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## News

### Software Provides Reading Lists

#### A TF develops program to help students find references on Wikipedia

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Last spring, Harvard Physics graduate student Alexander D. Wissner-Gross noticed something about the way the course material was structured in a Physics course for which he was a Teaching Fellow.

While looking for supplementary readings for his students in Physics 15a, "Introductory Mechanics and Relativity," Wissner-Gross noticed that the way information was connected by links on Wikipedia was similar to the way Physics 15a was taught.

As a teaching fellow, Wissner-Gross thought to capitalize on this similarity, and created a new search process to help students quickly and efficiently organize physics concepts explained in Wikipedia.

"Students very often skip recommended reading, and find resources on the Internet to help with understanding material," he said.

"I thought it might be interesting to short-circuit that process by automating it with software."

To do this, Wissner-Gross developed a program that generates reading lists based on the popularity of a page by ranking the number of pages that link to it.

David J. Morin, lecturer for Physics 15a, said he believes the software provides an important service to students looking for extra reading material on the web.

"Considering that the amount of information that exists on the web is infinitely more than what can be found in any textbook, it definitely makes sense to lead the students toward helpful links," Morin wrote in an e-mail to The Crimson.

Eve R. Meyer '09, a student in Wissner-Gross's section for Physics 15a, agreed that the lists generated by the software were very helpful.

"Our textbook wasn't very clear, so the Wikipedia links Alex gave us allowed me to understand the concepts," Meyer said.

The algorithm for the software was published recently in the Proceedings of Institute of Electrical and Electronics Engineers International Conference on Advanced Learning Technologies.

Besides being a resource for students looking for information online, Wissner-Gross thinks that this software could be a valuable tool for researchers.

"Often researchers studying topics at the interface of many fields cannot find textbooks to match their interests," he said.

"This software can provide the learning tools for professionals to motivate research papers or to learn about closely-related fields."

While the software is still in its early stages, Wissner-Gross is experimenting with ways to make it most accessible to users.

"I've downloaded an implementation of the software onto my iPod," he said.

"Ultimately, I think this software will be most appropriate for mobile consumption, so people can keep learning when they're on the go."

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