

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

Areas Interaction techniques, Design of Interactive systems, Methods and theories for understanding users

Education

2012–2014 **Masters in Human Computer Interaction and Design**, *Université 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

Scholarships

- **EIT ICT Labs Excellence Nominee** scholarship and tuition fee waiver for attending graduate school. Awarded by European Institute 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.
- Scholarship awarded by **Global information systems group, ETH Zürich** to pursue research activities at ETH Zürich

Bachelor Thesis

Title *PIM Touch: Extending Personal Information Management Paradigms for Multi-touch Interaction Contexts*

Supervisors Dr. Michael Nebeling, Prof. Moira Norrie

Time and Nov 2011–Jan 2012

Place

Description We designed an interactive multi-touch system for supporting the process of publication management and literature review by researchers. The project started by using participatory methods like semi-structured interviews with researchers. The research tasks after the interviews involved designing paper prototypes, building design sketches for gestures and evaluating these low-fidelity prototypes. The project then ended with an interactive multi-touch system built by adapting an existing publication management tool. The secondary goals of the projects were simultaneously realized by understanding the different methods and design trade-offs needed for adapting an existing systems to large screen multi-touch interaction contexts

Research and Project Experiences

Project **TweetZoom: An Exploration of Interaction Technique**

Sep *Student, CourseProject, Université Paris-Sud, Professor: Michel Beaudouin-Lafon.*
 2012–Dec 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.
 2012

Project **Semester Project: Computer Vision Laboratory**

Oct *Student, CourseProject, ETH Zürich, Advisors: Dr. Helmut Grabner, Prof. Luc Van Gool.*
 2012–Nov Worked on 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.
 2012

Project **Integrating Multi-Touch Interactions in Existing Web Interfaces**

Jun *Research Intern, Global Information Systems group, ETH Zürich, Advisors: Dr. Michael Nebeling, Prof. Moira Norrie.*
 2011–Sep 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 picnic (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.
 2011

Project **libDB: API for relational database access from eiffel**

Feb *Student, CourseProject, ETH Zürich, Professor: Bertrand Meyer.*
 2011–May 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
 2011

Project **libSpell: Cross platform eiffel spelling library**

Mar *Student, CourseProject, ETH Zürich, Professor: Bertrand Meyer.*
 2011–May 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
 2011

Miscellaneous

May **Student SysAdmin, SASTRA University, Thanjavur, India.**
 2010–Dec 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
 2010

June 2009– **Fedora Ambassador**, *Fedora*, Thanjavur District.

May 2010 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, Video Prototyping, Study Design	Idea 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, DNS and SNMP
Web Technologies:	PHP, HTML5, CSS, JavaScript, JavaFX, jQuery, AJAX, NodeJS	Other Tools:	R statistical modelling(Moderate), \LaTeX
DBMS:	MySQL, SQLite, Oracle, SQL Server	Other:	Experience in academic research, experimental design and methodology

Languages

English	Fluent
German	Intermediate
Tamil	Fluent
French	Basic

Clubs and Certifications

- o 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
- o RedHat certified engineer
- o RedHat certified expertise in Directory Services
- o RedHat certified expertise in Administration of SELinux

References

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| - Prof. Dr. Moira C. Norrie
Professor
Chair of Global Informations systems group
ETH Zürich
Phone: +41 44 632 72 42
E-Mail: norrie@inf.ethz.ch | - Dr. Michael Nebeling
Institut f. Informationssysteme
CNB E 106
Universitätstrasse 6
8092 Zuerich
Phone: +41 44 632 73 79
E-Mail: nebeling@inf.ethz.ch |
| - Prof. Dr. N.Sairam
Professor
SASTRA University
E-Mail: sairam@cse.sastra.edu | |