

**Madhur Parihar**  
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## EDUCATION

<b>MS</b>	<b>Biomedical Engineering</b> Drexel University, Philadelphia	(Finishing Mar-14) GPA: 3.61
<b>M Tech</b>	<b>Biomedical Engineering</b> Indian Institute of Technology Bombay, India Thesis: "Computational Investigation of Medium Spiny Projection Neurons"	(06-08) GPA:8.59
<b>BE</b>	<b>Biomedical Engineering</b> Rajiv Gandhi Technological University, Bhopal India	(02-06) 71.25%

## POSITIONS SUMMARY

**DAAD RISE PRO Intern**– Bells Labs, Alcatel- Lucent, Stuttgart, Germany  
(Jun-Dec 13)

*Dr. Michael Tangemann*

**Teaching Assistant (Applied Multivariate Statistics)** – School of Public Health, Drexel University  
(Jan-Apr 13)

*Dr. Marcia Polansky*

**Research Associate**– School of Education, Drexel University  
(Apr 13\*)

*Dr. Aroutis Foster*

**Research Associate**– LeBow College of Business, Drexel University  
(Sep 12\*)

*Dr. Dali Ma*

**Academic Associate (IT & IS area)** – Indian Institute of Management Indore, India  
(Nov 10- Aug 11)

*Dr. Prabin Panigrahi*

**Lecturer ( Department of Biomedical Engineering)** – Shri Govindram Seksaria Institute of Technology and Science, Indore India  
(Jul-Nov 10)

**Senior Research Associate (Intellectual Property)** – Evalueserve Pvt Ltd, Gurgaon India  
(Aug 08- Dec 09)

*Mr. Anoop Sankar*

**Teaching Assistant**– Indian Institute of Technology Bombay  
(Jan 07-Jun 08)

*Dr. Rohit Manchanda*

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## SKILLS

### **Courses:**

Medical Sciences I/I/III (A+)	Human Physiology	NeuralSignals (A+)
Biosimulation I/II	Principles of Neuroengineering	Clinicum Practicum (A+)
Medical Image Processing	Biostatistics	Algorithms and Complexities
Research Methodologies	Biopotentials	Biomedical Signal Processing
Cell and Tissue Imaging	Medical Instrumentation	Advance Statistics

### **Programming Skills:**

C	C++ (OOPS)	Java Core
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### **Scripting Experience:**

VB	Javascript	jQuery
JSON	STATA DO/ADO	

### **Software/Packages Experience:**

MATLAB	STATA	NEURON / GENESIS
ImageJ	Lab Windows/CVI	SAS
SPSS	Altera Quartus (VHDL)	Microsoft office suite
MS Excel	Visual C++	

### **Databases and Tools Experience:**

Micropatent	Thomson Reuters	Derwent Patent
Delphion Patent	LexisNexis	Concordance
Google Patents	PSID (U Michigan)	MediaWiki
ModelDB (Neuron)	NHL stats	

## HONORS

DAAD RISE PRO scholarship  
(13)

Neuroengineering Fellowship, Drexel University  
(11-12)

Research Assistantship, LeBow College of Business (U. Virginia Batten research fellowship)  
(12)

GATE MHRD rank and scholarship, India  
(07-08)

“**Faculty Development Program in Management**”, 3-month certificate, IIM Indore  
(11)

“**Advance Programming**”, 3-month certificate, IIT Bombay  
(08)

**GRE** 1410/1600 **TOEFL:** 108/120  
(09)

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## RESEARCH EXPERIENCE

**Investigation of Computational Properties of Medium Spiny Projection Neurons**– MTech thesis project  
(06-08)

*Dr. Rohit Manchanda, IIT Bombay*

- Investigated integrative computational properties in a single neuron model of type medium spiny projection (MSP) neuron with a stylized morphology
- Made a refined NEURON model with distance dependent dendritic spine population and ion channel mechanisms
- Model development and simulation setup in NEURON simulation environment

**Predicting entrepreneurship with attitude indicators**– RA work  
(12\*)

*Dr. Dali Ma, Drexel University*

- Used PSID longitudinal database to predict person's breakthrough into entrepreneurship with attitude and behavior indicators
- Data mining and advanced statistical analysis

**Analysis of game based learning environment for educational purpose**– RA work  
(13\*)

*Dr. Aroutis Foster, Drexel University*

- Analyzing and evaluating frameworks for implementing game based learning in classrooms
- Paper accepted in the 2014 Annual Meeting of the American Educational Research Association

**Real Time ECG Signal Processing using Lab Windows**– MTech Course project  
(07)

- Designed program for real-time ECG data acquisition in LabWindows interface (National Instruments)
- ECG post-processing, presentation and plotting
- Heart Rate detection, missing peaks accounting, baseline wandering correction, dynamic thresholding etc

**Design and Implementation of Low Pass IIR Filter on FPGA**– BE major project  
(06)

- FPGA implementation of IIR filtering with coefficients and feedback
- Digital filters tools for FPGA and VHDL programming using Altera's Quartus-II

**Implementation of a low-pass FIR filter using ADSP-21061 Ez-Kit Lite**– Raja Ramanna Centre for Advanced Technology Indore, (Dept of Atomic Energy, A Govt. of India Research Enterprise)  
(05)

- Data acquisition on Analog Devices' ADSP-21061 DSP kit
- Work on Super Harvard architecture processor and parallel programming

**Post Graduate Institute of Medical Education and Research (PGIMER), Chandigarh**– BE training  
(04)

- Trained in handling and maintenance of medical instruments in real hospital setup