

# Mohammed Rana Basheer

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## Objective

To develop a career in research and development by working in an intense, mentally stimulating and challenging area with a company that provides opportunities for mutual growth.

## Industrial Experience

### Garmin International Olathe, KS, USA

#### Embedded Software Engineer 3 years, (Aug 7, 2003 – Dec 22, 2006)

- Primary responsibility involves the design and development of boot code and drivers for microcontrollers. My academic background in electronics combined with over 5 years of software experience provides me a unique advantage in developing, debugging and maintaining embedded software.
- Implemented the Garmin ethernet network for marine environment. Tasks involved analyzing bandwidth and processor requirements, developing ethernet driver for the ARM processor, developing internet protocols etc.
- Implemented the IP over CAN network for marine environment.

### Hughes Software Systems Gurgaon, New Delhi, India

#### Senior Software Engineer 2 years, (Jan 3, 2000 – Jan 3, 2002)

- Technical lead for JAIN-SCE (Java Advanced Intelligent Network-Service Creation Environment). The objective of the project is to develop a set of APIs for Service Creation in Java replacing the INAP (Intelligent Network Application Protocol) APIs currently being used in telephony services.
- Technical lead for the Service Creation Environment (SCE) for the Mobile Intelligence Group (MIN).
- Written a paper on a new fourth generation visual language for the rapid development of telephony services to be deployed on RTOS such as VxWorks.

### Tata Consultancy Services Gurgaon, New Delhi, India

#### Module Leader 1 year, (Jan 4, 1999 – Jan 3, 2000)

- Served as Module Leader in Integrated Standard Banking System (ISBS) ATM Module.
- Utilized Software development skills to initiate and complete the successful implementation of ATM support for ISBS.
- Trained and led a team of five software developers. Aided the team in software design and CMM processes.

## Education

- **Missouri University of Science and Technology, Rolla, Missouri, USA**  
*PhD. in Electrical and Computer Engineering (Expected July 2010)* GPA 4.0
- **Missouri University of Science and Technology, Rolla, Missouri, USA**  
*Master of Science in Electrical and Computer Engineering* GPA 4.0
- **University of Kerala Trivandrum, Kerala, India**  
*Bachelor of Technology in Applied Electronics and Instrumentation* GPA 3.8

## Technical Skills

- **Wireless Technologies:** Zigbee, Bluetooth, 802.11b, CDMA.
- **Embedded Controllers:** OMAP331 (Texas Instruments), S3C2410 (Samsung), MC9328MXL (Motorola), Atmel AVR, 8051.
- **Programming Languages:** C, C++, Java, ARM assembly coding
- **Applications:** Eagle PCB 4.13, NS-2 Simulator, Matlab, Visual C++, Pspice
- **Scripting Languages:** Perl, Python, PHP, UNIX shell scripting, HTML and Javascript
- **Databases:** MySQL, Oracle
- **Strengths:** Wireless Networking, RTLS (Real Time Localization Systems), Markov Chains, Parameter Estimation using MLE, Statistics, RTOS (Real Time Operating Systems), TCP/IP, Multi Threaded programming, Computer Architecture and RF circuit design. A strong background in electronics and a proven track record of quality software development and design experience.

## Academic Publications

- M. R. Basheer, S. Jagannathan, "*A New Receiver Placement Scheme Using Delaunay Refinement-based Triangulation*," Wireless Communications and Networking Conference, WCNC '10. April 2010 (Accepted to the conference).
- M. R. Basheer, S. Jagannathan, "*R-Factor: A New Parameter to Enhance Location Accuracy in RSSI Based Real-time Location Systems*," Sensor, Mesh and Ad Hoc Communications and Networks, SECON '09. 6th Annual IEEE Communications Society Conference, pp. 1-9, 22-26 June 2009.
- M. R. Basheer, V. Rao, M. Derriso, M., "*Self Organizing Wireless Sensor Networks for Structural Health Monitoring*", SPIE, International Society for Optical Engineering, 2003.
- Mohammed Rana Basheer, "*Wireless Data Acquisition using Bluetooth*," published in Circuit Cellar, December 2002 issue.

## Awards and Membership

- GAANN Fellowship Oct 2007 – Present
- Chancellor's Fellowship Jan 2007 – Present
- Tau Beta Pi (<http://www.tbp.org>)
- IEEE (<http://www.ieee.org>)

## Independent Work

Designed and developed an online social networking website to promote reading called **GuruLib** (<http://www.gurulib.com>). GuruLib runs on a Fedora Linux server with Apache as the webserver and MySQL as the database. The server side scripting is mostly in PHP and Perl.