Fair Ranking Track

Summary
The track evaluates systems according to how well they fairly rank documents. The focus is on building two-sided systems that offer fair exposure to ranked content producers while ensuring high results quality for ranking consumers.

Task(2019)
The 2019 task focuses on re-ranking academic abstracts given a query. The objective is to fairly represent relevant authors from several, undisclosed group definitions. These groups can be defined in a variety of ways and the track emphasizes the development of systems which have robust performance across a variety of group definitions. (https://fair-trec.github.io/2019/index.html **)**

Data
The corpus is the Semantic Scholar(S2) Open Corpus from the Allen Institute for Artificial Intelligence, consisting of 47 1GB data files. An associated list of ~600 queries and relevance estimates is provided.

Evaluation of Runs
Multiple copies of the same query text are received, although the query ids are different. Different rankings for each instance of the query may be submitted. The amortized performance is measured over rankings produced for each given query, as well as across all rankings and queries. Systems are evaluated according to fair exposure of authors and relevance of documents.

1. Measuring Fairness
    a. Measuring Author Exposure for a Single Ranking
    b. Measuring Author Relevance for a Single Ranking
    c. Measuring Group Fairness
2. Measuring Relevance

In practice, relevance degrades as fairness improves. Therefore, trade-offs between fairness to producers and quality for consumers is also measured as an auxiliary metric.

Approach to the Task
Results can be retrieved by using TF-IDF or BM25 methods for all the queries. After that, final results can be retrieved using greedy methods, like the weighted average of the results for all the queries.