CURRICULUM VITAE

Jorge J. Ortiz
Associate Professor (with Tenure)
Electrical and Computer Engineering
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(a) Education & Training

University of California	Berkeley, CA	Computer Science	Ph.D., 2013
University of California	Berkeley, CA	Computer Science	M.S., 2010
M.I.T.	Cambridge, MA	Computer Science	B.S., 2003

(b) Academic Appointments

Sept. 2025 – present	Associate Professor, Rutgers University
Sept. 2018 – 2025	Assistant Professor, Rutgers University

(c) Research Leadership

Sept. 2018 – present	Director, Sensing and Reasoning (SnR) Lab, Rutgers University

(d) Industry Experience

Dec. 2019 – present	AI and Computer Vision Lead Baseball Ops., New York Yankees
Dec. 2013 – Aug. 2018	Research Staff Member, IBM Research
Jan. 2013 – Sept. 2013	Senior Software Engineer, Spire Global
Aug. 2003 – Feb. 2007	Software Engineer, Oracle Corp.

(e) Honors and Invited Talks

- Invited Panelist at the JPMC Hispanic Heritage Month Celebration Panel on The Impact of Latinos and Technology, October 2, 2024, New York, NY.
- Invited Panelist at the Sports and AI Symposium, Columbia University, September 2024.
- Invited speaker at I-SENSE Distinguished Seminar Series, Florida Atlantic University, April 2024: *Multimodal Learning and Sense-Making in Deeply Sensed Environments*
- Invited speaker at Samsara IoT Speaker Series, March 2024: *Multimodal Learning: Application-Driven Design and Fundamentals*
- Invited speaker at HCII Seminar Series, Carnegie Mellon University, November 2023: *Advancing Human-Machine Interactions: Multimodal Learning in Densely Sensed Spaces*
- Invited speaker at New Jersey Institute of Technology (NJIT) Computer Science Colloquium, November 2021
- Invited speaker at University of Massachusetts at Amherst (UMass Amherst) ECE Colloquium, October 2020
- Invited speaker at University of Southern California (USC), CPS-IoT Webinar, October 2020
- Invited speaker at Morris Meister Lecture Series, Bronx Science Foundation, Alumni Day, 2019
- Invited speaker at NSF Workshop on the Dynamic Interaction of Embodied Human and Machine Intelligence, May 2019
- Invited speaker ECE Seminar at Emory University, February 2019

- **Keynote Speaker**: Workshop on Smart and Connected Indoor Environments *in conjunction with IEEE International Conference on Sensing, Communication and Networking (SECON 2017)*
- Qualcomm Innovation Fellowship Finalist 2011
- NSF Graduate Fellowship Honorable Mention 2008
- Ford Foundation Diversity Fellowship Honorable Mention 2008

(f) Grants and Funding ($32.4M Total)

- NSF IUCRC Phase I: Center on Responsible Artificial Intelligence and Governance (CRAIG), National Science Foundation Award #2515224. Rutgers Site PI Jorge Ortiz. $302,272 (2025-2030).
- NSF Planning Grant: AI Ready: STAIRWAI to COSMOS: Sensor-enabled Testbed for Advancing Innovative Research in Wireless+AI, National Science Foundation Award #2509233. Co-Principal Investigator: Jorge Ortiz. $200,000 (2025-2027).
- National Science Foundation Grant: ReDDDoT Phase 2: Leveraging Urban AI as a Communal Tool for Connection and Exchange in Harlem. Co-Principal Investigator: Jorge Ortiz ($1,447,662).
- University Research Council Award: Toward next-generation "intelligent" pharmaceutical drug product manufacturing for efficient patient healthcare, Rutgers University. Co-Investigator: Jorge Ortiz ($25,000)
- NIH Grant for Developing the Context-Aware Multimodal Ecological Research and Assessment (CAMERA) Platform, National Institute of Mental Health. Co-Investigator: Jorge Ortiz ($1,079,407)
- NSF Engineering Research Center: The Center for Smart Streetscapes, National Science Foundation. Rutgers Site PI Jorge Ortiz ($2.3M Rutgers). $26,000,000.
- IUCRC Planning Grant Rutgers University: Center for Standards and Ethics in Artificial Intelligence (CSEAI), National Science Foundation Award Abstract #2137245. PI Jorge Ortiz. $20,000.
- Social Intelligence in the Automobile, Nissan Corporation. PI Jorge Ortiz. $10,000.
- SII Planning: ARIES: Center for Agile, RelIablE, Scalable Spectrum, National Science Foundation. PI: Narayan Mandayam. Co-PI Jorge Ortiz (25% effort). $50,000.

(g) Past Ph.D. Students

- Tahiya Chowdhury. Data-Driven Techniques for Human Activity Sensing in Smart Environments. 08/2022.
- Murtadha Aldeer. Sensing and Machine Learning Techniques for Human Behavior Understanding through Physical Interaction. 05/2023.
- Tong Wu. Novel Methods for Predicting Timing and Attention in Human-agent Interaction through Application-driven Scenarios. 05/2023.

(h) Publications

Under Submission

1. CHOWDHURY, T., MANDEL, I., ORTIZ, J., AND JU, W. Designing a user-centric framework for information quality ranking of large-scale street view images, 2024
2. SUN, Y., PARGOO, N. S., EHSAN, T., ZHANG, Z., AND ORTIZ, J. Vchar: Variance-driven complex human activity recognition framework with generative representation, November

2024. Under submission

3. ORTIZ, J., AND PARGOO, N. S. Aligncap: Fine-grained latent alignment via contrastive learning for region-level captioning, December 2024. Under submission

4. PARGOO, N. S., TURKCAN, M. K., XIA, S., ZANG, C., SUN, Y., EHSAN, T., GHASEMI, M., GHADERI, J., ZUSSMAN, G., KOSTIC, Z., AND ORTIZ, J. The streetscape application services stack (sass): Towards a distributed sensing architecture for urban applications. Under submission, November 2024

Conferences and Journals

1. ONDRAS, J., ANWAR, A., WU, T., BU, F., JUNG, M., ORTIZ, J. J., AND BHATTACHARJEE, T. Human-robot commensality: Bite timing prediction for robot-assisted feeding in groups. In *Proceedings of The 6th Conference on Robot Learning* (14–18 Dec 2023), K. Liu, D. Kulic, and J. Ichnowski, Eds., vol. 205 of *Proceedings of Machine Learning Research*, PMLR, pp. 921–933 [**30% Acceptance Rate**]

2. BURNS, T., SONG, C., SESKAR, I., ORTIZ, J., AND MARTIN, R. P. A simplified machine learning approach to classifying individual websites. In *GLOBECOM 2022 - 2022 IEEE Global Communications Conference* (2022), pp. 6109–6114

3. HUSSAIN, Z., SHENG, Q. Z., ZHANG, W. E., ORTIZ, J., AND POURIYEH, S. Non-invasive techniques for monitoring different aspects of sleep: A comprehensive review. *ACM Trans. Comput. Healthcare 3*, 2 (mar 2022)

4. ALDEER, M., WATERWORTH, D., HUSSAIN, Z., CHOWDHURY, T., BRITO, C., SHENG, Q. Z., MARTIN, R. P., AND ORTIZ, J. Medbuds: In-ear inertial medication taking detection using smart wireless earbuds. In *2022 2nd International Workshop on Cyber-Physical-Human System Design and Implementation (CPHS)* (2022), pp. 19–23 [**25% Acceptance Rate**]

5. WU, T., SACHDEVA, E., AKASH, K., WU, X., MISU, T., AND ORTIZ, J. Toward an adaptive situational awareness support system for urban driving. In *2022 IEEE Intelligent Vehicles Symposium (IV)* (2022), pp. 1073–1080

6. WU, T., MARTELARO, N., STENT, S., ORTIZ, J., AND JU, W. Learning when agents can talk to drivers using the inagt dataset and multisensor fusion. *Proc. ACM Interact. Mob. Wearable Ubiquitous Technol. 5*, 3 (Sept. 2021) [**21% Acceptance Rate**]

7. ALDEER, M., HOWARD, R. E., MARTIN, R. P., AND ORTIZ, J. Unobtrusive patient identification using smart pill-bottle systems. *Internet of Things 14* (2021), 100389

8. HUSSAIN, Z., WATERWORTH, D., ALDEER, M., ZHANG, W. E., SHENG, Q. Z., AND ORTIZ, J. Do you brush your teeth properly? an off-body sensor-based approach for toothbrushing monitoring. In *2021 IEEE International Conference on Digital Health (ICDH)* (2021), pp. 59–69 [**20% Acceptance Rate**]

9. BURNS, T. L., MARTIN, R. P., ORTIZ, J., SESKAR, I., STOJADINOVIC, D., DAVIS, R., AND CAMELO, M. Synthetic wireless signal generation for neural network algorithms. In *2021 IEEE Conference on Standards for Communications and Networking (CSCN)* (2021), pp. 174–179

10. BURNS, T. L., MARTIN, R. P., ORTIZ, J., SESKAR, I., STOJADINOVIC, D., DAVIS, R., AND CAMELO, M. Evaluating deep learning networks for modulation recognition. In *2021 IEEE International Symposium on Dynamic Spectrum Access Networks (DySPAN)* (2021), pp. 25–32

11. AKMANDOR, A. O., ORTIZ, J., MANOTAS, I., KO, B., AND JHA, N. K. Secret: Semantically enhanced classification of real-world tasks. *IEEE Transactions on Computers 70*, 3 (2021), 440–456 [**30% Acceptance Rate**]

12. JU, W., YAVO-AYALON, S., MANDEL, I., SALDARINI, F., FRIEDMAN, N., SIBI, S., ZAMFIRESCU-PEREIRA, J. D., AND ORTIZ, J. Tracking urban mobility and occupancy under social distancing policy. *Digit. Gov.: Res. Pract. 1*, 4 (Oct. 2020)

13. ALDEER, M., ORTIZ, J., HOWARD, R. E., AND MARTIN, R. P. Patientsense: Patient discrimination from in-bottle sensors data. In *Proceedings of the 16th EAI International Conference on Mobile and Ubiquitous Systems: Computing, Networking and Services* (New York, NY, USA, 2019), MobiQuitous '19, Association for Computing Machinery, p. 143–152

14. ORTIZ, J., CRAWFORD, C., AND LE, F. Devicemien: Network device behavior modeling for identifying unknown iot devices. In *Proceedings of the International Conference on Internet of Things Design and Implementation* (New York, NY, USA, 2019), IoTDI '19, Association for Computing Machinery, p. 106–117 [**28% Acceptance Rate, Best Paper Finalist**]

15. NUTTER, M., CRAWFORD, C. H., AND ORTIZ, J. Design of novel deep learning models for real-time human activity recognition with mobile phones. In *2018 International Joint Conference on Neural Networks (IJCNN)* (2018), pp. 1–8

16. CHAKRABORTY, S., ORTIZ, J., AND JULIER, S. Role of influence functions in model interpretability (Conference Presentation). In *Ground/Air Multisensor Interoperability, Integration, and Networking for Persistent ISR IX* (2018), M. A. Kolodny, D. M. Wiegmann, and T. Pham, Eds., vol. 10635, International Society for Optics and Photonics, SPIE

17. LEE., W., **JORGE ORTIZ.**, KO., B., AND LEE., R. Inferring smartphone users' handwritten patterns by using motion sensors. In *Proceedings of the 4th International Conference on Information Systems Security and Privacy - Volume 1: ICISSP,* (2018), INSTICC, SciTePress, pp. 139–148 [**21% Acceptance Rate, Best Paper Award**]

18. GAO, Y., SCHAY, A., HOU, D., AND ORTIZ, J. Home appliance energy disaggregation using low frequency data and machine learning classifiers. In *2017 16th IEEE International Conference on Machine Learning and Applications (ICMLA)* (2017), pp. 76–83 [**17% Acceptance Rate**]

19. WANG, S., AND ORTIZ, J. Non-negative matrix factorization of signals with overlapping events for event detection applications. In *2017 IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP)* (2017), pp. 5960–5964

20. GANTI, R., SRIVATSA, M., AGRAWAL, D., ZERFOS, P., AND ORTIZ, J. Mp-trie: Fast spatial queries on moving objects. In *Proceedings of the Industrial Track of the 17th International Middleware Conference* (New York, NY, USA, 2016), Middleware Industry '16, Association for Computing Machinery [**21% Acceptance Rate**]

21. HONG, D., WANG, H., ORTIZ, J., AND WHITEHOUSE, K. The building adapter: Towards quickly applying building analytics at scale. In *Proceedings of the 2nd ACM International Conference on Embedded Systems for Energy-Efficient Built Environments* (New York, NY, USA, 2015), BuildSys '15, Association for Computing Machinery, p. 123–132 [**23% Acceptance Rate, Best Paper Finalist (2nd Highest Review Score)**]
22. BHATTACHARYA, A. A., HONG, D., CULLER, D., ORTIZ, J., WHITEHOUSE, K., AND WU, E. Automated metadata construction to support portable building applications. In *Proceedings of the 2nd ACM International Conference on Embedded Systems for Energy-Efficient Built Environments* (New York, NY, USA, 2015), BuildSys '15, Association for Computing Machinery, p. 3–12 [**23% Acceptance Rate, Best Paper Finalist, 1st Highest Review Score**]
23. HUANG, C.-C., CHEN, Q., WANG, Z., POWER, R., ORTIZ, J., LI, J., AND XIAO, Z. Spartan: A distributed array framework with smart tiling. In *2015 USENIX Annual Technical Conference (USENIX ATC 15)* (Santa Clara, CA, July 2015), USENIX Association, pp. 1–15 [**28% Acceptance Rate**]
24. FONTUGNE, R., ORTIZ, J., TREMBLAY, N., BORGNAT, P., FLANDRIN, P., FUKUDA, K., CULLER, D., AND ESAKI, H. Strip, bind, and search: A method for identifying abnormal energy consumption in buildings. In *2013 ACM/IEEE International Conference on Information Processing in Sensor Networks (IPSN)* (2013), pp. 129–140 [**20% Acceptance Rate**]
25. MAASOUMY, M., **JORGE ORTIZ**, CULLER, D., AND SANGIOVANNI-VINCENTELLI, A. Flexibility of commercial building hvac fan as ancillary service for smart grid. In *IEEE Green Energy and Smart Systems Conference* (Oct 2013)
26. DAWSON-HAGGERTY, S., JIANG, X., TOLLE, G., ORTIZ, J., AND CULLER, D. Smap: A simple measurement and actuation profile for physical information. In *Proceedings of the 8th ACM Conference on Embedded Networked Sensor Systems* (New York, NY, USA, 2010), SenSys '10, Association for Computing Machinery, p. 197–210 [**17% Acceptance Rate**]
27. ORTIZ, J., AND CULLER, D. Multichannel reliability assessment in real world wsns. In *Proceedings of the 9th ACM/IEEE International Conference on Information Processing in Sensor Networks* (New York, NY, USA, 2010), IPSN '10, Association for Computing Machinery, p. 162–173 [**17% Acceptance Rate**]
28. ORTIZ, J., BAKER, C. R., MOON, D., FONSECA, R., AND STOICA, I. Beacon location service: A location service for point-to-point routing in wireless sensor networks. In *Proceedings of the 6th International Conference on Information Processing in Sensor Networks* (New York, NY, USA, 2007), IPSN '07, Association for Computing Machinery, p. 166–175 [**22% Acceptance Rate**]

Workshops, Posters, and Technical Reports

1. GRIMALOVSKY, M., WALTER, H., AND ORTIZ, J. Enhancing human-robot interaction with multimodal large language models. In *Proceedings of the Workshop on Enhancing Human-Robot Interaction, HRI 2024* (2024)
2. WALTER, H., PORTALATIN-MENDEZ, E., GRIMALOVSKY, M., SMITH, B., LAIRD, J., AND ORTIZ, J. Enhancing urban data analysis through large language models: A case study

with nyc 311 service requests. In *Proceedings of the Workshop on Human – Large Language Model Interaction, HRI 2024* (2024)

3. WU, T., PARGOO, N. S., AND ORTIZ, J. Poster abstract: Multi-sensor fusion for in-cabin vehicular sensing applications. In *Proceedings of the 22nd International Conference on Information Processing in Sensor Networks* (New York, NY, USA, 2023), IPSN '23, Association for Computing Machinery, p. 332–333

4. ALDEER, M., WATERWORTH, D., JAIN, P., MENG, X., MARTIN, R. P., AND ORTIZ, J. Poster abstract: A radar based user discrimination system for medication adherence monitoring. In *Proceedings of the 22nd International Conference on Information Processing in Sensor Networks* (New York, NY, USA, 2023), IPSN '23, Association for Computing Machinery, p. 338–339

5. ALDEER, M., SUN, Y., PAI, N., FLORENTINE, J., YU, J., AND ORTIZ, J. Poster abstract: A testbed for context representation in physical spaces. In *Proceedings of the 22nd International Conference on Information Processing in Sensor Networks* (New York, NY, USA, 2023), IPSN '23, Association for Computing Machinery, p. 336–337

6. RIVAS, P., ORTIZ, J., DIAZ, D., AND MONTOYA, L. Planning a center for standards and ethics in artificial intelligence. In *Proc. Int. Conf. Mach. Learn. Res.(PMLR)* (2022), pp. 1–10

7. CHOWDHURY, T., AND ORTIZ, J. Cadence: A practical timeseries partitioning algorithm for unlabeled sensor streams

8. CHOWDHURY, T., BHATTI, A., MANDEL, I., EHSAN, T., JU, W., AND ORTIZ, J. Towards sensing urban-scale covid-19 policy compliance in new york city. In *Proceedings of the 8th ACM International Conference on Systems for Energy-Efficient Buildings, Cities, and Transportation* (New York, NY, USA, 2021), BuildSys '21, Association for Computing Machinery, p. 353–356

9. CHOWDHURY, T., DING, Q., MANDEL, I., JU, W., AND ORTIZ, J. Tracking urban heartbeat and policy compliance through vision and language-based sensing. In *Proceedings of the 8th ACM International Conference on Systems for Energy-Efficient Buildings, Cities, and Transportation* (New York, NY, USA, 2021), BuildSys '21, Association for Computing Machinery, p. 302–306

10. WU, T., ALDEER, M., CHOWDHURY, T., HAYNES, A., NIKSERESHT, F., VARNOSFADERANI, M. P., GAO, J., HEYDARIAN, A., CAMPBELL, B., AND ORTIZ, J. The smart building privacy challenge. In *Proceedings of the 8th ACM International Conference on Systems for Energy-Efficient Buildings, Cities, and Transportation* (New York, NY, USA, 2021), BuildSys '21, Association for Computing Machinery, p. 238–239

11. WU, T., AND ORTIZ, J. Rlad: Time series anomaly detection through reinforcement learning and active learning. In *2021 7th SIGKIDD Workshop on Mining and Learning from Time Series (MILETS)* (2021)

12. CHOWDHURY, T., ALDEER, M., YU, J., FLORENTINE, J., HAYNES, A., AND ORTIZ, J. Is general purpose sensing a pipe dream? a case study in ambient multi-sensing for human

activity recognition. In *2021 IEEE The First International Workshop on Cyber-Physical-Human System Design and Implementation* (2021)

13. ALDEER, M., HOWARD, R., MARTIN, R. P., AND ORTIZ, J. Is that you again? adaptive learning techniques for user identification in smart pill bottle systems. In *2021 IEEE The First International Workshop on Cyber-Physical-Human System Design and Implementation* (2021)

14. ALDEER, M., ALAZIZ, M., ORTIZ, J., HOWARD, R. E., AND MARTIN, R. P. A sensing-based framework for medication compliance monitoring. In *Proceedings of the 1st ACM International Workshop on Device-Free Human Sensing* (New York, NY, USA, 2019), DFHS'19, Association for Computing Machinery, p. 52–56

15. WU, T., AND ORTIZ, J. Towards adaptive anomaly detection in buildings with deep reinforcement learning. In *Proceedings of the 6th ACM International Conference on Systems for Energy-Efficient Buildings, Cities, and Transportation* (New York, NY, USA, 2019), BuildSys '19, Association for Computing Machinery, p. 380–382

16. ALDEER, M., FLORENTINE, J., KOLODZIEJSKI, J., ORTIZ, J., HOWARD, R. E., AND MARTIN, R. P. Patient identification using a smart pill-bottle: Poster abstract. In *Proceedings of the 17th Conference on Embedded Networked Sensor Systems* (New York, NY, USA, 2019), SenSys '19, Association for Computing Machinery, p. 424–425

17. LEE, W.-H., ORTIZ, J., KO, B., AND LEE, R. Time series segmentation through automatic feature learning. *ArXiv abs/1801.05394* (2018)

18. KO, B. J., ORTIZ, J., SALONIDIS, T., TOUMA, M., VERMA, D., WANG, S., WANG, X., AND WOOD, D. Acoustic signal processing for anomaly detection in machine room environments: Demo abstract. In *Proceedings of the 3rd ACM International Conference on Systems for Energy-Efficient Built Environments* (New York, NY, USA, 2016), BuildSys '16, Association for Computing Machinery, p. 213–214

19. ORTIZ, J., HUANG, C., AND CHAKRABORTY, S. Get more with less: Fast image clustering on network of mobile phones. *1st Workshop for On Device Intelligence at The International Conference on Machine Learning (ICML 2016)* (Nov 2016), 16–19

20. MEHRA, M., BAGRI, A., JIANG, X., AND ORTIZ, J. Image analysis for identifying mosquito breeding grounds. In *2016 IEEE International Conference on Sensing, Communication and Networking (SECON Workshops)* (2016), pp. 1–6

21. ORTIZ, J., AND KIM, Y. Project tidy: Ranking time series for smart energy systems: Poster abstract. In *Proceedings of the 3rd ACM International Conference on Systems for Energy-Efficient Built Environments* (New York, NY, USA, 2016), BuildSys '16, Association for Computing Machinery, p. 227–228

22. KO, B. J., ORTIZ, J., SALONIDIS, T., TOUMA, M., VERMA, D., WANG, S., WANG, X., AND WOOD, D. Acoustic signal processing for anomaly detection in machine room environments: Demo abstract. In *Proceedings of the 3rd ACM International Conference on Systems for Energy-Efficient Built Environments* (New York, NY, USA, 2016), BuildSys '16, Association for Computing Machinery, p. 213–214

23. HONG, D., ORTIZ, J., BHATTACHARYA, A. A., AND WHITEHOUSE, K. Sensor-type classification in buildings. *CoRR abs/1509.00498* (2015)

24. BHATTACHARYA, A., CULLER, D., HONG, D., WHITEHOUSE, K., AND ORTIZ, J. Writing scalable building efficiency applications using normalized metadata: Demo abstract. In *Proceedings of the 1st ACM Conference on Embedded Systems for Energy-Efficient Buildings* (New York, NY, USA, 2014), BuildSys '14, Association for Computing Machinery, p. 196–197

25. BHATTACHARYA, A., CULLER, D., HONG, D., WHITEHOUSE, K., AND ORTIZ, J. Automated metadata transformation for a-priori deployed sensor networks. In *Proceedings of the 12th ACM Conference on Embedded Network Sensor Systems* (New York, NY, USA, 2014), SenSys '14, Association for Computing Machinery, p. 364–365

26. BHATTACHARYA, A., CULLER, D. E., ORTIZ, J., HONG, D., AND WHITEHOUSE, K. Enabling portable building applications through automated metadata transformation. Tech. Rep. UCB/EECS-2014-159, EECS Department, University of California, Berkeley, Aug 2014

27. HONG, D., ORTIZ, J., WHITEHOUSE, K., AND CULLER, D. Towards automatic spatial verification of sensor placement in buildings. In *Proceedings of the 5th ACM Workshop on Embedded Systems For Energy-Efficient Buildings* (New York, NY, USA, 2013), BuildSys'13, Association for Computing Machinery, p. 1–8

28. ORTIZ, J., NOH, Y., SALDANHA, G., SU, D., AND CULLER, D. Towards real-time, fine-grained energy analytics in buildings through mobile phones. In *Proceedings of the Fourth ACM Workshop on Embedded Sensing Systems for Energy-Efficiency in Buildings* (New York, NY, USA, 2012), BuildSys '12, Association for Computing Machinery, p. 42–44

29. FONTUGNE, R., ORTIZ, J., CULLER, D., AND ESAKI, H. Empirical mode decomposition for intrinsic-relationship extraction in large sensor deployments. In *Proceedings of the 1st Workshop on Internet of Things Applications, IoT-App* (Beijing, China, 2012), IPSN '12, ACM

30. KATZ, R. H., CULLER, D. E., SANDERS, S., ALSPAUGH, S., CHEN, Y., DAWSON-HAGGERTY, S., DUTTA, P., HE, M., JIANG, X., KEYS, L., KRIOUKOV, A., LUTZ, K., ORTIZ, J., MOHAN, P., REUTZEL, E., TANEJA, J., HSU, J., AND SHANKAR, S. An information-centric energy infrastructure: The berkeley view. *Sustainable Computing: Informatics and Systems 1*, 1 (2011), 7 – 22

31. LANZISERA, S., DAWSON-HAGGERTY, S., JIANG, X., CHEUNG, H. Y., TANEJA, J., LAI, J., ORTIZ, J., CULLER, D., AND BROWN, R. Wireless electricity metering of miscellaneous and electronic devices in buildings. In *2011 Future of Instrumentation International Workshop (FIIW) Proceedings* (2011), pp. 16–19

32. DAWSON-HAGGERTY, S., ORTIZ, J., JIANG, X., HSU, J., SHANKAR, S., AND CULLER, D. Enabling green building applications. In *Proceedings of the 6th Workshop on Hot Topics in Embedded Networked Sensors* (New York, NY, USA, 2010), HotEmNets '10, Association for Computing Machinery

33. HSU, J., MOHAN, P., JIANG, X., ORTIZ, J., SHANKAR, S., DAWSON-HAGGERTY, S., AND CULLER, D. Hbci: Human-building-computer interaction. In *Proceedings of the 2nd ACM Workshop on Embedded Sensing Systems for Energy-Efficiency in Building* (New York, NY, USA, 2010), BuildSys '10, Association for Computing Machinery, p. 55–60

34. ORTIZ, J. A system for managing physical data in buildings. Tech. Rep. UCB/EECS-2010-128, EECS Department, University of California, Berkeley, Sep 2010

35. ORTIZ, J., AND CULLER, D. Exploring diversity: Evaluating the cost of frequency diversity in communication and routing. In *Proceedings of the 6th ACM Conference on Embedded Network Sensor Systems* (New York, NY, USA, 2008), SenSys '08, Association for Computing Machinery, p. 411–412 [**Best Poster Award**]

36. DAWSON-HAGGERTY, S., ORTIZ, J., JIANG, X. F., AND CULLER, D. E. The effect of link churn on wireless routing. Tech. Rep. UCB/EECS-2008-109, EECS Department, University of California, Berkeley, Aug 2008

37. TAVAKOLI, A., DUTTA, P., JEONG, J., KIM, S., ORTIZ, J., CULLER, D., LEVIS, P., AND SHENKER, S. A modular sensornet architecture: Past, present, and future directions. *SIGBED Rev. 4*, 3 (July 2007), 49–54

38. JIANG, X., TANEJA, J., ORTIZ, J., TAVAKOLI, A., DUTTA, P., JEONG, J., CULLER, D., LEVIS, P., AND SHENKER, S. An architecture for energy management in wireless sensor networks. *SIGBED Rev. 4*, 3 (July 2007), 31–36

Books and Book Chapters

1. ALDEER, M., JAVANMARD, M., ORTIZ, J., AND MARTIN, R. *Monitoring Technologies for Quantifying Medication Adherence*. Springer International Publishing, 4 2022, pp. 49–78

Ph.D. Thesis

1. ORTIZ, J. *A Platform Architecture for Sensor Data Processing and Verification in Buildings*. PhD thesis, EECS Department, University of California, Berkeley, Dec 2013

Masters Thesis

1. ORTIZ, J. Multichannel reliability assessment in real world wsns. Master's thesis, EECS Department, University of California, Berkeley, May 2010

Patents Issued

1. CHAKRABORTY, S., GRUENEBERG, K., KO, B., MAKAYA, C., ORTIZ, J. J., RALLAPALLI, S., SALONIDIS, T., URGAONKAR, R., VERMA, D., AND WANG, X. Recommendations based on private data using a dynamically deployed pre-filter. https://patents.google.com/patent/US17938405, 2 2023. US Patent App. 17/938,405

2. KANDLUR, D. D., FREIMUTH, D. M., LE, T. F., NAHUM, E., AND ORTIZ, J. J. Name based internet of things (iot) data discovery. In *US Patent 2019/10735370* (08 2020)

3. KO, B., MAKAYA, C., ORTIZ, J. J., AND VERMA, D. C. Monitoring and management of software as a service in micro cloud environments. In *US 2019/10623276* (04 2020)

4. CALO, S. B., FREIMUTH, D. M., KANDLUR, D. D., LE, T. F., NAHUM, E., ORTIZ, J. J., TOUMA, M., AND VERMA, D. C. Automatic protocol discovery using text analytics. In *US 2019/16127615* (03 2020)

5. DESAI, N. V., KO, B. J., ORTIZ, J. J., RALLAPALLI, S., SALONIDIS, T., URGAONKAR, R., AND VERMA, D. C. System, method, and recording medium for data mining between private and public domains. In *US 2019/10394912* (08 2018)

6. CALO, S. B., MEL, G. R. D., GRUENEBERG, K. W., ORTIZ, J. J., WANG, X., AND III, D. A. W. Adaptive query targeting in a dynamic distributed environment. In *US 2019/10334025* (06 2018)

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(i) Service

1. Judge, Newsweek AI Impact Awards 2025 (https://events.newsweek.com/aiimpact-us/awards-us-2025)
2. Instructor, Electrical and Computer Engineering Component, Rutgers Honors Engineering Experience (RHEx) Summer Program 2025
3. TPC Member ACM MobiHoc 2025
4. TPC Member Sensys 2025
5. TPC Member Buildsys 2025
6. Reviewer LatinX in AI Supercomputing Network Cohort II (LXAISN) 2025
7. TPC Member ICLR 2025
8. Steering Committee Chair BuildSys 2024-2025
9. IPSN Poster co-Chair 2023
10. General Chair Buildsys 2022
11. Chair for Workshop on Cyber-Physical-Human Systems (CPHS) at CPS Week 2022
12. NeurIPS 2021 Workshop on The Symbiosis of Deep Learning and Differential Equations (DLDE), Organizer
13. AAAI-22 Undergraduate Consortium – Mentorship Coordinator Chair
14. TPC The First International Workshop on Cyber-Physical-Human System Design and Implementation at CPS Week 2021
15. EWSN 2021 Poster Co-Chair
16. Buildsys 2020 TPC Co-Chair, Steering Committee 2021, TPC 2021, Poster Chair 2021
17. AAAI-21 Undergraduate Consortium – Faculty Mentor
18. AAAI-20 Undergraduate Consortium – Faculty Mentor
19. LatinX in AI Mentor 2020
20. Co-Chair N2Women at Sensys 2019
21. Co-Chair Workshop on Combining Physical and Data-Driven Knowledge in Ubiquitous Computing at UBICOMP 2019
22. CPS-IoT Week 2019 Publication Chair (HSCC, ICCPS, IPSN, RTAS, IoTDI)
23. Richard Tapia Celebration in Diversity in Computing Poster Co-Chair 2018, Chair 2019
24. TPC Member Latinos in Artificial Intelligence Workshop NeurIPS 2018, ICML 2019
25. TPC Member Energy Data and Analytics Workshop at e-Energy 2018, 2019
26. TPC Member Sensys 2016 (Demo Session), Organizing Committee 2020
27. TPC Member IPSN 2014, 2017, 2019, 2020, 2021
28. TPC Member Buildsys 2016, 2017, 2018, 2019, 2020
29. Organizing Committee Sensys/Buildsys 2016, 2017, 2020
30. The 26th International Conference on Computer Communication and Networks (ICCCN 2017)
31. TPC Member 1st Workshop on Smart and Connected Indoor Environments (SCIE) in conjunction with IEEE International Conference on Sensing, Communication and Networking (SECON 2017)
32. TPC Member 1st Workshop on Internet of Thing Physical Data Analytics (IoTPDA) in conjunction with IEEE International Conference on Sensing, Communication and Networking (SECON 2016)
33. TPC Member DCOSS 2016 (The annual International Conference on Distributed Computing

in Sensor Systems)
34. TPC Member ALGOSENSORS 2017
35. TPC IEEE workshop on Big Data Management for the Internet of Things (BIOT2017)
36. Member of CSGSA Faculty Candidate Evaluation Committee, UCB Computer Science Div. (2008, 2009, 2010)
37. President of CSGSA Faculty Candidate Evaluation Committee, UCB Computer Science Div. (2011)
38. Chair, Internet of Things Professional Interest Community (IoT-PIC) IBM Research at Watson Labs.