Location: Malmö
Functional area: Control Technologies
Division: Industrial Automation
Closing date for applications:
Job Reference Code: SE66982386

Thesis Work for Implementation of new automatic PID tuning methods

You will be a part of Industrial Automation, Control Technologies in Malmö. Control Technologies is a unit within ABB's Industrial Automation division. The unit is responsible for development, marketing and sale of automation products – hardware and software – and for monitoring, control and optimization. The unit has automation products for all types of industry. Digitalization offers unique opportunities to combine data from the manufacturing process with other information systems within the company and make information available in real time.

Assignments:
In a factory there are usually thousands of PID controllers. To tune all of these controllers manually would be very time consuming and is usually not an option. Instead, automatic controller parameter tuning methods are preferred. These tuning methods consist of an experiment, model estimation and controller parameter tuning. ABB Ability System 800xA is our flagship product for process automation and it includes the AC800M controller family. It already supports a few automatic tuning methods, but recent research has resulted in new methods for performing automatic PID controller tuning that are expected to be more efficient and robust. The goal of this Master Thesis is to implement one or more of these new methods for the AC800M controllers and to evaluate and compare them to our existing tuning methods.
The project is suitable for one or (preferably) two students. The work will be carried out mainly at ABB in Malmö, with joint supervision between ABB and the Department of Automatic Control at Lund University.
The project will provide you with insight into the latest automatic controller tuning technology and with experience of industrial control systems.

Requirements:
Master Programme in Engineering, including advanced level courses in computer science and fundamental knowledge of automatic control.

- *Period – January/Febrary – May/June 2020*
- *This master thesis is equivalent to 30 ECTS/högskolepoäng(hp)*

More information: Alfred Theorin (+46 40 550103) will answer any technical questions. Recruiting Manager Andreas Bäckman, +46 40550760 Union representatives - Sveriges Ingenjörer: Håkan Gustavsson +46 40550086. Positions are filled continuously. Apply with your CV, academic transcripts and a cover letter in English
Welcome to apply!

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