

## Association for Information Systems AIS Electronic Library (AISeL)

---

Issue Nr 5 (2014)

Scandinavian (IRIS)

---

2014

# Foreword - Designing Human Technologies

Judith Molka-Danielsen

*Molde University College, [j.molka-danielsen@himolde.no](mailto:j.molka-danielsen@himolde.no)*

Jacob Nørbjerg

*Aalborg University*

Jan Pries-Heje

*Roskilde University*

Harald Holone

*Østfold University College*

Follow this and additional works at: <http://aisel.aisnet.org/iris2014>

---

### Recommended Citation

Molka-Danielsen, Judith; Nørbjerg, Jacob; Pries-Heje, Jan; and Holone, Harald, "Foreword - Designing Human Technologies" (2014).

*Issue Nr 5 (2014)*. 1.

<http://aisel.aisnet.org/iris2014/1>

This material is brought to you by the Scandinavian (IRIS) at AIS Electronic Library (AISeL). It has been accepted for inclusion in Issue Nr 5 (2014) by an authorized administrator of AIS Electronic Library (AISeL). For more information, please contact [elibrary@aisnet.org](mailto:elibrary@aisnet.org).

# IRIS

Selected Papers of the  
Information Systems Research  
Seminar in Scandinavia

Nr. 5 (2014)

Issue Theme "Designing Human Technologies"

Coordinating Editor:  
Judith Molka-Danielsen  
Molde University College, Norway

Issue Editors: Jacob Nørbjerg, Jan Pries-Heje, Harald Holene

ISSN 2387-3353



The IRIS Association is a chapter of the  
Association for Information Systems

# IRIS

## Selected Papers of the Information Systems Research Seminar in Scandinavia

Nr. 5 (2014)

Issue Theme “Designing Human Technologies”

### Coordinating Editor

Judith Molka-Danielsen  
Molde University College, Norway

### Issue Editors

Jacob Nørbjerg  
Aalborg University, Denmark

Jan Pries-Heje  
Roskilde University, Denmark

Harald Holone  
Østfold University College, Norway

IRIS 37 was hosted by Aalborg University and Roskilde University and was held in Ringsted, Denmark on 10<sup>th</sup>-13<sup>th</sup> August 2014.



**The Scandinavian  
Chapter of AIS**

This academic series is published by AIS – IRIS, The Scandinavian Chapter of the Association for Information Systems. The publication is located on the

**AIS Electronic Library (AISEL)**

## Credits

We wish to thank the IRIS 37 Organization Committee and Reviewers for their contributions to this book of selected papers.

### IRIS 37 Organization Committee

Conference chairs:

Jacob Nørbjerg, Aalborg University  
Jan Pries-Heje, Roskilde University

Program committee:

Jacob Nørbjerg, Aalborg University  
Jan Pries-Heje, Roskilde University  
Ahmad Ghazawneh, IT University of  
Copenhagen

### Reviewers

Margunn Aanestad	Christian Koch	Lars Svensson
Aki Alanne	Jens Vejrup Lassen	Jose Teixeira
Hans Allmér	Josefin Lassinantti	Devinder Thapa
Aleksandre Asatiani	Markus Laursen	Sanna Tiilikainen
Ali Ismail Awad	Fulvio Lizano	Virpi Kristiina Tuunainen
Said Morad Babaheidari	Ulrika Lundh Snis	Elin Uppström
Daryna Barsukowa	Carl-Mikael Lönn	Lucas van Biert
Lennarth Bernhardsson	Guohong Mai	Markus Vattulainen
Jan Bosch	Antonio Martini	Siri Wassrin
Charlotte J. Brandt	John Bang Mathiasen	Sara Willermark
Pradeep Durgam	Amir Mohagheghzadeh	Anna Wingkvist
Ahmed Elragal	Erkka Niemi	Anna Zaytseva
Kristina Eriksson	Livia Norström	
Per Flensburg	Jussi Nykänen	
Linda Frygell	Ali Mohammad Padyab	
Gloria Gomez	Yushan Pan	
Lars Haahr	Lena Pareto	
Amir Haj-Bolouri	Samuli Pekkola	
Dan Harnesk	Noora Pinjamaa	
Monika Hattinger	Lene Pries-Heje	
Ari Helin	Tero Päivärinta	
Marita Holst	Knut H. Rolland	
Dalia Hosny	Rune Rosseland	
Karin Högberg	Cenyu Shen	
Lars Haahr	Jesper Simonsen	
Mari Hartemo	Maria Spante	
Lise Heeager	Jan Stage	
Sarfraz Iqbal	Anna Ståhlbröst	
Anna Sigridur Islind	Per Svejvig	
Eric Knauss	Björn Svensson	

## Table of Contents

Foreword by the Editors – Designing Human Technologies <i>Judith Molka-Danielsen, Jacob Nørbjerg, Jan Pries-Heje and Harald Holone</i>	4
<b>Research Papers</b>	
1 Doing Systems Development – A Pragmatist Take on the Learning of Engineers <i>Christian Koch and John Bang Mathiasen</i>	7
2 Toward a Process View in Adoption of Interorganizational Information Systems: A Literature Review <i>Charlotte J. Brandt</i>	22
3 Agile Contracts: Designing an Agile Team Selection Guideline <i>Lene Pries-Heje and Jan Pries-Heje</i>	34
4 Reinforcing Family Values with Web Design - Case Yle “P2” Children’s Website <i>Sanna Tiilikainen, Virpi Kristiina Tuunainen</i>	50
5 Design Principles for Online Information Security Laboratory <i>Sarfraz Iqbal, Ali Ismail Awad, Devinder Thapa</i>	65
6 User-Driven Designs in Medical Informatics: Developing and Implementing Support for Inter-departmental Coordination of Hospital Work using Electronic Whiteboards <i>Jens Vejrup Lassen and Jesper Simonsen</i>	80
7 Understanding the Processes of Online Creative Interaction – Toward a Research Agenda <i>Siri Wassrin</i>	95
8 Synthesis of Consumer Switching Research: A Proposal for Comprehensive Framework <i>Jussi Ilmari Nykänen</i>	106
9 E-servicescape is Plausible <i>Hans Allmér</i>	121
10 Looking Normal When I Don’t See Normal: SEEing What Can Be Done about the Experience of Visual Impairment <i>Guohong Mai and Gloria Gomez</i>	133
11 (Dis)abling Effects of Technology Use and Socio-material Practices <i>Rune Rosseland</i>	149
12 Open Data in Europe – Mapping User Groups to Future Innovation Impacts <i>Josefin Lassinantti, Birgitta Bergvall-Kåreborn</i>	161

# Foreword – Designing Human Technologies

Judith Molka-Danielsen, Jacob Nørbjerg, Jan Pries-Heje and Harald Holone

The Information Systems Research Seminar in Scandinavia (IRIS) is of an annual meeting of Information Systems (IS) researchers. The IRIS seminar distinguishes itself as the oldest IS seminar in the world, as it has been established in 1978. IRIS is organised by the IRIS Association, the Scandinavian Chapter of the Association for Information Systems (AIS). Utilising working groups led by an established researcher in the field, where all groups have read and prepared comments to all the group's papers gives IRIS a unique format in the IS field. Each group member in turn comments on the other papers of the group. IRIS is also a forum for networking activities. In the traditional seminar segment called the IRIS games, participants get to know each other through intellectual and team building activities. This leads to both friendships and academic collaboration with lifelong impact on careers. The IRIS seminar is especially beneficial to PhD students in helping them to establish networks and raising the quality of their research. Since 2010, IRIS has been combined with the Scandinavian Conference on Information Systems (SCIS) to ensure participation of a wide range of both starting and established academics in the field.

The articles of this fifth issue of the *IRIS Selected Papers of the Information Systems Research Seminar in Scandinavia* were originally proposed by the working group chairs (senior IS researchers). All of the papers of the IRIS seminar have gone through a peer review process, after which the chairs of the groups were requested to suggest one to two best papers of their groups for this publication. The selected papers, represent an acceptance rate of 25% of papers selected from the initial set of submissions. The selected papers were then improved according to the feedback from the IRIS seminar participants and finally reviewed by the editors of this issue, Judith Molka-Danielsen, Jacob Nørbjerg, Jan Pries-Heje, and Harald Holone. The coordinating editor, Judith Molka-Danielsen, represents the IRIS Association steering board as former president of IRIS. Issue editors Jacob Nørbjerg and Jan Pries-Heje were Program Co-chairs of the 37<sup>th</sup> IRIS seminar. Harald Holone is a representative of the IRIS Association steering board and will take on the role of coordinating editor in the forthcoming issue number 6.

The 37<sup>th</sup> IRIS seminar was jointly hosted by Roskilde University and Aalborg University, and held at Sørup Herregaard near Ringsted, Denmark between August University, and held at Sigtunahöjden, in Sigtuna, Sweden on the dates of August 10<sup>th</sup> to 13<sup>th</sup>, 2014. The theme of the conference was "Designing Human Technologies".

## Selected papers

The first article in this issue, *Doing systems development – A pragmatist take on the learning of engineers*, by **Christian Koch and John Bang Mathiasen** explores how learning can take place when systems development takes place under conditions of high innovation pressure combined with time and cost constraints. Applying Dewey's pragmatist approach they uncover the micro processes that enable or constrain learning and how these processes relate to the interplay between the technological artifacts being produced and the social context of development.

**Charlotte J. Brandt** reviews the research on adoption of interorganizational ISs (IOIS). In the article *Toward a Process View in Adoption of Interorganizational Information Systems: A Literature Review* she identifies four different focus areas in IOIS research from 1995 onwards: 1) IOIS factors and barriers, 2) creating effects, 3) post-adoption effects on buyer-supplier relationships, and 4) categorizations of IOIS adopters into different configurations. There is, however, very little research into the actual adoption process of IOIS. Therefore, she argues, there is a need to study the IOIS adoption process itself.

Danish public sector institutions are generally required to follow an open and transparent bidding process based on a **requirements** specification, which results in a contract with fixed time, budget and scope. This is, however, ill suited to situations where requirements are changing or ambiguous. In the article *Agile contracts: Designing an agile team selection guideline*, **Lene Pries-Heje and Jan Pries-Heje** design a guideline for a tender process that results in a time and resource contract. The research is based on the study of how a Danish public sector institution adapted the transparent tender process required by Danish and EU law to fit an agile development process.

The article *Reinforcing family values with web design - Case Yle "P2" children's website*, by **Sanna Tiilikainen, Virpi Kristiina Tuunainen**, report from an Action Design Research (ADR) project aiming to redesign the web-site of a Finnish children's TV show. The study uses social value theory as the lens to formulate the design principles governing the redesign effort the redesign of the web-site, demonstrating how this body of theories can inform web-design in cases where social values and considerations must be taken into account.

**Sarfraz Iqbal, Ali Ismail Awad and Devinder Thapa** also frame their work as ADR research. In the article, *Design Principles for Online Information Security Laboratory*, report from their work on developing an Online Information Security Laboratory for use in a Master's level university course. The design principles are derived from Conversational Framework, Constructive Alignment and Personalized System of Instruction. The study shows how design principles such as contextualization, collaboration, robustness and flexibility offer practical guidelines on how to remove the barrier of time and location in education, and promoting individualized learning by following flexible pedagogical approaches.

**Jens Vejrup Lassen and Jesper Simonsen** study the effects of extending a communication and coordination support system from one hospital department to the whole hospital in the article *User-Driven Designs in Medical Informatics: Developing and Implementing Support for Inter-departmental Coordination of Hospital Work using Electronic Whiteboards*. The study found that the original system is both designed to and capable of supporting cooperative work between departments. However, heterogeneous practices in different departments and other organizational issues created challenges for the successful implementation of the system. The study demonstrates the complexity of organizing cooperative work using artifacts and technology across organizational units.

In her paper, **Siri Wassrin** discusses the gap in innovation research between the proclaimed importance for Information and Communication Technologies to support creativity and innovation on the one hand, and the lack of studies of creativity in the IS field on the other. Based on a literature study, the paper, *Understanding the Processes of Online Creative Interaction – Toward a Research Agenda*, maps key concepts and research that

relate to online creative interactions, and proposes a research agenda to study the processes of online creative interaction.

The next paper, *Synthesis of Consumer Switching Research: A Proposal for Comprehensive Framework*, by **Jussi Ilmari Nykänen**, reviews the existing research on consumer switching behavior. The review identifies six limitations in the existing research on consumer switching. The paper then develops a comprehensive framework for research into consumer switching behavior. The framework is developed from the theory of migration and the Push-Pull-Mooring framework and is intended to benefit future sense-making, comparison and evaluation of consumer switching research.

**Hans Allmér**, asks if and how concepts describing shopping experience and context of physical stores - the servicescape - can be translated to Internet shopping - the e-servicescape. In the paper, *E-servicescape is plausible*, he proposes a tool to assess and compare aspects of servicescape and e-servicescape in physical and on-line stores. Further research is needed to develop proper evaluation mechanisms for e-servicescapes.

In the paper *Looking Normal When I Don't See Normal: SEEing What Can Be Done about the Experience of Visual Impairment*, **Guohong Mai and Gloria Gomez** explore ways to design aids for Visually Impaired People (VIP). Through a phenomenological study they uncover the changing strategies, needs and ambitions of VIPs as they move from early to later stages of the impairment and how these changes affect the need for support tools and technologies. Design principles for the different stages are suggested.

**Rune Rosseland** studies welfare technologies in the context of senior citizens living in so-called "smart homes". In the paper *(Dis)abling effects of technology use and socio-material practices* he reports from an initial exploratory fieldwork into senior citizens' knowledge and use of modern digital technologies. He analyzes interviews and observations using Actor Network Theory he uncovers how use of technology is entangled in a web of social and material structures and strategies having both enabling and disabling effects on the use of technology. These social and structural conditions must be taken into account when developing new welfare technologies.

The final paper in this issue, *Open data in Europe – mapping user groups to future innovation impacts*, by **Josefin Lassinanti**, compares the view on Open Data Innovation as expressed in EU policy papers, to reports from actual cases. The author finds that the policy papers express a narrow and unidimensional view on the actors, the innovation process, and motivational drivers in Open Data Innovation, when compared to multiplicity of actual users and approaches found in the cases. She concludes that the simplistic view of users and innovations found in the policy documents may obstruct the creation a broad innovation scene with many types of actors and innovations.