

## Srinath TV Setty

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CONTACT 1100, E 32<sup>nd</sup> St. 104 srinath@cs.utexas.edu  
INFORMATION Austin TX 78722 USA www.cs.utexas.edu/users/srinath  
Phone: (512) 284-0748

RESEARCH Networked Systems - Security and Fault Tolerance  
INTERESTS

PUBLICATIONS **NIT Karnataka, Surathkal**, India

- Srinath T V, Anil Kumar Katti, Ananthanarayana VS, *Analysis of Mobile Beacon aided In-Range Localization scheme in Ad Hoc Wireless Sensor Networks*, Proceedings of ACM IWCMC 2006, Vancouver, Canada.
- Srinath T V, *Localization in Resource Constrained Sensor Networks using a Mobile Beacon with In-Ranging*, Proceedings of the IEEE WOCN 2006, Bangalore, India
- Srinath T V, Anil Kumar Katti, Ananthanarayana VS, *Optimal Virtual Beacon Placement Mobility Model for In-Range Localization in Ad Hoc Wireless Sensor Networks*, Unpublished

EDUCATION **The University of Texas at Austin**, United States

**Ph.D., Computer Sciences** **Aug 2008 - Present**

- *Advisor*: Prof. Mike Walfish
- *Area of Study*: Byzantine Fault Tolerance in Distributed Systems.

**NIT Karnataka, Surathkal**, India

**B.E., Information Technology** **Jun 2002 - Jun 2006**

- *Thesis*: Analysis of mobile beacon aided localization in wireless sensor networks
- *Advisor*: Prof. Ananthanarayana VS
- *Abstract*: In this work, We mathematically model the In-Range localization scheme in the presence of a Mobile Beacon. In the In-Range localization scheme, a sensor with unknown location is localized to a disc centered at the position of the beacon, if the sensor under consideration can successfully decode a transmission from the beacon. In our approach a Mobile Beacon guided by a mobility model is used to generate the virtual beacons, there by eliminating the need to deploy static beacons that are required in the classical In-Range localization scheme. For analysis, we consider a Mobile Beacon guided by the Random Way Point (RWP) mobility model with In-Range localization scheme. The main contribution of this work consists of mathematical models for the In-Range localization parameters in the presence of a Mobile Beacon guided by the RWP mobility model.

EXPERIENCE

**Software Engineer, Yahoo! R & D India Jul 2006 - Jul 2008**

- I was a part of the Video Syndication Platforms group based in Bangalore and worked on the video processing and delivery system for cricket videos.
- Prior to that, I worked with the Media Engineering team to build an Entertainment Content Repository to store and retrieve metadata related to Movies, Games etc.

**Summer Research Fellow, IISc Bangalore May 2005 - Jul 2005**

- I worked on the Localization problem in Distributed Wireless Sensor Networks under the guidance of Prof. Anurag Kumar, This work resulted in a publication at an IEEE conference and a detailed technical report submitted to JNCASR Bangalore (Listed under Publications).
- This work was supported with fellowship from JNCASR, Bangalore under Summer Research Fellowships Program 2005.

**Microsoft Student Project Program Sep 2004 - Feb 2005**

- This program was designed to introduce Microsoft .NET platform to undergrad students and mentor them to build database oriented products using Microsoft technologies.
- I designed and implemented a database application to manage the inventory of a distribution company using Microsoft .NET framework.

AWARDS

**NIT Karnataka, Surathkal, India**

- Rajiv Gandhi National Sciences talent Research Fellow for the year 2005 - List of Fellows for the year 2005.
- Gold Medal from NITK Surathkal for the excellent academic performance during undergrad.
- First Rank holder of Information Technology major in each year of undergrad.
- Best Outgoing Student of Information Technology major for the year 2006, NITK Surathkal.

**Yahoo! R & D India**

- "Media U-Rock" award **Oct 2007**
- Most Useful Hack awarded to "Videofy Mash" **Oct 2007**
- Best Hack awarded to "Video Annotations" **Feb 2008**
- Smart Magic awarded to "Smart Mobile Video Encoder" **Jun 2008**
- Nominated for Yahoo! Ratna 2008 award

PATENTS

**Smart Mobile Video Encoder** (in process) - Yahoo! Patent team approved this Invention Disclosure for patenting.

ACADEMIC  
EXPERIENCE

**The University of Texas at Austin, USA**

*Graduate Student*

**Aug 2008 - Present**

- **Projects**

- **Carbon State Machine** - Design and Implementation of Aardvark BFT state machine replication with Lagnippe programming environment.

- **Courses**

- Advanced Operating Systems (Prof. Mike Dahlin, Fall 2008)
  - Algorithms - Techniques and Theory (Prof. Vijaya Ramachandran, Fall 2008)
  - Supervised Teaching in Computer Sciences (Prof. J Moore, Fall 2008)
  - Distributed Computing (Prof. Lorenzo Alvisi, Spring 2009)
  - Topics in Secure and Distributed Storage Systems (Prof. Mike Walfish, Spring 2009)
  - Conference Course - Independent Research (Prof. Emmett Witchel, Spring 2009)
  - Computational Statistics (Prof. Mary Parker, Summer 2009)
  - Conference Course - Independent Research (Prof. Emmett Witchel, Summer 2009)
  - Operating Systems Implementation (Prof. Mike Walfish, Fall 2009)
  - Conference Course - Independent Research (Prof. Mike Walfish, Fall 2009)
  - Theory and Practice of Secure Systems (Prof. Vitaly Shmatikov, Fall 2009)

*Graduate Research Assistant*

**June 2009 - Present**

- Laboratory for Advanced Systems Research, working on byzantine fault tolerance.

*Teaching Assistant*

**Aug 2008 - May 2009**

- Assisted CS 303E: Elements of Computing course offered by Dr. Shyamal Mitra in Fall 2008
- Assisted CS 313E: Elements of Software Design offered by Dr. Shyamal Mitra in Spring 2009
- Work includes grading tests, holding office hours, handling programming assignments and conducting review sessions.

**NIT Karnataka, Surathkal, India**

*Undergraduate Student*

**Jun 2002 - Jun 2006**

- **Projects**

- An optimizing compiler for The C Programming language
  - "TinyRobo": A data collection and visualization system for sensor networks

- "Judge": Automated evaluation server for an online programming contest
- A scalable secure group communication system using key trees
- An assembler and a simulator for PDP 11 architecture
- A simple animation creator for Linux using Open GL technology
- **Courses**  
Operating Systems, Data Structures, Design and Analysis of Algorithms, Database Systems, Artificial Intelligence, Multimedia and Virtual Reality, Computer Organization and Architecture, Principles of Programming Languages, Theory of Computation, Operations Research, Digital Systems, Microprocessors, Data Communication, Computer Networks, Software Engineering, Compilers, Object oriented systems, Distributed Systems, Software Quality Assurance.

***Co-curricular Activities***

**Jun 2002 - Jun 2006**

- Instructor, TUXRIDE 2004, 2005 and 2006 - A course on programming skills.
- Member, Web Enthusiasts Club
- Coordinator, OPEN - OPen Source operating systems Enthusiasts Network
- Member, Indian Society for Technical Education
- Convener, Software Committee, Engineer 2006, Annual technical symposium

**TECHNICAL SKILLS**

**Programming:**

C, C++, PHP, Python, C#, Java, Perl, UNIX shell scripting

**Applications:**

Apache, MySQL, Flash Media Server, Windows Media Server

**Platforms:**

Linux, Free BSD, Facebook, Google App Engine, Microsoft Windows XP/2000, Apple OS X