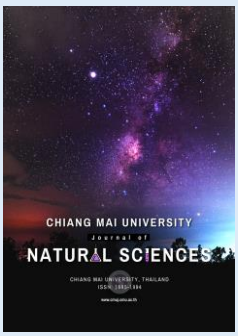

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Corresponding author:
Erwin Rauch,
E-mail: *erwin.rauch@unibz.it*

A Literature Review

Research Fields and Challenges to implement Cyber-Physical Production Systems in SMEs: A Literature Review

Rafael Rojas[1], Erwin Rauch[1,*] and Dominik T. Matt[1, 2]

1 Industrial Engineering and Automation (IEA), Faculty Science and Technology, Free University of Bolzano, Bolzano 39100, Italy
2 Innovation Engineering Center (IEC), Fraunhofer Italia Research s.c.a.r.l., Bolzano 39100, Italy

Abstract Cyber-Physical Production Systems (CPPS) consists of the orchestration of single intelligent and connected cyber-physical systems (CPS) in order to perform what we call smart manufacturing. CPS collaborate in an intelligent way in order to obtain and maintain the optimum of the manufacturing process, handle disturbances and adapt to changing conditions. It might not be easy for small and medium-sized enterprises (SMEs) to implement such production system architectures in their shop floor. In this paper, we want to investigate existing scientific literature through a systematic literature review in order to identify the main research fields for implementing CPPS in smart SME factories. As a result, the identified research fields are critically discussed, highlighting those fields that can be identified as the most difficult challenges for SMEs in the near future and giving directions for future research activities.

Keywords: Cyber-physical production systems, Cyber-physical systems, Industry 4.0, Internet of things, Smart manufacturing, Systematic literature review

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