PALANIVEL KODESWARAN

4805 ELDON GREEN
BALTIMORE MD 21227

Ph: (443) 454-2836
Lab: (410) 455-2668
http://www.cs.umbc.edu/~palanik1
palanik1@cs.umbc.edu

Objective

To obtain a summer internship position in a stimulating research environment in the areas of pervasive computing, mobile networks and intelligent systems.

Education

Ph.D. Student, Computer Science
(Expected Graduation – May 2009)
University of Maryland, Baltimore County (UMBC),
Advisor: Prof. Anupam Joshi, eBiquity Research Group
GPA: 4.0/4.0

Fall 2005 – Present

Bachelor of Engineering (Computer Science and Engineering)
College of Engineering, Guindy (CEG), Anna University,
Chennai, India
GPA: 8.9/10, *First Class with Distinction*

April 2005

Computer Skills

Languages: C, C++, Java, JavaScript, Shell Scripting, SQL, Perl, Prolog, Assembly x86
Platforms: Linux, Windows
Simulators and Tools: GloMoSim, Simple Scalar, Lex, Yacc, Latex
Network Protocols: TCP/IP and Mobile Ad Hoc Routing

Publications

"A Generic Resilient Multipath Routing Mechanism for Failure Prone Ad Hoc Networks", accepted for the poster session at The International Conference on High Performance Computing (HiPC) 2005, Goa India.

Research Interests

Mobile Computing, Wireless Networks, Pervasive Computing, Context Aware Computing, RFID, Computer Networks, Computer Security, Distributed Systems

Experience

eBiquity Research Group, UMBC   http://research.ebiquity.org

- **Research Assistant**   **January 2007 – Present**
  Working on building a context aware environment for surgical training at the University of Maryland, Medical School using pervasive computing technologies. We are using a combination of RFID tags and Bluetooth to infer the presence of entities in the training room and use this location information in reasoning about context.

- **Research Assistant**   **August 2006 – December 2006**
  Worked on the resource monitoring subsystem of the DARPA sponsored Trauma Pod project which aims at achieving tele surgery through a remote robotic arm. All supplies and medicines are tagged using RFID which is used in inventory management, allowing the remote surgeon to know what supplies are available at his disposal.

Cougaar Software Inc, Mclean VA   http://www.cougaarsoftware.com

- **Summer Intern**   **June 2006 – August 2006**
  Worked on setting up data streaming into the Cougaar Distributed Data Environment Architecture using a combination of MySQL database triggers, MySQL User Defined Functions (UDFs) and Java Messaging Service.

Projects

UMBC – Baltimore, MD

- **Instruction Set Architecture Extensions for Multimedia on Wireless Devices**

  Spring 2006

  Studied the characteristics of multimedia applications and proposed extensions to existing instruction set architectures. The goal was to provide instructions which consume less power and are easy to execute.

- **Distributed File System with Bit Torrent Downloading**   **Fall 2005**
  Designed and implemented a Distributed File System in Java. The file system supports bit-torrent style downloading where in a client can download various parts of a file from multiple locations. The Chord Protocol was used for the underlying file discovery. The system was tested with various file sizes and caching strategies.

- **Query Incentive Networks**   **Fall 2005**
  Involved studying Query Incentive Networks where in querying a piece of data is associated with a cost. This model was then applied to the field of sensor networks, where in a mechanism was designed and implemented for achieving uniform energy dissipation.

- **Online Auction Portal**   **Fall 2005**
  Designed and implemented an online auction portal using Oracle as the back end and JSP for the front end. Form validation was implemented using JavaScript. The system had support for a number of administrative queries such as the most productive seller, bidders etc.

CEG – Chennai, India

- **Resiliency in Ad Hoc Networks**   **September 2004 – April 2005**
  Designed and implemented a routing protocol for Ad Hoc networks which was based on the tolerance philosophy. The inherent redundancy of Ad Hoc networks was exploited in the recovery mechanism. The simulations were carried out using the GloMoSim Toolkit.

- **Dynamic Instruction Reuse**   **January 2004 – March 2004**
  Made modifications to the Dynamic Instruction Reuse Algorithm and ran simulations on the Simple Scalar Toolkit.

Academic Awards

- Ranked 63 among 80000 applicants in the Tamil Nadu State Engineering Entrance Examinations.
- Received Merit Certificate for standing in the top 0.1% of successful candidates of AISSE 1999 in Science.

References

Available upon request.