

# Conference Navigator 3: An Online Social Conference Support System

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**Abstract.** In this poster we introduce Conference Navigator 3, an online social system that helps conference attendees in selecting the talks most relevant to their interests, and it also supports them in exploring and building their research contacts' network. In particular, we show how some features that we have progressively incorporated in different conferences have significantly increased user participation.

**Keywords:** Social Navigation Support, Conference System, Recommender Systems.

## 1 Introduction

Most academic conferences feature web-based tools that enable their attendees to get information about the conference events and attendees. However, they usually fail to support personalized access to this information. A personalized adaptive access may help attendees to better find talks and people that fit their research interests. Under these requirements, adaptive systems aim to help users dealing with information overload, and doing it in the context of academic conferences has been already studied [1, 2], but their adaptive features have been rather limited. This poster presents Conference Navigator 3 (CN3), the third version of a system that provides a personalized user experience to the conference attendees to achieve two critical goals: 1) finding, scheduling and commenting the most relevant talks during the conference, and 2) contacting people with similar interests and building a network of research contacts. By describing the system's features and usage statistics, we show how some features have produced an impact on user engagement. In the following sections we introduce the main features of CN3; then, we present usage statistics, and finally summarize and introduce some future work.

## 2 CN3 Main Features

Users can access conferences from the CN3 portal page. Once a conference is selected, users can access basic and social features. The pages with basic features are:

- **Proceedings:** This page shows the list of articles presented during the conference. Every article presents title, authors' information, type of presentation (long research paper, poster, keynote, etc.), users' tags, and an expandable abstract.
- **Schedule:** This page is similar to proceedings, but instead of showing the program as a list, it shows it as a calendar. It shows the presentations grouped by day and by session, facilitating users' navigation and filtering of papers that they can attend.
- **Paper Details:** This page shows detailed information of each talk. A user that has not authenticated in the system can see the presentation's title, type of presentation, authors, and abstract. Furthermore, users can share the presentation using the Tweet button. An authenticated user can see a list of related presentations in the widget "People who scheduled X, also scheduled Y", the list of users that have scheduled that talk and the list of tags provided by users to index the presentation.
- **List of Attendees:** Depending on the conference organizers and on each attendee privacy settings, we provide a page with the list of attendees. In addition to the attendees' name, we show their affiliation, web page, and number of scheduled talks.
- **User Profile Page:** On this page, CN3 displays user's name, affiliation information, and the list of talks that she has scheduled in the conference. On the right panel, the list of followers, followees and connections in CN3 are also displayed.

CN3 also has a list of social features that facilitate the navigation of users to discover the most popular items and also other researchers with similar interests in the conference.

- **Top Items:** This page presents aggregated users' activity on talks and it has three different views implemented as different tabs: Within people I follow, within my connections, and globally. Each view (tab) contains four widgets: a) ranked list of most scheduled papers, b) most active schedulers of talks, c) institutions to which the most active schedulers belong, and d) most popular users' tags.
- **Recommendations:** CN3 provides personalized recommendations of talks and people. We have implemented two methods for talk recommendation described in [3] (content-based and tag-based) and one method for people recommendation. In addition, the *Top Items* page has the feature of "recommendation in context", where annotations show recommended talks in the context of a ranked list.
- **Connections:** In this page users can explore and enhance their contact network: a) by seeing their network in CN3 and in other services like Facebook, LinkedIn, Mendeley or CiteUlike, and b) by connecting into their CN3 network users matched in the third-party services described in a).

### 3 Usage Statistics

The first implementation of CN3 supported the iConf 2011 conference. Since then, we have supported 6 conferences and in Table 1 we show 4 representative deployments of CN2 and CN3 respectively, with their usage statistics. From the numbers shown in the table, we can highlight some trends: a) there is a clear increase in participation from CN2 to CN3 reflected in the amount and percentage of people who

bookmarked talks, b) Although there is an increase in people who “Tagged” between CN2 and CN3, iConf 2011 presents a decrease. iConf 2011 was our first CN3 deployment, and after we analyzed the tagging usage, we incorporated additional tagging mechanisms that led to increased participation, c) there is a positive relation between system usage and the availability of recommendations.

	Conference Navigator 2				Conference Navigator 3			
	UMAP 2009	HT 2009	UMAP 2010	ASIST 2010	iConf 2011	ECTEL 2011	HT 2011	UMAP 2011
Recommended			T		T	T	T, P	T, P
Attended	171	141	134	550	474	141	111	176
Bookmarked	24	18	30	58	109	36	42	69
Tagged	12	13	12	11	2	21	18	21
Connected	-	-	-	-	2	8	3	8
Bookmarks	177	114	266	471	1327	416	499	1019
%Bookmarked	14.04%	12.77%	22.39%	10.55%	23.00%	25.53%	37.84%	39.20%
%Tagged	7.02%	9.22%	8.96%	2.00%	0.42%	14.89%	16.22%	11.93%

**Table 1.** Usage statistics of CN 2 and 3 over different conferences. Number of users who bookmarked/tagged talks and connected to other users in relation to the total number of attendees and availability of recommendations for talks (T) and people (P)

## 4 Summary and Future Work

Conference Navigator has increasingly engaged more researchers in planning their conference activities before and during the conferences. Their activities have also helped conference chairs in creating the conference schedules based on co-scheduling patterns. Additionally, our users receive recommendations for all the conferences that are supported by the system. CN3 will also provide new features in UMAP 2012. Some of them will support networking among users such as the integration with twitter, a news-feed and support for workshops. Moreover, we will introduce rich visualizations of recommendations and we will study their effect compared to plain lists.

## 5 References

- [1] Wang, J., D. Soroker, et al. (2010). Event maps: a collaborative calendaring system for navigating large-scale events. *Proceedings of CHI*
- [2] Wongchokprasitti, C., P. Brusilovsky, et al. (2010). Conference Navigator 2.0: Community-Based Recommendation for Academic Conferences. *Workshop IUI 2010*. Hong Kong, China.
- [3] Brusilovsky, P., Parra, D., Sahebi, S., Wongchokprasitti, C. (2010). Collaborative information finding in smaller communities: The case of research talks. *Collaborate-Com 2010*, pp.1-10. Chicago, IL, USA.



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Most academic conferences feature web-based tools that enable their attendees to get information about the conference events and attendees. However, they usually fail to support personalized access to this information. A personalized access may help attendees to better find talks and people that fits their research interests, and therefore enhance their academic experience during the conference.

## Introducing Conference Navigator 3

This poster presents Conference Navigator 3 (CN3), the system that provides a personalized user experience to the conference attendees to achieve critical goals:

- 1) finding, scheduling and commenting the most relevant talks during the conference, and
- 2) contacting people with similar interests and building a network of research contacts.

## User Engagement Statistics

Table 1. Usage statistics of CN 2 and CN3 over different conferences. Number of users who bookmarked/tagged talks and connected to other users in relation to the total number of attendees and availability of recommendations for talks (T) and people (P)

	Conference Navigator 2				Conference Navigator 3			
	UMAP	IT	UMAP	ASIST	Conf	ECIS	IT	UMAP
Recommendable	209	209	203	210	203	201	201	201
Attended	11	33	14	33	14	14	11	18
Bookmarked	24	38	38	38	38	16	42	69
Tagged	14	25	11	11	11	21	38	21
Connected	-	-	-	2	2	8	3	8
Bookmarks	177	314	266	61	337	418	69	109
%Bookmarked	14.8%	23.7%	23.9%	18.5%	21.0%	21.0%	33.0%	37.8%
%Tagged	7.0%	9.2%	5.9%	2.9%	4.2%	11.0%	15.2%	11.0%

From the numbers shown in the table, we can highlight some trends:

- a) There is a clear increase in participation from CN2 to CN3 reflected in the amount and percentage of people who bookmarked talks,
- b) We incorporated additional tagging mechanisms that led to increased participation after iConf2011
- c) The numbers also show a positive relation between system usage and the availability of recommendations.

## Main Features on Conference Navigator 3

### Proceedings

This proceedings list displays articles presented during the conference.



### Schedule

This schedule view is grouped by day and by session, facilitating users' navigation and filtering of papers that they can attend



### Paper Details

This detail page shows the details of a paper presented during the conference. The authenticated user can see a list of papers in the widget "People who scheduled X, also scheduled Y".



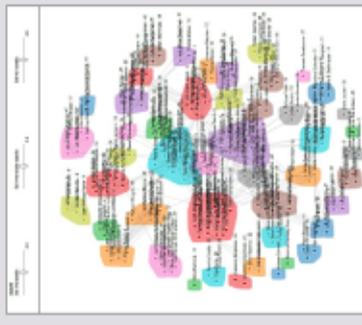
### List of Attendees

This list shows attendees' affiliations, web page, and number of scheduled talks during the conference. The list of attendees is shown to other conference attendees only.

### User's Profile Page

This profile page will display user's affiliation, contact information, followers, contacts and personal schedule in the conference

### Network Visualization



### Connections

Connection feature allow users to explore and enhance their contact network by connecting CN3 and Facebook, LinkedIn, Mendeley or CiteULike.



### Recommendations

Recommendation feature pages list two methods for talk recommendation (content-based and tag-based) and one method for people recommendation.



### Top Items

These top item lists show several ranked lists of the most scheduled papers, the most active schedulers or institutions, and the most popular tags.



## Summary

Conference Navigator 3 (CN3) has increasingly engaged more researchers in planning their conference activities before and during the conferences. Their activities have already helped conference chairs in creating the conference schedules based on co-scheduling patterns. Additionally, our users receive recommendations for all the conferences that are supported by the system.

## Future Work

Conference Navigator 3 (CN3) will also provide new features in UMAP 2012 to further support networking among users such as the integration with twitter, a news-feed and support for workshops. Furthermore, our next CN3 version will introduce rich visualizations of recommendations and we will study their effect.

[1] Farzan, R. and P. Brusilovsky (2006). Where did the researchers go? supporting social navigation at a large academic. Proceedings of the nineth ACM conference on Hypertext and Hypermedia - Pittsburgh, PA, USA, ACM, 203-212.  
 [2] Wengshengprabati, C., P. Brusilovsky, et al. (2010). Conference Navigator 2.0: Community-Based Recommendation for Academic Conferences. Workshop IUI 2010, Hong Kong, China.  
 [3] Brusilovsky, P., Parra, D., Sahebi, S., Wongshikprasit, C., "Collaborative information finding in smaller communities: The case of research talks." Collaborative Computing, Networking, Applications and Worksharing (CollaborateCom), 2010 6th International Conference on , vol. , no. , pp. 1-10, 9-12 Oct. 2010