

Call for Papers, DARE 2017

Skopje, Macedonia, September 2017

Concerns about climate change, energy security, and dwindling fossil fuel reserves are stimulating ever increasing interest in the generation, distribution, and management of renewable energy. While a lot of attention has been devoted to energy generation technologies, an equally important challenge is the integration of energy extracted from renewable resources into existing electricity distribution and transmission systems. Renewable energy resources like wind power and solar energy are often spatially distributed and inherently variable, necessitating the use of computing techniques to predict levels of supply and demand, coordinate power distribution and manage the operations of storage facilities.

A key element of the solution to this problem is the concept of a “Smart Grid”. A smart grid is broadly perceived as an intelligent variant of the traditional electricity grid, in which advanced Information and Communication Technology (ICT) is used to detect, predict and intelligently respond to events affecting the supply of electricity. Data analytics is a science that encompasses data mining, machine learning, and statistical methods, focussing on cleaning, transforming, modeling and extracting actionable information from large, complex data sets. A smart grid generates a large amount of data from various components. Examples include renewable energy generators and smart meters. The potential value of this data is huge, but exploiting this value will be almost impossible without the use of proper analytic techniques. With the application of systematic analytics on the smart grid’s data, its goal of better economy, efficiency, reliability, and security can be achieved. In other words, data analytics is an essential tool that can help to imbue the smart grid with “smartness”.

The focus of this workshop is to study and present the use of various data analytics techniques in the different areas of renewable energy integration in the smart grid. Authors are invited to submit their original and unpublished research contributions to DARE in areas relevant to the application of data analytics for renewable energy integration including but not limited to the following:

- Data analytics for renewable energy sources
- Smart grid applications of data analytics
- Data analytics for power generation, transmission, and distribution
- SCADA/DCS data analytics
- Fault detection, classification, location, and diagnosis
- Power quality detection
- Power system state estimation
- Load forecasting, wind power forecasting, and PV power forecasting
- Islanding detection
- Demand response
- Smart grid cyber security

- Customer profiling and smart billing
- Parallel and distributed data analytics for renewable energy integration
- Big data and cloud-based analytics for renewable energy integration

Paper Submission

Two types of submissions are invited:

- Full papers (Maximum 12 pages, including title page and bibliography)
- Short position papers (Maximum 6 pages, including title page and bibliography)

Submitted papers will be peer-reviewed and selected on the basis of these reviews. Accepted papers will be presented at the workshop and published in the workshop proceedings.

For manuscript submission, please use the EasyChair site at:

<https://easychair.org/conferences/?conf=dare170>

Manuscripts should adhere to the guidelines of Springer LNCS/LNAI format (<http://www.springer.com/computer/lncs?SGWID=0-164-6-793341-0>)

Key Dates

- Workshop paper submission deadline: July 24th, 2017
- Workshop paper acceptance notification: July 24th (or later, depending on submission date), 2017
- Workshop paper camera-ready deadline: August 7th, 2017
- Workshop day: 22nd of September 2017

More details regarding the workshop are available from the website: <http://dare2017.dnagroup.org>