# MITUN BHATTACHARYYA

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**STRENGTHS**

- **Interpersonal Skills** achieved through fruitful communication with graduate students, peers, research associates and professors of different departments for research work.
- **Leadership Skills** displayed by directing graduate students in doing project work and leading classes as an instructor.
- **Problem-Solving Skills** acquired through identifying frontier research problems, finding innovative strategies to solve them with consideration of solution costs versus obtainable benefits and successfully implementing them.
- **Organization Skills** as evidenced by the ability to encourage and manage students and prioritize tasks as an instructor while continuing research work. Co-organized an IEEE conference in 2007.

**EDUCATION**

University of Louisiana at Lafayette
**PhD in Computer Engineering**, 2008 GPA: 3.7

University of Louisiana at Lafayette GPA: 3.6
**MS in Computer Engineering**, 2001

Bangalore University
**BE in Instrumentation and Electronics**, 1998 GPA: 3.8

**SPECIFIC KNOWLEDGE AND SKILLS**

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|---|---|---|
| Sensor Networks | Advanced Mobile Computing | Protocol Design |
| Microprocessors | VLSI | Computer Architecture |
| Circuit Design | Dynamic System Modeling | Mathematical Modeling |
| Regression Model | Time Series Analysis | Experimental Design |
| C++ | MATLAB | SAS |

**RESEARCH EXPERIENCE** (2001-2007)

- Presently an active research member of the UCoMS group. UCoMS is a multi-million dollar research project funded by DOE and the State working on proposals and papers related to sensor networks in the oil field industry.
- "Battery-Aware Global Reference Energy Metric for Sensor Networks" Journal in progress.
- Writing grant proposals (participated in four proposals, three on Sensor Networks and one on Reconfigurable Architectures).
- Project work experience in Verilog and CADENCE. Lab work experience in microprocessors.
- Several algorithms and models were proposed and developed for energy level monitoring of sensor networks with minimized costs. Simulations are being done in MATLAB, C++ and SAS.

- A design for cache replacement scheme was proposed in sensor network that takes into account query history and fault tolerance. Simulations were done in C++.
- Improve query reply performance at the application layer. Analysis to test the potential of proposed work was done in MATLAB.
- Reviewer for Conference papers (ISCAS- 2004, 2005, 2006, 2007) and Elsivier Journal papers.
- Research work in Hardware – Software Co-synthesis, Reconfigurable Architecture.

**PUBLICATIONS:**

- "A Framework for Assessing Residual Energy in Wireless Sensor Network", Special Issue on International Journal of Sensor Networks (InderScience) appeared in Vol. 2, No. ¾, 2007.
- "Intelligent Mechanism for Energy Reduction in Wireless Sensor Networks using Learning Methods", Book Title: Integrated Intelligent Systems for Engineering Design, Publishers: IOS Press, ISBN 1-58603-675-0.
- "Design and Analysis of Energy Reference Metric in a Cluster Based Wireless Sensor Network", ICCSC 06.
- "Algorithms for Energy-Efficient Query-Reduction in Wireless Sensor Networks", CAMPS 06.
- "An Energy Efficient Protocol Exploiting Cache Data for Sensor Networks", ConTEL 05.
- "Communication Protocol with Interference Awareness for Sensor Networks with Security Enhancements", ICEEC 04.

**EXTRA – CURRICULAR ACTIVITIES AND HONORS:**

- Departmental representative from Computer Engineering (2000), Graduate Student Organization at the University of Louisiana at Lafayette.
- Volunteer Tutor, Volunteer Instructors Teaching Adults (a United-Way funded organization) at Lafayette, Louisiana.
- Student Member of Institute of Electrical and Electronics Engineers, IEEE.

**REFERENCE**

Available on request.