New Energy Control and Smart Energy

CALL FOR PAPERS

Smart energy is an environmentally friendly energy system which has functions of learning, adaptation and self-organization to meet the requirements of system security, economy, cleanliness and high efficiency. Smart energy with advanced new energy control can not only alleviate the energy crisis and pressure, adapt to the needs of human development, but also promote the progress of civilization and accelerate the industrial transformation. Therefore, smart energy should be the focus of research now and in the future.

Smart energy, especially the new energy control, still has great potentials for making further progress. The performance of smart energy is limited by computational complexity, heterogeneous data, multiple time scale and so on. The high requirements such as analysis of complex operating conditions, real-time optimization of hybrid energy motivate smart energy to improve control method or consider combining with diversified advanced method. Further research is essential to advance the development of smart energy and sustainable energy control. The topics of interests include, but are not limited to:

❉ structural form of smart energy system with high proportion of sustainable energy

❉ flexible reconstruction and self-healing method for smart energy with high permeability and sustainable energy

❉ stability analysis method of source-net-load-storage in smart energy

❉ grid-connected coordinated control method of large-scale sustainable energy cluster with stability constraints

❉ application of cyber physics system theory and method in smart energy

❉ application of AI in the field of safety, stability, load sensing and prediction of smart energy

❉ application research of machine learning and deep learning in smart energy

For more information on the special session, please contact Professor Qiuye Sun through email: sunqiuye@ise.neu.edu.cn