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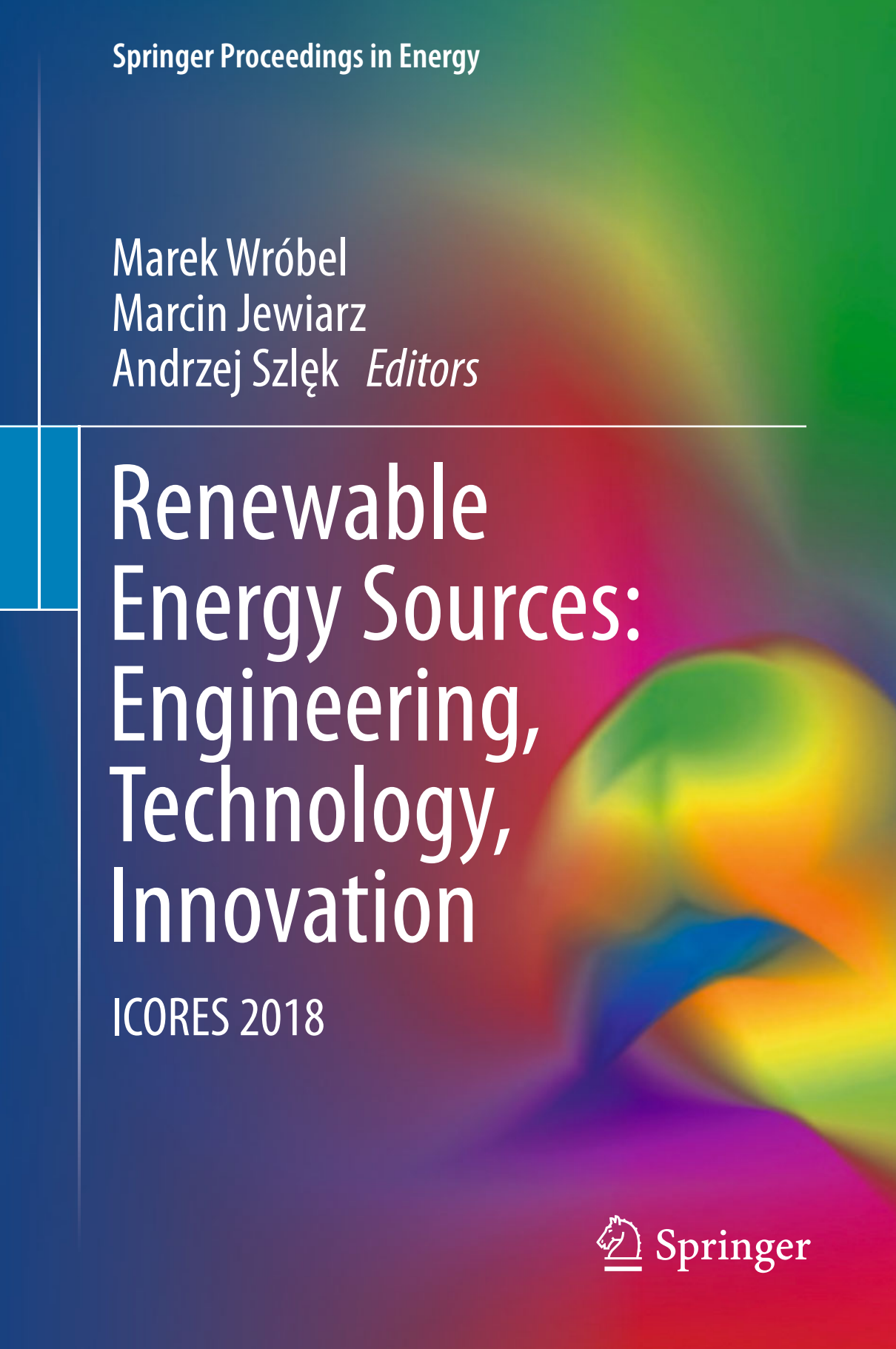

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Possibility of Using Automation Tools for Planting of the Energy Willow Cuttings

Serhii Yermakov, Taras Hutsol, Sergii Slobodian, Serhii Komarnitskyi and Myroslav Tysh

Abstract Existing machines for planting energy crops cuttings are characterized by the low productivity because of the speed restriction to hand stowing into a plant setter. Therefore, establishment of mechanisms for the cutting auto-stowing into a plant setter is a current scientific and production task. The research is set against the analysis of the known planting machine constructions that are used for setting the potted plants and forest seedlings. In this research, the methods of structural and factorial analysis with regard to the mechanisms' arrangement were used, as well as peculiarities of the working processes occurring at each stage of the overall technological process of the cutting relocation from the reservoir to the land area were highlighted. In the issue of analysis, possible ways of different methods implementation into the technological process were singled out. This can be seen in the structural and logical scheme of the process. The promising solutions for planting automation of the energy crop cuttings were provided.

Keywords Planting machine · Plant setter · Feed gearing · Planting head · Cassette mechanism · Energy willow

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