

# SALMAN BUTT

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## OBJECTIVE:

Currently working on Research Thesis Project titled 'Electronic Band Structure in Quantum Dot Superlattice for Intermediate Band Solar Cell (IBSC)' with advisor, Dr. Jing Bai, in the ECE Grad dept at UMD to utilize and expand my knowledge and experience in the field of Solid State Devices (Quantum Mechanics).

## SKILLS/COURSES:

- Proficient in working with various operating systems (Windows, UNIX/Linux, Mac) and Microsoft Office.
- Knowledgeable in building and running Windows CE application(s) using eMbedded Visual C++.
- Competent in integrated engineering and mathematical tools and software e.g. MATLAB.
- Experienced in telecommunications tools and software: Citrix Client, SecureCRT 4.1.
- Expert in Circuit analysis and designing software e.g. SPICE 2G, PCB, ORCAD, etc.
- **Purdue:** Senior Design (EE 402d: Image capture using CCD camera, Circuit design for video field grabber system, RF transmission, video and synch processing, technical writing, product development requiring customer specifications), Digital Signal Processing (EE538: CDMA, digital subbanding, upsampling, IIR filter design), Semiconductor Devices (PN junction, MOSFET characteristics), Digital Control System Design & Analysis, Microcontrollers and Assembly Language & Mobile Communications Project: Wireless Transportation (Integrated Circuit Design, digital signal/image processing, extrapolation of locations points, designing algorithm for data processing, wireless networking, etc).
- **UMD:** Signal Processing, Modern Communications, Energy Conversion Systems, Engineering & Project Management, Linear Systems and Optimal Control.

## ADDITIONAL TECHNICAL SKILLS AND EXPERIENCE:

<b>Operating Systems:</b>	Windows 95/98/ME/2000/NT/XP/VISTA, UNIX, Mac.
<b>MS Tools:</b>	Microsoft office 2001/03/07/XP, <b>Microsoft Visual Studio 2005.</b>
<b>Languages:</b>	<b>C++, JAVA, embedded Visual C++, .Net.</b>
<b>Web Technologies:</b>	<b>HTML, Dream weaver 8, Macromedia Studio 8.</b>
<b>Database Server:</b>	<b>MySQL, SQL.</b>

## EDUCATION:

### Present

University of Minnesota, Duluth,  
Electrical and Computer Engineering (MSECE), 3<sup>rd</sup> Semester.  
Cumulative GPA: 3.90/4.00

### Previous

Purdue University, West Lafayette, IN  
Electrical Engineering, Bachelor of Science, May 2006  
Minor(s): Mathematics  
Cumulative GPA: 3.24/4.00; **Dean's List and Semester Honors** (Spring 2002, Spring 2005 and Spring 2006)

## WORK-EXPERIENCE/PROJECTS:

- **Micron Tech Inc, VA:** **Jan'07 - Dec'07**  
Worked as an intern in QRA dept dealing with various technical software tools and integrated programs for quality and reliability data analysis and other statistical measures.
- **Computer Lab Assistant for ITAP (Information Technology at Purdue)** **Aug'04 - Aug'06**  
Promoted to Senior IT Lab Assistant. Various Operating Systems: Windows/Sun/UNIX/Linux.  
**My Responsibilities:**  
Supervision of IT Labs, Hardware interfacing and troubleshooting, software debugging, web design and developing (Dream weaver 8: Macromedia Studio 8), dealing with Microsoft Power Point, Outlook, Publisher, Excel, Adobe PageMaker, etc.
- **Research Assistant, School of Electrical and Computer Engineering,** **May'05 - Jun'05**  
**WIRELESS TRANSPORTATION PROJECT I:** Project dealing with data collection for vertical acceleration by mounting tri-axis sensors in a vehicle where data is time synchronized with video.  
**My Responsibilities:**  
Working with both Electrical and Civil engineering departments on Wireless transportation technology; Arcgis, Google earth, Camtasia, Signal Processing, web site maintenance, etc.
- **Research Assistant, Delphi Co. (Kokomo),** **Jun'05 - Aug'05**  
**WIRELESS TRANSPORTATION PROJECT II:** Comparison of data collection and analysis using various methodology, software development/debugging, designing algorithms for extracting analytical data, database management, etc. with software engineers from Delphi Co. Automotive dept.
- **IEEE (Institute of Electrical and Electronics Engineers)** **Jan'04 - Jan'05**  
**MARS (Mobile Autonomous Robotics Squad) Committee.**  
  
**PROJECT: SUMO ROBOT** (National Contests in Peoria, IL and Fort Wayne, IN): Autonomous robot with certain time delay and coding for pattern recognition between black and white surfaces.  
**My Responsibilities (teamwork):**  
Java programming, Microcontrollers, IR-sensors (tri-sensor array), H-bridge amplifiers, etc.  
<http://www.purdueieee.org/mars.php>
- **Mobile Communications PROJECT: Wireless Transportation** **Jan'05 - May'05**  
**My Responsibilities:**  
HTML, MySQL, regional databases, cross-covariance using signal processing, programming for automated data collection/analysis & programming algorithms for vertical acceleration data.

## Environment(s):

Windows XP/2000, Matlab 7.0.4, Microsoft Visual Studio 2005, Microsoft SQL Server 2005, Microsoft .NET framework SDK, UNIX.

## LINKS:

- **Weather Station (EPICS): More details->** [www.lafayettejeff.org](http://www.lafayettejeff.org) **Aug'05 - Nov'05**
- **Wireless Transportation (EE495M/V):**  
<http://shay.ecn.purdue.edu/~wtrans/Documents/FinalPre.ppt>