Karlsruher Institut für Technologie

Institut für Angewandte Informatik
und Formale Beschreibungsverfahren

Graduiertenkolloquium Angewandte Informatik

Nonparametric Regression for Short Term Building Power Demand Forecasting

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Following the ongoing transformation of the European power system, in the future, it will be necessary to balance the increasing share of decentralized renewable energy supply. Its volatility will have to be coped with locally, within the distribution grid, where low voltage consumers can act as flexible loads. This will require reliable short-term load forecasts at the level of single buildings, which are more accurate than currently used standardized load profiles. At the same time, the forecaster has to require minimal amount of manual setup and parametrization since it will be applied at numerous buildings without any specific knowledge about them.

In this work, we develop such forecaster investigating nonparametric regression methods such as Kernel and K-Nearest Neighbors regression. We demonstrate its accuracy on a large set of low voltage consumers of different types and aggregation size, comparing them to load profiling, similar day, as well as other approaches discussed in the literature.

Termin: **Mittwoch, 28. März 2018, 15.45 Uhr**

Ort: Kaiserstr. 89, 76133 Karlsruhe
Kollegiengebäude am Kronenplatz (Geb. 05.20), 1. OG, Raum 1C-04
(Hinweise für Besucher: www.aifb.kit.edu/web/Kontakt)

Veranstalter: Institut AIFB, Forschungsgruppe Effiziente Algorithmen

Zu diesem Vortrag lädt das Institut für Angewandte Informatik und Formale Beschreibungsverfahren alle Interessierten herzlich ein.

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