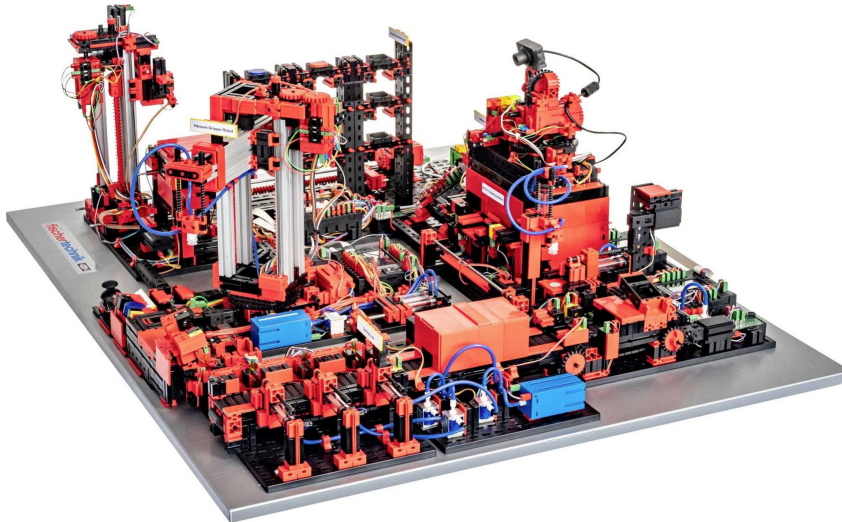![Technische Universität Dresden logo]

SHK Task Description

Conditional Monitoring of a Training Factory Using Wireless Sensors

The offer is for 6 month (renewal is possible for a similar or a different task), 10h/w

Task description

Sensors capture various physical phenomena such as pressure, temperature, light, which are immediately transmitted to deliver the current and possible future condition of assets within a smart factory. Displayed on a dashboard, these insights help prevent delays in the production process or even asset breakage. Therefore, the aim of this work is to build and deploy a wireless sensor network within a training factory (lernfabrik) from fischertechnik, in order to perform condition monitoring, with the help of our bitteiler software modules, intended to promote data collection from sensor devices in an industrial environment.

     The student is expected to build a wireless sensor network from scratch using the equipment provided, establish a wireless network that delivers in real-time the readings from the sensors to a raspberry pi, which in turn processes and analyzes the data for monitoring purposes.

     Install and test the operability of bitteiler software modules.

Requirements

1. Be a Master/Bachelor student in electrical engineering, computer science or related fields at TU Dresden
2. Have electronics expertise for building circuits and sensor devices
3. Have basic knowledge of embedded C/C++ programming (arduino)

Hardware to use

Fischertechnik training factory, sensors, arduinos, raspberry pi, router

Please send your CV and relevant documents to **Dr.-Ing. Máté Tömösközi**
mate.tomoskozi@tu-dresden.de