How to be fair - The concept of fairness from a Computational Social Choice perspective

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Computational Social Choice deals with the computational aspects of collective decision making. There are various settings in which a group of people or agents has to reach a common decision, such as voting, resource allocation, matching problems, or coalition formation. For a 'good' common decision, besides efficiency, a crucial criterion to assess the quality of a solution and to measure the welfare of agents is fairness. This talk wants to provide an insight into problems considered in the area of computational social choice, with a special focus on fair solutions. We introduce various notions and concepts of fairness in this context, present elegant methods to obtain fair solutions on the one hand and impossibility results on the other hand, as well as real-world applications of the described methods.