DIVERSITY	2420
<i>Xiong Wang, Riheng Jia, Xiaohua Tian, Xiaoying Gan</i>	
A CONSTRAINED MAXIMUM LIKELIHOOD ESTIMATOR FOR UNGUIDED SOCIAL SENSING	2429
<i>Huajie Shao, Shuochoao Yao, Yiran Zhao, Chao Zhang, Jinda Han, Lance Kaplan, Lu Su, Tarek Abdelzaker</i>	
SYBIL-PROOF ONLINE INCENTIVE MECHANISMS FOR CROWDSENSING	2438
<i>Jian Lin, Ming Li, Dejun Yang, Guoliang Xue</i>	
SMALL-SCALE MARKETS FOR BILATERAL RESOURCE TRADING IN THE SHARING ECONOMY	2447
<i>Bainan Xia, Srinivas G. Shakkottai, Vijay Subramanian</i>	
OCCUPATION-OBVIOUS PRICING OF CLOUD JOBS VIA ONLINE LEARNING	2456
<i>Xiaoxi Zhang, Chuan Wu, Zhiyi Huang, Zongpeng Li</i>	
AN INVESTIGATION INTO ANDROID IN-APP AD PRACTICE: IMPLICATIONS FOR APP DEVELOPERS	2465
<i>Boyuan He, Haitao Xu, Ling Jin, Guanyu Guo, Yan Chen, Guangyao Weng</i>	
OPTIMIZING DATA PLANS: USAGE DYNAMICS IN MOBILE DATA NETWORKS	2474
<i>Liang Zheng, Carlee Joe-Wong, Matthew Andrews, Mung Chiang</i>	
ROBUST MULTI-STAGE POWER GRID OPERATIONS WITH ENERGY STORAGE	2483
<i>Yihan Zou, Xiaojun Lin, Dionysios Aliprantis, Minghua Chen</i>	
EV CHARGING NETWORK DESIGN WITH TRANSPORTATION AND POWER GRID CONSTRAINTS	2492
<i>Yongmin Zhang, Jiayi Chen, Lin Cai, Jianping Pan</i>	
HOW CAN CYBER-PHYSICAL INTERDEPENDENCE AFFECT THE MITIGATION OF CASCADING POWER FAILURE?	2501
<i>Mingkui Wei, Zhuo Lu, Yufei Tang, Xiang Lu</i>	
RESTRICTING INVOLUNTARY EXTENSION OF FAILURES IN SMART GRIDS USING SOCIAL NETWORK METRICS	2510
<i>Jose Cordova Garcia, Dongliang Xie, Xin Wang</i>	
PRIVACY RISK ASSESSMENT ON EMAIL TRACKING	2519
<i>Haitao Xu, Shuai Hao, Alparslan Sari, Haining Wang</i>	
RANDOMIZED VIEW RECONCILIATION IN PERMISSIONLESS DISTRIBUTED SYSTEMS	2528
<i>Ruomu Hou, Irvan Jahja, Loi Luu, Prateek Saxena, Haifeng Yu</i>	

TOWARDS FINE-GRAINED FINGERPRINTING OF FIRMWARE IN ONLINE EMBEDDED DEVICES	2537
<i>Qiang Li, Xuan Feng, Haining Wang, Zhi Li, Limin Sun</i>	
STOCHASTIC MODELS AND WIDE-AREA NETWORK MEASUREMENTS FOR BLOCKCHAIN DESIGN AND ANALYSIS	2546
<i>Nikolaos Papadis, Sem Borst, Anwar Walid, Mohamed Grissa, Leandros Tassioulas</i>	
PROACTIVE VIDEO PUSH FOR OPTIMIZING BANDWIDTH CONSUMPTION IN HYBRID CDN-P2P VOD SYSTEMS	2555
<i>Yuanxing Zhang, Chengliang Gao, Yangze Guo, Kaigui Bian, Xin Jin, Zhi Yang, Lingyang Song, Jiangang Cheng, Hu Tuo, XiaoMing Li</i>	
PAID PEERING, SETTLEMENT-FREE PEERING, OR BOTH?	2564
<i>Xin Wang, Yinlong Xu, Richard T. B. Ma</i>	
MODE-SUPPRESSION: A SIMPLE AND PROVABLY STABLE CHUNK-SHARING ALGORITHM FOR P2P NETWORKS	2573
<i>Vamseedhar R. R. Raja, Srinivas G. Shakkottai, Parimal Parag</i>	
ON THE DISTRIBUTED COMPUTATION OF LOAD CENTRALITY AND ITS APPLICATION TO DV ROUTING	2582
<i>Leonardo Maccari, Lorenzo Ghio, Alessio Guerrieri, Alberto Montresor, Renato Lo Cigno</i>	
A SIMPLE MODEL OF MTC IN SMART FACTORIES	2591
<i>Paolo Castagno, Vincenzo Mancuso, Matteo Sereno, Marco G. A. Marsan</i>	
FUNDAMENTAL LIMITS OF WIRELESS DISTRIBUTED COMPUTING NETWORKS	2600
<i>Mingyue Ji, Rong-Rong Chen</i>	
TO ACCEPT OR NOT TO ACCEPT: THE QUESTION OF SUPPLEMENTAL DISCOUNT OFFERS IN MOBILE DATA PLANS	2609
<i>Madhumitha Harishankar, Nagarjun Srinivasan, Carlee Joe-Wong, Patrick Tague</i>	
IT'S ALL IN THE NAME: WHY SOME URLS ARE MORE VULNERABLE TO TYPOSQUATTING	2618
<i>Rashid Tahir, Ali Raza, Faizan Ahmad, Jehangir Kazi, Fareed Zaffar, Chris Kanich, Matthew Caesar</i>	
HIGHLY COMPACT VIRTUAL ACTIVE COUNTERS FOR PER-FLOW TRAFFIC MEASUREMENT	2627
<i>You Zhou, Yian Zhou, Shigang Chen, Youlin Zhang</i>	
FAST OPENFLOW TABLE LOOKUP WITH FAST UPDATE	2636
<i>Tong Yang, Alex X. Liu, Yulong Shen, Qiaobin Fu, Dagang Li, XiaoMing Li</i>	
CUTSPLIT: A DECISION-TREE COMBINING CUTTING AND SPLITTING FOR SCALABLE PACKET CLASSIFICATION	2645
<i>Wenjun Li, Xianfeng Li, Hui Li, Gaogang Xie</i>	
BYTECUTS: FAST PACKET CLASSIFICATION BY INTERIOR BIT EXTRACTION	2654
<i>James Daly, Eric Tornø</i>	
ON SPATIAL AND TEMPORAL VARIATIONS IN ULTRA DENSE WIRELESS NETWORKS	2663
<i>Pranav Madadi, Francois Baccelli, Gustavo de Veciana</i>	
OPTIMAL ACTIVATION RATES IN ULTRA-DENSE WIRELESS NETWORKS WITH INTERMITTENT TRAFFIC SOURCES	2672
<i>Fabio Cecchi, Sem Borst, Johan van Leeuwen, Philip Whiting</i>	
JOINT OPTIMIZATION OF USER ASSOCIATION AND DYNAMIC TDD FOR ULTRA-DENSE NETWORKS	2681
<i>Nikolaos Sapountzis, Thrasyvoulos Spyropoulos, Navid Nikaiein, Umer Salim</i>	
ROBUST USER ASSOCIATION FOR ULTRA DENSE NETWORKS	2690
<i>Nikolaos Liakopoulos, Georgios S. Paschos, Thrasyvoulos Spyropoulos</i>	
OPTIMAL DEMAND-AWARE RIDE-SHARING ROUTING	2699
<i>Qiulin Lin, Lei Deng, Jingzhou Sun, Minghua Chen</i>	
MOVI: A MODEL-FREE APPROACH TO DYNAMIC FLEET MANAGEMENT	2708
<i>Takuma Oda, Carlee Joe-Wong</i>	
DISTRIBUTED TRIP SELECTION GAME FOR PUBLIC BIKE SYSTEM WITH CROWDSOURCING	2717
<i>Jianhui Zhang, Pengqian Lu, Zhi Li, Jiayu Gan</i>	
MOBICROWD: MOBILE CROWDSOURCING ON LOCATION-BASED SOCIAL NETWORKS	2726
<i>Yulong Tian, Wei Wei, Qun Li, Fengyuan Xu, Sheng Zhong</i>	
CROWDBUY: PRIVACY-FRIENDLY IMAGE DATASET PURCHASING VIA CROWDSOURCING	2735
<i>Lan Zhang, Yannan Li, Xiang Xiao, Xiang-Yang Li, Junjun Wang, Anxin Zhou, Qiang Li</i>	
OPTIMAL CACHE LEASING FROM A MOBILE NETWORK OPERATOR TO A CONTENT PROVIDER	2744
<i>Jonatan Krolkowski, Anastasios Giovanidis, Marco Di Renzo</i>	
DOMINANT STRATEGY ALLOCATION OF DIVISIBLE NETWORK RESOURCES WITH LIMITED INFORMATION EXCHANGE	2753
<i>Hao Ge, Randall A. Berry</i>	
LEARNING CLOUD DYNAMICS TO OPTIMIZE SPOT INSTANCE BIDDING STRATEGIES	2762
<i>Mikhail Khodak, Liang Zheng, Andrew Lan, Carlee Joe-Wong, Mung Chiang</i>	
Author Index	