Data-driven scheduling in manufacturing

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Abstract. With the continuous development of network technology and global economic integration, the competition in manufacturing becomes more and more fierce. There is increasing awareness of the supply chain participants that they have to reinforce the cooperation between each other to improve the competitiveness of supply chain so as to decrease each operation cost. The development of Internet of Things technology provides an information basis of the cooperation between the participants of supply chain. It can not only return the production information to the management center, but also share the information to other participants. The Internet of Things technology pushes the cooperation between supply chain participants to a new level that by using the information effectively can decrease the production cost, increase the profit, improve the satisfaction of customers, and in the end enhance the competitiveness of the whole supply chain. Besides, introducing the technology of the Internet of Things also broadens the theoretical area of the research on scheduling problems. Therefore, how to transform the information value into economic and social value, and use the information acquired by the Internet of Things to obtain efficient production plans becomes the key issues. Based on the background of Aluminum production manufacturing chain in China, we focus on the data-driven scheduling in manufacturing.