

Assessment of Smart Mechatronics Application in Agriculture

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Abstract : Smart mechatronics systems in agriculture can be traced back to the mid-1980s, when research into automated fruit harvesting systems began in Japan, Europe, and the United States. Since then, impressive advances have been made in smart mechatronics systems. Furthermore, smart mechatronics systems are promising areas, and as a result, we were intrigued to learn more about them. Consequently, the purpose of this study was to examine the smart mechatronic systems that have been applied to agricultural areas so far, with inspiration from the smart mechatronic system in other sectors. To get an overview of the current state of the art, benefits and drawbacks of smart mechatronics systems, various approaches were investigated. Moreover, smart mechatronic modules and various networks applied in agriculture processing were examined. Finally, we explored how the data retrieved using the one-way analysis of variance related to each other. The result showed that there were strongly related keywords for different journals. With the virtually limited use of sophisticated mechatronics in the agricultural industry and, at the same time, the low production rate, the demand for food security has fallen dramatically. Therefore, the application of smart mechatronics systems in agricultural sectors would be taken into consideration in order to overcome these issues.

Keywords : mechatronics, robotic, robotic system, automation, agriculture mechanism

Conference Title : ICAAIM 2023 : International Conference on Applications of Artificial Intelligence in Mechatronics

Conference Location : Paris, France

Conference Dates : April 13-14, 2023