Subhadeep Datta

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EDUCATION

IIT PATNA
B.Tech in Electrical Engineering
Expected May 2016 | Bihta, Patna
CGPA: 9.16/10 (till 6th semester)

JODHPUR PARK BOYS SCHOOL
Higher Secondary (WBCHSE), 2012
Aggregate: 83.8%
Science Group: 92.75%

RKMV NARENDRAPUR
Matriculation (WBBSE), 2010
Aggregate: 90.3%
Science Group: 95.5%

COURSEWORK

CORE (ELECTRONICS)
Signals & Systems
Digital Circuits & Microprocessors
Analog Integrated Circuits
RF Microelectronics
VLSI Design
Embedded Systems
Principles of Communication
Advanced Digital Communication
Digital Signal Processing

CORE (ELECTRICAL)
Electrical Machines
Electrical Power Systems
Power Systems Operation & Control
Power Electronics & Drives
Control Systems
Advanced Control Systems

MATHAMATICS
Probability & Random Processes
Linear Algebra
ODEs & PDEs
Numerical Methods
Mathematical Methods in EE

SKILLS

PROGRAMMING
C • Java • VerilogHDL • FPGA
Intel 8085 • Arduino UNo • LaTeX

SOFTWARE
Matlab • Xilinx ISE • Pyxis Schematic Design Vision

EXPERIENCE

ROLE OF SYNAPTOTAGMIN-3 IN SYNAPTIC PLASTICITY
Summer 2015 | Trans-synaptic Signaling Group, ENI Göttingen
Advisor: Dr. Camin Dean, PhD (UC Berkeley)

- Mini currents are recorded electrophysiologically from dissociated neuronal cultures of mutant mice of wild-type and syt3 knockout backgrounds
- Differences in synaptic transmission & plasticity properties of these neurons are assessed to determine syt3's involvement in recepter recycling at synapses

ANALYTIC APPROACH TOWARDS K-SPACE IN MRI
Winter 2013 | Neuroimaging Neurospectroscopy Lab, NBRC India
Advisor: Prof. Pravat K. Mandal, Associate (Adj) Prof., Johns Hopkins University

- Investigated the importance of K-Space in the whole process staring from raw data acquisition to image formation in MRI Imaging System
- Proposed mathematical justification for the impact of rejection of peripheral points of K-Space in the process of image reconstruction

PROJECTS

DEVELOPMENT OF SPEECH ENHANCEMENT ALGORITHM
Bachelor's Thesis (Ongoing from Summer & Winter 2014)
Advisor: Dr. Sharba Bandyopadhyay, PhD (Johns Hopkins University)

- We aim to implement a novel speech pre-processing algorithm for hearing aids to restore normal neural coding in the Auditory Nerve of subjects with SNHL.
- Modelled the deafened OHC profile which is later used to predict the changes in spectro-temporal encoding of the speech in impaired condition

ANALYSIS OF PRACTICAL SERIES RLC CIRCUIT
Summer 2013 | Undergraduate Physics Lab, IIT Patna, India
Advisor: Dr. Ayash Kanto Mukherjee, Dept. of Physics, IIT Patna

- Experimentally investigated series RLC circuit comprising of real components through Impedance Spectroscopy in the frequency range of 5 - 20 kHz
- Physically appropriate practical models of R,L and C are proposed which when put together in series explains the non-ideal behavior of resonance curve

SCHOLASTIC ACHIEVEMENTS

2015 Awarded the prestigious DAAD WISE Scholarship 2015
2013 Letter for Academic Excellence from Director of IIT Patna for scoring SPI of 10
2012 All India rank of 4706 (top 1%) in IITJEE-2012 attempted by 479,651 students
2012 State rank of 142 (top 0.1%) in WBJEE-2012 attempted by 137,575 students
2009 All India rank of 153 in National Cyber Olympiad (NCO)
2004 District rank of 3 in Scholarship Examination of Malda, WB, India
2004 District rank of 7 in Mathematics Aptitude Test of Malda, WB, India

EXTRACURRICULAR ACTIVITIES

Painting 2nd prize in Wall Painting Competition 2012 & 2013, IIT Patna
3rd prize in Environmental Painting Competition 2013, IIT Patna
1st prize in Annual Exhibition-2007 & 2008, RKMV Narendrapur
Music Play 'Drums' in college band 'Eighth Note'
Played 'Tabla' in several school & college cultural events