Final Report

Information Foraging and Retrieval Autumn School (ASIRF)

21-26 Sept. 2014

Schloß Dagstuhl, Germany

http://www.dagstuhl.de/de/programm/kalender/evhp/?semnr=14392

Summary

The Autumn School 2014 for Information Foraging and Retrieval addressed students, early career researchers and practitioners in interactive information retrieval. The School to introduce students to advanced theoretical models and technology related to information retrieval, interaction with information in and information seeking as well as to discuss current research in this area. The school attraced Master and PhD students in computer science and information science and practitioners from information infrastructure institutions. Overall, 27 students from over 10 countries participated; 13 of them benefited from a grant.

Lectures were delivered by experts in information retrieval and information foraging. The event took place at Schloss Dagstuhl[1] in Germany, one of the leading venues for computer science, from September 21 to September 26, 2014.

The Information Foraging and Retrieval School follows the tradition of past successful Information Foraging Summer Schools and the German Information Retrieval Autumn School. It was co-organized by the German Information Retrieval Specialist Group and the Radboud University in Nijmegen, The Netherlands.

Description

The school is based in information retrieval. Broadening the topic to include 'Information Foraging' reflects the shift of attention in information retrieval research from static document statistics towards the study of information behavior as a more holistic concept. This growing importance of applying more methods including qualitative ones which are typically not taught in computer science led to an innovative concept which was well received by the students.

Organizers:

- Ingo Frommholz (University of Bedfordshire - Luton, GB)
- Norbert Fuhr (University Duisburg-Essen, DE)
- Thomas Mandl (University Hildesheim, DE)

[1] http://www.dagstuhl.de/

Program: The school consisted of one week of lectures. Two lectures were usually given per day. In addition, the participants used the opportunity to present their work in two evening sessions. The social program included networking in the Dagstuhl castle and a trip to Trier which encompassed a guided tour.

Monday

Introduction
IR Models 1: Ingo Frommholz
Evaluation: Thomas Mandl
Evening: Presentations of participants

Tuesday

Activity logging for context and user modeling: Wessel Kraaij
Task Based Evaluation: Pia Borlund
Evening: Presentations of participants

Wednesday

Information Behavior: Katriina Byström
IR models 2: Thomas Rölleke
Excursion with guided tour to Trier (dinner in Dagstuhl)

Thursday

Modelling Interactive IR: Norbert Fuhr
Multimedia Retrieval: Stefan Rueger

Friday

Efficiency Issues: Ralf Schenkel

Financial Support

The Autumn school was financially supported by the following institutions:

- ACM SIGIR – Special Interest Group on Information Retrieval
- ESF – European Science Foundation – Project Elias
- BCS (British Computing Society)
- Gesellschaft für Informatik – Fachgruppe Information Retrieval

The institutional funding for the Leibniz Gemeinschaft also supported the school by enabling low prizes for room and board:

- Schloß Dagstuhl – Leibniz Zentrum für Informatik

Assessment of the results , impact on future directions

The results of the school were first of all the exposure of the participants with high level scientific lectures. The participants got to know research intensive areas of information retrieval and information foraging and also received a good overview of the whole field.

The teaching material for the school was also collected and organized into a Wiki which is hosted at Dagstuhl and to which all participants have access (see in Annex).

Networking among participants as well as between lecturers and participants is also one of the main goals of such an event. The one week program and the great atmosphere and the remote location of Schloß Dagstuhl contribute excellently to the networking. The evening presentations of participants are a great opportunity for lecturers to get to know the work of participants and to form groups of people interested in similar areas.

The students of ASIRF even set up a Facebook group to stay in contact and exchange material. Twitter tweets related to the school can be found under the hashtag #ASIRF2014.

ASIRF offered the opportunity to the participants to evaluate the event. The results were overall very positive. The majority of the participants were very satisfied with the event overall, some others were satisfied. The evaluation for the relevance of the selected topics and other aspects like venue and organization were similar, the large majority was satisfied or very satisfied.

Content of Lectures

The first lecture on IR Models by Ingo Frommholz introduced basic notions and assumptions of common IR models at a very high level. The difficulties arising from different document lengths etc. were discussed as well as the assumptions the formal models are based on.

A second foundational lecture on evaluation by Thomas Mandl reviewed the assumptions made by the traditional evaluation paradigms in IR. The Cranfield model and its weaknesses and strengths were discussed. The presentation included on overview on evaluation initiatives and an outlook into user oriented evaluation.

The lecture Activity logging for context and user modeling by Wessel Kraaij introduced the topic of deeper analysis of user behavior based on logging users. The lecture explained how such data can be applied to improve systems, for example, in recommender systems.

The lecture on Task Based Evaluation by Pia Borlund extended the perspective of evaluation into studies involving users. The problems and specific issues of organizing, conducting and analyzing a good study were thoroughly discussed.

In the lecture Information Behavior Katriina Byström gave an overview over the well established models of Information Behavior. Then the lecture broadened the topic to include realistic models of work tasks and how they can be designed in information seeking contexts.

The second lecture on IR models by Thomas Rölleke presented more advanced models. The lecture went on to explain differences by comparing several models and by reaching a unified perspective when looking at the systems.

The lecture Modelling Interactive IR by Norbert Fuhr focused on three aspects of interactive retrieval, namely quantitative modeling, cognitive models, and user interface design. For the quantitative models, the interactive probability ranking principle was introduced along with methods for estimating the required parameters and for constructing Markov models of the user's interaction with the system.

The lecture Multimedia Retrieval by Stefan Rueger moved away from text retrieval and showed how content based image retrieval can be implemented today. The lecture deeply explained how features can be extracted from images and how they can be exploited for retrieval.

The lecture on Efficiency Issues by Ralf Schenkel focused first on efficient query processing and the necessary data structures for modern IR technology. Then it introduced MapReduce and showed how queries can be processed in a distributed manner.

Annex

Full List of Speakers

Name	*First Name*	*Organisation / Address*	*Country*
Frommholz	Ingo	University of Bedfordshire	UK
Rölleke	Thomas	Queen Mary University, London	UK
Mandl	Thomas	University Hildesheim	Germany
Borlund	Pia	Royal School of Library and Information Science, Copenhagen	Denmark
Fuhr	Norbert	University Duisburg-Essen	Germany
Byström	Katriina	Oslo and Akershus University College	Norway
Kraaij	Wessel	Radboud University Nijmegen	The Netherlands
Rüger	Stefan	The Open University	UK
Schenkel	Ralf	University of Passau	Germany

Program ASIRF 2014

Lecture times:

Morning: 9:00 – 10:30 and 11:00 – 12:30

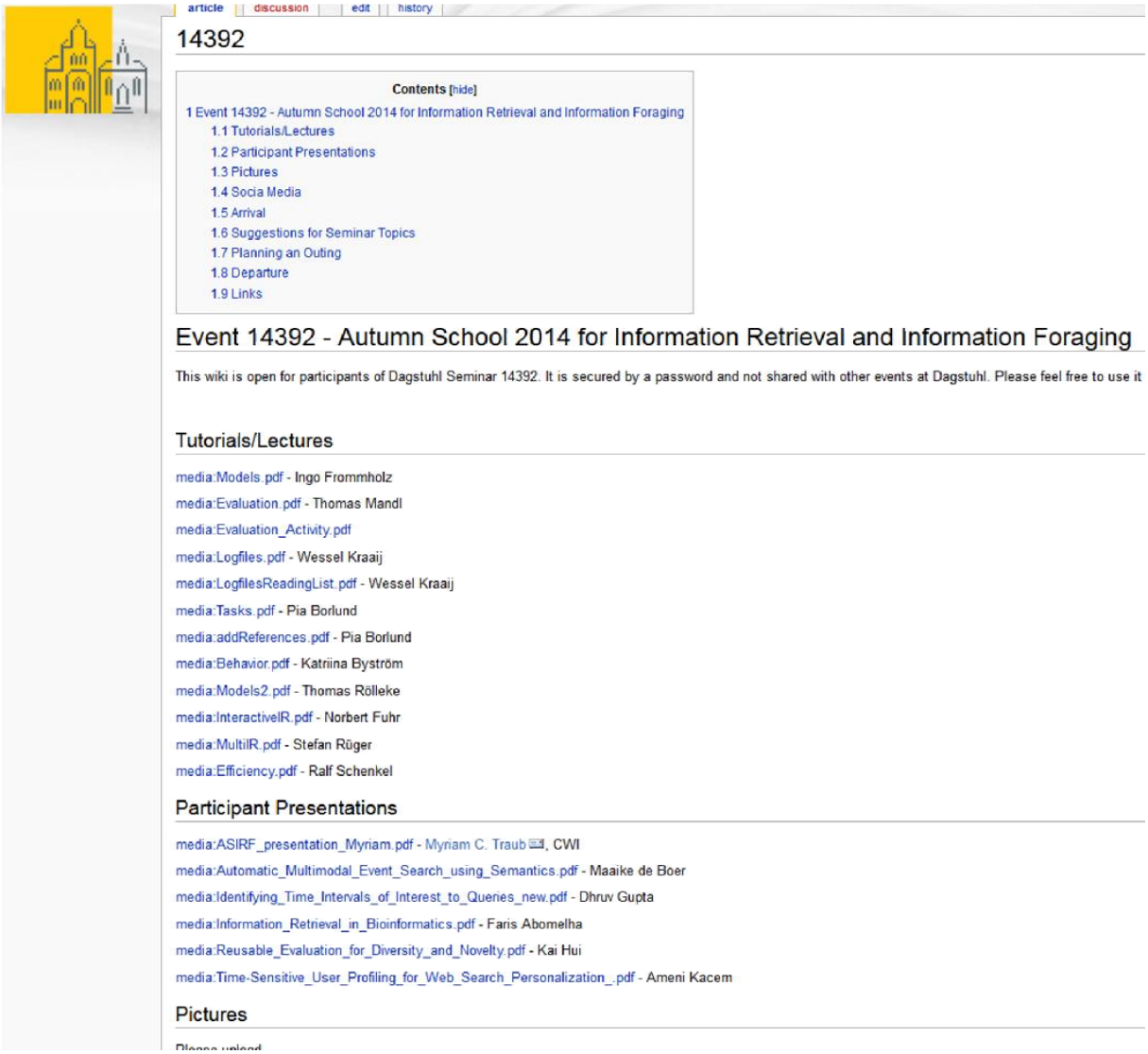
Afternoon: 14:00 – 15:30 and 16:00 – 17:30

All lectures were 90 minutes long.

For participants presentations, 90 minutes were dedicated on Monday as well as on Tuesday evening.

Sunday	Arrival	
Monday morning	Welcome	**Thomas Mandl,** University of Hildesheim **Ingo Frommholz**, University of Bedfordshire
Monday morning	Lecture: IR Models	**Ingo Frommholz,** University of Bedfordshire
Monday afternoon	Lecture: Evaluation	**Thomas Mandl,** University of Hildesheim
Monday evening	Presentations of participants on PhD and Master projects	
Tuesday morning	Lecture: Task based interactive IR evaluation	**Pia Borlund**, Royal School of Library and Information Science
Tuesday afternoon	Lecture: Logfile analysis	**Wessel Kraaij**, Radboud University
Tuesday evening	Presentations of participants on PhD and Master projects	
Wednesday morning	Lecture: IR Models	**Katriina Byström,** University of Boras, Sweden
Wednesday afternoon	Lecture: Advanced IR Models	**Thomas Rölleke,** Queen Mary University, London
Wednesday evening	Social Event: Trip to Trier, Guided city tour	
Thursday morning	Lecture: Interactive IR	**Norbert Fuhr,** University of Duisburg-Essen
Thursday afternoon	Lecture: Multimedia Retrieval:	**Stefan Rüger**, The Open University, UK
Friday morning	Lecture: Efficiency Issues	**Ralf Schenkel**, University Passau
Friday afternoon	Closing session - travel	

Learning Space in the Wiki



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Event 14392 - Autumn School 2014 for Information Retrieval and Information Foraging

This wiki is open for participants of Dagstuhl Seminar 14392. It is secured by a password and not shared with other events at Dagstuhl. Please feel free to use it

Tutorials/Lectures

media:Models.pdf - Ingo Frommholz
media:Evaluation.pdf - Thomas Mandl
media:Evaluation_Activity.pdf
media:Logfiles.pdf - Wessel Kraaij
media:LogfilesReadingList.pdf - Wessel Kraaij
media:Tasks.pdf - Pia Borlund
media:addReferences.pdf - Pia Borlund
media:Behavior.pdf - Katriina Byström
media:Models2.pdf - Thomas Rölleke
media:InteractiveIR.pdf - Norbert Fuhr
media:MultiIR.pdf - Stefan Rüger
media:Efficiency.pdf - Ralf Schenkel

Participant Presentations

media:ASIRF_presentation_Myriam.pdf - Myriam C. Traub, CWI
media:Automatic_Multimodal_Event_Search_using_Semantics.pdf - Maaike de Boer
media:Identifying_Time_Intervals_of_Interest_to_Queries_new.pdf - Dhruv Gupta
media:Information_Retrieval_in_Bioinformatics.pdf - Faris Abomelha
media:Reusable_Evaluation_for_Diversity_and_Novelty.pdf - Kai Hui
media:Time-Sensitive_User_Profiling_for_Web_Search_Personalization_.pdf - Ameni Kacem

Pictures

Please upload

List of Participants 2014

The list includes also the participants who were not funded.

Name	First Name	Organisation	Country
Alam-Wira	Andias	GESIS, Köln	Germany
Berberich	Klaus	University Saarbrücken	Germany
de Boer	Maaike	University Nijmwegen	The Netherlands
Hübner	Lisa	University Hildesheim	Germany
Hui	Kai	University Saarbrücken	Germany
Juric	Mate	University Zadar	Croatia
Dhruv	Gupta	University Saarbrücken	India / Germany
Mishra	Azuar	University Saarbrücken	Germany
Plassmeier	Kim	ZBW, Kiel	Germany
Traub	Myriam	University Amsterdam	The Netherlands
Kocher	Mirco	Univ. Neuchatel	Switzerland
Nishioka	Chifumi	ZBW, Kiel	Germany/Japan
McCrae	Patrick	Firmeninhaber, Hamburg	Germany
Birke	Peter	ZPID, Trier	Germany
Ullah	Asad	University of Bedfordshire	Pakistan/United Kingdom
Mustafa	Ghulam	University of Bedfordshire	Pakistan/United Kingdom
Kock	Helena	University Hildesheim	Germany
Maifarth	Matthias	University Hildesheim	Germany
Pörsch	Julian	University Regensburg	Germany
Stefani	Michael	University Regensburg	Germany
Ameni	Kacem	University Toulouse	France / Tunesia
Meriam	Bambia	University Toulouse	France / Tunesia
Gerling	Philipp	University Duisburg-Essen	Germany
Malischewski	Simon	University Duisburg-Essen	Germany
Husevag	Anne-Stine	HIAO, Oslo	Norway
Carevic	Zeljko	GESIS, Köln	Germany
Abomelha	Faris	University of Bedfordshire	United Kingdom

Web-Site of ASIRF

http://www.uni-hildesheim.de/en/fb3/institute/iwist/veranstaltungen/asirf/