Developing a multi-sensory framework to characterize skills

Promotor: Tom Verstraten (tom.verstraten@vub.be)

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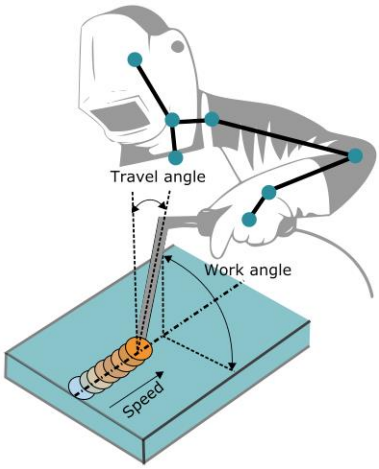
Background:

In the manufacturing industry, expert operators perform tasks in different ways. This makes the skill transfer process of skills from an expert operator to a novice operator challenging. Therefore, there is a need to study and quantify different parameters in tasks performed by expert operators. Some important parameters are speed, applied force, body posture, and eye movement, which can be tracked by using various sets of sensors.



The master thesis student will work on:

- Identifying relevant parameters from previous studies and documentations that differentiate experts from novices.
- Implementation of a sensory system to track parameters (i.e. through eye tracking technologies, force sensors, etc.) for three use cases
- Analyzing data captured by the sensory system through feature selection, feature extraction, or other methodologies to capture the abilities of expert workers compared to novices.

Number of possible students: **1**

PhD/Postdoc that will guide the student:

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