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Procedia CIRP 00 (2024) 000–000

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18th CIRP Conference on Intelligent Computation in Manufacturing Engineering

A new Software Driven external Sensor System for Industrial Robots

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Abstract

For decades, laser tracker and working station have been the state of the art to measure externally the position disturbances in robotic systems. High system costs limit their usage for control systems in common production machines. We present details for an alternative software-driven approach. Hereby, we combine a new self-referencing, high-precision photogrammetry sensor system with a software system for camera placement layout and trajectory optimization. Furthermore, we outline the integration in a closed loop control system and corresponding strategies.

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B	position of
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$$X_r = \dot{Q}''_{rad} \Big/ \left(\dot{Q}''_{rad} + \dot{Q}''_{conv}\right)$$

$$\rho = \frac{\vec{E}}{J_c(T = \text{const.}) \cdot \left(P \cdot \left(\frac{\vec{E}}{E_c}\right)^m + (1 - P)\right)} \tag{1}$$

[1] Footnote text.

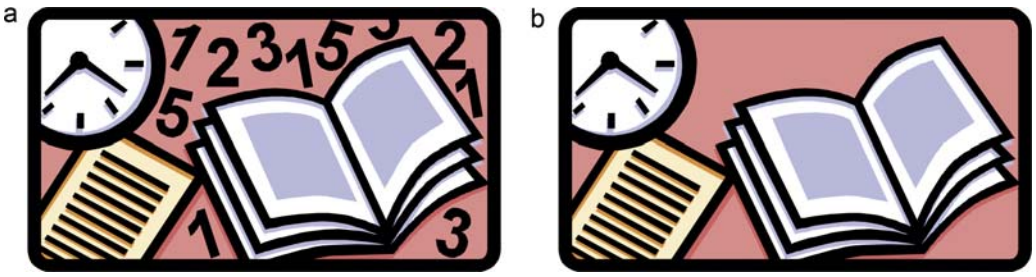

Fig. 1. (a) first picture; (b) second picture.

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References

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