Gross Substitutes: Representation and Approximation

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**Abstract**: We investigate how complex is the class of gross substitutes as compared to both simpler classes (e.g. matroid rank functions) and more complex one (e.g. submodular valuations). To do so, we take two perspectives: (i) representation: how to construct gross substitutes from simpler classes; (ii) approximation: to what extend can gross substitutes approximate submodular functions.

**Papers**: We will discuss parts of the following papers: <https://arxiv.org/abs/2102.13343> <https://arxiv.org/abs/1805.03726> <https://arxiv.org/abs/2107.06961>