

Ming Jin

Contact info

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Education

- 2012-2017 **University of California, Berkeley**
PhD, Electrical Engineering and Computer Sciences with
Designated Emphasis in Communication, Computation and Statistics, and
Minors in Statistics and Optimization
Thesis: Data-efficient analytics for optimal human-cyber-physical systems
Advisor: Costas Spanos
Committee: Pieter Abbeel, Alexandra von Meier, Stefano Schiavon
- 2008-2012 **Hong Kong University of Science and Technology**
BEng (Summa Cum Laude), Electronic & Computer Engineering
Major Grade Point Average: 4.3 / 4.3 (A+), rank: 1/566

Academic Experience

- 2018-
present **Laboratory for Control, Optimization, and Power**
Postdoctoral scholar, Department of Industrial Engineering and Operations Research, UC
Berkeley
Mentor: Javad Lavaei
- 2016-
present **Ernest Orlando Lawrence Berkeley National Laboratory**
Research associate, Environmental Energy Technologies Division
Collaborators: Chris Marnay, Wei Feng
- 2017
summer **Summer Institute for Preparing Future Faculty**
Fellow, Graduate division, UC Berkeley
- 2015
summer **Berkeley Education Alliance for Research in Singapore**
Research fellow, National University of Singapore
- 2011
summer **Princeton University**
Undergraduate researcher, Keller Center for Innovation in Engineering Education
- 2011
spring **University of Pennsylvania**
Exchange student, School of Engineering and Wharton School

Honors and Awards

1. **Siebel Scholar**, Class of 2018
awarded for academic excellence and demonstrated leadership
2. Cover story, SinBerBEST periodical, 2019 spring
3. **Best paper award**, Building and Environment (impact factor: 4.820), 2018
4. Best Reviewer Award, IEEE Transactions on Smart Grid (impact factor: 10.486), 2018
5. Most Cited Articles published in 2018, Scopus

6. Winner of Student Technology Fund Initiative at Berkeley twice (2016, 2017)
7. Fellow of the Summer Institute for Preparing Future Faculty, UC Berkeley, 2017
8. **Best paper award**, 13th Annual International Conference on Mobile and Ubiquitous Systems: Computing, Networking and Services (MobiQuitous), 2016
9. **Best paper award**, 9th International Conference on Mobile Ubiquitous Computing, Systems, Services and Technologies (UBICOMM), 2015
10. Top 5 in Microsoft Indoor Localization Competition, Seattle, Washington, 2015
11. Samsung PhD Fellowship finalist, 2015
12. **Academic Achievement Medal**, HKUST, 2012
the highest academic honor bestowed for only the top 1% of the graduates
13. Dean's honor list, HKUST, 2008 – 2012
14. Undergraduate Research Travel Grant, HKUST, 2011
15. REDBIRD Achievement Award, HKUST, 2010
16. Second-runner up Impromptu Speech Competition, H-division, Hong Kong, 2010
17. **Electronic and Computer Engineering Department Scholarship**, HKUST, 2008-12
18. **School of Engineering Scholarship**, HKUST, 2008-12
19. **University Scholarship**, HKUST, 2008-12

* HKUST: Hong Kong University of Science and Technology

Grant Writing Experience

1. CITRIS Seed Funding Project “WeCare: WiFi enabled Device-free Activity Monitoring Platform for Elderly Healthcare and Smart Home Automation,” ([link](#)) 2018. Role: **co-PI**. Total amount: \$60,000. Duration: 3/2018-6/2019.
2. UC Berkeley Student Technology Fund: “Social Game for Smart Building Energy Efficiency”. Role: **co-PI**. Total amount: \$15,000. Duration: 7/2017- 7/2018.
3. UC Berkeley Student Technology Fund: “Energy Utopia”. Role: **PI**. Total amount: \$4,000. Duration: 1/2017-1/2018
4. Helped with writing grants for: ARO proposal “Nonconvex optimization for decentralized control”, 2019; ARPA-E proposal “GHOST--Gradated, High-accuracy Occupancy Sensing Technology”, 2017; NSF proposal in the smart building and nanogrid section “NEXUS: NEXt-generation Urban ecoSystem”, 2016

Publications

Peer-reviewed Papers in International Journals

1. M. Jin, I. Molybog, R. Mohammadi-Ghazi, and J. Lavaei. “Scalable and Robust State Estimation from Abundant but Untrusted Data.” IEEE Transactions on Smart Grid, 2019. Online: <https://ieeexplore.ieee.org/document/8855013>
2. M. Jin, J. Lavaei, and K. Johansson. “Power grid AC-based state estimation: vulnerability analysis against cyber attack.” IEEE Transactions on Automatic Control, 2019, vol. 64 (5), pp. 1784-1799, 2019.
3. Liu, S., S. Schiavon, H. P. Das, M. Jin, C. J. Spanos. “Personal thermal comfort models with wearable sensors.” Building and Environment, 162, 106281, 2019.
4. Y. Bao, J. Xu, W. Feng, Y. Sun, S. Liao, R. Yin, Y. Jiang, M. Jin, C. Marnay, "Provision of secondary frequency regulation by coordinated dispatch of industrial loads and thermal power plants," Applied Energy, vol. 241(C), pages 302-312, 2019.
5. R. Jia, B. Jin, M. Jin, Y. Zhou, I. Konstantakopoulos, H. Zou, J. Kim, D. Li, W. Gu, P. Nuzzo, S. Schiavon, A. Sangiovanni-Vincentelli, C. Spanos. “Design automation for smart buildings.” Proceedings of the IEEE 106.9 (2018): 1680-1699.
6. W. Feng, M. Jin, X. Liu, Y. Bao, C. Marnay, C. Yao, J. Yu. “A Review of Microgrid Development in the United States -- A Decade of Progress on Policies, Demonstrations, Controls, and Software Tools.” Applied Energy, 228, 1656-1668, 2018.

7. M. Jin, S. Liu, S. Schiavon, and C. Spanos. "Automated mobile sensing: Towards high-granularity and agile indoor environmental quality monitoring." *Building and Environment*, vol. 127, pp. 268-276, 2018.
 - **2018 Best Paper Award (3 out of more than 3000 submissions) ([link](#))**
 - **Cover story of SinBerBEST periodical, 2019 spring**
8. M. Jin, W. Feng, C. Marnay, and C. Spanos. "Microgrid to enable optimal distributed energy retail and end-user demand response." *Applied Energy*, vol. 210, pp. 1321-1335, 2018.
9. X. Wang, M. Jin, W. Feng, G. Shu, H. Tian, Y. Liang. "Cascade energy optimization for waste heat recovery in distributed energy systems." *Applied energy*, 230, 679-695, 2018.
10. K. Weekly, M. Jin, H. Zou, C. Hsu, C. Soyza, A. Bayen, C. Spanos. "Building-in-Briefcase: A Rapidly-Deployable Environmental Sensor Suite for the Smart Building." *Sensors*, 18(5), 1381, 2018.
11. M. Jin, R. Jia, and C. Spanos. "Virtual occupancy sensing: Using smart meters to indicate your presence." *IEEE Transactions on Mobile Computing*, vol. 16, no. 11, pp. 3264-3277, 2017.
12. H. Zou, M. Jin, H. Jiang, L. Xie, and C. Spanos. "WinIPS: An WiFi-based non-intrusive indoor positioning system enabling online radio map construction." *IEEE Transactions on Wireless Communications*, vol. 16, no. 12, pp. 8118-8130, 2017.
13. W. Gu, K. Zhang, Z. Zhou, M. Jin, Y. Zhou, X. Liu, C. Spanos, Z. J. Shen, W. H. Lin, L. Zhang. "Measuring fine-grained metro interchange time via smartphones." *Transportation Research Part C: Emerging Technologies*, vol. 81, pp. 153-171, 2017.
14. M. Jin, W. Feng, L. Ping, C. Marnay, C. Spanos. "MOD-DR: Microgrid optimal dispatch with demand response.", In *Applied Energy*, vol. 187, pp. 758-776, 2017.
15. C. Cheung, S. Schiavon, E. Gall, M. Jin, W. Nazaroff. "Longitudinal assessment of thermal and perceived air quality acceptability in relation to temperature, humidity, and CO2 exposure in Singapore." *Building and Environment*, vol. 115, pp. 80-90, 2017.
16. I. Konstantakopoulos, L. Ratliff, M. Jin, S. Sastry, C. Spanos. "A robust utility learning framework via inverse optimization." *IEEE Transactions on Control Systems Technology*, vol. PP, no. 99, pp. 1-17, 2017.
17. M. Jin, N. Bekiaris-Liberis, K. Weekly, C. Spanos, and A. M. Bayen. "Occupancy detection via environmental sensing." *IEEE Transactions on Automation Science and Engineering*, vol. 15, no. 2, pp. 443-455, 2016.
18. R. Jia, M. Jin, H. Zou, Y. Yesilata, H. Jiang, L. Xie, and C. Spanos. "MapSentinel: Can knowledge of spatial mobility improve tracking further?" *Sensors*, 16(4): 472, 2016.
19. K. Weekly, N. Bekiaris-Liberis, M. Jin, and A. M. Bayen. "Modeling and estimation of the humans' effect on the CO2 dynamics inside a conference room." *IEEE Transactions on Control Systems Technology*, vol. 23, no. 5, pp. 1770-1781, 2015.

Submitted Journal/Conference Papers

1. M. Jin, J. Lavaei, S. Sojoudi, R. Baldick. "Boundary Defense against Cyber Threat for Power System Operation." Under review for *Nature Energy*, arXiv preprint arXiv:1908.10315, 2019
2. M. Jin, H. Chang, W. Zhu, S. Sojoudi. "Power up! Robust Graph Convolutional Network against Evasion Attacks based on Graph Powering." Under review for the International Conference on Learning Representations (ICLR), arXiv preprint arXiv:1905.10029, 2019
3. M. Jin, J. Lavaei. "Stability-certified reinforcement learning: A control-theoretic perspective." Under review for *IEEE Transactions on Automatic Control*, arXiv preprint arXiv:1810.11505, 2019
4. F. Zohrizadeh, C. Jozs, M. Jin, R. Madani, J. Lavaei, S. Sojoudi. "Conic Relaxations of Power System Optimization: Theory and Algorithms." Under review for *European Journal of Operational Research*, 2019.

Peer-reviewed Papers in Conference Proceedings

1. M. Jin, I. Molybog, R. Mohammadi-Ghazi, and J. Lavaei. "Towards Robust and Scalable Power System State Estimation." IEEE Conference on Decision and Control (CDC), 2019
2. M. Jin, R. Jia, H. Das, W. Feng, C. Spanos. "BISCUIT: Building intelligent system customer investment tools." Energy Procedia, 158, 6152-6157, 2019.
3. R. Jia, M. Jin, K. Sun, T. Hong, C. Spanos. "Advanced Building Control via Deep Reinforcement Learning." Energy Procedia, 158, 6158-6163, 2019.
 - **This paper leads to the Laboratory Directed Research and Development Program (LDRD) project "AlphaBuilding: deep reinforcement learning for building control" (PI: Dr. Tianzhen Hong) at Lawrence Berkeley Lab, total: \$150,000, total span: 2 years**
4. M. Jin and J. Lavaei. "Control-theoretic analysis of smoothness for stability-certified reinforcement learning." IEEE Conference on Decision and Control (CDC), pp. 6840-6847, 2018.
5. S. Liu, M. Jin, H. P. Das, C. Spanos, S. Schiavon. "Personal thermal comfort models based on physiological parameters measured by wearable sensors." 10th Windsor Conference: Rethinking Comfort, 2018
6. M. Jin, J. Lavaei, and K. Johansson. "A semidefinite programming relaxation under false data injection attacks against power grid AC state estimation." The 55th Annual Allerton Conference on Communication, Control, and Computing (Allerton), 2017
7. M. Jin, C. Marnay, and W. Feng. "Distributed energy resource integration by dispatch and retail optimization." The 7th Innovative Smart Grid Technologies (ISGT Asia), 2017
8. M. Jin, S. Liu, Y. Tian, M. Lu, S. Schiavon, and C. Spanos. "Indoor environmental quality monitoring by autonomous mobile sensing." The 4th ACM International Conference on Systems for Energy-Efficient Built Environments (BuildSys), 2017
9. J. Yu, C. Marnay, M. Jin, C. Yao, W. Feng. "A comprehensive review of microgrid development in the United States, and lessons learned for China", Renewable Energy Integration with Mini/Microgrid (REM), 2017
10. M. Jin, A. Damianou, P. Abbeel, and C. Spanos. "Inverse Reinforcement Learning via Deep Gaussian Process." In Conference on Uncertainty in Artificial Intelligence (UAI), Sydney, Australia, 2017. **(Oral presentation)**
11. I. C. Konstantakopoulos, L. Ratliff, M. Jin, C. Spanos. "Leveraging correlations in utility learning." In American Control Conference, pp. 5249-5256, Seattle, WA, 2017.
12. P. Liu, W. Feng, C. Marnay, S. Dutton, M. Jin, L. Zheng, N. Zhou. "Towards the optimal development of low-carbon community energy systems." ACEEE Summer Study on Energy Efficiency in Buildings, Pacific Grove, CA, 2016.
13. W. Gu, M. Jin, Z. Zhou, C. Spanos, L. Zhang. "MetroEye: smart tracking your metro trips underground." In 13th Annual International Conference on Mobile and Ubiquitous Systems: Computing, Networking and Services (MobiQuitous), pp. 84-93, Hiroshima, Japan, 2016.
 - **Best Paper Runner-up Award**
14. I. C. Konstantakopoulos, L. Ratliff, M. Jin, C. Spanos, S. Sastry. "Inverse modeling of non-cooperative agents via mixture of utilities." IEEE Conference on Decision and Control, pp. 6327-6334, Las Vegas, NV, 2016.
15. H. Zou, M. Jin, H. Jiang, L. Xie and C. Spanos. "WinIPS: WiFi-based non-intrusive IPS for online radio map construction." IEEE Conference on Computer Communications Workshops, pp. 1081-1082, San Francisco, CA, 2016.
16. I. C. Konstantakopoulos, L. Ratliff, M. Jin, C. Spanos, S. Sastry. "Smart building energy efficiency via social game: a robust utility learning framework for closing-the-loop." The International Workshop on Science of Smart City Operations and Platforms Engineering (SCOPE) in partnership with Global City Teams Challenge, pp. 1-6, Vienna, Austria, 2016.

17. M. Jin, N. Bekiaris-Liberis, K. Weekly, C. Spanos, and A. M. Bayen. “Sensing by proxy: occupancy detection based on indoor CO2 concentration.” In the 9th International Conference on Mobile Ubiquitous Computing, Systems, Services and Technologies, pp. 1-10 Nice, France, 2015.

- **Best Paper Award**

18. R. Jia, M. Jin, Z. Chen, and C. Spanos. “SoundLoc: accurate room-level indoor localization using acoustic signatures.” IEEE Automation Science and Engineering (CASE), pp. 186-193, Gothenburg, Sweden, 2015.
19. M. Jin and C. Spanos. “BRIEF: Bayesian regression of infinite expert forecasters for single and multiple time series prediction.” IEEE Conference on Decision and Control (CDC), pp. 78-83, Osaka, Japan, 2015.
20. M. Jin, R. Jia, and C. Spanos. “APEC: auto planner for efficient configuration of indoor positioning systems.” The 9th International Conference on Mobile Ubiquitous Computing, Systems, Services and Technologies, pp. 100-107, Nice, France, 2015.
21. M. Jin, L. Ratliff, I. Konstantakopoulos, C. Spanos, and S. Sastry. “REST: a reliable estimation and stopping time algorithm for social game experiments.” In ACM/IEEE 6th International Conference on Cyber-Physical Systems (ICCPS), pp. 90-99, Seattle, WA, 2015.
22. M. Jin, L. Zhang, C. Spanos. “Power prediction through energy consumption pattern recognition for smart buildings.” IEEE International Conference on Automation Science and Engineering (CASE), pp. 419-424, Gothenburg, Sweden, 2015.
23. M. Jin, R. Jia, Z. Kang, I. Konstantakopoulos, and C. Spanos. “PresenceSense: zero-training algorithm for individual presence detection based on power monitoring.” The ACM Conference on Embedded Systems for Energy-Efficient Buildings (BuildSys), pp. 1-10, Memphis, TN, 2014.
24. Z. Kang, M. Jin, and C. Spanos. “Modeling of end-use energy profile: an appliance data-driven stochastic approach.” The 40th Annual Conference of the IEEE Industrial Electronics Society, pp. 5382 – 5388, Dallas, TX, 2014.
25. M. Jin, H. Zou, K. Weekly, R. Jia, A. M. Bayen, and C. Spanos. “Environmental sensing by wearable device for indoor activity and location estimation.” The 40th Annual Conference of the IEEE Industrial Electronics Society, pp. 5369-5375, Dallas, TX, 2014.
26. L. Ratliff, M. Jin, I. Konstantakopoulos, C. Spanos, and S. Sastry. “Social game for building energy efficiency: Incentive design.” The 52nd Annual Allerton Conference on Communication, Control, and Computing (Allerton), pp. 1011-1018, Monticello, IL, 2014.
27. M. Jin, S. Xu, G. Abyad, G. Poirier, and N. Yao. “In situ electrical and mechanical characterization of individual nickel nanowires utilizing dural beam focused ion beam and nanomanipulator systems.” Microscopy and Microanalysis, Phoenix, Arizona, pp. 790 – 791, 2012.

Book and Editorial

1. M. Jin, R. Jain, C. Spanos, Q. Jia, L. K. Norford, M. Kjærsgaard, J. Yan. “Energy-cyber-physical systems.” Applied Energy, 2019
2. Z. Jin, M. Jin, R. Jia. “Writing Methods and Skills of Research Papers.” Petroleum Industry Press (in Chinese), 2018

Teaching

2019 fall	IEOR 258: Control and Optimization for Power Systems Guest Lecturer, University of California, Berkeley Course Instructor: Javad Lavaei
2018 spring	IEOR 268: Applied Dynamic Programming Guest Lecturer, University of California, Berkeley

Course Instructor: Javad Lavaei

2016
fall **EE 120: Signals and Systems**
Graduate Student Instructor, University of California, Berkeley
Course Instructor: Ronald Fearing

2016
spring **EECS 16B: Designing Information Devices and Systems II**
Graduate Student Instructor, University of California, Berkeley
Course Instructor: Michel Maharbiz and Anant Sahai

Professional Experiences

1. Guest Editorialship:

Applied Energy (ranked 1st in all Energy journals by SJR, impact factor: 8.426), special issue on “Energy-cyber-physical systems,” 2018 – 2019. Coeditors: Rishee Jain (Stanford), Leslie Norford (MIT), Costas Spanos (UC Berkeley), Qingshan Jia (Tsinghua), Mikkel Kjærgaard (University of Southern Denmark), Jinyue Yan (KTH)

2. Organizers of workshops/panels:

- International Workshop on Applied Machine Learning for Intelligent Energy Systems (AMLIES) co-located with ACM e-Energy Conference, Arizona, USA, June 25, 2019
- The International workshop on Artificial Intelligence for Energy-Cyber-Physical Systems (collocated with ICAE 2018), Hong Kong, August 24, 2018
- Panel session “From clean energy research into innovation” at Applied Energy Symposium and Forum (REM2017), Tianjin, China, October 20, 2017
- The International workshop on Smart Buildings as Enablers for a Smarter Grid, Sydney, Australia, November 6, 2016

3. Technical program committees:

- International Conference on Innovative Smart Grid Technologies – Asia (ISGT Asia 2018), May 22 - 25, 2018 – Singapore
- Judge committee for IEEE PES ISGT 2018
- The seventh International Conference on Smart Cities, Systems, Devices and Technologies (SMART 2018), July 22 - 26, 2018 - Barcelona, Spain
- UBICOMM Industry /Research Advisory Committee (2016, 2017)

4. Session chairs:

- INFORMS Annual Conference, “Data Analytics for Power Systems,” Phoenix, Arizona, USA, Nov 2018
- INFORMS Annual Conference, “Renewable Energy,” November, 2018, Phoenix, Arizona, USA, Nov 2018
- International Conference on Applied Energy, session “Artificial Intelligence for Energy-Cyber-Physical Systems,” Hong Kong, Aug 2018

5. Journal reviewer: for Applied Energy, IEEE Transaction on Smart Grid, IEEE Transactions on Industrial Electronics, IEEE Transactions on Automation Science and Engineering, Journal of Cleaner Production, IEEE Transaction on Signal Processing, Journal of Energy Efficiency, Energy and Buildings, Energies, International Journal of Electrical Power and Energy Systems

6. Conference reviewer: CDC, ACC, ECC, SmartGridComm, ISGT, CoDIT, NeurIPS

Leadership Experiences

1. Co-Leader of the IEEE Smart World NVIDIA AI City Challenge, proposal “Video Data Based Traffic Management System for AI cities”, Fremont, California, USA, 2017
2. Leader of the HKUST entrepreneur contest, top 5 team, 2012

3. Elevator pitch: “Accessible healthcare for rural areas in developing countries.”
4. Vice President of Toastmaster International Club, HKUST, 2010 – 2011
5. Head coach at REDBird club, HKUST, 2010 summer
6. Representative of student body in ECE department, HKUST, 2009 – 2012
7. Representative in APRU Leadership Program, Singapore, 2010 summer
Theme presentation: “Rising to new challenges, leadership in the 21st century.”
8. Representative in AEARU Summer Program, South Korea, 2010 summer
Invited talk: “How East Asia can lead the world.”

Invited Talks

1. CompSust Open Graduate Seminar (COGS), “Robust Data Analytics for Safety-Critical Systems”, Feb. 2020, [Link](#)
2. IEEE Power & Energy Society (PES)/ Power Electronics Society (PELS) seminar, “Trustworthy Data Analytics for Power Systems”, Feb. 2020, Berkeley, CA, USA
3. Energy Modeling, Analysis, and Control (EMAC) group, “Trustworthy Data Analytics for Power Grids”, Feb. 2020, UC Berkeley, CA, USA
4. Energy, Controls, & Applications (eCAL) seminar, “Trustworthy Data Analytics for Safety-Critical Systems”, Feb. 2020, UC Berkeley, CA, USA
5. Energy Technologies Area (ETA) seminar of Lawrence Berkeley Lab, “Robust learning and control for safety-critical systems”, Feb. 2020, Berkeley, CA, USA
6. Global Energy Interconnection Research Institute North America (GEIRINA), “Adversarially Robust Learning and Control in the Real World”, Oct. 2019, San Jose, CA, USA
7. Seminar of Laboratory for Control, Optimization, and Power, “Robust Graph Convolutional Networks,” September, 2019, UC Berkeley, CA, USA
8. Seminar of Stanford Sustainable Systems Lab, “Robust Data Analytics for Societal-Scale Infrastructures,” April, 2019, Stanford University, CA, USA
9. AI & Energy Summit, “Robust and Resilient Data Analytics for Power,” Feb. 2019, Stanford University, CA, USA
10. Data Science for Sustainability (DSfS) joint event with Berkeley Energy & Resources Collaborative (BERC) on cybersecurity in power systems, “Robust and Resilient Data Analytics for Power,” Feb. 2019, Berkeley, CA, USA ([link](#))
11. INFORMS Annual Conference, “Control-theoretic Analysis of Smoothness for Stability-certified Reinforcement Learning,” November, 2018, Phoenix, Arizona, USA
12. INFORMS Annual Conference, “Multiplier-based Observer Design for Large-scale Lipschitz Systems,” November, 2018, Phoenix, Arizona, USA
13. Smart Power and CPS for the CROSS Research Symposium and Oktoberfest, UC Santa Cruz, “Stability-certified Smooth Reinforcement Learning: A Control-theoretic Perspective,” Oct. 2018 ([link](#))
14. The 23rd International Symposium on Mathematical Programming (ISMP), “Vulnerability analysis and robustification of power grid state estimation,” Jul. 2018, Bordeaux, France
15. Power system seminar, IEOR department, UC Berkeley, “Stability-certified smooth reinforcement learning: A control-theoretic perspective,” Mar. 2018
16. Power system seminar, IEOR department, UC Berkeley, “Learning about the human factors in human-cyber-physical systems,” Nov, 2017
17. Panelist in the Industrial Advisory Board meeting, Center of the Built Environment, “IEQ Bot,” October, 2017, Berkeley, California, USA
18. INFORMS Annual Conference, “Robustness analysis of power grid under false data attacks against AC state estimation,” October, 2017, Houston, Texas, USA
19. Presentation to Tianjin Electric Power Construction Company delegation group, “Microgrid and demand response in district-scale building energy system,” Aug, 2017
20. Simulation Research Group, Lawrence Berkeley National Lab, “Data-efficient algorithms for occupancy detection,” July, 2017
21. College of Engineering Dean’s Society Event, Menlo Circus Club, Atherton, CA, “MODEST: Microgrid Optimization with District Energy Systems Tool,” April, 2017
22. Power system seminar, IEOR department, UC Berkeley, “Towards future integrated energy system planning and operation,” March, 2017

23. China Energy Group, Lawrence Berkeley National Lab, “Microgrids and demand response,” February, 2017
24. American Council for Energy-Efficient Economy (ACEEE) summer summit, “Towards the optimal development of a low-carbon community energy system,” August, 2016
25. Samsung Strategy and Innovation Center, California, “Towards the brain of buildings,” March, 2016
26. Tsinghua University, China, “Machine learning in smart environments,” June, 2015
27. Berkeley EECS Annual Research Symposium (BEARS), “PresenceSense: Zero-training algorithm for individual presence detection based on power monitoring,” February, 2015

Media Coverage

1. BLOCK71 Singapore (April 2019), “Faces from the BLOCK: The Building in a Briefcase (BiB) from SinBerBest” ([link](#))
2. Centerline (Nov 2017), “CBE Panel Session Explores Innovative Methods for Monitoring Indoor Environments” ([link](#))
3. Electronics360 (Oct 2017), “Building-in-Briefcase” Is a Portable Efficiency Monitor ([link](#))
4. Berkeley Engineer Magazine (Oct 2017), “Brains for buildings, packaged in a smart briefcase” (reposted at SinBerBEST website) ([link1](#), [link2](#))
5. LBNL China Energy Group Public Media (Jul 2017), “Effective grid integration of distributed energy resources by energy retail” ([link](#))
6. IEEE Spectrum (Jun 2017), “What Does Your Smart Meter Know About You?” (re-posted at CITRIS Banatao Institute website, SinBerBEST website) ([link1](#), [link2](#), [link3](#))
7. CO2Meter.com (Feb 2017), “CO2 Sensor Occupancy Detection” ([link](#))
8. MIT Technology Review (Jul 2014), “An Indoor Positioning System Based on Echolocation” ([link](#))

Mentorship

1. Alan Tian (UC Berkeley. Now: PhD student at MIT), “Robot-based mobile sensing”, 2015/11-2017/8
2. Zilong Chen (Tsinghua University. Now: Google), “Sensor fusion for indoor localization”, 2015/4-2016/4
3. Shayaan Abdullah (UC Berkeley. Now: Navigant), “Smart grid sensing and data analytics”, 2015/6-2016/9
4. Richard Xu (UC Berkeley), “Microgrid toolset UI development”, 2016/8-2017/4
5. Mingjian Lu (UC Berkeley. Now: MS student at UC Berkeley), “IoT smart office sensor”, 2016/3-2017/6
6. Albert Xu (UC Berkeley. Now: PhD student at Columbia University), “Energy Utopia web UI development”, 2016/9-2018/3
7. Evan Limanto (UC Berkeley), “Smart building applications”, 2016/12-2017/12
8. Abhishek Mangla (UC Berkeley), “IoT data for storytelling”, 2016/12-2017/9
9. Forest Hu (UC Berkeley), “Energy Utopia sensing platform”, 2016/9-2017/9
10. Yibo Pang (University of British Columbia), “Microgrid optimization toolset”, 2017/7-2018/6
11. Jerry Lin (UC Berkeley), “Wearables for thermal comfort estimation”, 2017/6-2017/9
12. Xuan Wang (graduate, Tianjin University, LBNL visitor), “Deep reinforcement learning for thermal energy utilization”, 2017/6-2018/9
13. Yi Bao (graduate, Wuhan University, LBNL visitor), “Deep reinforcement learning for power grid”, 2017/6-2019/3
14. James Feng (UC Berkeley), “Grid optimization competition”, 2019/5-present
15. Neha Kunjal (UC Berkeley), “Grid optimization competition”, 2019/5-present
16. Huihan Liu (UC Berkeley), “Smart environment”, 2018/6-present
17. Hari Prasanna Das (graduate, UC Berkeley), “AI for energy”, 2018/1-present
18. Heng Chang (graduate, Tsinghua-Berkeley Shenzhen Institute), “AI for energy”, 2019/1-present