

Sandeep Sirpatil

9544 University Terrace Dr, Apt A
Charlotte, NC 28262

Phone: 704-549-9604

ssirpati@uncc.edu

sandeepsirpatil@gmail.com

Education: **Graduate Student** – Electrical and Computer Engineering - UNC Charlotte
Expected graduation: August 2006, Current GPA 4.0

Bachelor of Engineering (2001) - Electronics and Communication.
Gulbarga University, Gulbarga- INDIA. (First Class with Distinction).

Skills:

Hardware: Board design using DSP and microprocessors

Tools: OrCAD capture 9, TI-Code Composer 'C2000, Sun One Studio, Xilinx Foundation. Visual Studio, MATLAB, IDE
(Atmel, Renesas, IAR, CodeWarrior)

Languages: C/C++, Java (AWT/Swing, JNI, 2D graphics), HTML, UML

Environments: Windows, Linux, and μ C/OS-II

Microcontrollers: TI - TMS320LF240x and MSP430, Renesas - M16C, Motorola – MMC2001, Cypress – EZ-USB,
Atmel ATmega128

Assistantships

Research Assistant: University of North Carolina – Charlotte: Summer 05.

- Developed an embedded data logging system for an under water application

Teaching Assistant: University of North Carolina – Charlotte: Fall 05.

- Taught the course ECGR2103 “Computer Utilization in C++ “ for under graduates
-

Work Experience:

Design Engineer - Systemantics India Pvt. Ltd. (www.systemantics.com)

Duration - 3 Years (Nov. 2001 – Dec 2004)

Job Responsibilities:

- Designed a System Controller using VIA Mini-ITX and added CAN functionality to it over USB
- Worked on porting Linux 2.4.x Kernel to VCMA9 (Samsung S3C2410 – ARM 9 Core)

4 Axis Pick n Place (SCARA) Robot:

- Designed 2-axis motion control boards using TI's TMS320LF240x DSP's, developed software for Servo control (PID) of BLDC/ DC / Stepper / VR motors and communicate over CAN and RS232.
- Designed System Controller using TI's TMS320LF240x and Xilinx CLPD's. Developed the software for communications and coordination of motion controllers.
- Developed an elementary GUI in Java

Walking Robot:

- Customized the 2-axis motion controller to this robot
 - Designed and implemented an algorithm for coordinated motion of 4 legs (8 servos) of the robot and developed a walk plan for it
 - Designed GUI and system control software in OOD. It was executed on a PC and communicated with robot over CAN. The GUI was developed in Java using Swing and Java 2D graphics
-

Graduate Level courses:

- | | |
|-----------------------------|--------------------------------|
| ▪ Advanced Embedded Systems | ▪ Computer Architecture |
| ▪ Designing with USB | ▪ Intro to VHDL |
| ▪ Digital Signal Processing | ▪ Wireless and Sensor Networks |
-

Paper:

“Implementation of a Heuristic Walk Plan for a Four Legged Walking Machine”:

Appu George Thomas, Sandeep Sirpatil.

Paper presented at National Conference on Machines and Mechanisms (NaCoMM 2003), IIT Delhi, December 18-19,2003.

Interests:

- Embedded systems hardware design and debugging
 - Embedded and Real Time software
 - Linux programming
-