

Rohin K. Yeluripati

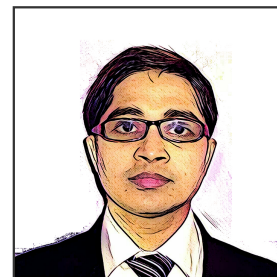
RESEARCHER · TINKERER · INVENTOR

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"What I cannot create, I do not understand. - R. Feynman"



Education

Ph. D. in Physics (Cosmology)

DEPARTMENT OF PHYSICS & ASTROPHYSICS, UNIVERSITY OF DELHI

Thesis Submitted

Feb, 2012 - Aug, 2018

Master of Engineering (M.E.), Micro Electronics

BITS-PILANI (BIRLA INSTITUTE OF TECHNOLOGY AND SCIENCE)

Dropped out

Aug, 2009 - Feb, 2010

Master of Sciences (M. Sc (Hons.) Physics) with Bachelor of Engineering (B. E (Hons.) Electrical and Electronics Engineering)

BITS-PILANI (BIRLA INSTITUTE OF TECHNOLOGY AND SCIENCE)

CGPA - 8.65/10

Aug, 2004 - July, 2009

- Secured all "A" grades in M.Sc Physics with topping most of the courses.
- Received BITS Merit-cum-need Scholarship for maintaining good CGPA in academics throughout

Research Experience

Research Scholar

DEPARTMENT OF PHYSICS & ASTROPHYSICS, UNIVERSITY OF DELHI

Delhi

Feb, 2012 - Aug, 2018

- Submitted thesis on "Studies in Alternative Cosmologies" for Ph.D. in Physics.
- Worked on extracting statistical parameters from galaxy distribution using SDSS sky survey
- Created small software packages and utilities (including **correlcalc**) in Python
- Studied alternative models of Cosmology and put observational constraints on them

Project Research Assistant

PHYSICS BEYOND STANDARD MODEL, UGC PROJECT

Delhi

July, 2011 - Feb, 2012

- Helped setup computational facilities and work-flow for particle physics simulations

Summer Research Fellow

DEPARTMENT OF PHYSICS & ASTROPHYSICS, UNIVERSITY OF DELHI

Delhi

May, 2011 - Sept, 2011

- Worked on some aspects of Higher Dimensional Cosmology and simulated results

Industry/Startup Experience

Consulting Engineer, Hardware

IoTfy INC.

New Delhi

Dec, 2016 - May, 2018

- Built and wrote firmware for Smart RO systems with IoT integration
- Calibrated TDS sensors for Water purity testing

Founder-CEO, R & D Chief

MYTi TECHNETRONICS PVT. LTD.

New Delhi/Pilani

Dec, 2012 - May, 2015

- Worked on building an R & D company in design and electronics.
- Developed MyTi.Note tablet, Zappowr & did consulting for research projects.
- Did product design, component selection, prototyping, testing etc.
- Acquired various skills ranging from embedded systems design to final PCB design, technology research to firmware coding

Intern, Tech R & D Group

Greater Noida, Uttar Pradesh

STMICROELECTRONICS

Jul, 2008 - Jun, 2009

- Developed a “High Speed Transceiver High Precision SILICON-CAD Validation Methodology Development” which is aimed at designing a new flow for signal integrity verification.
- Did a semi-custom design of an “All Digital Phase-Locked Loop” for digitally controlled clock generation using the standard cell libraries in CMOS090.
- Played an active role as a member of team consisted of 8 members in verification of a chip named Bolero in Automotive Product Group.

Teaching Experience

Guest Lecturer

New Delhi

SGTB KHALSA COLLEGE, UNIVERSITY OF DELHI

Aug, 2011 - Mar, 2013

- Taught Electromagnetic Theory, Signals & Systems, C++ Programming to B.Sc (Electronics) students.
- Conducted lab practicals along with guiding student projects.

Guest Lecturer

Visakhapatnam, Andhra Pradesh

GITAM UNIVERSITY

Sept, 2010 - May, 2011

- Taught core courses to M.Sc (Electronics) and M.Sc (Physics) students along with projects.

Tutor, College grade

Online

TUTORVISTA GLOBAL PVT LTD, PEARSON EDUCATION

Sep, 2010 - May, 2011

- Did online tutoring (teaching Physics) for college grade students.

Teaching Assistant

Pilani, Rajasthan

BITS-PILANI

Aug, 2009 - Feb, 2010

- Helped in setting up Wireless Communications Lab.
- Worked as TA for Electronic Devices & Integrated Circuits, Digital Electronics & Microprocessor Programming and Measurement Techniques courses.

Publication(s)

correlcalc: A ‘generic’ recipe for calculation of two-point correlation function

doi:10.1016/j.ascom.2018.09.011

ASTRONOMY & COMPUTING

Oct, 2018

- A BallTree algorithm based recipe to compute 2pCF quickly for any alternative model of Cosmology.

Gravity Models for Linearly Coasting Cosmologies

Delhi University

ARXIV PRE-PRINT: 1611.03728

Nov, 2016

- Instead of assuming a form of gravity and demand cosmology fit with Λ CDM, a potentially ‘viable’ $f(R)$ gravity model is derived assuming an alternative model of cosmology.

Conference Proceedings

Machine learning in Astronomy and Cosmology - An overview

DBIT campus

INTERNATIONAL CONFERENCE ON INNOVATIONS AND CHALLENGES IN SCIENCE AND TECHNOLOGY (ICICST-2018)

May, 2018

- A talk on applications of machine learning in astrophysics and cosmology

Galaxy Clustering in Alternative models

Osmania Univ

ASTRONOMICAL SOCIETY OF INDIA (ASI)

Feb, 2018

- A Poster on observational galaxy clustering and its dependence on fiducial cosmological model.

Yukawa type corrections to Newtonian potential and its implications at different scales

IUCAA, Pune

YOUNG ASTRONOMER MEET (YAM)

Sept, 2017

- A contributed talk presented on the effect of Yukawa-type potential corrections in galaxy rotation curves observations

A New Class of Cosmologically ‘Viable’ $f(R)$ Models

IIT-Guwahati

INDIAN ASSOCIATION FOR GENERAL RELATIVITY AND GRAVITATION (IAGRG) NAMED “THE ERA OF GRAVITATIONAL WAVES”

May, 2015

- A Poster presented on alternative gravity models that are cosmologically viable

GSM based Intelligent Instrumentation

BITS-Pilani

NATIONAL CONFERENCE ON VIRTUAL AND INTELLIGENT INSTRUMENTATION

Nov, 2009

- This paper discusses a GSM model to control remotely placed instruments using Short Messaging Service (SMS).

Patents

2018	An Electrically Controlled Thin Film Interference based Pixel and Natural Display , Indian Patent no: 201811018427, Pending	Utility Patent
2018	A battery-less Tire pressure monitoring system , Indian Patent no: 201811018428, Pending	Utility Patent
2013	Complimentary Pointing/Writing/Text Input Hybrid Device for Tablets & Other Computing Devices , Indian Patent no: 2109/DEL/2012, Expired	Utility Patent
2013	Symmetrically Connected Tablet , Indian Patent no: 251584, issued	Design Patent
2013	Write and Type Hybrid Cover , Indian Patent no: 251585, issued	Design Patent
2013	3 patents of "Tablet with multipurpose cover" , Indian Patent nos: 251684, 251685, 251686, issued	Design Patent

Skills

Programming	C/C++, Python, Java, Javascript, HTML, Perl
Software Packages	Matlab, Mathematica, Maple, MS Office, ipython notebook, LaTeX, GNU Octave
Hardware/Design	Cadence Virtuoso, Cadsoft Eagle, DesignSpark PCB, ModelSim, Arduino, Embedded Programming, Verilog, VHDL, Sketchup
Operating Systems	Linux/Unix, MacOS, Windows, Solaris
Languages	English, Hindi, Telugu, Sanskrit

Honors & Awards

2013-	Mentor , TechTop, MIT Media Lab India Initiative at Mumbai, Trivandrum, Cochin	Mumbai
2014-	Fellow of the Startup Leadership Program , Startup Leadership Program	Delhi
2013-	Fellow of the Power of Youth , Power of Youth, Metta Network	Delhi/Scotland
2014	Interview Broadcast , A special program on 'MyTi' and interview featured on NDTV	NDTV, India
2012	Mentor , Asian Physics Olympiad, 2012	Delhi
2012	1st position , AMITY B-Plan Competition	AMITY University
2012	2nd Place , Entrepreneurship Summit, Acumen, B-Plan Competition	NIT, Silchar
2006	2nd Place , Embedded Brains, APOGEE	BITS-Pilani
2004	Pratibha Award , Conferred by the Govt. of A.P for excellence in Intermediate Public Examination	Hyderabad, A.P
2004	State 2nd topper , Awarded by the Telugu Academy for excellence in board exams in Telugu Medium	Hyderabad, A.P

Foreign Visits

Silicon Valley, USA	2015 - Consulted for YouWeb (9Plus) Incubator for setting up a prototyping lab for IoT startups
Shenzhen, China	2014 - Visited tablet and mobile phone manufacturing facilities for MyTi and NuVo
Trieste, Italy	2013 - Attended conference on Planck satellite data on CMB observations at International center for Theoretical Physics (ICTP)

Extracurricular Activities

2013-14	Panel member on TV Debates , Participated in a couple of debates on NDTV representing BITS-Pilani at the request of their PR team	Delhi
2006-08	Astronomy Club Secretary , Conducted Sky-watch sessions and workshops on Amateur Astronomy and Telescope making	BITS-Pilani
2004-06	Organizing Committee Member, SPIC-MACAY , Organized various cultural events as part of society for the promotion of Indian classical music and culture amongst youth	BITS-Pilani
2004-06	Core Member, Dept. of Trophy Fabrication , Actively participated in designing trophies and mementos for various events at the institute	BITS-Pilani

Hobbies

- Amateur Astronomy, Reading, sketching and playing badminton
- Singing and appreciating Indian classical music and playing Veena, Harmonium