Mario Berges (Associate Professor)

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Biography

Mario Berges is an associate professor in the Department of Civil and Environmental Engineering at Carnegie Mellon University. He is interested in making our built environment more operationally efficient and robust through the use of information and communication technologies, so that it can better deal with future resource constraints and a changing environment.

Berges is the faculty co-director of the IBM Smart Infrastructure Analytics Laboratory at CMU, as well as the director of the Intelligent Infrastructure Research Lab (INFERLab). Among recent awards, he received the Outstanding Early Career Researcher award from FIATECH in 2010, and the Dean's Early Career Fellowship from CMU in 2015.

Education

- PhD 2010 - Carnegie Mellon University.
- MS 2007 - Carnegie Mellon University.
- Certificate 2005 - Instituto Tecnológico de Santo Domingo (Dominican Republic).
- BS 2004 - Instituto Tecnológico de Santo Domingo (Dominican Republic).

Research

Research Group: AIS- Advanced Infrastructure Systems.

Research Centers: SII- Smart Infrastructure Institute.

Areas of Interest

- Infrastructure monitoring
- Building energy management
- Smart grid
- Machine learning for signal processing
- Sensor networks

Citation counts:

- Web of Science: unavailable.
- Google scholar: 1498.
- Scopus: 618 total citations by 490 documents.

Publications

Articles appearing in journals

1. Suman Giri and Mario Bergés. An error correction framework for sequences resulting from known state-transition models in non-intrusive load monitoring. Advanced Engineering Informatics, 32:152--162, April 2017.
2. Matineh Eybpoosh, Mario Bergés, and Hae Young Noh. Sparse representation of ultrasonic guided-waves for robust damage detection in pipelines under varying environmental and operational conditions. Structural Control and Health Monitoring, 23(2):369--391, February 2016.
3. Matineh Eybpoosh, Mario Bergés, and Hae Young Noh. An energy-based sparse representation of ultrasonic guided-waves for online damage detection of pipelines under varying environmental and operational conditions. Mechanical Systems and Signal Processing, 82:260--278, 2016.
4. In-Soo Jung, Mario Bergés, James H. Garrett Jr., and Barnabas Poczos. Exploration and evaluation of AR, MPCA and KL anomaly detection techniques to embankment dam piezometer data. Advanced Engineering Informatics, 29(4):902--917, October 2015.
5. Chang Liu, Joel B. Harley, Mario Bergés, David W. Greve, and Irving J. Oppenheim. Robust ultrasonic damage detection under complex environmental conditions using singular value decomposition. Ultrasonics, 58:75--86, April 2015.
6. Emre Can Kara, Mario Bergés, and Gabriela Hug. Impact of Disturbances on Modeling of Thermostatically Controlled Loads for Demand Response. IEEE Transactions on Smart Grid, PP(99):1--1, 2015.
7. Emre C. Kara, Jason S. Macdonald, Douglas Black, Mario Bergés, Gabriela Hug, and Sila Kiliccote. Estimating the benefits of electric vehicle smart charging at non-residential locations: A data-driven approach. Applied Energy, 155(0):515 -- 525, 2015.
8. Suman Giri and Mario Bergés. An energy estimation framework for event-based methods in non-intrusive load monitoring. Energy Conversion and Management, 90:488--498, 2015.
9. Farrokh Jazizadeh, Burcin Becerik-Gerber, Mario Bergés, and Lucio Soibelman. An unsupervised hierarchical clustering based heuristic algorithm for facilitated training of electricity consumption disaggregation systems. Advanced Engineering Informatics, 28(4):311--326, 2014.
10. Nipun Batra, Oliver Parson, Mario Bergés, Amarjeet Singh, and Alex Rogers. A comparison of non-intrusive load monitoring methods for commercial and residential buildings. arXiv preprint arXiv:1408.6595, 2014.
11. Suman Giri, Mario Bergés, and Anthony Rowe. Towards automated appliance recognition using an EMF sensor in NILM platforms. Advanced Engineering Informatics, 27(4):477--485, October 2013.

12. Derrick Carlson, H. Scott Matthews, and Mario Bergés. One size does not fit all: Averaged data on household electricity is inadequate for residential energy policy and decisions. Energy and Buildings, 64:132--144, September 2013.
13. Xuesong Liu, Burcu Akinci, Mario Bergés, and James H. Garrett. Domain-specific querying formalisms for retrieving information of HVAC systems. Journal of Computing in Civil Engineering, February 2013.
14. Xuesong Liu, Burcu Akinci, Mario Bergés, and James H. Garrett Jr. Extending the information delivery manual approach to identify information requirements for performance analysis of HVAC systems. Advanced Engineering Informatics, 2013.
15. Anthony Rowe, Mario Bergés, Gaurav Bhatia, Ethan Goldman, Raj Rajkumar, James H. Garrett, José M. F. Moura, and Lucio Soibelman. Sensor andrew: Large-scale campus-wide sensing and actuation. IBM Journal of Research and Development, 55(1.2):6:1 -- 6:14, January 2011.
16. Mario Bergés, Ethan Goldman, Lucio Soibelman, H. Scott Matthews, and Kyle Anderson. User-centered Non-Intrusive electricity load monitoring for residential buildings. Journal of Computing in Civil Engineering, 25(1), 2011.
17. S. Taneja, B. Akinci, J. H Garrett, L. Soibelman, Mario Bergés, G. Atasoy, X. Liu, S. M. Shahandashti, E. B. Anil, E. Ergen, A. Pradhan, and P. Tang. CEC: sensing and field data capture for construction and facility operations. Journal of Construction Engineering and Management, 137(10):870--881, 2011.
18. S. M. Shahandashti, Saiedeh N. Razavi, Lucio Soibelman, Mario Bergés, Carlos H. Caldas, Ioannis Brilakis, Jochen Teizer, Patricio Vela, Carl Haas, James H. Garrett, Burcu Akinci, and Zhenhua Zhu. CEC: data fusion approaches and applications for construction engineering. Journal of Construction Engineering and Management, 137(10):863--869, 2011.
19. Mario Bergés, Ethan Goldman, H. Scott Matthews, and Lucio Soibelman. Enhancing electricity audits in residential buildings with nonintrusive load monitoring. Journal of Industrial Ecology, 14(5):844--858, October 2010.
20. Mario Bergés, Ethan Goldman, H. Scott Matthews, and Lucio Soibelman. Training load monitoring algorithms on highly Sub-Metered home electricity consumption data. Tsinghua Science & Technology, 13:406–411, 2008.

Articles appearing in conference proceedings

1. Minkyung Kang, Mario Bergés, and Burcu Akinci. Forecasting airport building electricity demand based on flight schedule information for demand response applications. In Transportation Research Board 96th Annual Meeting Compendium of Papers, 2017.
2. Minkyung Kang, Mario Bergés, and Burcu Akinci. Electric load prediction baseline for airport buildings: A case study. In Proceedings of the 2016 Construction Research Congress, San Juan, Puerto Rico, June 2016.
3. Henning Lange and Mario Bergés. The Nerual Energy Decoder: Energy Disaggregation by Combining Binary Subcomponents. In 3rd International Workshop on Non-Intrusive Load Monitoring, Vancouver, Canada, May 2016.
4. Henning Lange and Mario Bergés. Efficient Inference in Dual-emission FHMM for Energy Disaggregation. In Workshops at the Thirtieth AAAI Conference on Artificial Intelligence, Phoenix, Arizona, USA, February 2016.

5. Bharathan Balaji, Arka Bhattacharya, Gabriel Fierro, Jingkun Gao, Joshua Gluck, Dezhi Hong, Aslak Johansen, Jason Koh, Joern Ploennigs, Yuvraj Agarwal, Mario Berges, David Culler, Rajesh Gupta, Mikkel Baun Kjærgaard, Mani Srivastava, and Kamin Whitehouse. Portable queries using the brick schema for building applications: Demo abstract. In Proceedings of the 3rd ACM International Conference on Systems for Energy-Efficient Built Environments, BuildSys '16, pages 219--220, New York, NY, USA, 2016. ACM.
6. Bharathan Balaji, Arka Bhattacharya, Gabriel Fierro, Jingkun Gao, Joshua Gluck, Dezhi Hong, Aslak Johansen, Jason Koh, Joern Ploennigs, Yuvraj Agarwal, Mario Berges, David Culler, Rajesh Gupta, Mikkel Baun Kjærgaard, Mani Srivastava, and Kamin Whitehouse. Brick: Towards a unified metadata schema for buildings. In Proceedings of the 3rd ACM International Conference on Systems for Energy-Efficient Built Environments, BuildSys '16, New York, NY, USA, 2016. ACM.
7. Henning Lange and Mario Bergés. Bolt: Energy disaggregation by online binary matrix factorization of current waveforms. In Proceedings of the 3rd ACM International Conference on Systems for Energy-Efficient Built Environments, BuildSys '16, pages 11--20, New York, NY, USA, 2016. ACM.
8. Peng Gong, Joel B. Harley, Mario Bergés, Warren R. Junker, David W. Greve, and Irving J. Oppenheim. Ultrasonic guided wave detection of scatterers on large clad steel plates. volume 9803, pages 98033O--98033O--9, 2016.
9. Kyle Anderson, Mario Bergés, and José M. F. Moura. Non-Intrusive Load Monitoring: A Power Consumption Based Relaxation. Orlando, Florida, USA, December 2015. IEEE.
10. Suman Giri and Mario Bergés. Virtual metering of electrical appliances through analysis of data from contactless sensing. Orlando, Florida, USA, December 2015. IEEE.
11. Jingkun Gao, Emre Can Kara, Suman Giri, and Mario Bergés. A feasibility study of automated plug-load identification from high-frequency measurements. Orlando, Florida, USA, December 2015. IEEE.
12. Xuechen Lei, Minkyung Kang, Mario Bergés, and Burcu Akinci. Assessment of Industry Foundation Classes (IFC) in Supporting Building Energy Benchmarking. In Proceedings of the 32nd CIB W78 Conference 2015, Eindhoven, The Netherlands, October 2015.
13. Jingkun Gao, Joern Ploennigs, and Mario Bergés. A Data-driven Meta-data Inference Framework for Building Automation Systems. In Proceedings of the 2Nd ACM International Conference on Embedded Systems for Energy-Efficient Built Environments, BuildSys '15, pages 23--32, New York, NY, USA, 2015. ACM.
14. Matineh Eybpoosh, Mario Bergés, and Hae Young Noh. Effects of damage location and size on sparse representation of guided-waves for damage diagnosis of pipelines under varying temperature. volume 9437, pages 94371X--94371X--9, 2015.
15. Matineh Eybpoosh, Mario Bergés, and Hae Young Noh. Nonlinear feature extraction methods for removing temperature effects in multi-mode guided-waves in pipes. volume 9437, pages 94371W--94371W--16, 2015.
16. Matineh Eybpoosh, Mario Bergés, and Hae Young Noh. Temperature variation effects on sparse representation of guided-waves for damage diagnosis in pipelines. volume 9437, pages 94371N--94371N--11, 2015.
17. In-Soo Jung, Mario Bergés, and James H. Garrett Jr. Anomaly detection on piezometer data collected from embankment dams using physical model-based simulation. In Proceedings

of the 2014 International Conference on Computing in Civil and Building Engineering (ICCCBE), pages 1771--1778, Orlando, Florida, USA, June 2014. ASCE.

18. Alejando Gomez Rivera, Sergio Guindon, Timothy Pianka, Neil Patel, Varun Kasireddy, Enze Li, Jungcheng Li, Semiha Ergan, and Mario Bergés. Lessons learned from monitoring electricity consumption in a research lab through a capstone project course. In Proceedings of the 2014 International Conference on Computing in Civil and Building Engineering (ICCCBE), Orlando, Florida, USA, June 2014. ASCE.
19. Matineh Eybpoosh, Mario Bergés, and Hae Young Noh. Investigation on the effects of environmental and operational conditions (eoc) on diffuse-field ultrasonic guided-waves in pipes. In Proceedings of the 2014 International Conference on Computing in Civil and Building Engineering (ICCCBE), Orlando, Florida, USA, June 2014.
20. Alejando Gomez, Mario Bergés, and Burcu Akinci. Exploratory study towards streamlining the identification of sensor locations within a facility. In Proceedings of the 2014 International Conference on Computing in Civil and Building Engineering (ICCCBE), pages 1820--1827, Orlando, Florida, USA, June 2014. ASCE.
21. Farrokh Jazizadeh, Burcin Becerik-Gerber, Mario Bergés, and Lucio Soibelman. Unsupervised clustering of residential electricity consumption measurements for facilitated user-centric non-intrusive load monitoring. In Proceedings of the 2014 International Conference on Computing in Civil and Building Engineering (ICCCBE), pages 1869--1876, Orlando, Florida, USA, June 2014.
22. Emre Can Kara, Mario Bergés, and Gabriela Hug. Modeling thermostatically controlled loads to engage households in the smart grid: Lessons learned from residential refrigeration units. In Proceedings of the 2014 International Conference on Computing in Civil and Building Engineering (ICCCBE), pages 2032--2039, Orlando, Florida, USA, June 2014. ASCE.
23. Miguel Mora, Burcu Akinci, and Mario Bergés. Information exchange requirements to support commissioning of HVAC and building envelope components during an energy retrofit project - a comparative case study. In Proceedings of the 2014 International Conference on Computing in Civil and Building Engineering (ICCCBE), pages 1481--1488, Orlando, Florida, USA, June 2014. ASCE.
24. Jingkun Gao, Suman Giri, Emre Can Kara, and Mario Bergés. Plaid: a public dataset of high-resoultion electrical appliance measurements for load identification research: demo abstract. In Proceedings of the 1st ACM Conference on Embedded Systems for Energy-Efficient Buildings, pages 198--199. ACM, 2014.
25. Merthan Koc, Burcu Akinci, and Mario Bergés. Comparison of linear correlation and a statistical dependency measure for inferring spatial relation of temperature sensors in buildings. In Proceedings of the 1st ACM Conference on Embedded Systems for Energy-Efficient Buildings, pages 152--155. ACM, 2014.
26. Christopher Palmer, Patrick Lazik, Maxim Buevich, Jingkun Gao, Mario Bergés, Anthony Rowe, Ricardo Lopes Pereira, and Christopher Martin. Mortar.io: a concrete building automation system: demo abstract. In Proceedings of the 1st ACM Conference on Embedded Systems for Energy-Efficient Buildings, pages 204--205. ACM, 2014.
27. Emre Can Kara, Zico Kolter, Mario Bergés, Bruce Krogh, Gabriela Hug, and T. Yuksel. A moving horizon state estimator in the control of thermostatically controlled loads for demand

response. In Proceedings of the 4th International Conference on Smart Grid Communications (SmartGridComm). IEEE, September 2013.

28. Chang Liu, Joel B. Harley, David Greve, Mario Bergés, and Irving Oppenheim. Identifying pipe degradation in a highly dynamic environment using singular value decomposition. In Proceedings of the Ninth International Workshop on Structural Health Monitoring, volume 1, pages 815--822, Palo Alto, California, September 2013.
29. Suman Giri, Po-Hsian Lai, and Mario Bergés. Novel techniques for ON and OFF states detection of appliances for power estimation in non-intrusive load monitoring. In Proceedings of the The 30th International Symposium on Automation and Robotics in Construction and Mining (ISARC), Montreal, Canada, August 2013.
30. In-Soo Jung, Jennifer Fraizer, Burcu Akinci, Mario Bergés, Semiha Ergan, James H. Garrett, and Christopher Kelly. Towards dam information modeling: Best practices learned from the AEC/FM domain. In Proceedings of the 2013 International Commission on Large Dams (ICOLD), Seattle, WA, August 2013.
31. Suman Giri and Mario Bergés. Towards automatic classification of appliances: Tackling cross talk in EMF sensors using blind source separation techniques. In Proceedings of the 2013 International EG-ICE Workshop on Intelligent Computing, Vienna, Austria, July 2013.
32. Farrokh Jazizadeh, Burcin Becerik-Gerber, Lucio Soibelman, and Mario Bergés. Towards passive training for non-intrusive load monitoring. In Proceedings of the 2013 International EG-ICE Workshop on Intelligent Computing, Vienna, Austria, July 2013.
33. In-Soo Jung, Mario Bergés, James H. Garrett, and Christopher Kelly. Interpreting the dynamics of embankment dams through a time-series analysis of multiple piezometer data using a non-parametric spectral estimation method. In Proceedings of the 2013 ASCE International Workshop on Computing in Civil Engineering, Los Angeles, California USA, June 2013. ASCE.
34. Emre Can Kara and Mario Bergés. Demand response in buildings: Engaging thermostatically controlled loads in the power grid. In Proceedings of the 2013 ASCE International Workshop on Computing in Civil Engineering, Los Angeles, California USA, June 2013. ASCE.
35. Chang Liu, Joel B. Harley, Yujie Ying, Martin H. Altschul, Mario Bergés, David Greve, José M. F. Moura, Irving Oppenheim, and Lucio Soibelman. Ultrasonic monitoring of a pressurized pipe in operation. In Proceedings of the 2013 ASCE Structures Congress, Pittsburgh, PA, April 2013. ASCE.
36. Niranjini Rajagopal, Anthony Rowe, Suman Giri, and Mario Bergés. Demo abstract: A magnetic field-based appliance metering system. In Proceedings of the 12th ACM/IEEE International Conference on Information Processing in Sensor Networks, Philadelphia, PA, April 2013. ACM/IEEE.
37. Niranjini Rajagopal, Suman Giri, Anthony Rowe, and Mario Bergés. A magnetic field-based appliance metering system. In ACM/IEEE Third International Conference on Cyber-Physical Systems, Philadelphia, PA, April 2013.
38. Chang Liu, Joel B. Harley, Yujie Ying, Mario Bergés, James H. Garrett, David Greve, and Irving Oppenheim. Singular value decomposition for novelty detection in ultrasonic pipe monitoring. In Proceedings of the 2013 SPIE Smart Structures/NDE Conference, volume 8692-58, San Diego, California, United States, February 2013.

39. Leneve Ong, Mario Bergés, and Hae Young Noh. Exploring sequential and association rule mining for pattern-based energy demand characterization. In Proceedings of the 5th ACM Workshop on Embedded Systems For Energy-Efficient Buildings, BuildSys'13, pages 25:1--25:2, New York, NY, USA, 2013. ACM.
40. Kyle Anderson, Mario Bergés, Adrian Ocneanu, Diego Benitez, and José M. F. Moura. Event detection for non intrusive load monitoring. In Proceedings of the 38th Annual Conference on IEEE Industrial Electronics Society (IECON), Montreal, Canada, November 2012. IEEE.
41. Emre Can Kara, Mario Bergés, Bruce H. Krogh, and Soummya Kar. Using smart devices for system-level management and control in the smart grid: A reinforcement learning framework. In Proceedings of the 3rd International Conference on Smart Grid Communications (SmartGridComm), Tainan City, Taiwan, November 2012. IEEE.
42. Kyle Anderson, Adrian Ocneanu, Diego Benitez, Derrick Carlson, Anthony Rowe, and Mario Bergés. BLUED: a fully labeled public dataset for Event-Based Non-Intrusive load monitoring research. In Proceedings of the 2nd KDD Workshop on Data Mining Applications in Sustainability (SustKDD), Beijing, China, August 2012.
43. Chang Liu, Joel B. Harley, Nicholas O'Donoughue, Yujie Ying, Mario Bergés, Martin H. Altschul, James H. Garrett, David Greve, José M. F. Moura, Irving Oppenheim, and Lucio Soibelman. Ultrasonic scatterer detetion in a pipe under operating conditions using singular value decomposition. In 39th Annual Review of Progress in Quantitative Nondestructive Evaluation, Denver, CO, USA, July 2012.
44. Suman Giri and Mario Bergés. A study on the feasibility of automated data labeling and training using an EMF sensor in NILM platforms. In Proceedings of the 2012 International EG-ICE Workshop on Intelligent Computing, Herrsching, Germany, July 2012.
45. Xuesong Liu, Burcu Akinci, James H. Garrett, and Mario Bergés. Requirements for a formal approach to represent information exchange requirements of a self-managing framework for HVAC systems. In Proceedings of the 2012 International Conference on Computing in Civil and Building Engineering, Moscow, Russia, July 2012.
46. Lucas Pereira, Filipe Quintal, Nuno J. Nunes, and Mario Bergés. The design of a hardware-software platform for long-term energy eco-feedback research. In Proceedings of the 4th ACM SIGCHI Symposium on Engineering Interactive Computing Systems (EICS), Copenhagen, Denmark, June 2012. ACM.
47. Xuesong Liu, Burcu Akinci, Mario Bergés, and James H. Garrett. An integrated performance analysis framework for HVAC systems using heterogeneous data models and building automation systems. In Proceedings of the 4th ACM Workshop on Embedded Systems for Energy-Efficiency in Building, BuildSys '12, pages 145--152, Toronto, Canada, 2012. ACM.
48. Derrick R. Carlson, Mario Bergés, and H. Scott Matthews. How many appliances does it take to…? In 1st International Workshop on Non-Intrusive Load Monitoring, 2012.
49. Matineh Eybpoosh, Burcu Akinci, and Mario Bergés. A taxonomy for depicting geospatial deviations of facilities extracted through comparisons between point clouds and building information models. In ASCE International Workshop on Computing in Civil Engineering, Clearwater Beach, FL, 2012. ASCE.
50. Xuesong Liu, Burcu Akinci, Mario Bergés, and James H. Garrett Jr. Exploration and comparison of approaches for integrating heterogeneous information sources to support

performance analysis of HVAC systems. In ASCE International Workshop on Computing in Civil Engineering, Clearwater Beach, FL, 2012. ASCE.

51. Matineh Eybpoosh, Burcu Akinci, and Mario Bergés. Effects of planning and data collection approaches on the quality of processed laser scanned data: Lessons learned. In Construction Research Congress, West Lafayette, IN, 2012.
52. Hugo Goncalves, Adrian Ocneanu, and Mario Bergés. Unsupervised disaggregation of appliances using aggregated consumption data. In 1st KDD Workshop on Data Mining Applications in Sustainability (SustKDD), August 2011.
53. Mario Bergés, Emre Can Kara, Ethan Goldman, and Anthony Rowe. Towards automated detection and state tracking of artificial light sources from sequential pictures inside buildings. In International Workshop on Intelligent Computing in Engineering, Enschede, The Netherlands, July 2011.
54. N.J. Nunes, L. Pereira, F. Quintal, and Mario Bergés. Deploying and evaluating the effectiveness of energy eco-feedback through a low-cost NILM solution. In Proceedings of the 6th International Conference on Persuasive Technology, Colombus, OH, June 2011.
55. Yuanwei Jin, Eniye Tebekaemi, Mario Bergés, and Lucio Soibelman. Robust adaptive event detection in non-intrusive load monitoring for energy aware smart facilities. In Proceedings of the IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP), pages 4340 --4343, May 2011.
56. Xuesong Liu, Burcu Akinci, James H. Garrett Jr, and Mario Bergés. Requirements and development of a computerized approach for analyzing functional relationships among HVAC components using building information models. In CIB W078 - W102, France, 2011.
57. Mario Bergés and Anthony Rowe. Poster abstract: Appliance classification and energy management using Multi-Modal sensing. In Proceedings of the 3rd ACM Workshop on Embedded Sensing Systems for Energy-Efficiency in Building, BuildSys '11, Seattle, WA, 2011. ACM.
58. Yuanwei Jin, Eniye Tebekaemi, Mario Bergés, and Lucio Soibelman. A time-frequency approach for event detection in non-intrusive load monitoring. In Proceedings of the Signal Processing, Sensor Fusion, and Target Recognition XX, pages 80501U--80501U--13, Orlando, Florida, USA, 2011.
59. X. Liu, B. Akinci, J.H. Garrett Jr, and Mario Bergés. Requirements for an integrated framework of Self-Managing HVAC systems. In ASCE International Workshop on Computing in Civil Engineering, Miami, FL, 2011. ASCE.
60. Mario Bergés, Lucio Soibelman, and H. Scott Matthews. Building commissioning as an opportunity for training Non-Intrusive load monitoring algorithms. In Proceedings of the 6th International Conference on Innovation in Architecture, Engineering and Construction (AEC), State College, PA, July 2010.
61. Mario Bergés, Lucio Soibelman, and H. Scott Matthews. Leveraging data from environmental sensors to enhance electrical load disaggregation algorithms. In Proceedings of the 13th International Conference on Computing in Civil and Building Engineering, Nottingham, UK, June 2010.
62. Anthony Rowe, Mario Bergés, and Raj Rajkumar. Contactless sensing of appliance state transitions through variations in electromagnetic fields. In Proceedings of the 2nd ACM

Workshop on Embedded Sensing Systems for Energy-Efficiency in Building, BuildSys '10, page 19–24, New York, NY, USA, 2010. ACM. ACM ID: 1878437.

63. Filipe Quintal, Nuno J Nunes, Adrian Ocneanu, and Mario Bergés. SINAIS: home consumption package: a low-cost eco-feedback energy-monitoring research platform. In Proceedings of the 8th ACM Conference on Designing Interactive Systems, DIS '10, page 419–421, New York, NY, USA, 2010. ACM. ACM ID: 1858252.
64. Mario Bergés, H. Scott Matthews, and Lucio Soibelman. A system for disaggregating residential electricity consumption by appliance. In Sustainable Systems and Technology (ISSST), 2010 IEEE International Symposium on, page 1, 2010.
65. Mario Bergés, Lucio Soibelman, H. Scott Matthews, and Ethan Goldman. Evaluating the electric consumption of residential buildings: Current practices and future prospects. In Proceedings of the 2010 Construction Research Congress, pages 8--8, Banff, Alberta, Canada, 2010.
66. Anthony Rowe, Mario Bergés, Gaurav Bhatia, Ethan Goldman, R. Rajkumar, and L. Soibelman. Demo abstract: The sensor andrew infrastructure for large-scale campus-wide sensing and actuation. In Information Processing in Sensor Networks, 2009. IPSN 2009. International Conference on, pages 415 --416, April 2009.
67. Mario Bergés, Ethan Goldman, H. Scott Matthews, and Lucio Soibelman. Learning systems for electric consumption of buildings. In ASCE International Workshop on Computing in Civil Engineering, Austin, Texas, USA, 2009. ASCE.
68. H. Scott Matthews, Lucio Soibelman, Mario Bergés, and Ethan Goldman. Automatically disaggregating the total electrical load in residential buildings: a profile of the required solution. In International Workshop on Intelligent Computing in Engineering, page 381–389, 2008.