Saiganesh Swaminathan

Masters Student

107 Boulevard de Mondétour
91400 Orsay, France
℘ *+33658513433*
✆ *www.saiganesh.net*
✉ *saiganesh.swaminathan@masterschool.eitictlabs.eu*

Research Interests

Summary: I'm excited to be a part of research ventures that lead to building interactive systems, toolkits and tools that leverages the existing theories on human capabilities, interaction contexts in real world and novel device modalities

Interested Areas: Interaction techniques, Design of Interactive systems, Methods and theroies for understanding users

Education

2012–2014 **Masters in Human Computer Interaction and Design**, *Universitè Paris-Sud*, Paris, France.
Dual degree masters program with TU Berlin acting as the second university with the specialization of multi-modal interaction. The masters program is organised by **EIT ICT Labs Masters School** - European Institute of Technology.
Relevant Courses: Introduction to HCI, Programming Interactive Systems, User-centered design methods, Interactive computer graphics

2008–2012 **B.Tech in Computer Science and Engineering**, *Shanmuga Arts Science Technology and Research Academy*, Thanjavur, TN, India, *GPA: 8/10*.
Relevant Courses: Pervasive Computing, Design and Analysis of Algorithms, Theory Of Computation, Object Oriented Analysis and Design

2011–2012 **Exchange Student at department of computer science**, *ETH Zürich*, Zürich, Switzerland, *4.95/6*.
Relevant Courses: Bachelor-Thesis, Human Computer Interaction, Research in Computer Science, Web Engineering, Software Engineering Laboratory, Software Architecture

Publications

○ **Saiganesh Swaminathan**, Conglei Shi, Yvonne Jansen, Pierre Dragicevic, Lora Oehlberg, Jean-Daniel Fekete. Supporting The Design and Fabrication of Physical Visualizations. In Proceedings of *CHI 2014* (Conditionally Accepted).

○ **Saiganesh Swaminathan**, Conglei Shi, Yvonne Jansen, Pierre Dragicevic, Lora Oehlberg, Jean-Daniel Fekete. Creating Physical Visualizations With MakerVis. CHI 2014 Interactivity (under review).

○ Saiganesh Swaminathan, PIM Touch: Extending Personal Information Management Paradigms for Multi-touch Interaction Contexts, *Bachelor Thesis*, ETH Zürich, Feb 2012

Scholarships

○ **EIT ICT Labs Excellence Nominee** which includes stipend, tuition fee waiver and travel support for attending two graduate schools. Awarded by European Insitute of Technology for entire duration of the masters program.

○ **Desh-Videsh** scholarship for pursuing academic endeavours abroad awarded by SASTRA university which covered round trip travel and living expenses.

○ Schloarship awarded by **Global information systems group, ETH Zürich** to pursue research activities at ETH Zürich

Selected Research and Project Experiences

Project	**Tools for visualizing data in wrist watch displays**
Dec 2013–March 2014	*Student Researcher*, *Mobile and Physical Interaction group at T-Labs*, Advisors: Dr. Joerg Mueller. Currently, we are exploring how to better support users on creating visualizations in wristwatch displays like pebble
Project	**Toolkit for building physical visualizations**
May 2013–Sep 2013	*Research Intern*, *AVIZ group at INRIA-Saclay*, Advisors: Dr. Pierre Dragicevic, Yvonne Jansen. My role in project involved designing a prototype to help end users build Physical Visualizations. The tool that we designed is capable of generating parameterizable physical visualizations through the generation of design files which can be fabricated with laser cutters, 3D printers, etc. Further more we conducted design sessions with users and results were submitted as a paper to CHI 2014
Project	**FloorCom: Interactive floor comunication for conference attendees**
Jan 2013–Mar 2013	*Student, CourseProject*, *Universitè Paris-Sud*, Professor: Dr. Wendy Mackay. As a part of the user centered design course we developed a video prototype of a concept called FloorCom. As a part of the course we did Interviews, used grounded theory, created user personas, profiles, design scenarios, design space and storyboards. The design scenarios were further refined and redesigned with theories from social sciences and finally leading to a video prototype.
Project	**TweetZoom: An Exploration of Interaction Technique**
Sep 2012–Dec 2012	*Student, CourseProject*, *Universitè Paris-Sud*, Professor: Dr. Michel Beaudouin-Lafon. We explored a new interaction technique (PolyZoom) from CHI 2012 by implementing a mash-up application which uses the technique. The application builds on Twitter search API and Google maps API. It allows user to navigate tweets around the world at different scales of zoom and spatially distant parts of the world simultaneously.
Project	**Semester Project: Computer Vision Labratory**
Oct 2011–Nov 2011	*Student, CourseProject*, *ETH Zürich*, Advisors: Dr. Helmut Grabner, Prof. Luc Van Gool. Worked on a project to improve the machine learning algorithm that detects and categorizes objects based on affordances of objects. We investigated various mechanisms through which the algorithm could be improved for increased scientific result like physical stability of objects, material Properties in 3d content scene discovery.
Project	**Integrating Multi-Touch Interactions in Existing Web Interfaces**
Jun 2011–Sep 2011	*Research Intern*, *Global Information Systems group, ETH Zürich*, Advisors: Dr. Michael Nebeling, Prof. Moira Norrie. We investigated the gradual adaptation of existing web interfaces to touch and multi-touch devices using jQMultiTouch. jQMultiTouch is a javascript based framework for developing multi-touch interactions on the web. The project began by developing several multi-touch prototypes of existing web interface picnik (Photo editing tool from Flickr). The motivation for these prototypes are both evaluating the framework and the interactions of the newly adapted website. The work ended with designing user-studies for comparing the existing web interfaces with the adapted interfaces.
Project	**libDB: API for relational database access from eiffel**
Feb 2011–May 2011	*Student, CourseProject*, *ETH Zürich*, Professor: Bertrand Meyer. We conceptualized, designed and implemented an RDB API for eiffel language. We followed a waterfall software development cycle through the design of the architecture (of API). The various design decisions included contracts, design patterns, various Public/Private classes with their methods. The project was a team based project for the course software architecture, It was international with four developers from four different countries
Project	**libSpell: Cross platform eiffel spelling library**
Mar 2011–May 2011	*Student, CourseProject*, *ETH Zürich*, Professor: Bertrand Meyer. Developed a cross platform eiffel library that uses google toolbar api to check spelling and hint programmers for suggestions. The API was developed as a part of Software Engineering laboratory course

Miscellaneous

May 2010–Dec 2010	**Student SysAdmin**, *SASTRA University*, Thanjavur, India. Responsibilities included 1) Implementing university wide wi-fi authentication/access mechanisms 2)Implementing university wide LDAP server providing the provision of ldap-squid authentication mechanism 3)Integrating the university educational system MOODLE with ldap configurations
June 2009–May 2010	**Fedora Ambassador**, *Fedora*, Thanjavur District. Was involved in organizing hackathons, teaching and evangelizing the use of various open source technologies around the region. Roles also included several development decisions on features of fedora over IRC

Skill Set

HCI Skills:	Paper Prototyping, Semi-structured interviews, Critical Incident Technique, Video Prototyping, Study Design	Ides and software:	Eclipse, Vim, NetBeans, Familiar with UNIX/Linux environments, Revision control (Mercurial, SVN, Git), Unit testing, and Code review systems
Programming Languages:	C, C++, Java (J2EE, Swing), Eiffel	Sysadmin skills:	Apache, Memcached, Squid, NFS, DHCP, NTP, SSH, DNSandSNMP
Web Technologies:	PHP, HTML5, CSS, JavaScript, JavaFX, jQuery, AJAX, NodeJS	Other Tools:	R statistical modelling(Moderate),LaTeX
DBMS:	MySQL, SQLlite, Oracle, SQL Server	Other:	Experience in academic research, experimental design and methodology

Languages

English	**Fluent**
German	**Intermediate**
Tamil	**Fluent**
French	**Basic**

Clubs and Certifications

- An member of **GLOSS** (*GNU Linux & Open Source Society*) at SASTRA. Roles include coordinating and conducting sessions on various fields in FOSS, including Linux customizations and hackathons
- RedHat certified engineer
- RedHat certified expertise in Directory Services
- RedHat certified expertise in Administration of SeLinux

References

Available upon request.