JERRY (CHIA-CHENG) YEN
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RESEARCH INTERESTS

- Networks, Reinforcement Learning, IoT, Distributed Systems, Traffic Signal Control

EDUCATION

PhD student in Computer Science	**09/2017-present**
University of California, Davis	

- GPA: 3.86/4.0

Master of Science in Computer Science	**09/2012-07/2014**
National Tsing Hua University, Hsinchu, Taiwan	

- Overall GPA: 4.27/4.3 (50% Academic Average and 50% Thesis)

Bachelor of Science in Computer Science and Information Engineering	**09/2008-06/2012**
Fu Jen Catholic University, Taipei, Taiwan	

- Overall GPA: 3.96/4.0 (Major GPA: 4.0/4.0)
- Best Ranked 1st, Average Ranked 2nd in class

RESEARCH EXPERIENCES

Algorithms and Theory Lab (Advisor: Professor Dipak Ghosal)	**09/2017-present**
University of California, Davis	

- Backpressure-based Schemes for Maximizing Throughput and Minimizing Latency at Multiple Intersections [3]
    - Apply the network model to schedule traffic signal controls for multiple intersections
    - Security analysis on Backpressure-based schemes

Visual Communication Lab (Advisor: Professor Jia-Shung Wang)	**09/2012-present**
National Tsing Hua University, Hsinchu, Taiwan	

- Distributed Delivery of Videos over Ultra-dense Networks [4][6][7]
    - Deploy distributed storage using LT codes on cloud platform for popular videos
    - Evaluate distributed delivery techniques for hot videos over ultra-dense wireless environments
- Clustering Algorithm for Gene Expression Data [2]
    - Affinity propagation-based clustering algorithm for time-series gene expression data
    - Outperform other methods when the same datasets were used in the evaluation
- Data Compression in WSNs [1][5]
    - Tree-structured linear approximation with optimal RD control method for IoT Data
    - Considering the heterogeneity of sensors simultaneously using the R-D distortion allocation

PUBLICATIONS

Journal Papers

[1] **Chia-Cheng Yen**, Chu-Ming Wang, Wan-Yane Yang, and Jia-Shung Wang, "Homogeneous and Heterogeneous IoT Data Compression using Tree-Structured Linear Approximation Approach," *IEEE Sensors Journal*, 2018, **submitted**.

[2] Tai-Yu Chiu, Ting-Chieh Hsu, **Chia-Cheng Yen**, and Jia-Shung Wang, "Interpolation based consensus clustering for gene expression time series," *BMC Bioinformatics.2015;16:117*.

Conference Papers

[3] **Chia-Cheng Yen**, Dipak Ghosal, Michael Zhang, Chen-Nee Chuah, and Hao Chen, "Security Analysis of Backpressure-based Traffic Signal Control Schemes," *IEEE Vehicular Networking Conference*, 2018, **submitted**.

[4] Yi-Ting Chen, **Chia-Cheng Yen**, Yu-Tai Lin, and Jia-Shung Wang, "Cooperative Caching Plan of Popular Videos for Mobile Users by Grouping Preference," *IEEE 16th International Conference on Pervasive Intelligence and Computing (PICom)*, 2018, **accepted**.

[5] Chu-Ming Wang, **Chia-Cheng Yen**, Wan-Yane Yang, and Jia-Shung Wang, "Tree-Structure Linear Approximation for Data Compression over WSNs," *IEEE 12th International Conference on Distributed Computing in Sensor Systems (DCOSS)*, 2016.

[6] **Chia-Cheng Yen** and Jia-Shung Wang, "Distributed Delivery of Popular Videos over Ultra-Dense Networks," *IEEE Symposium on Computers and Communication (ISCC)*, 2015.

[7] Hsien-Tzu Chiu, **Chia-Cheng Yen**, and Jia-Shung Wang, "A Framework of Temporal Data Retrieval for Unreliable WSNs Using Distributed Fountain Codes," *IEEE 9th International Conference on Mobile Ad-hoc and Sensor Networks (MSN)*, 2013.

TECHNICAL EXPERTISE

- Programing Languages: C/C++, Open CV, Java, Matlab, Python, Assembly
- Platforms: Windows, Linux, Unix