

MARKETING COLLOQUIA

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Giovanni Compiani

Assistant Professor of Marketing
University of Chicago, Booth School of Business

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Where: 741 JMHH

When: 12:00 PM to 1:20 PM

ONLINE SEARCH AND PRODUCT RANKINGS: A DOUBLE LOGIT APPROACH

ABSTRACT:

We develop a flexible yet tractable model of consumer search and choice and apply it to the problem of product rankings optimization by online retail platforms. In the model, products are characterized by a search index, which governs what consumers search; and a utility index, which governs which of the searched options is purchased. We show that this framework generalizes several commonly used search models. We then consider how platforms should assign products to search ranks. To optimize consumer surplus, platforms should facilitate product discovery by promoting “diamonds in the rough,” products whose utility index exceeds their search index. By contrast, to maximize static revenues, the platform should favor high-margin products, creating a tension between the two objectives. We develop computationally tractable algorithms for estimating consumer preferences and optimizing rankings, and we provide approximate optimality guarantees in the latter case. When we apply our approach to data from Expedia, our suggested ranking achieves both higher consumer surplus and higher revenues than is achieved by the Expedia ranking, and also dominates ranking the products in order of utility.