



Research Networking Programmes

Science Meeting – Scientific Report

The scientific report (WORD or PDF file - maximum of seven A4 pages) should be submitted online within two months of the event. It will be published on the ESF website.

Proposal Title:

Application Reference N°:

1) Summary (up to one page)

The 5th Information Interaction in Context conference brought together 98 researchers to present and discuss research in the areas of interactive information retrieval and information behaviour.

The Information Interaction in Context conference (IliX) is a unique forum exploring the relationships between and within the contexts that affect information retrieval (IR) and information seeking, how these contexts impact information behavior, and how knowledge of information contexts and behaviors improves the design of interactive information systems.

The intention of IliX is to foster an integrated approach to information access by bringing together members of the diverse research communities in information seeking behaviour, user interface design for IR systems, and IR system design.

This year we put particular emphasis on "building bridges" between the various research communities with specific activities being planned to encourage improved understanding of differing viewpoints and foster collaboration.

The conference took place from the 26th-30th August, 2014 and featured diverse components:

- a doctoral consortium whereby X doctoral students presented their research projects and received combined and individual advice from allocated experts in their area of interest.
- 4 tutorials provided by 5 renowned experts that participants could attend for free. The idea was to support learning within our field and increase

understanding and collaboration between researchers within our community with different backgrounds.

- 3 days with plenary sessions, including invited keynote talks, as well as oral presentation of long and short papers, which were accepted after a comprehensive peer review process
- 2 well attended workshops on topics of current research interest to the community.

Further details of the content of these components will be described below.

- 2) Description of the scientific content of and discussions at the event (up to four pages)

Doctoral Consortium:

The IliX Doctoral Consortium, held in conjunction with the main conference, provided an opportunity for doctoral students to present and discuss their research with senior researchers and other doctoral students in a seminar format. The Doctoral Consortium focused on advising students regarding current critical issues in their research, and making students aware of the strengths and weaknesses of their research as viewed from different perspectives.

11 doctoral students participated in the event. In addition to receiving general feedback from other senior researchers in the seminar-like sessions, each student was assigned an individual mentor to provide specific feedback on their project.

Tutorials:

Tutorials were provided by Leif Azzopardi (formal models), Nick Belkin (history of interactive information retrieval), Diane Kelly (statistical power analysis), and Jeremy Pickens and Max Wilson (Systems IR).

We have made the slides and other teaching resources for the tutorials available via the conference website.

Main Conference Programme:

The main programme of conferences consisted of [Z] sessions, including 3 keynotes by Peter Pirolli (PARC), Gabriella Kazai (Lumi.do) and Francesco Ricci (University of Bozen-Balzano).

Peter Pirolli's keynote presentation discussed the complex human-information interaction problems involving information foraging, sense-making, and lifestyle change (behavioural change), predictive models of human cognition in these contexts, as well as novel interaction techniques inspired by these models. The talk drew on diverse literature from models of cognitive psychology to formal mathematical models describing behaviour and explained how these influence the above listed problems.

Gabriella Kazai's talk examined how crowd-sourcing experiments (via services such as Mechanical Turk) can be used to augment or support the Cranfield model of evaluation for IR. The main focus of the talk was on experiments aimed at uncovering characteristics of the crowd by monitoring their behaviour during different relevance assessment tasks and comparing them to professional judges' behaviour on the same tasks. The talk highlighted challenges of quality assurance and control in crowdsourcing and proposed a possible direction for solving the issue without relying on gold standard data sets, which are expensive to create and have limited application.

Francesco Ricci linked the themes of the conference series to his area of expertise – recommender systems, which automatically compute personalised suggestions for items that are predicted to be interesting and useful to a user. The talk focused on the importance context in determining user preferences and decision making processes. Using examples from his own research in context of tourism and entertainment he illustrated this point aptly and highlighted the challenges in understanding and harnessing context as well as evaluating systems, which do this.

The first session of the conference focused on relevance and was chaired by Charlie Clark from the University of Waterloo. Papers were presented looking at how relevance can be understood and estimated using eye-tracking approaches (Gwizdka), and in particular contexts via other interactional information such as dwell time (Vakkari et al). Al-Harbi and Schmucker presented analyses of secondary relevance assessor judgements and Millan Cifuentes and colleagues presented work on relevance in mobile, casual leisure scenarios.

The next plenary session focused on user aspects and was chaired by Pia Borlund. The first paper looked at usability issues for search engines targeted at young users comparing their perception to that of adults (Gossen et al.)

Schaller et al. presented work investigating behaviour of users with a smart phone application at a festival in Munich and demonstrated that different patterns of usage with the app correlated with different experiences at the festival.

McKeown et al. provided insight into how the search behaviour of intelligence agents can be investigated. Henna Kim and Yan Zhang followed by presenting an investigation of how low socio-economic status hispanic adults use smartphones to search for health information. Finally, Svarre and Lykke presented their work applying simulated work tasks to specific professional users.

The conference's third paper session focused on social networks and contributions ranged from systems based approaches, such as Albakour and colleague's work on Diversifying Contextual Suggestions from Location-based Social Networks and Mackie et al's work to choose

appropriate evaluation metrics for Microblog summarisation task to more user based approaches. These included Wilson et al.'s qualitative investigation of content available on mental health information available on microblogging platforms and Meier and Elsweiler's investigation of refinding behaviour on Twitter.

The next session had two main themes: recommender systems and personal information management and was hosted by Paul Thomas (CSIRO). The papers in the section dealt with cross-over topics, such as recommender systems for OPAC (Wakeling et al) and leisure plans (Schaller and Elsweiler), managing experiences with lifelogs (Chen and Jones) and email categorisation (Sappelli et al).

The following session dealt with cognitive aspects and was chaired by Jacek Gwidka (Texas). Contributions here included how user cognitive abilities affects task performance on tasks of varying complexity (Brennen et al), how concept maps representing what users learn during search tasks change (Egusa et al), and exploring knowledge graphs for exploratory search (Sarrafzadeh et al).

In the final conference session, the theme of the papers revolved around the concept of search sessions. The first paper examined how multistage Information-Seeking models can influence the design of search systems (Hurdeman). Ye and Wilson presented a qualitative evaluation of the factors that should be used to determine sessions from query logs. Finally Pättsch et al presented a nice short paper exploring how sensor graphs can be used to stimulate recall in retrospective think-aloud setups.

Workshops:

The conference concluded with two parallel workshops on up and coming research topics of interest to our community: searching for learning, which focuses on learning tasks and exploratory search scenarios and searching for fun, which deals with how the process of search can be made to be more entertaining. Both workshops were well attended, highly interactive and resulted in concrete ideas for future research. Separate reports will be published on the output of the workshops in due time.

3) Assessment of the results and impact of the event on the future directions of the field (up to two pages)

The conference can be viewed as a huge success and will influence the future of the field in several ways.

The focus on education and furthering future research generations (via the doctoral consortium and tutorials) has received particularly positive feedback from participants. The general impression is that these made steps towards achieved the aim of breaking down barriers between researchers with different backgrounds in the community.

We feel the conference served young researchers particularly well giving them several open for to present their work and receive feedback from

experienced members of our community. The small and informal setting of the IliX conference is particularly good at this.

Similarly, we believe the conference provided researchers with a setting to be creative for future collaboration and research. We are personally aware of three projects proposals, one of which is an EU project, that is the direct result of scientific exchange at IliX. There are no doubt several others.

- 4) Annexes 4a) and 4b): Programme of the meeting and full list of speakers and participants

Annex 4a: Programme of the meeting

Wednesday the 26th of August

10:00 - 17:00 Doctoral consortium
17:30 - 20:30 Welcome Reception and brewery tour at the [Spital Brauerei](#) Meeting point "[Wurstkuchl](#)" on the Wednesday the 27th of August

10:00 - 9:30 Opening ceremony
10:30 - 10:30 Keynote by Peter Pirolli
"Seeking Answers, Making Sense, Changing Lifestyles: Cognitive Models of Human-Information Search"

10:30 - 11:00 Coffee break
11:00 - 12:30 Paper session - Relevance
Chair: Charles Clarke, University of Waterloo

Characterizing Relevance with Eye-tracking Measures
Jacek Gwizdka¹
1: *University of Texas at Austin*

Books' Interest Grading and Dwell Time in Metadata in Selecting Fiction
Pertti Vakkari¹, Arto Luoma¹ and Janna Pöntinen¹
1: *University of Tampere*

A Qualitative Exploration of Secondary Assessor Relevance Judging Behavior
Aiman Al-Harbi¹ and Mark Smucker¹
1: *University of Waterloo*

Curiosity driven search: When is relevance irrelevant? (short paper)
Juan David Millan Cifuentes¹, Ayse Goker², Andrew MacFarlane¹ and Hans Myrhaug¹
1: *City University London*, 2: *Robert Gordon University*

11:30 - 14:00 Lunch
14:00 - 15:30 Paper session - Time Models in Systems
Chair: Japp Kamps, University of Amsterdam

Time Well Spent
Charles Clarke¹ and Mark Smucker¹
1: *University of Waterloo*

Stuck in Traffic: How Temporal Delays Affect Search Behaviour
David Maxwell¹ and Leif Azzopardi¹
1: *University of Glasgow*

Social Priors to Estimate Relevance of a Resource
Ismail Badache¹ and Mohand Boughanem¹
1: *IRIT University Paul Sabatier Toulouse*

What does time constraint mean to information searchers? (short paper)
Chang Liu¹, Fan Yang¹, Yu Zhao¹, Qin Jiang¹ and Lu Zhang¹
1: *Department of Information Management, Peking University*

11:30 - 16:00 Coffee break
16:00 - 17:15 Tutorials by Nicholas Belkin and Jeremy Pickens/Max Wilson
17:00 - 19:30 BBQ and poster session (Vielberth building)
Thursday the 28th of August

10:00 - 10:15 Tutorials by Diane Kelly and Leif Azzopardi
10:15 - 10:45 Coffee break
10:45 - 12:30 Paper session - User Types
Chair: Pia Borlund, Royal School of Library and Information Science

Usability and Perception of Young Users and Adults on Targeted Web Search Engines
Tatiana Gossen¹, Juliane Höbel¹ and Andreas Nürnberger¹

1: Otto-von-Guericke University Magdeburg

Relating user interaction to experience during festivals

Richard Schaller¹, Morgan Harvey² and David Elsweiler³

1: University of Erlangen-Nuremberg, 2: University of Lugano, 3: University of Regensburg

Investigating People: A Qualitative Analysis of the Search Behaviours of Open-Source Intellig

Sean McKeown¹, David Maxwell¹, Leif Azzopardi¹ and William Bradley Glisson²

1: University of Glasgow, 2: University of South Alabama

**Health Information Seeking of Low SES (Socioeconomic Status) Hispanic Adults Using Smart
Henna Kim¹ and Yan Zhang¹**

1: University of Texas at Austin

Simulated work tasks: the case of professional users (short paper)

Tanja Svarre¹ and Marianne Lykke¹

1: Aalborg University

13:30 - 14:00

Lunch

14:00 - 15:30

Paper session - Social Networks

Ian Ruthven, University of Strathclyde

Diversifying Contextual Suggestions from Location-based Social Networks

M-Dyaa Albakour¹, Romain Deveaud¹, Craig Macdonald¹ and Iadh Ounis¹

1: University of Glasgow

Finding Information about Mental Health in Microblogging Platforms: a Case Study of Depres

Max Wilson¹, Susan Ali¹ and Michel Valstar¹

1: University of Nottingham

On Choosing an Effective Automatic Evaluation Metric for Microblog Summarisation

Stuart Mackie¹, Richard McCreadie¹, Craig Macdonald¹ and Iadh Ounis¹

1: University of Glasgow

Tweets I've Seen: Analysing Factors Influencing Re-finding Frustration on Twitter (short pape

Florian Meier¹ and David Elsweiler¹

1: University of Regensburg

16:30 - 16:00

Coffee break

17:00 - 17:00

Keynote by Gabriella Kazai

"IR Evaluation with Humans in the Loop"

19:10 - 20:00

Organ concert at the cathedral (next to Haus Heuport)

Meet in front of the western entrance to the cathedral at 19:00.

19:00 - late

Banquet at [Haus Heuport](#) (Domplatz)

Friday the 29th of August

10:15 - 10:15

Keynote by Francesco Ricci

"Engaging Users with Situational Recommendations: Challenges and Results"

10:15 - 10:45

Coffee break

12:45 - 12:30

Paper session - Recommenders

Chair: Paul Thomas, CSIRO

Investigating the Potential Impact of Non-Personalized Recommendations in the OPAC: Amaz

Simon Wakeling¹, Paul Clough¹ and Barbara Sen¹

1: University of Sheffield

Itinerary Recommenders: How Do Users Customize Their Routes and What Can We Learn From
Richard Schaller¹ and David Elsweiler²

1: University of Erlangen-Nuremberg, 2: University of Regensburg

Paper session - PIM

Chair: Paul Thomas, CSIRO

Are episodic context features helpful for refinding tasks? Lessons learnt from a case study with
Yi Chen¹ and Gareth Jones¹

1: Dublin City University

E-mail categorization using partially related training examples

Maya Sappelli^{1,2}, Susan Verbene¹ and Wessel Kraaij¹

1: Radboud University Nijmegen, 2: TNO

13:30 - 14:00

Lunch

14:00 - 15:15

Paper session - Mental Models

Chair: Jacek Gwizdka, University of Texas at Austin

The Effect of Cognitive Abilities on Information Search for Tasks of Varying Levels of Complexity
Kathy Brennan¹, Diane Kelly¹ and Jamie Arguello¹

1: University of North Carolina at Chapel Hill

How Concept Maps Change if a User Does Search or Not?

Yuka Egusa¹, Masao Takaku² and Hitomi Saito¹

1: National Institute for Educational Policy Research, 2: University of Tsukuba, 3: Aichi University

Exploring Knowledge Graphs for Exploratory Search

Bahareh Sarrafzadeh¹, Olga Vechtomova² and Vlado Jokic³

1: University of Waterloo, David R. Cheriton School of Computer Science, 2: University of Victoria, 3: Management Science, 3: InsightNG

15:15 - 15:45

Coffee break

15:45 - 16:50

Paper session - Search Sessions

Chair: Luanne Freund, University of British Columbia

From Multistage Information-Seeking Models to Multistage Search Systems

Hugo Huurdeman¹ and Jaap Kamps¹

1: University of Amsterdam

A User Defined Taxonomy of Factors that Divide Online Information Retrieval Sessions

Chaoyu Ye¹ and Max Wilson¹

1: University of Nottingham

Using Sensor Graphs to Stimulate Recall in Retrospective Think-aloud Protocols (short paper)
Gabriele Pätsch¹, Thomas Mandl¹ and Christa Womser-Hacker¹

1: Universität Hildesheim

17:50 - 17:10

Closing ceremony

18:30

Guided tour through Regensburg (Domplatz)

Programme

Annex 4b: Full list of speakers and participants

Below is a list of all the doctoral students who were supported to attend IliX either by the Elias network or from other financial sources.

Stefanie Elbeshausen	Stefanie Elbeshausen <elbesh@uni-hildesheim.de>
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Aiman L. Al-Harbi	Aiman L. Al-Harbi
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