

Debejyo Chakraborty

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Ph.D., Signal Processing,
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PROFILE

Collaborative inter-disciplinary state-of-the-art research in electrical and mechanical engineering for systems health management. Five years of research experience in stochastic signal processing, machine learning, and adaptive estimation and classification. Algorithms are implemented in MATLAB and C/C++ (multi-core) on real data. Research findings are documented in nine published manuscripts with more in preparation. An active team member/leader with great communication, public presentations and interpersonal skills.

AREAS OF INTEREST

Machine learning, digital signal processing, data mining, statistical data modeling, stochastic filtering, structural health monitoring and time-frequency signal analysis.

PROFESSIONAL PREPARATION

- 2010 **M.S. & Ph.D.**, *Signal Processing & Communication*, GPA is 3.7/4.
School of Electrical, Computer & Energy Engineering (ECEE), Arizona State University (ASU), Tempe, AZ.
- 2005 **B.E.**, *Instrumentation Technology (Engineering)*, GPA 74/100.
Dept. of Instrumentation Technology, Visveswaraiah Technological University, Belgaum, India.

EXPERIENCE/APPOINTMENTS

- 2006–current **Research Assistant**, *Arizona State University*, Tempe, AZ.
(*Statistical data analysis & modeling, machine learning, parameter estimation, HMM, Monte Carlo methods, optimization, feature extraction, Matlab, C/C++ with multi-processor implementation.*)
- Fall 2005 **Radar testing and calibration**, *San Diego State University*, San Diego, CA.
(*Testing of radar and design of process automation using Labview.*)
- Spring 2005 **Design Engineer intern**, *Hindustan Aeronautics Limited*, Bangalore, India.
(*Spectral analyzer design, PIC programming, drivers in C++.*)

CURRENT RESEARCH

- Topic *Time-Frequency Based Adaptive Learning for Structural Health Management.*
- Achievements Designed experiments, developed active statistical learning techniques and sensor fusion for robust classification, C/C++ and MATLAB with multi-core, Tested on real data and published manuscripts.

ACTIVITIES

- ➔ Reviewer for ICASSP (2007 & 2008), SenSIP 2008, Neural Networks Journal (2009), ASILOMAR 2010.
- ➔ Website/graphic designer & student member of Adaptive Intelligent Materials & Systems (AIMS) Center, ASU.
- ➔ Student coordinator & member of Sensor, Signal & Information Processing (SENSIP) Center, ASU.
- ➔ Student member of IEEE, AIAA & SPIE.

PROGRAMMING PLATFORMS

- ➔ MATLAB.
- ➔ C/C++ (GNU) *multi-core programming with MPI*

COMPUTER SKILLS

- Computational Mathematica.
- Interfacing Labview (basic applications), Code composer studio, Verilog, MPLab.
- Web-based HTML, PHP, MySQL.
- Operating sys. Windows, MacOS, Linux.
- Other apps. MS Office, Latex, Adobe CS4, Autocad.
- Hardware Intel 8086 microprocessor, PIC microcontroller, TMS32xxx, MICA2 motes.

ACADEMIC AWARDS

- 2006–current **Graduate Research Assistantship**, *ASU, School of ECEE.*

OTHER INFORMATION

- ➔ **Publications:** available at <http://www.debejyo.com/Publications.htm>
- ➔ **References:** available on request
- ➔ **Curriculum Vitae:** available at http://www.debejyo.com/CV_resume.htm