SINDHU ANAND

Current Address:
8201, Meera Bhawan,
Vidya Vihar Campus,
BITS, Pilani – 333031
Rajasthan, INDIA
☎: +919950675915
Email: sindhu.ananda@gmail.com

Permanent Address:
#395, 4th Main, 16th Cross,
Vidyaranyapuram,
Mysore - 570008
Karnataka, INDIA
☎: +91-821-2487425
Webpage: http://sindhu.ananda.googlepages.com

OBJECTIVE

To pursue Graduate Studies and research in bioengineering, particularly in the field of neuroengineering.

RESEARCH INTERESTS

Neuroengineering, Computational Neuroscience, Image Processing and Digital Signal Processing applications in Neuroscience

EDUCATION

Birla Institute of Technology & Sciences (BITS), Pilani **Rajasthan, India.**
B.E. (Hons) Electrical & Electronics & M. Sc. (Hons) Biological Sciences, June 2008 (***Dual Degree***)
Major GPA: Biological Sciences: 10.0/10.0
Electrical & Electronics: 8.58/10.0 ***Overall CGPA***: 8.98/10.0

Sadvidya Pre-University College, May 2003 **Mysore, India**
12th Std, Department of Pre-University Education, Karnataka
Aggregate: 95.6% Topped in Mathematics: 100%

Marimallappa's High School, May 2001 **Mysore, India**
10th Std, Board of Secondary Education, Karnataka
Aggregate: 96.32% Topped in Mathematics and Science- 100%

TEST SCORES

GRE: Verbal – 590/800 Quantitative: 780/800 Analytical Writing (Essay) – 6.0/6.0
TOEFL: 118/120

ACADEMIC EXPERIENCE

Professional and Teaching Assistant
Practise School I program for undergraduate students, Summer 2006
Digital Signal Processing, Fall 2007

PROFESSIONAL EXPERIENCE

Internship in Department of Applied Biotechnology, University of Mysore. Summer 2004
The training exposed me to various molecular biology techniques. I assisted a Ph D student who was working to find an anti-viral component in plant extracts.

Internship at Bangalore Stock Exchange Ltd., Bangalore **Summer 2005**

This was the Practise School I program, a mandatory part of BITS curriculum.

Internship at (NIMHANS) National Institute of Mental Health And Neurosciences, Bangalore
Summer 2006

- Worked in the area of Signal transduction in brain at molecular and cellular levels.
- I learnt the technique of fluorescence imaging of calcium at cellular level to image calcium currents in cultured primary neurons using a confocal microscope and spectrofluorimeter.
- I was also exposed to the technique of patch-clamp.

Co-founder: Vita Peracta www.vitaperacta.com

We are trying to build a model which borrows the advantageous features of the extreme approaches of psychologists at one end and AI programmers and mathematicians on the other. We aim to build a framework which is simple enough to code and simulate and still accurate enough to explain the complex working of the human mind and build the personality profile of an individual.

SELECTED PROJECTS

- Modeling of Visual cortex Area V1 and studying the context dependent modulation of cortical cell responses. (***Dissertation*** – *Currently Pursuing*)
- DNA Semiconductor - Area: Bioelectronics (Individual Project presented at the All India Annual Academic Festival of BITS Pilani, APOGEE 2006 and won the **Best Conceptual Project Award**.)
- SNP analysis of the mu-opioid receptor gene and the associated genes involved in the signaling pathway.
- Study, Simulation and Testing of ISFET Source Drain Follower Circuit
- Development of database of Schizophrenia Candidate Genes, classification based on neural pathways and neuroanatomical expression sites.
- Design of a very narrowband Band Pass filter to quantify the mains frequency content of ECG signal in fetal heart monitoring.

TERM PROJECTS

- Design and Implementation of an ASK system, including layout design.
- Design of microprocessor based hydro electric power plant system using Intel 8086.
- Sleep Database Management System, **Technology Business Incubation** project, for the company **Paramatrix** based in Vienna, Austria.
- Design and Implementation of Sample and Hold Circuit in 0.35µ CMOS technology

AWARDS/HONOURS

- Recipient of the BITS Pilani Merit Cum Need Scholarship given to top 10% students in the batch
- Course Topper of Developmental Biology, General Physiology, Genetics at BITS, Pilani
- **Best Conceptual Project** Award for the project DNA SEMICONDUCTOR presented at the All India Annual Academic Festival of BITS Pilani, **APOGEE 2006**
- Secured 8th Rank in State and College Topper in 12th Pre-University Board Exams.
- Recipient of the Prestigious **National Scholarship** for meritorious performance in the 12th Std.
- 22nd rank in State in the **National Talent Search Examination** (NTSE) 2000
- Placed in the top 10% in the country in **National Standard Examination in Biology** 2001-02
- 2nd prize in the **State Level Maths and Science Quiz** organized by Department of Science Education, Research and Training, Government of Karnataka

COMPUTER SKILLS

Languages: C, C++, Assembly (Intel 8086, Texas Instruments C54x), Verilog
Packages: MATLAB, Visual Basic, MySQL Operating System: Linux/Unix

CAD TOOLS

Cadence – Virtuoso Layout Editor, Schematic Editor, ELDO-Spice, Model Sim, Leonardo Spectrum

RELEVANT COURSEWORK

Biology: Biochemistry, Microbiology, Biophysics, General Physiology, Cell Biology, Recombinant DNA Technology, Developmental Biology, Ecology, Genetics
Electronics: Microprocessors, Digital Electronics and Computer Organization, Circuits and Signals, Digital Signal Processing, Image Processing, Communication Systems, Microelectronics, Electronic Devices and Integrated Circuits, Analog and Digital VLSI Design, Analog Electronics, Control Systems
Basic Maths: Advanced Calculus, Linear Algebra, Probability & Statistics, Differential Equations,Optimization

EXTRA-CURRICULAR ACTIVITIES

- Senior Member**,** Constitution Review and Amendment Committee, BITS Pilani
- Group Leader, Department of Controlz which is responsible for organizing nationwide inter university cultural and academic festivals, OASIS and APOGEE respectively.
- Member of English Drama Club at BITS, Pilani
- Member and Team Lead (Pilani) for Spring 2006 of SANDPAPER 2.0, A BITS Alumni Magazine
- Member of SPIC MACAY – BITS Pilani Chapter (Society for Promotion of Indian Classical Music and Culture Among Youth)