

# Amitabh Shrivastava

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Bachelor of Science(Research) from Indian Institute of Science(IISc<sup>1</sup>), 2015  
Major: Physics, Minor: Biology

CGPA: 7.2/8.0

## Publications

**"An Experiment on Projectile Motion"** -Amitabh Shrivastava, M K Raghavendra, K P Ramesh  
Resonance ISSN 0971-8044, v. 20, no. 6, p458, May 2015

This apparatus is being used to train high-school teachers at the Talent Development Center, IISc.

## Key Scholastic Achievements

- Mar 2016 **Intel IoT Roadshow<sup>2</sup>, Bangalore.**  
Secured runners up place for a spelling aid for dyslexic kids, as a part of team of two.
- Jan 2015 **MIT Media Labs Design and Innovation Workshop, Gandhinagar.**  
As the team lead of four, prototyped and presented a theft resistant bag for the urban environment.
- 2013 Awarded **Gold Medal<sup>3</sup>** in the National Graduate Physics Examination(NGPE).
- 2011 Ranked among the **top 0.4% nationally** in the IIT Joint Entrance Exam.
- 2011 – 2015 Recipient of the prestigious Kishore Vaigyanik Protsahan Yojana (**KVPY**) fellowship.
- 2011 Secured **national rank 47** in National Science Talent Search Examination.
- 2011 Secured **national rank 81** in National Science Olympiad.
- 2011 Secured **national rank 59** in National Cyber Olympiad.
- 2008 – 2011 Recipient of National Talent Search Examination(**NTSE**) Scholarship.
- 2006 Secured **national rank 2** in the Nationwide Biotechnology Olympiad.

## Experience

- Sep 2017 – **Masters Student, ITP, Tisch, NYU, New York, USA.**  
Till date Studying and inventing creative technology.
- Nov 2016 – **Hardware Engineer, Locus.sh, Bangalore, India.**
- Aug 2017 Explored various uses of hardware in logistics e.g. in-warehouse localization, navigation aids for bike riders, drone delivery. Conceptualized and built SizeUp a hand-held package size scanner for delivery companies - patent pending.
- Aug 2015 – **Interactive Systems Engineer, SuperSuit, Bangalore, India.**
- Oct 2016 SuperSuit is the world's first wearable gaming platform, designed to promote free play while adding strategy and depth to play. It has been showcased in leading international conferences CES'16, MWC'16. I presented the product in the Bay Area **Maker Faire'16 and TechCrunch Disrupt '16.**  
I was responsible for ideation and making hardware prototypes. Amongst the prototypes I built were a gesture controlled RC car, haptic feedback vests and looks-like, feels-like prototypes of the Suit. I also had significant design inputs vis-à-vis user experience and ergonomics. Being closely involved in both design and testing, I understood the lean iterative cycle of development, prototyping and testing.

<sup>1</sup>IISc is the highest ranked Institute of higher learning in India

<sup>2</sup>Intel IoT Roadshow is the largest hardware hackathon in India

<sup>3</sup>Awarded to 5 students from amongst thousands of applicants.

Sept 2013 – **The Engineer Guy**, *Center for Ecological Sciences(CES)*, IISc, Under the guidance of  
July 2015 Dr. Vishwesh Guttal and Prof. Renee M. Borges.

During the last two years of my undergraduate studies, I developed and fabricated tools for ecological research. Going from idea to prototype, I made a low-speed **wind-tunnel** and wing-beat frequency analyzer to study insect flight, a multi-rotor and a fixed wing **UAV** for aerial photography, a rig for **3D-tracking** mosquito flight and underwater gates for studying fish decision making. I take pride in the fact that many of these are still seeing active use in research.

Mar 2014 – **Sparse Sensor Based Silhouette detector**, *CES, IISc*, Undergrad thesis project.

July 2015 Designed and fabricated a passive infrared detector to measure the silhouette of an object such as an elephant to an unprecedented accuracy. Presented the prototype in Student Conference on Conservation Science, 2014, Bangalore. The detector is awaiting field trial.

### Camps/Hackathons

Dec 2016 **STEAM School**, *Makers Asylum, Mumbai*.

Participated as a peer in the Design thinking and prototyping workshop. Organized by The Center for Research and Interdisciplinarity, France and Makers Asylum, India.

Nov 2016 **Open hackathon**, *Startup Mechanics, Bangalore*.

As the team lead of four, won first place for prototyping a modular smart kitchen garden.

Aug 2015 **In50Hrs IoT Hackathon**, *MediaTek, Bangalore*.

As the team lead of three, won fourth place prototyping a pollution monitoring system for bikes.

May 2013 **Summer Course in Expt. Phy.**, *Tata Inst. of Fundamental Research, Mumbai*

Presented a talk : 'Quirky results with the Physical Pendulum: Instruments are to blame'

Aug 2012 **Sixth Asian Science Camp**, *Jerusalem, Israel*

Part of the Indian Delegation consisting of 30 students.

### Internships

May 2014 – **Summer Intern**, *Dept of Physics, Brandeis University, Waltham, MA*,

July 2014 Guide: Prof. John F. C. Wardle.

Learnt to program monte carlo simulations in MATLAB. Found a novel formula for orientation of Quasars based on radio observations and simulation results.

### Technical skills

**Languages** C, C++, MATLAB ●●●●● **Software** Arduino, PCB design, Parametric CAD ●●●●●  
Python, Processing ●●●●● Organic CAD, Photoshop ●●●●●

**Hands On** SMD soldering, Digital circuit debugging, Laser-Cutting, Woodshop ●●●●●  
Analog circuit debugging, 3D printing, MetalShop ●●●●●

### Co-Curricular Activities

I am an avid maker and spend practically all of my free time in my workshop hacking electronics.

**Instructables** [www.instructables.com/member/tinkrmind/](http://www.instructables.com/member/tinkrmind/)

**HackaDay** [www.hackaday.io/tinkrmind](http://www.hackaday.io/tinkrmind)

Feb 2014 As the engineering coordinator for Pravega – IISc's Science and cultural festival– I lead a team of 14 volunteers to organise engineering competitions.

2013, 2012 Built various high voltage demonstrations for IISc open day, including a 100KV VandeGraff generator and a macroscopic, analog of an electrostatic particle accelerator.

Nov 2012 Organized waste collection in the IISc campus and conducted 'Best out of Waste' workshops in various government schools for Children's Day through Notebook Drive, IISc.