

## IPCCC 2017 Program Draft

### Sunday (12/10)

|              |  |                        |
|--------------|--|------------------------|
| 8:15-8:30    | Opening Remarks  |                        |
| 8:30-9:45    | Keynote (Dr. K. K. Ramakrishnan)                       |                        |
| 9:45-10:00   | Break  |                        |
| 10:00-12:00  | Session 1.1 (5 papers - Best paper candidates session) |                        |
| 12:00-1:15   | Lunch  |                        |
| 1:15 - 3:15  | Session 1.2 (5 Papers)                                 | Session 1.3 (5 Papers) |
| 3:15-3:30    | Break  |                        |
| 3:30-5:30    | Session 1.4 (5 Papers)                                 | Session 1.5 (5 Papers) |
| 6:00-8:00 pm | Reception & Poster Session                             |                        |

### Monday(12/11)

|             |                           |                        |
|-------------|---------------------------|------------------------|
| 8:15-8:30   | Opening Remarks           |                        |
| 8:30-9:45   | Keynote (Dr. Wenjing Lou) |                        |
| 9:45-10:00  | Break                     |                        |
| 10:00-12:00 | Session 2.1 (5 papers)    | Session 2.2(5 papers)  |
| 12:00-1:15  | Lunch                     |                        |
| 1:15 - 3:15 | Session 2.3 (5 Papers)    | Session 2.4 (5 Papers) |
| 3:15-3:30   | Break                     |                        |
| 3:30-5:30   | Session2.5 (5 Papers)     | Session 2.6 (5 Papers) |

### Tuesday (Workshop session)

|             |                        |
|-------------|------------------------|
| 8:15-8:30   | Opening Remarks        |
| 8:30-10:30  | Session 3.1 (5 papers) |
| 10:30-10:45 | Break                  |
| 10:45-12:45 | Session 3.2 (5 papers) |

### Session 1.1 Best Paper Candidates

#### Chair: Xubin He

1. Bo Wu, Ke Xu, Qi Li, Fan Yang, "Robust and Lightweight Fault Localization"
2. Yajun Yu, Mingwei Xu, Yuan Yang, "When QUIC Meets TCP: an Experimental Study"
3. Jinping Yu, Xinxin Fan, Guoqiang Zhang, Jingping Bi, "Scheduling Loop-free Updates for Multiple Policies with Overlaps in Software-Defined Networks"
4. Zhengyu Yang, Morteza Hoseinzadeh, Ping Wong, John Artoux, Clay Mayers, David Evans, Rory Bolt, Janki Bhimani, Ningfang Mi, Steven Swanson, "H-NVMe: A Hybrid Framework of NVMe-based Storage System in Cloud Computing Environment"
5. Yang Chen, Jie Wu, "Link-Based Fine Granularity Flow Migration in SDNs to Reduce Packet Loss"

### Session 1.2 Data Center and Cloud Computing

#### Chair: Ningfang Mi

1. Zhengyu Yang, Morteza Hoseinzadeh, Allen Andrews, Clay Mayers, David Evans, Rory Bolt, Janki Bhimani, Ningfang Mi, Steven Swanson, "AutoTiering: Automatic Data Placement Manager in Multi-Tier All-Flash Datacenter"

2. Xin Li, Jie Wu, Zhuzhong Qian, Shaojie Tang, Sanglu Lu, "Towards Location-aware Joint Job and Data Assignment in Cloud Data Centers with NVM"
3. Ziyang Song, Ting Zhang, Qing Li, Guang Yang, Yong Jiang, "START: Sensible Traffic Scheduling in Dynamic Data Center Networks"
4. Biyu Zhou, Jie Wu, Fa Zhang, Zhiyong Liu, "Resource Optimization for Survivable Embedding of Virtual Clusters in Cloud Data Centers"
5. Shuaibing Lu, Zhiyi Fang, Jie Wu, Guannan Qu, "Elastic Scaling of Virtual Clusters in Cloud Data Center Networks"

### **Session 1.3 Mobile and Wireless Networks**

**Chair: JJ Garcia-Luna-Aceves**

1. Catalina Aranzazu-Suescun, Mihaela Cardei, "Spatio-Temporal Event Detection and Reporting in Mobile-Sink Wireless Sensors Networks"
2. Zhuo Jiang, Qian Wu, Hewu Li, Jianping Wu, "Can MPTCP increase system efficiency and fairness in 802.11 multirate WLAN environment?"
3. J.J. Garcia-Luna-Aceves, "Avoiding Interference from Hidden Terminals with Carrier Tones"
4. Haizhou Bao, Qin Liu, Chuanhe Huang, Xiaohua Jia, "Minimal Road-Side Unit Placement for Delay-Bounded Applications in Bus Ad-hoc Networks"
5. J.J. Garcia-Luna-Aceves, Spencer Thompson, Joshua Stern, "Time-Based Persistence in Channel-Access Protocols with Carrier Sensing"

### **Session 1.4 Recovery, optimization and beyond**

**Chair: Hongliang Li**

- Hongliang Li, Jie Wu, Zhen Jiang, Xiang Li, Xiaohui Wei, Yuan Zhuang, "Integrated Recovery and Task Allocation for Stream Processing"
- Abdel-Hameed A. Badawy, Donald Yeung, "Optimizing Locality in Graph Computations using Reuse Distance Profiles"
- Wenlong Tian, Ruixuan Li, Zhiyong Xu, Weijun Xiao, "Does the Content Defined Chunking Really Solve the Local Boundary Shift Problem?"
- Xiaoyun Zhang, Daji Qiao, "On Minimizing the Maximum Sensor Movement to Construct a Horizontal Barrier"
- Hai Zhu, Fu Xiao, Lijuan Sun, Xiaohui Xie, Ruchuan Wang, "Robust Passive Static Human Detection with Commodity WiFi Devices"

### **Session 1.5 Security and Privacy**

**Chair: Tingting Chen**

1. Xin Liang, Xiaolin Gui, Jian An, Dewang Ren, "Mitigating Cloud Co-Resident Attacks via Grouping-based Virtual Machine Placement Strategy"
2. Fudong Qiu, Fan Wu, Xiaofeng Gao, Guihai Chen, "A Privacy-preserving Combinatorial Auction Mechanism for Spectrum Redistribution"
3. Fei Xu, Haiqing Pan, Zigang Cao, Zhen Li, Gang Xiong, Yangyang Guan, Siu Ming Yiu, "Identifying Malware with HTTP Content Type Inconsistency via Header-Payload Comparison"

4. Yihao Jia, Ying Liu, Gang Ren, Lin He, "Revisiting inter-AS IP Spoofing Let the Protection Drive Source Address Validation"
5. Jing Zheng, Jianhua Sun, Kun Sun, Bo Wu, Qi Li, "Cookie-based Amplification Repression Protocol"

### **Session 2.1 Cache, Memory, and Storage Systems**

#### **Chair: Jehan Francois Paris**

1. Xiaodong Zhu, Jinlin Wang, Lingfang Wang, Weining Qi, "Popularity-based Neighborhood Collaborative Caching for Information-Centric Networks"
2. Jehan-Francois Paris, Veronica Estrada-Galinanes, Ahmed Amer, Carlos Rincon, "Using Entanglements to Increase the Reliability of Two-Dimensional Square RAID Arrays"
3. Han Zhang, Xingang Shi, Yingya Guo, Haijun Geng, Zhiliang Wang, Xia Yin, "Joint source selection and transfer optimization for erasure coding storage system"
4. Zhixiang Mao, Shengan Zheng, Linpeng Huang, Yanyan Shen, "A DAX-enabled Mmap Mechanism for Log-structured In-memory File Systems"
5. Jannatun Noor, Hasan Ibna Akbar, Ruhul Amin Sujon, A. B. M. Alim Al Islam, "Secure Processing-aware Media Storage (SPMS)"

### **Session 2.2 Crowdsourcing and Mobile Crowdsensing**

#### **Chair: Mea Wang**

1. Zhenyu Ju, Chuanhe Huang, Yanjiao Chen, Lin Ma, "A Truthful Auction Mechanism for Resource Provisioning in Mobile Crowdsensing"
2. Mohamed Abdelaal, Mohammad Qaid, Frank Dürr, Kurt Rothermel, "iSense: Energy-Aware Crowd-Sensing Framework"
3. Yangsu Liu, Zhenzhe Zheng, Fan Wu, Xiaofeng Gao, Guihai Chen, "Fault Tolerant Mechanism Design for Time Coverage in Crowdsensing System"
4. Luoyao Hao, Chengming Jin, Xiaofeng Gao, Fan Wu, Guihai Chen, "Towards Cost-Effective and Budget-Balanced Task Allocation in Crowdsourcing Systems"
5. Georges A. Kamhoua, Niki Pissinou, S.S. Iyengar, Jonathan Beltran, Jerry Miller, Charles A. Kamhoua, Laurent L. Njilla, "Approach to Detect Non-Adversarial Overlapping Collusion in Crowdsourcing"

### **Session 2.3 Internet Service and Management**

#### **Chair: Peipei Fu**

1. Zengyin Yang, Hewu Li, Qian Wu, Jianping Wu, "Analyzing and Optimizing BGP Stability in Future Space-Based Internet"
2. Xiaohui Nie, Youjian Zhao, Guo Chen, Kaixin Sui, Yazheng Chen, Dan Pei, Miao Zhang, Jiyang Zhang, "TCP WISE: One initial Congestion Window Is Not Enough"
3. Hemin Yang, Jared Ivey, George F. Riley, "Scalability Comparison of SDN Control Plane Architectures Based on Simulations"
4. Tran Phuong Thao, Adetokunbo Makanju, Ayumu Kubota, "Anonymous and Analysable Web Browsing"
5. Ziqing Zhang, Cuicui Kang, Peipei Fu, Zigang Cao, Zhen Li, Gang Xiong, "Metric Learning With Statistical Features For Network Traffic Classification"

## **Session 2.4 Performance and Modeling**

### **Chair: Fatih Berber**

1. Alan Hylton, Greg Henselman-Petrusek, Janche Sang, Robert Short, "Performance Enhancement of a Computational Persistent Homology Package"
2. Fatih Berber, Ramin Yahyapour, "Response Time Speedup of Multi-Tier Internet Systems"
3. Luoyao Hao, Chengming Jin, Xiaofeng Gao, Linghe Kong, Fan Wu, Guihai Chen, "QoE-Aware Optimization for SVC-Based Adaptive Streaming in D2D Communications"
4. Xiaoguang Niu, Zhen Wang, Qiongzan Ye, Yihao Zhang, Jiawei Wang, "A Hierarchical-Learning-based Crowdedness Estimation Mechanism for Crowdsensing Buses"

## **Session 2.5 Many-core and Heterogenous Computing**

### **Chair: Ying Mao**

1. Minh Quan Ho, Christian Obrecht, Bernard Tourancheau, Benoit Dupont de Dinechin, Julien Hascoet, "Improving 3D Lattice Boltzmann Method stencil with asynchronous transfers on many-core processors"
2. Feng Sheng, Qiang Cao, Haoran Cai, Jie Yao, Changsheng Xie, "Laro: Lazy Repartitioning for Graph Workloads on Heterogeneous Clusters"
3. Ying Mao, Jenna Oak, Anthony Pompili, Daniel Beer, Tao Han, Peizhao Hu, "DRAPS: Dynamic and Resource-Aware Placement Scheme for Docker Containers in a Heterogeneous Cluster"
4. Xue Ouyang, Huan Zhou, Stephen Clement, Paul Townend, Jie Xu, "Mitigate Data Skew Caused Stragglers through ImKP Partition in MapReduce"
5. Fangxiao Ning, Yu Wen, Gang Shi, Dan Meng, "Efficient Tamper-Evident logging of Distributed Systems via Concurrent Authenticated Tree"

## **Session 2.6 IoT and Smart Grids**

### **Chair: Alan Hylton**

- Junjie Wang, Jinyang Li, Tianshu Pang, Xiaoshan Sun, Qi Liu, Hengchang Liu, "Towards a Holistic and Optimized Framework for Smart Grid Regulation"
- Yu Chen, Hong Li, Weiwei Zhao, Lin Zhang, Zhongjin Liu, Zhiqiang Shi, "IHB: A Scalable and Efficient Scheme to Identify Homologous Binaries in IoT Firmwares"
- Chang Liu, Lingwu Zeng, Junzheng Shi, Fei Xu, Gang Xiong, Siu Ming Yiu, "Auto-identification of Background Traffic Based on Autonomous Periodic Interaction"
- Luis Felipe Zapata-Rivera, Catalina Aranzazu-Suescun, Imadeldin Mahgoub, "An Energy-aware Collaborative Multi-agent System for Autonomous Underwater Vehicles"
- Donghe Li, Qingyu Yang, Wei Yu, Dou An, Xinyu Yang, Wei Zhao, "A Strategy-proof Privacy-preserving Double Auction Mechanism for Electrical Vehicles Demand Response in Microgrids"

## **Poster**

1. Meixuan Li, Yu-e Sun, He Huang, Jing Yuan, Yang Du, Yu Bao, Yonglong Luo, "Profit Maximization Resource Allocation in Cloud Computing with Performance Guarantee"
2. Fan Wu, Wang Yang, Qingshan Guo, Xinfang Xie, "Reducing Idle Listening Time in 802.11 via NDN"

3. Khaleda Papry, A. B. M. Alim Al Islam, "Fault -tolerant 3D Mesh for Network-on-Chip"
4. Yu Tian, Xin Ye, "Motif: A Social Reading Platform that Helps People Filter, Memorize, and Organize Online Contents"
5. Shuo-Han Chen, Wei-Shin Li, Min-Hong Shen, Yi-Han Lien, Tseng-Yi Chen, Tsan-sheng Hsu, Hsin-Wen Wei, Wei-Kuan Shih, "An Update-Overhead-Aware Caching Policy for Write-Optimized File Systems on SMR Disks"
6. Jianwei Zhang, Xinchang Zhang, Meng Sun, "Two-Level Decomposition for Multi-Commodity Multicast Traffic Engineering"
7. Liudong Zuo, "Bandwidth Preemption for Data Transfer Request with Higher Priority"
8. Salem Alharbi, Peter Rodriguez, Rajaputhri Maharaja, Prashant Iyer, Nivethitha Bose, Zilong Ye, "Secure the Internet of Things with Challenge Response Authentication in Fog Computing"
9. Zheng Liu, Qing Li, Dan Wang, Mingwei Xu, "Balancing Interdependent Networks: Theory and Algorithm"
10. A s m Rizvi, Tarik Reza Toha and Siddhartha Shankar Das, Sriram Chellappan, A. B. M. Alim Al Islam, "Many-Objective Performance Enhancement in Computing Clusters"
11. Eren Balevi, Richard D. Gitlin, "Unsupervised Machine Learning in 5G Networks for Low Latency Communications"
12. Janki Bhimani, Jingpei Yang, Zhengyu Yang and Ningfang Mi, N. H. V. Krishna Giri, Rajinikanth Pandurangan, Changho Choi, Vijay Balakrishnan, "Enhancing SSDs with Multi-Stream: What? Why? How?"
13. Bhargava Kalla, Nandakishore Santhi, Abdel-Hameed A Badawy, Gopinath Chennupati and Stephan Eidenbenz, "Probabilistic Monte Carlo Simulations for Static Branch Prediction"

#### **Workshop papers:**

1. Baiyu Chen, Zhengyu Yang, Siyu Huang, Xianzhi Du, Zhiwei Cui, Janki Bhimani, Ningfang Mi, Xin Xie, "Cyber-Physical System Enabled Nearby Traffic Flow Modelling for Autonomous Vehicles"
2. Tzu-Ting Tseng, Chung-An Shen, "The VLSI Architecture of a Highly Efficient Configurable Pre-processor for MIMO Detections"
3. Muhammad Shoaib, Ozlem Durmaz Incel, Hans Scholten, Paul Havinga, "Resource Consumption Analysis of Online Activity Recognition on Mobile Phones and Smartwatches"
4. Dou An, Qingyu Yang, Wei Yu, Donghe Li, Yang Zhang, Wei Zhao, "Towards Truthful Auction for Big Data Trading"
5. Aklilu D Tesfamicael, Vicky Liu, Ernest Foo, William Caelli, "Modeling for Performance and Security Balanced Trading Communication Systems in the Cloud"
6. Peter Dorfinger, Christof Brandauer, Pedro Paiva, "Towards scalable and adaptable security monitoring"
7. S M Osman Gani, Yaser P. Fallah, Gaurav Bansal, Takayuki Shimizu, "Message Content Control for Distributed Map Sharing in Vehicular Safety Communications"
8. Yosef Ashibani, Qusay Mahmoud, "An Efficient and Secure Scheme for Smart Home Communication Using Identity-Based Signcryption"
9. Fukuro Koshiji, Ryogo Urushidate, Kohji Koshiji, "Biomedical Signal Transmission Using Human Body Communication"

10. Achref Aloui, Mounira Msahli, Sihem Mesnager, Stephane Bressan, Talel Abdessalem,  
"Preserving Privacy in Distributed System (PPDS) Protocol: Security analysis"