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# 1st International Workshop on Non-Intrusive Load Monitoring

Date: May 7th, 2012          Location: Carnegie Mellon University, Pittsburgh, PA

## Objective

Non-Intrusive Load Monitoring (NILM), also referred to as Non-Intrusive Appliance Load Monitoring (NIALM) or more generally electricity disaggregation, is the name given to a set of techniques used to obtain estimates of the electrical consumption of individual appliances from measurements of voltage and/or current taken at a limited number of locations of the power distirbution system in a building.

The original idea was developed by George Hart and other researchers at the Massachusetts Institute of Technology in the 1980s, but recent technological advancements in hardware costs, capabilities and proliferation (e.g., smart meters) as well as novel algorithms and an overall increased interest in improving the electrical grid have motivated a renewed interest in this topic from industry and academic researchers around the world.

The mission of this workshop is to create a forum that can unite all the researchers that are working on the topic of energy disaggregation. There are currently no specialized conferences or workshops dedicated to this topic, and the contributions (which have been increasing in the past 5 years) come from researchers in a wide variety of fields and from different backgrounds.

The main objective of this event is to review the main types of approaches that have been explored to date to solve the problem of electricity disaggregation, and to then discuss possible paths forward knowing what has been tried and what has yet to be experimented. We also intend to have a group discussion about possible solutions to the growing need for standardized datasets and performance metrics that can allow the field to move forward, as well as possible areas of collaboration among different research groups.

## Speakers

- Kevin Ashton, Belkin International, Inc.
- Sidhant Gupta, University of Washington
- Zico Kolter, Massachusetts Institute of Technology
- Mario Berges, Carnegie Mellon University

## Organizing Committee

- Mario Berges, CMU (co-chair)
- Zico Kolter, MIT (co-chair)
- Jon Froehlich, University of Maryland
- Sidhant Gupta, University of Washington
- Diego Benitez, Bosch Research
- Manish Marwah, HP Labs
- Anthony Rowe, CMU

## Sponsors

**BOSCH**

## Information for Authors

If you would like to present your work at the workshop, you may do so by submitting a 2-page abstract along with a poster and/or a 5 minute presentation. We will be accepting abstract submissions until April 22nd, 2012.

## Registration

You can register for the vent using the RSVP form found on the website: **http://www.ices.cmu.edu/psii/nilm**. Participation will be free of charge, but you can contact Mario Berges (marioberges@cmu.edu) or Zico Kolter (kolter@csail.mit.edu) if you are interested in sponsoring.

Contact Mario Bergés (marioberges@cmu.edu) with any questions about this workshop