Automation： 2024-2025年高引文章精选 MDPI 编辑荐读

作者：writer 来源：科学网

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Automation： 2024-2025年高引文章精选 MDPI 编辑荐读。期刊名：Automation

期刊主页：https://www.mdpi.com/journal/automation

自动化领域发展迅猛——数字孪生、协作机器人、自动驾驶、AI驱动的智能控制……哪些研究方向最受关注？我们为您精选了Automation (ISSN 2673-4052)
期刊2024-2025年的高被引论文，涵盖以下热点领域，所有文章开放获取，免费阅读。

我们为您精心整理了涵盖以下热点领域的高被引论文：

- 数字孪生工业自动化自动化制造损伤检测
- 机器人手臂协作机器人辅助机器人无人水面艇
- 自动驾驶神经网络人工智能

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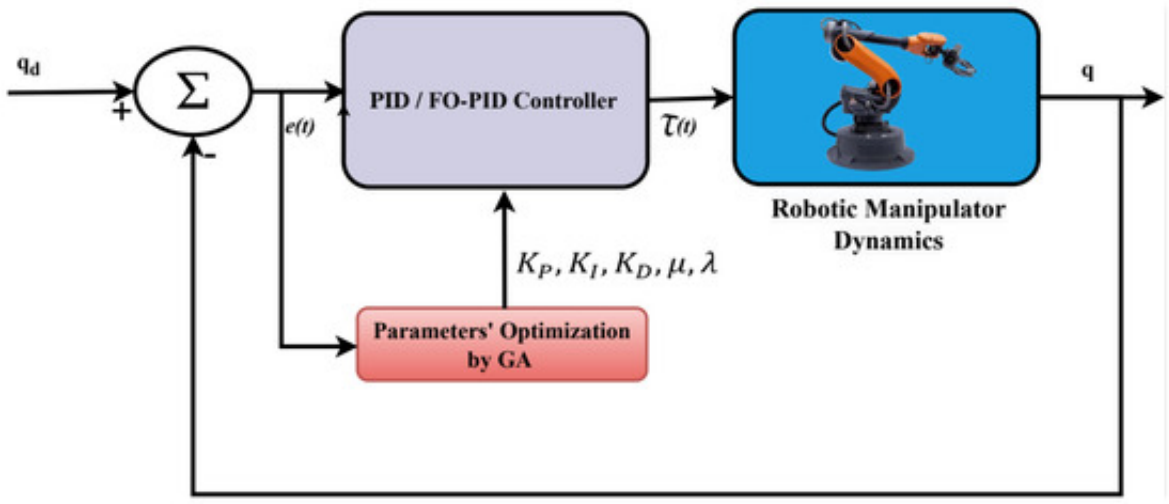
【高引文章推荐】

1.Comparative Analysis: Fractional PID vs. PID Controllers for Robotic Arm Using Genetic Algorithm Optimization

比较分析：基于遗传算法优化的分数式 PID 控制器与常规 PID
控制器在机器人手臂中的应用对比研究

文章链接：https://www.mdpi.com/2673-4052/5/3/14

Eltayeb, A.; Ahmed, G.; Imran, I.H.; Alyazidi, N.M.; Abubaker, A. Comparative Analysis: Fractional PID vs. PID Controllers for Robotic Arm Using Genetic Algorithm Optimization. Automation 2024, 5, 230-245. https://doi.org/10.3390/automation5030014

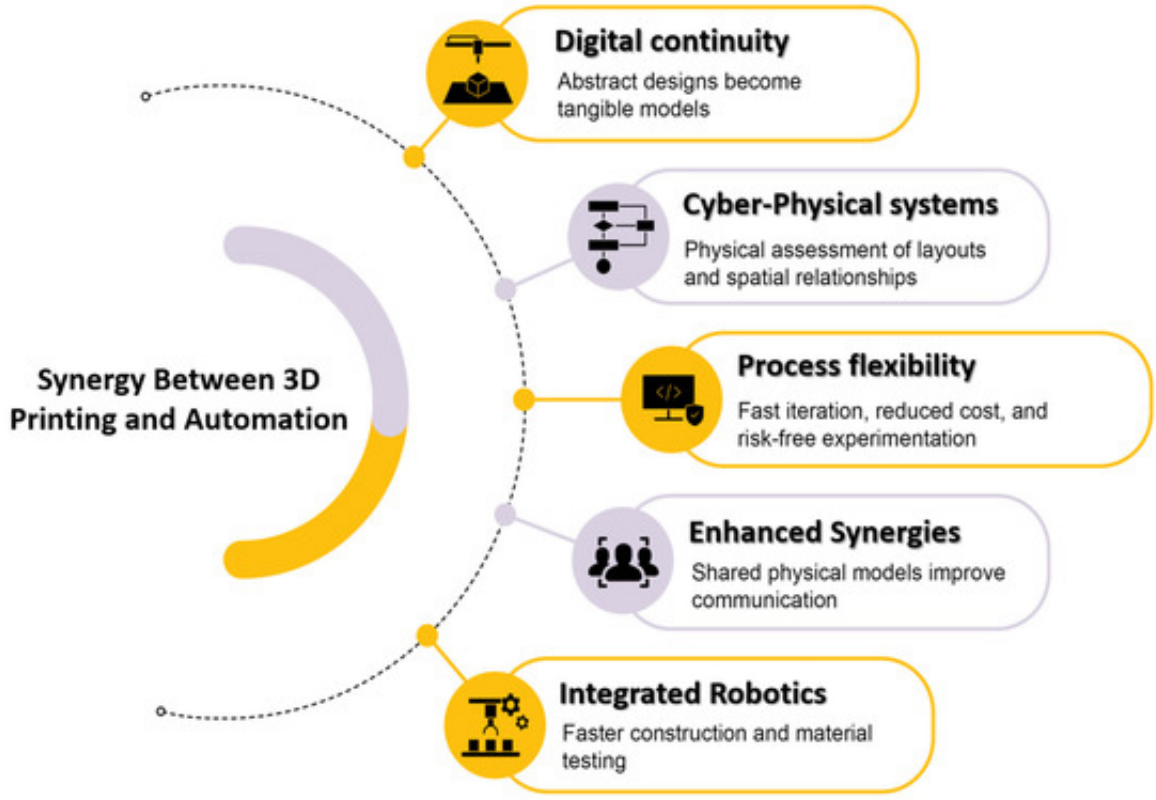


2.The Role of 3D Printing in Advancing Automated Manufacturing Systems: Opportunities and Challenges

3D 打印在推动自动化制造系统发展中的作用：机遇与挑战

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Kantaros, A.; Drosos, C.; Papoutsidakis, M.; Pallis, E.; Ganetsos, T. The Role of 3D Printing in Advancing Automated Manufacturing Systems: Opportunities and Challenges. Automation 2025, 6, 21. https://doi.org/10.3390/automation6020021

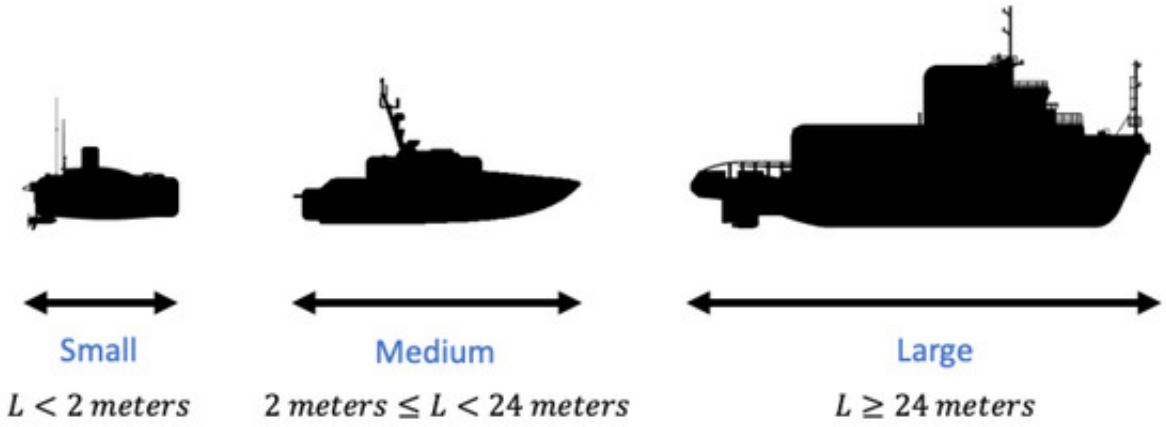


3.Operative Unmanned Surface Vessels (USVs): A Review of Market-Ready Solutions

可操作的无人水面艇（USV）：市场成熟解决方案综述

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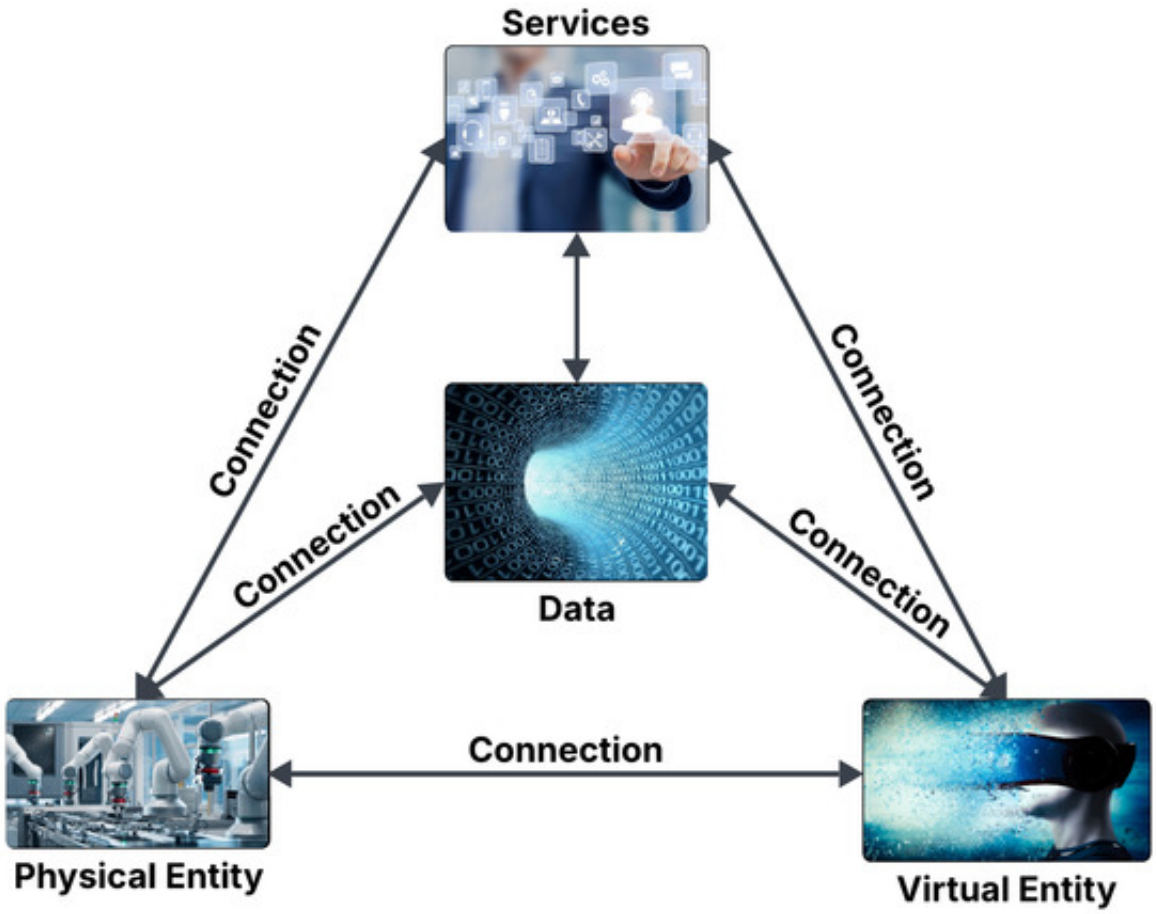


4.Enabling Intelligent Industrial Automation: A Review of Machine Learning Applications with Digital Twin and Edge AI Integration

推动智能工业自动化：基于数字孪生与边缘人工智能集成的机器学习应用综述

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5.Enhancing Nut-Tightening Processes in the Automotive Industry: Integration of 3D Vision Systems with Collaborative Robots

强化汽车行业的紧固工艺：将 3D 视觉系统与协作机器人相结合

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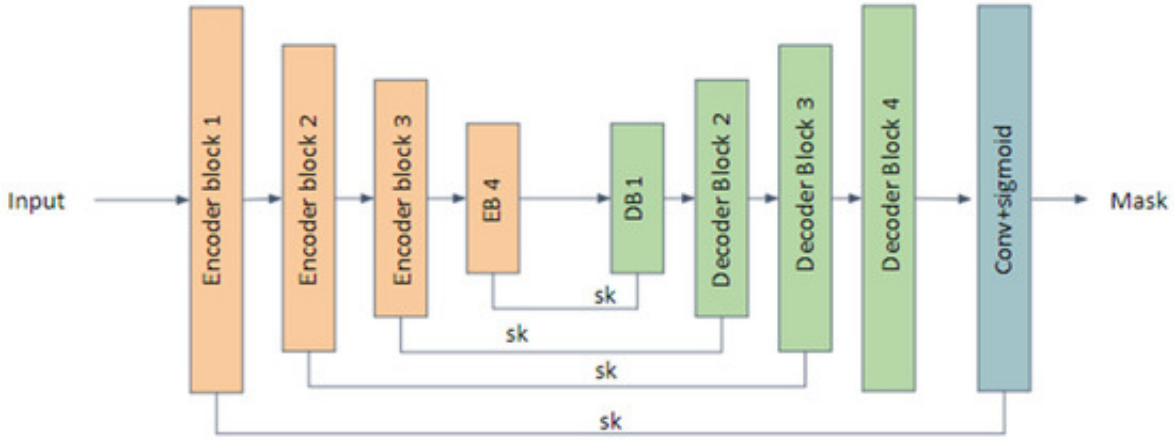


6.Deep Learning-Based Detection and Segmentation of Damage in Solar Panels

基于深度学习的太阳能电池板损伤检测与分割技术

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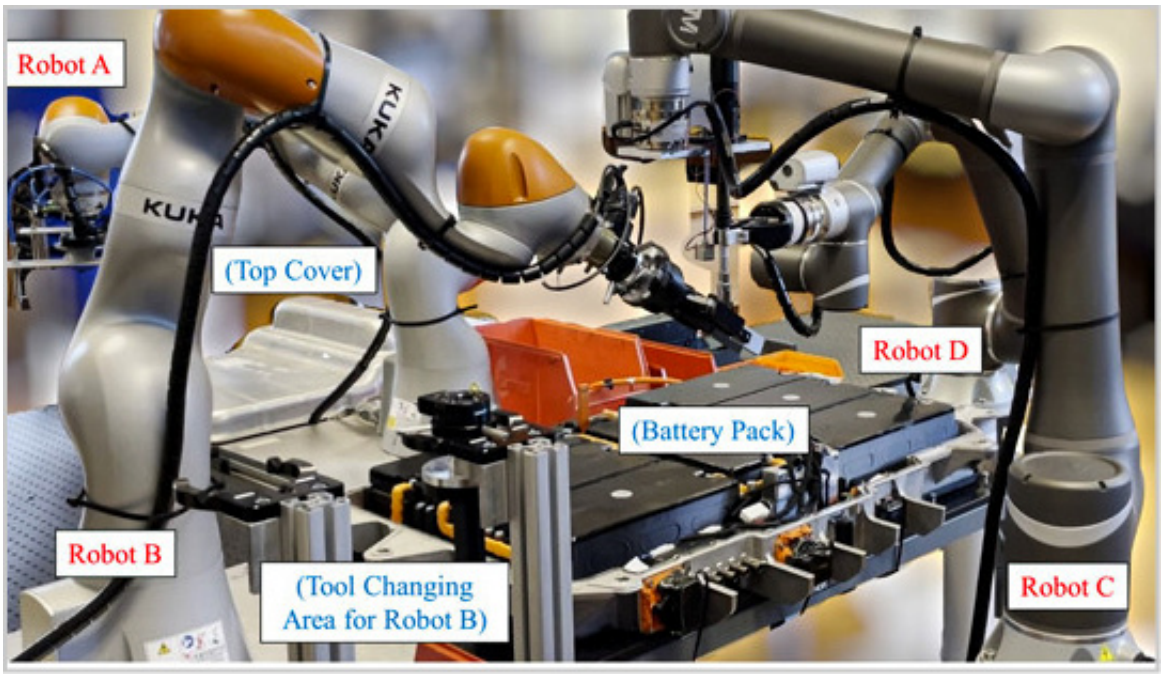


7.Robotic Disassembly Platform for Disassembly of a Plug-In Hybrid Electric Vehicle Battery: A Case Study

插电式混合动力汽车电池机器人拆卸平台的实例研究

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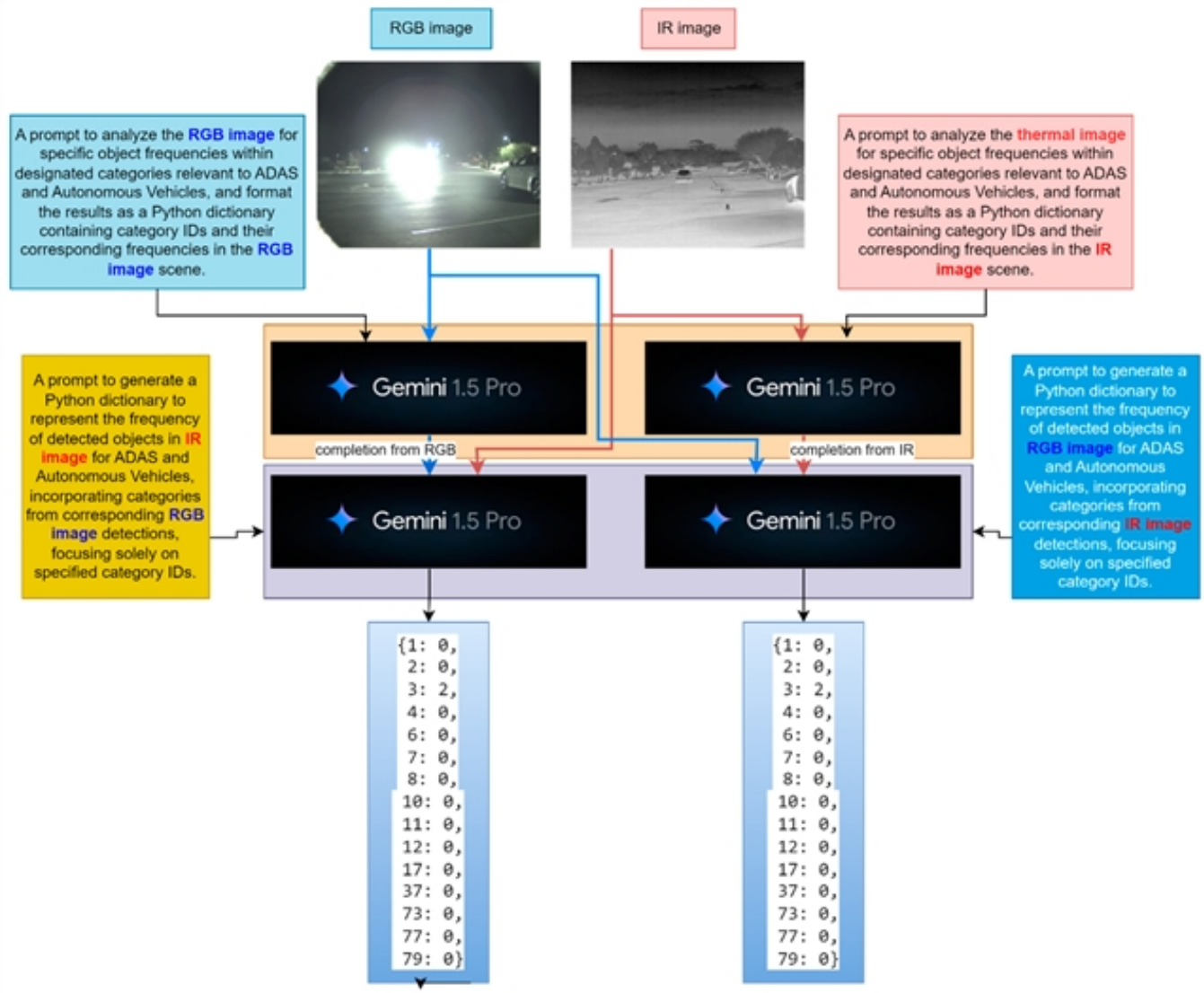


8.Leveraging Multimodal Large Language Models (MLLMs) for Enhanced Object Detection and Scene Understanding in Thermal Images for Autonomous Driving Systems

利用多模态大语言模型（MLLMs）增强自动驾驶系统热图像中的目标检测和场景理解

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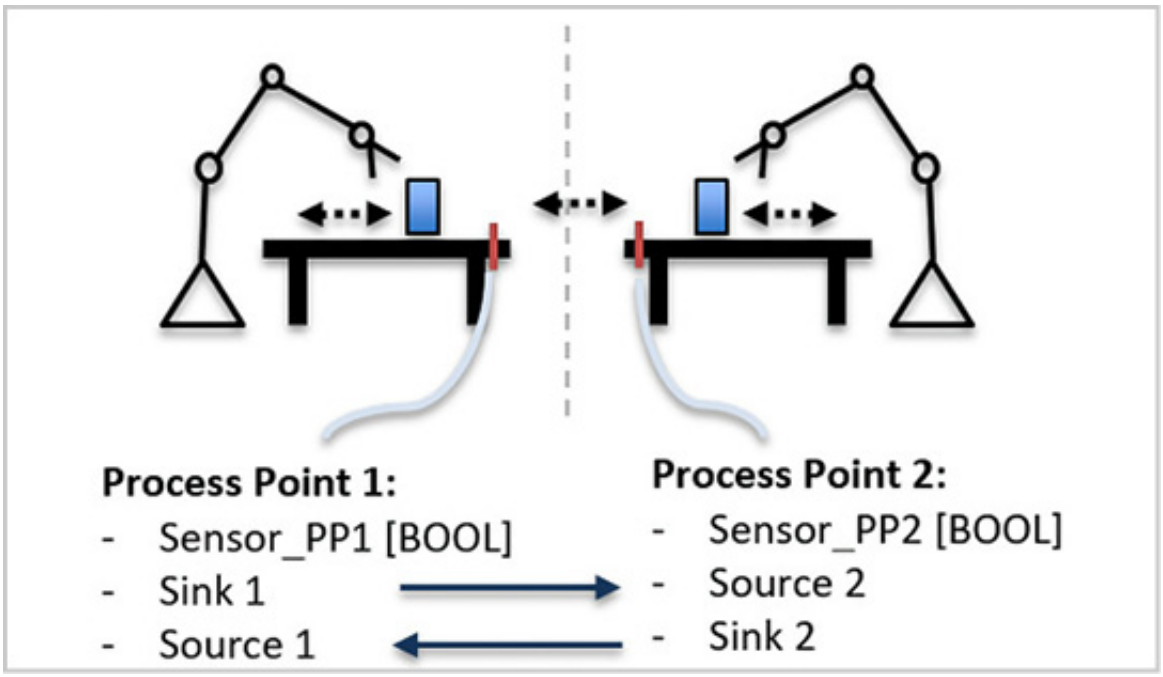


9.Virtual Commissioning of Linked Cells Using Digital Models in an Industrial Metaverse

基于工业元宇宙数字模型的关联生产单元虚拟调试

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10.Vision-Based Object Manipulation for Activities of Daily Living Assistance Using Assistive Robot

基于视觉的辅助机器人日常活动对象操作

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【期刊简介】

主编：Eyad H. Abed, University of Maryland, USA

Automation (ISSN 2673-4052) 是一本国际性的、经过同行评审的开放获取期刊。期刊主要发表自动化、控制及相关领域的高质量论文。期刊旨在提供高知名度和及时的研究成果，并致力于快速出版。该期刊为自动化、控制及其应用的专业和多学科研究提供了一个平台。Automation 创刊于2020年；2023年被Scopus数据库收录，2024年被ESCI数据库收录；2025年获得首个影响因子2.0。

2024 Impact Factor 2.0 2024 CiteScore 4.1 Time to First Decision 30.9Days Acceptance to Publication 8.5Days
来源：Automation

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