A new optimization model for well-balanced multiple team formation

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Finding a team that satisfies a set of requirements is a well-studied problem in the Team Formation Problem (TFP). The TFP only considers a single-project, while the multi-project is a common situation where the objective is to allocate people among a set of teams. This problem is named the Multiple Team Formation Problem (MTFP). Typical models for MTFP do not consider an adequate equilibrium between team characteristics, which can lead to imbalanced performances. In this talk, we present a new optimization model for forming well-balanced multiple teams according to the skills of their members. An equilibrium factor is also defined and included in the objective function to minimize the intergroup difference. We also present a formulation of this model through integer linear programming by introducing binary variables and additional constraints that reduce computational performance.