**Call for Papers**

**Special Issue on Active Perception for Industrial Intelligence**

**IEEE Transactions on Automation Science and Engineering**

Information technologies are permeating all aspects of manufacturing systems as well as other fields, expediting the generation of industrial big data. Traditionally, the devices collected the sensor data from various sources and information fusion was then performed. This incurs great burdens for time and storage costs. Recently, more and more intelligent devices are equipped in the industrial environment. This provides more opportunities for better data collection and processing for industrial intelligence. Active perception technology, which performs control strategies on the data acquisition process, enables the devices to seamlessly integrate the perception and action to reach high-level goals rather than to accomplish low-level commands. It helps to select more useful information and may save the life of the sensors. However, there exist many unsolved challenging problems since the feedback is performed on complex processed sensory data, i.e., various extracted features. In addition, the performance evaluation of active perception is far from settled, since the benchmark dataset is difficult to establish.

This special issue mainly focuses on active perception technology for industrial intelligence, addressing both original algorithmic development and new applications of active perception. We are soliciting original contributions, of leading researchers and practitioners from academia as well as industry, which address a wide range of theoretical and application issues in active perception for industry intelligence. Topics for this special issue include, but are not limited to:

* Architecture for industrial active perception
* Active perception algorithms
* Collaborative active perception
* Multi-modal active perception
* Self-configuration technology for industrial intelligence
* Deep learning for active perception
* Reinforcement learning for active perception
* Robotic active perception for industrial intelligence
* Benchmark for active perception
* Industrial applications of active perception

**Deadlines:**

* September 1, 2018: paper submission deadline.
* December 1, 2018: completion of the first round review.
* April 1, 2019: completion of the second round review.
* July 1, 2019: final manuscripts due.
* October 2019: tentative publication date.

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