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Finding Your Literature Match - A Physics Literature Recommender System[1] EDWIN HENNEKEN, MICHAEL KURTZ, Smithsonian Astrophysical Observatory — A recommender system is a filtering algorithm that helps you find the right match by offering suggestions based on your choices and information you have provided. A latent factor model is a successful approach. Here an item is characterized by a vector describing to what extent a product is described by each of N categories, and a person is characterized by an "interest" vector, based on explicit or implicit feedback by this user. The recommender system assigns ratings to new items and suggests items this user might be interested in. Here we present results of a recommender system designed to find recent literature of interest to people working in the field of solid state physics. Since we do not have explicit feedback, our user vector consists of (implicit) "usage." Using a system of N keywords we construct normalized keyword vectors for articles based on the keywords of that article and its bibliography. The normalized "interest" vector is created by calculating the normalized frequency of keyword occurrence in the papers cited by the papers read.

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