

# JIASI CHEN

Email: [jiasi@cs.ucr.edu](mailto:jiasi@cs.ucr.edu)  
Website: <http://www.cs.ucr.edu/~jiasi>  
Phone: +1 951-827-5815

Dept. of Computer Science and Eng.  
University of California, Riverside  
Riverside, CA 92521

## EXPERIENCE

---

**University of California, Riverside** 2015 - present  
Assistant Professor, Dept. of Computer Science and Engineering

**KBR Wyle, NASA Ames Research Center** 2020  
External Consultant

**AT&T Labs – Research** 2013  
Intern, Networking & Services  
Mentors: Jeffrey Erman, Guangzhi Li, K.K. Ramakrishnan, Rakesh Sinha

**NEC Labs America** 2012  
Intern, Mobile Communications & Networking  
Mentors: Rajesh Mahindra, M. Amir Khojastepour, Sampath Rangarajan

## EDUCATION

---

**Princeton University** 2015  
Ph.D. in Electrical Engineering  
Thesis: Optimizing video delivery on mobile networks  
Advisor: Mung Chiang  
M.A. in Electrical Engineering

**Columbia University** 2010  
B.S. in Electrical Engineering, *magna cum laude*

## HONORS and AWARDS

---

**NSF CAREER Award** 2020  
Topic: Networked Multi-User Augmented Reality for Mobile Devices

**IEEE INFOCOM Distinguished TPC Member** 2019, 2021  
Based on peer ratings, reflecting the high quality of the reviews provided.

**Hellman Fellowship** 2017  
For promising Assistant Professors who exhibit potential for great distinction in their area of expertise.

**UCR University Honors Faculty Mentor of the Year** 2017  
One of three awards given campus-wide for senior thesis advising.

## TEACHING EXPERIENCE

---

- CS135: Virtual reality** 2018-  
New technical elective for juniors and seniors with ~100 students per year.
- CS179i: Project in computer networks** 2016-18  
Advised group senior design projects in computer networking.
- CS204: Advanced computer networks** 2016-  
Graduate-level course with updated syllabus based on recent research.
- CS260: Seminar in multimedia networking** 2017  
Graduate-level seminar. Topics included online video, augmented and virtual reality, and Internet economics.

## MENTORING EXPERIENCE

---

- PhD:** Kittipat Apicharttrisor (co-advised with Srikanth Krishnamurthy), Xukan Ran, Carter Slocum, Yi-Zhen Tsai, Xuechen Zhang (co-advised with Samet Oymak)
- Master's:** Shahryar Afzal (co-advised with K.K. Ramakrishnan), Daniel Handojo, Hui Yang, Chang Yuan
- Undergraduate:** Daniel Handojo, Japneet Kaur, James Luo, Elijah Nicasio, Emmilio Segovia, David Zhang

## PUBLICATIONS

---

Moustafa Abdelbaky, **Jiasi Chen**, Alexander Fedin, Kenneth Freeman, Mohana Gurram, Abraham Ishihara, Carlee Joe-Wong, Christopher Knight, Kalmanje Krishnakumar, Isaias Reyes, Calvin Robinson, Peter Shannon, Sandeep Shetye, Luka Tomljenovic, William Van Dalsem, "DRF: A Software Architecture for a Data Marketplace to Support Advanced Air Mobility", *AAAI Aviation Forum*, 2021.

Xukan Ran, Carter Slocum, Yi-Zhen Tsai, Kittipat Apicharttrisor, Maria Gorlatova, **Jiasi Chen**, "Multi-User Augmented Reality with Communication Efficient and Spatially Consistent Virtual Objects", *ACM CoNEXT*, 2020.

Kittipat Apicharttrisor, Bharath Balasubramanian, **Jiasi Chen**, Rajarajan Sivaraj, Yi-Zhen Tsai, Rittwik Jana, Srikanth Krishnamurthy, Tuyen Tran, Yu Zhou, "Characterization of Multi-User Augmented Reality over Cellular Networks", *IEEE SECON*, 2020. (best paper finalist, 28% acceptance rate)

Ha-Ryung Kim, **Jiasi Chen**, Jongwon Yoon, "Joint User Clustering and Beamforming in Non-Orthogonal Multiple Access Networks", *IEEE ACCESS*, 2020.

Shahryar Afzal, **Jiasi Chen**, K.K. Ramakrishnan, "Viewing the 360-degree Future: Trade-Off Between User Field-of-View Prediction, Network Bandwidth, and Delay", *IEEE ICCCN*, 2020.

Hisham Alhulayyil, Kittipat Apicharttrisor, **Jiasi Chen**, Karthik Sundaresan, Samet Oymak and Srikanth Krishnamurthy, "WOLT: Auto-Configuration of Integrated Enterprise PLC-WiFi Networks", *IEEE ICDCS*, 2020. (18% acceptance rate)

Shengxin Liu, Carlee Joe-Wong, **Jiasi Chen**, Christopher Brinston, Chee Wei Tan, Liang Zheng, "Economic Viability of Virtual ISP", *IEEE Transactions on Networking*, 2020.

Ahmet Dermikaya, **Jiasi Chen**, Samet Oymak, "Exploring the Role of Loss Functions in Multiclass Classification", *IEEE CISS*, 2020.

Guoqiang Zhang, Yue Wu, Xu Han, Qian Gao, **Jiasi Chen**, "Exploiting the layer correlation to improve DASH scheduling with scalable video coding", *Computer Networks*, 2020.

Kittipat Apicharttrisorn, Xukan Ran, **Jiasi Chen**, Srikanth Krishnamurthy, Amit Roy-Chowdhury "Frugal Following: Power Thrifty Object Detection and Tracking for Mobile Augmented Reality", *ACM SenSys*, 2019. (best paper finalist, 19% acceptance rate)

Xukan Ran, Carter Slocum, Maria Gorlatova, **Jiasi Chen**, "Communication-efficient Multi-User Mobile Augmented Reality", *ACM Workshop on Hot Topics in Networks (HotNets)*, 2019. (20% acceptance rate)

**Jiasi Chen**, Xukan Ran, "Deep Learning with Edge Computing: A Review", *Proceedings of the IEEE*, 2019. (impact factor: 10.7)

Samet Oymak, Mehrdad Madavi, **Jiasi Chen**, "Learning Feature Nonlinearities with Non-Convex Regularized Binned Regression", *IEEE ISIT*, 2019.

**Jiasi Chen**, Bharath Balasubramanian, Zhe Huang, "Liv(e)-ing on the Edge: User-Uploaded Live Streams Driven by "First-Mile" Edge Decisions", *IEEE EDGE*, 2019

Xukan Ran, Haoliang Chen, Xiaodan Zhu, Zhenming Liu, **Jiasi Chen**, "DeepDecision: A Mobile Deep Learning Framework", *IEEE INFOCOM*, 2018. (19% acceptance rate)

Shahryar Afzal, **Jiasi Chen**, K.K. Ramakrishnan, "Characterization of 360-degree videos," *SIGCOMM Workshop on Virtual Reality and Augmented Reality Network*, 2017.

Xukan Ran, Haoliang Chen, Zhenming Liu, **Jiasi Chen**, "Delivering deep learning to mobile devices via offloading," *SIGCOMM Workshop on Virtual Reality and Augmented Reality Network*, 2017.

Suzan Bayhan, Liang Zheng, **Jiasi Chen**, Mario Di Francesco, Jussi Kangasharju, Mung Chiang, "Improving Cellular Capacity with White Space Offloading," *Symposium on Modeling and Optimization in Mobile, Ad Hoc, and Wireless Networks (WiOpt)*, 2017.

Liang Zheng, **Jiasi Chen**, Carlee Joe-Wong, Chee Wei Tan, Mung Chiang, "An Economic Analysis of Wireless Network Infrastructure Sharing", *Symposium on Modeling and Optimization in Mobile, Ad Hoc, and Wireless Networks (WiOpt)*, 2017.

Kittipat Apicharttrisorn, Ahmed Osama Fathy Atya, **Jiasi Chen**, Karthikeyan Sundaresan, and Srikanth V. Krishnamurthy, "Enhancing WiFi Throughput With PLC Extenders: A Measurement Study," *Passive and Active Measurement Conference*, 2017. (23% acceptance rate)

Liang Zheng, Carlee Joe-Wong, **Jiasi Chen**, Christopher G. Brinton, Chee Wei Tan, Mung Chiang, "Economic Viability of a Virtual ISP", *IEEE INFOCOM*, 2017. (21% acceptance rate)

Michael Wang, **Jiasi Chen**, Ehsan Aryafar, and Mung Chiang, "A Survey of Client-Controlled HetNets for 5G" (invited), *IEEE Access*, 2017.

Tao Lin, Hongjia Li, Haiyong Xie, **Jiasi Chen**, Huajun Cui, Guoqiang Zhang, Wei An, Yang Li,

"Performance and Implications of RAN Caching in LTE Mobile Networks: a Real Traffic Analysis", IEEE SECON, 2016. (26% acceptance rate)

**Jiasi Chen**, Mung Chiang, Jeffrey Erman, Guangzhi Li, K.K. Ramakrishnan, Rakesh Sinha, "Fair and Optimal Resource Allocation for LTE Multicast (eMBMS): Group Partitioning and Dynamics," *IEEE INFOCOM*, 2015. (19% acceptance rate)

Xiaoli Wang, **Jiasi Chen**, Aveek Dutta, Mung Chiang, "Adaptive Video Streaming over Whitespace: SVC for 3-Tiered Spectrum Sharing," *IEEE INFOCOM*, 2015. (19% acceptance rate)

**Jiasi Chen**, Amitabh Ghosh, Mung Chiang, "Mechanisms for Quota-Aware Video Adaptation," book chapter: *Smart Data Pricing*, ed. S. Sen, C. Joe-Wong, S. Ha, M. Chiang, John Wiley, 2014.

**Jiasi Chen**, Rajesh Mahindra, M. Amir Khojastepour, Sampath Rangarajan, Mung Chiang, "Scheduling Framework for Adaptive Video Delivery over Cellular Networks," *ACM MobiCom*, 2013. (14% acceptance rate)

**Jiasi Chen**, Soumya Sen, David Dorsey, Mung Chiang, "A Framework for Energy-efficient Adaptive Jamming of Adversarial Communications," *CISS*, 2013.

**Jiasi Chen**, Amitabh Ghosh, Josphat Magutt, Mung Chiang, "QAVA: Quota-Aware Video Adaptation," *ACM CoNEXT*, 2012. (18% acceptance rate)

## **PATENTS**

---

Bharath Balasubramanian, Zhe Huang, Jiasi Chen, "Live Streaming Server Selection", US Patent #16/705,926 (pending).

Rakesh Sinha, Jeffrey Erman, Guangzhi Li, Jiasi Chen, Kadangode K. Ramakrishnan, "Broadcast Services Platform and Methods for Use Therewith," US Patent #10,447,616.

Jiasi Chen, Amitabh Ghosh, Mung Chiang, "Quota-Aware Video Adaptation," US Patent #9,544,623, 2017.

Rajesh Mahindra, M. Amir Khojastepour, Sampath Rangarajan, Jiasi Chen, "Scheduling Framework for Adaptive Video Delivery over Cellular Networks," US Patent #9,338,693, 2016.

## **ACADEMIC SERVICE**

---

### **Co-Chair:**

ACM CoNEXT Student Workshop	2019
IEEE INFOCOM CNERT Workshop	2019
ACM SIGCOMM NEAT Workshop	2018

### **Technical Program Committees:**

IEEE INFOCOM	2017-
IEEE ICNP	2016-
IEEE SECON	2018
IEEE WiOpt	2019-
IEEE Sarnoff Symposium	2019
IEEE CNSM HiPNET Workshop	2018-19
IEEE ICNP NIPAA Workshop	2020

ACM Multimedia	2019-
ACM MMSys	2019
ACM SIGCOMM Workshop on Virtual and Augmented Reality Network	2017-18
ACM SIGCOMM Workshop on Network Meets AI & ML	2020
ACM SIGCOMM Education Workshop	2020
<b>Registration Chair: ACM SIGCOMM</b>	2017
<b>Local Arrangements Chair: ACM CoNEXT</b>	2016
<b>Demo/Poster Chair: ACM/IEEE Symposium on Edge Computing</b>	2016

**Journal Reviewer:** Proceedings of the IEEE, IEEE Trans. Networking, IEEE Trans. Mobile Computing, IEEE Trans. Parallel and Distributed Systems, IEEE Trans. Communications, IEEE Trans. Wireless Communications, IEEE Communications Mag., IEEE Journal on Selected Areas in Communications

## **FUNDING**

---

- AT&T Labs Research gift, “Leveraging ORAN Control for Augmented/Virtual Reality”, \$20k, 2021 (PI)
- Center for Inclusive Computing Best Practices Grant, \$600k, 2021-2023 (co-PI)
- NSF CAREER: Networked Multi-User Augmented Reality for Mobile Devices, \$500k, 2020-26 (PI)
- National Center for Women & Information Technology Academic Alliance Seed Fund, \$10k, 2020 (co-PI)
- Google Cloud Platform research credits, \$5k, 2020 (PI)
- U.S. Department of Education, Graduate Assistance in Areas of National Need, \$895k, 2018-21 (co-PI)
- NSF CNS NeTS: Small: Support for Interactive AR/VR Video: Learning and Optimizing at the Network Edge, \$250k, 2018-21 (PI)
- NSF CNS NeTS: Small: Realizing Integrated High throughput PLC/VLC networks, \$400k, 2015-18 (co-PI)
- UCR Collaborative Seed Grant, \$10k, 2018 (co-PI)

## **BROADENING PARTICIPATION ACTIVITIES**

---

<b>Faculty Advisor</b> of UCR’s ACM-Women chapter	2017 -
<b>N2Women Mentor</b> at ACM SIGCOMM	2020
<b>Judge</b> for UCR CSE’s Grace Hopper Conference scholarships	2018, 2019
<b>Judge and VR workshop organizer</b> at various UCR hackathons	2017 -
<b>Speaker/Mentor</b> at Riverside Unified School District’s STEM workshop for girls	2018, 2019
<b>Speaker</b> at CS4All and IEEE TryEngineering code camps for high school students	2018

## **INVITED TALKS and PANELS**

---

<b>Networked Augmented and Virtual Reality for Mobile Devices</b> UC Merced ECE Speaker Series	2021
<b>Networked Augmented and Virtual Reality for Mobile Devices</b> Rice University ECE Distinguished Speaker Series	2021
<b>Communication-efficient Multi-User Mobile Augmented Reality</b> ACM HotNets Workshop	2019

<b>Mobile AR/VR with Edge-based Deep Learning</b> Keynote Speaker at IEEE CNSM	2019
<b>ML/AI as Enabler for Network Engineering and Operation</b> Distinguished Experts Panelist at IEEE CNSM	2019
<b>Mobile AR/VR with Edge-based Deep Learning</b> Distinguished Speaker at Dalhousie University	2019
<b>Mobile AR/VR with Edge-based Deep Learning</b> UCR Data Science seminar series	2019
<b>System Challenges of Mobile AR and VR</b> Princeton University EDGE10 Workshop	2019
<b>Research on Networked Augmented and Virtual Reality</b> UCR Homecoming Parents' Day	2019
<b>Measuring Communication Latency for Persistent AR</b> COSMOS Experimenter's Workshop, Rutgers University	2018
<b>Research in Augmented and Virtual Reality</b> Riverside Unified School District's "Inspire Her Mind" STEM Workshop	2018
<b>Research on Networked Multimedia</b> UCR "Living the Promise" alumni speaker series, Google, Mountain View CA	2018
<b>Research in Multimedia Networks</b> UCR ACM-Women general meeting	2018
<b>Optimizing Video Delivery over Mobile Networks</b> UC Irvine NetSys/CS seminar series	2016
<b>Video to Go: Optimizing Video Delivery over Mobile Networks</b> AT&T Labs Research	2015