

# Fernando Loizides

2014

## Curriculum Vitae



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## SHORT BIO

I am a Research Fellow and Special Scientist at the Cyprus University of Technology while consulting as a user experience researcher. Currently, I am on a 6 month Visiting Lecturer position in Tallinn University Estonia. My main area of research lies in Digital Libraries, focusing on Information Interaction, Information Architecture and User Experience, especially in user interface field. I have a Computer Science background, which I combine with my digital library research to investigate how systems can be enhanced by state of the art and future technologies. I have published work in international journals and conferences which have also been submitted to the UK REF exercise, taken part in EU funded as well as national funded projects, edited books and proceedings and successfully secured personal EU and national funding, based on proposals I have written.

I am also an experienced enthusiastic teacher, lecturing classes between 12 and 100 students with excellent feedback. I have actively setup new modules and teaching curricula which have been successfully established and permanently adopted by the department. Among others, these include the courses on 'Digital Information Architecture', 'Interactive Multimedia' 'Human Computer Interaction' and 'Developing Mobile Applications'.

I have also given talks and presentations to both academia and industry and taken leadership and managerial roles in team projects and on panels and committees for management and research and organised and chaired international conferences. I have also been actively involved in the creation of three new research labs from the ground up.

I have extensive experience in user study design and facilitation using state of the art technologies, eliciting user requirements and performing systems evaluation, both in industry and academia where I have freelanced as an Information architect and user experience researcher. I also have applied development experience, with one of my mobile applications winning the digital championship social impact award. Some of the entities which I have collaborated with or worked for in projects include the European Patent Office (Ongoing), Microsoft, Nokia, Department for Education UK, Cyprus Broadcasting Channel and the Federal Department of Antiquities (Ongoing).

My aims are to set up a research team on Information Interaction and Architecture which will be self-sustained by research funding and produce world leading research. I would also look to be an active member of the school and department in which I would look to support and expand in both teaching and research.

## QUALIFICATIONS

### City University London

PhD in Human-Computer Interaction

### Swansea University

MRes in Future Interaction Technologies

### University of Wales, Swansea

BSc (Hons) in Computer Science

## EMPLOYMENT

### Research Fellow/Special Scientist | Cyprus University of Technology

09/2011 - Present

I have been hired on several projects by the university including designing and project managing the development of bespoke application for touch tabletops, brain computer interfaces and virtual reality applications as well as assistive software for people with disabilities. Furthermore, I was also hired to evaluate existing software and hardware via traditional HCI methodologies including specialized technologies such as eye-tracking, mobile testing and bio-tracking. During this time I was facilitating user testing and evaluations as well as wireframe prototypes for online and standalone systems. Clients included both industrial as well as from academia. Furthermore, I was hired as a lab manager and help setup the first interactive virtual reality CAVE in Cyprus. During my time at the university I was also hired and helped to setup the first HCI lab in Cyprus, benefiting from my previous experience in user experience labs. I was also hired to participate in a government funded project spanning over a 3-year period in order to elicit requirements from different stakeholders and produced a roadmap for establishing a computer games and research industry in Cyprus. The data gathered is now being utilized in order to encourage this domain on the island.

### User Experience Researcher and Consultant | Freelancing

04/2012 – Present

After my PhD, I took a hybrid approach to research, engaging in both academia as well as industry. During this time I have had the opportunity to work with several recurring clients including the European Patent Office (ongoing), Microsoft, Nokia, Department for Education UK, Cyprus Broadcasting Channel and the Federal Department of Antiquities (Ongoing). One example of

the consulting included evaluating and creating metrics for the user interfaces that patent examiners used at the European Patent Office. Eye-tracking technology was introduced the behavioral process of the examiners modeled. Metrics for evaluation of the systems have been introduced which are now used during intervals to evaluate changes and performance during the information seekers' patent examinations. Another example was work on a government funded project in order to design and evaluate a digital library interface based on a user-centered approach to store and display digital 3D items of ancient cultural heritage. During the design of the system, I used 3D scanning equipment to digitize physical objects and manipulate the digitized equivalents within bespoke interfaces. The 3D models were also used in creating virtual museums which I was assigned to then evaluate with users who used the virtual reality equipment to immerse themselves in the environment.

Research Assistant | **City University London (HCID)**  
01/2010 – 03/2011

I was primarily in charge of user test facilitation on bespoke information seeking interfaces as well as for researching fundamental behaviors of users and modeling their actions. Most of the testing involved lab-based eye-tracking or think aloud methods. Interviews and statistical analysis was also employed. During the time there I created a bespoke tool to be used by researchers to gain quantitative data from users on a document reader. Clients included academic staff as well as commercial partners from industrial projects as well as companies requiring specific user experience skills and equipment.

Research Assistant | **Swansea University**  
04/2008 – 12/2009

During my time at Swansea University the Future Interaction Technologies Laboratory was created, which I assisted in setting up as an assistant. My main duties however, were developing and evaluating digital library systems. The tests were mainly lab-based, but also included on-site observations and interviews as well as diary studies. From the results, several working prototypes were created.

User Experience Instructor | **IT Wales**  
08/2008 – 09/2008

During the Summer of 2008, I was hired by ITWales to teach students (ages 12-19) about system development and human computer interaction. Students went through a user-centered design approach and created working prototype

software systems. The students earned points towards a position at a university upon successful completion of the course, and one of the teams a technology award at a national level based on their work.

## PUBLICATIONS

### BOOKS, CHAPTERS AND EDITORIALS

- Professional Search in the Modern World, Springer, 2014.
- Multidisciplinary Information Retrieval, Springer (2013).
- Theory and Practice of Digital Libraries, TPDL 2012, Paphos, Cyprus, September 23-27, 2012. Springer 2012, Panayiotis Zaphiris, George Buchanan, Edie Rasmussen, Fernando Loizides.
- Proceedings of the 2nd International Workshop on Semantic Digital Archives 2012, Annett Mitschick, Fernando Loizides, Livia Predoiu, Andreas Nurnberger and Seamus Ross.
- Understanding and conceptualising the document triage process through information seekers' visual and navigational attention. (Doctoral Thesis, City University London 2012).
- Exploring Document Triage, Improving Information Seeking Methods, Fernando Loizides (M.Res Thesis Swansea University, 2008).

### JOURNALS (Peer Reviewed)

- Loizides, F., Photiades, T., Mavri, A., & Zaphiris, P. (2014). On Interactive Interfaces for Semi-Structured Academic Document Seeking and Relevance Decision Making. *New Review of Information Networking*, 19(2), 67-95.
- We Have the Content. Now What? The role of Structure and Interactivity in Academic Document Triage Interfaces Aekaterini Mavri, Fernando Loizides, Thomas Photiades, Panayiotis Zaphiris - *Information Design Journal* 20:3. 2013. ii, 109 pp. (pp. 247–265)
- Let's Talk About Technology for Peace: A Systematic Assessment of Problem-Based Group Collaboration Around an Interactive Tabletop Andri Ioannou;

Panayiotis Zaphiris; Fernando Loizides; Christina Vasiliou. Interacting with Computers 2013

- User experience in using surface computing for collaborative decision making, Interactive Technology and Smart Education, Panayiotis Zaphiris, Andri Ioannou, Fernando Loizides, Christina Vasiliou, (2013) Vol. 10 Iss: 4, p297-p308

#### CONFERENCE PUBLICATIONS (Peer Reviewed)

- Using Eye-Tracking to Investigate Patent Examiners' Information Seeking Process. Fernando Loizides, Barrou Diallo. Information Retrieval Facility Conference 2014 (pp76-81)
- Presenting Cypriot Cultural Heritage in Virtual Reality: A User Evaluation. In *Digital Heritage. Progress in Cultural Heritage: Documentation, Preservation, and Protection*. Loizides, F., El Kater, A., Terlikas, C., Lanitis, A., & Michael, D. (2014). (pp. 572-579). Springer International Publishing.
- Towards a Framework for Human (Manual) Information Retrieval. Loizides, Fernando, and George Buchanan. Information Retrieval Facility Conference Springer, 2013: p87-p98.
- AugDesk. Fusing Reality with the Virtual in Document Triage. Part1: Gesture Interactions, Fernando Loizides, Doros Polydorou, Keti Mavri, George Buchanan, Panayiotis Zaphiris, Theory and Practise in Digital Libraries 2013 p228-p234.
- Information Seekers' Visual Focus during Time Constraint Document Triage. Fernando Loizides. International Conference on Theory and Practice of Digital Libraries 2012: p25-p31
- Collaboratively Creating a Thematic Repository Using Interactive Table-Top Technology. Fernando Loizides, Christina Vasiliou, Andri Ioannou, Panayiotis Zaphiris, International Conference on Theory and Practice of Digital Libraries 2012: p512-p516
- Digitization, Restoration and Visualization of Terracotta Figurines from the House of Orpheus, Nea Paphos. Giorgos Papantoniou, Fernando Loizides, Demetrios Michaelides and Andreas Lanitis. International Conference on Cultural Heritage. EuroMed 2012 543-550.

- Visual Analysis of Document Triage Data - (Zhao Geng, Robert S.Laramee, Fernando Loizides, George Buchanan -International Conference on Information Visualisation Theory and Applications, 2011, pages 151-163.
- Performing Document Triage on Small Screen Devices. Part 1: Structured Documents (Fernando Loizides, George Buchanan -Information Interaction in Context, p341-p346, 2010) **(Best Conference Short Paper Award)**.
- Supporting Early Document Navigation with Semantic Zooming (Tom Owen, George Buchanan, Parisa Eslambolchilar, Fernando Loizides -International Conference on Asian Digital Libraries, p168-p178, 2010) **(Best Conference Paper Award)**.
- An Empirical Study of User Navigation During Document Triage Fernando Loizides, George Buchanan -European Conference in Digital Libraries, p138-p149 2009.
- Hear it is: Enhancing Rapid Document Browsing with Sound Cues. Parisa Eslambolchilar, George Buchanan, Fernando Loizides -European Conference in Digital Libraries, p75-p86, 2009 **(Best Conference Paper Award)**.
- Investigating and Assisting Interactive Document Triage in Electronic Environments. Fernando Loizides (IEEE Technical Committee on Digital Libraries Volume 6 Issue 1-2010 ISSN 1937-7266).
- What Patrons Want: Supporting Interaction for Novice Information Seeking Scholars (Fernando Loizides, George Buchanan -Joint Conference on Digital Libraries, p427-p428, 2009).
- The Myth of Find: User Behaviour and Attitudes Towards the Basic Search Feature (Fernando Loizides, George Buchanan -Joint Conference on Digital Libraries, p48-p51, 2008).
- Investigating Document Triage on Paper and Electronic Media. (George Buchanan, Fernando Loizides -European Conference in Digital Libraries, p416-p427, 2007) **(Best Conference Paper Award)**.

WORKSHOP PAPERS AND POSTERS (Peer Reviewed)

- Ideas Mapping, Surface Computing and User Experience Panayiotis Zaphiris, Andri Ioannou, Fernando Loizides, Christina Vasiliou. NordiCHI: I-UxSED 2012.
- Computer Game Research and Industry in a Small Nation. (Fernando Loizides, Panayiotis Zaphiris and Christos Gatzoulis. Extended Proceedings of the 4th International Conference on Fun and Games 2012 p27-p28).
- Ideas mapping, surface computing and user experience Zaphiris Panayiotis, Andri Ioannou, Fernando Loizides and Christina Vasiliou, International Workshop on the Interplay between User Experience (UX) Evaluation and System Development 2012 p4-p9.
- Mapping Ideas Around the Table. Andri Ioannou, Panayiotis Zaphiris and Fernando Loizides. Interactive Tabletop Surface Workshop 2012, Bristol).
- The Fast Lane: Rapid Document Triage Using an Eye-tracker. - Fernando Loizides, George Buchanan -1st European Workshop on Human Computer Interaction, Volume 1, 2012.
- Get them while they're Young: Introducing, Promoting and Training in HCI to Novices (Fernando Loizides, Lloyd Williams and George Buchanan. Workshop paper on HCI Learning - INTERACT 2009).

**LECTURING EXPERIENCE – MODULES TAUGHT**

- Interactive Multimedia.** Interactive Technologies and Development. Included in this module were rapid development technologies using drag and drop interfaces as an introduction. Students then learned development using HTML, JavaScript, HTML 5, Flash and Actionscript 3. 2D Game development was also taught with a large group project. Future interactive technologies were also used such as brain computer interfaces to educate in the upcoming interaction methods.
- Mobile / Tablet Interaction Design and Development. (This is a new course I developed from the ground up).** High & low fidelity prototyping, testing, systems evaluation, software programming and design, mobile tablet specific interaction techniques.

- Digital Information Architecture and Systems (This is a new course I developed from the ground up).** Digital Information, environments, presentation, systems, visualizations, and heuristics for web based as well as non-web based information architecture. Navigation and layout properties and user interaction.
- Information Retrieval and Seeking.** Search engine technologies, Information retrieval algorithms, search interfaces, Information visualization, Search engine design and implementation, Information architecture.
- Beginner/Advanced Human Computer Interaction.** Focus groups, Controlled experiments, Research and design Methodologies, Drama, Qualitative and Quantitative analysis, Theory formulation, Grounded theory, cognitive modelling, Low and high level prototyping, Markov Models.
- Practices and Theories in Interaction Design.** Wireframing, HCI Principles (including web design and evaluation heuristics), User study techniques,, Ergonomics, Inclusive design, Safety/Business critical systems.
- Designing for Disabilities.** Special software, hardware training, analysis, evaluation and developments for individuals with special needs.
- Programming and Data Structures.** C#, C, C++, Java, Visual Basic, Sorting algorithms, Trees, Hashmaps.
- Hardware and Devices.** Phidget development, Wiimote programming, Giro's, Brain computer interfaces.
- Cognition and Technologies.** Memory, GOMS/CPM-GOMS modelling, Keystroke level modelling, ACT-R, Affordances, Human error, Human perception.

### PROFESSIONAL SKILLS

- User Study Design and Facilitation.** Lab-based testing, field studies, interviews, direct observations, diary studies, focus groups, eye-tracking, EEG and BIO sensor testing.
- Proposal and Bid writing.** Bids for funding from in both academic as well as practitioner fields.
- Requirements Elicitation.** Functional, non-functional and data requirements. State charts, UML.



- Wireframing / Rapid Prototyping.** Software prototyping with a variety of tools. Specialising in Axure. Both hi-fidelity and low-fidelity.
- Quantitative and Qualitative Evaluation.** Statistical Analysis, Grounded Theory, Discourse analysis. Theory formulation
- Brainstorming Techniques and Methodologies.** Focus groups, card sorting, mind maps. Use of online as well as physical tools.
- System Evaluation.** Web analytics, user-based and heuristic evaluation.
- Modelling.** Cognitive, Behavioural and Procedural. GOMS/CPM-GOMS modelling, Keystroke level modelling, ACT-R.
- Universal Design.** Specialized ergonomics, heuristics and standards including techniques and design methodologies to design for all persons.
- High Level Software Development.** C#, WPF, XAML, Java, Javascript, CSS, Visual Basic, ActionScript, Flash, XML. Small screen development (tablets, mobiles) Android and Windows 8.
- Project management.** Project manager experience in several industrial and academic projects ranging from two to ten people in each team.

#### ACADEMIC AWARDS

- Best Poster Paper Award (Information Interaction in Context, 2010).
- Best Conference Paper Award (International Conference on Asian Digital Libraries 2010).
- Best Conference Paper Award (European Conference on Digital Libraries 2009).
- Best Conference Paper Award (European Conference on Digital Libraries 2007).

#### NON-ACADEMIC AWARDS

- E-novation championship finalists (final results pending) (On Mobile Application Mi.L.A – Minority Languages and Autism)
- Digital Championship Cyprus – Best Social Impact Innovation 2014 (On Mobile Application Mi.L.A – Minority Languages and Autism)
- MSP (Microsoft Student Partner) Star Award (2006/2007).

### ACADEMIC GRANTS AND SCHOLARSHIPS

- Modelling Patent Officers' Visual and Search Behavior, EU COST Grant. (€1800)
- RCUK/EPSRC Grant for "Engaging in State of the Art, Affordable, Future Interaction Technologies" 2010. (£1378.34)
- Fees Bursary Swansea University Computer Science Departmental Award (2007-2010 £10000).
- James Callaghan Scholarship (2007-2010 £4500).
- Swansea University Fees Only Bursary Award (2007-2010, £10000).

### NON-ACADEMIC GRANTS

- Cyprus Tourism Organisation – INTERACT Conference Hosting Proposal 2014. (€8500.00)
- Cyprus Tourism Organisation – TC 13 Conference Proposal, 2012. (€11600.00)
- Cyprus Tourism Organisation -Theory and Practices for Digital Libraries Conference Hosting Proposal, 2011. (€8500.00)

### PRESENTATIONS AND TALKS (SELECTION)

- Supporting People with Autism by Developing Multilingual Mobile Applications (Digital Championship - 2014).
- Information Architecture in the Modern World (Invited Lecture – Semiotics and Visual Communication Lab, 2014).
- Standards and Protocols in Information Retrieval Systems: The User. (EU COST Meeting on IR Standards and Protocols 2013).
- Computer Game Research and Industry in Cyprus: A Structured Dialogue Design Approach (Panel for Games Research, IPE project, Cyprus University of Technology 2011)
- Building a thought controlled PDF reader. (City University Health Sciences Invited Departmental Talk. 2011)
- Using Thought as a Means for Interaction (Finalist for City Research Competition 2011).

- Conceptualizing the Document Triage Process (Invited talk at the University of North Carolina, 2010).
- Deciphering the Document Triage Process and its Applicability to the Information Seeking Process (Invited Talk at Cyprus University of Technology, 2010).
- An Empirical Study of User Navigation During Document Triage (European Conference on Digital Libraries, 2009).
- Get them while they're Young: Introducing, Promoting and Training in HCI to Novices (Short Presentation, Interact 2009).
- Document Triage Data (Tutorial Talk for the Department of Computer Science, Swansea University, 2009).
- Introduction to Human Computer Interaction and Design (Work Experience Week Swansea Computer Science, 2008).
- Investigating Document Triage on Paper and Electronic Media (European Conference on Digital Libraries, 2007).
- On Panel Committee for British Computer Society Young Professionals Networking 2007.
- Motivational and Learning Skills (Microsoft Cambridge, 06/2007).
- Image analysis on PDA's for use in Medical Skin Disease Diagnosis (Microsoft Reading, 04/2006).
- Document Triage and the Information Seeking Process (Future Interaction Technologies Day Waterfront Museum Swansea, 11/2006).

#### **OTHER ACTIVITIES**

- General Chair. SouthCHI 2015
- Program Committee ECIR 2015
- Program Committee Electronic Publishing Conference 2015
- Special Technical Committee for Assessment of Proposals for new Higher Education Computer Science Courses – Cyprus Government 2014
- Program Board - International Conference on Social Computing and Social Media 2014

- Program Committee – Digital Libraries Conference 2014 (Joint JCDL & TPDF conference)
- Program Committee – Information Retrieval Facility Conference 2014
- Local Organizing Chair – iPads in Higher Education Conference 2014
- Chairman – SIGCHI Cyprus 2014-2015.
- Winner, Digital Champion Competition 2014 - Business and Freelancer category.
- Program Chair - Information Retrieval Facility Conference 2013
- Vice Chairman and co-founder - ACM SIGCHI Cyprus (Special Interest Group Human Computer Interaction) 2012-2013
- Cyprus Representative -ICT COST Action IC1002 Multilingual and Multifaceted Interactive Information Access (MUMIA)
- Program Committee - International Conference on Theory and Practise of Digital Libraries 2012.
- Board Member - Online Communities and Social Computing, HCI International, Las Vegas 2013
- Proceedings Chair - International Conference on Theory and Practice of Digital Libraries, 2012
- Organiser - Semantic Digital Archives (SDA) Workshop 2012
- Reviewer-CHI (ACM Conference on Human Factors in Computing Systems).
- City University London Informatics Board of Studies Committee 2010-2011.
- Swansea University Computer Science Departmental Research Committee Panel Research Staff Representative (2008/09).
- Reviewer -International Conference in Asian Digital Libraries (2008).
- Finalist Imagine Cup software Development Competition, UK

## LANGUAGES

- English (Fluent)
- Greek (Fluent)