

Aravind Reddy Talla

Curriculum Vitae

✉ arareddy@cse.iitk.ac.in
📄 aravindreddy.org

Education

- 2014–2018 **B.Tech in Computer Science with minors in Quantum Mechanics**, *Indian Institute of Technology Kanpur*, CPI - 8.7/10 (At the end of 6 semesters) .
- 2014 **Higher Secondary School**, *Sri Chaitanya Narayana Junior College*, Vijayawada, 98.0%(State top one percentile).
- 2012 **Secondary School**, *Gowtham Concept School*, Hyderabad, GPA : 9.7/10.

Awards & Scholastic Achievements

- 2017 **Charpak Scholarship for research internship**, *French Government*.
- 2015 **National Initiative on Undergraduate Science Scholarship**, *HBCSE(TIFR)*.
- 2015 **Academic Excellence Award**, *IIT Kanpur*.
- 2014 **Gold Medallist**, *Indian National Physics Olympiad*, National Top 35, Participated in the selection camp for the Indian team for IPhO 2014.
- 2014 **All India Rank 189 out of 1.4 million applicants**, *Joint Entrance Examination*.

Internships

- Summer 2017 **Paris Centre for Quantum Computing**, *Université Paris Diderot*, Paris.
Mentors: *Prof. Eleni Diamanti and Prof. Iordanis Kerenidis*
Outline: Quantum Repeater networks.
- Summer 2016 **Centre for Quantum Technologies**, *National University of Singapore*, Singapore.
Mentor: *Prof. Hartmut Klauck*
Outline: Studied about complexity theory in general and relations between query and communication complexities of a subclass of composed functions(related to "Rectangles are Nonnegative Juntas" by Göös et.al)
- June & December **Indian Institute of Science Education and Research**, *Kolkata*.
Mentor: *Prof. Prasanta K. Panigrahi*
2015 Outline: Studied about quantum computing in general and some aspects of quantum cryptography like QKD protocols and quantum money schemes.

Relevant Coursework:

(*)Fall 2017

- Graduate courses **Quantum Computing**, Modern Cryptology, Computational Complexity*, Machine Learning*, Quantum Coherence & Entanglement*
- TCS & Mathematics **Theory of Computation**, Discrete Mathematics, Abstract Algebra, Logic, Algorithms & Data Structures, Operating Systems, Compilers, Probability & Statistics
- Systems **Computer Networks***, Operating Systems, Compilers, Computer Organisation

Other Quantum Physics, Quantum Mechanics 1*, [Quantum Information Science II](#)(graduate course - [edX Verified Certificate](#)), [Quantum Cryptography](#)([edX Verified Certificate](#))

Miscellaneous [Human Evolution](#)([edX Verified Certificate](#)),Philosophical Aesthetics, Economics, Academic Writing*

Skills:

Programming C, Python, Bash, \LaTeX , Octave, Git

Web HTML, CSS

Natural Telugu(native), English, Hindi

Languages

Academic Projects (at IIT Kanpur)

- Fall 2016 **Undergraduate Research Project.**
Mentor: *Prof. Rajat Mittal*, Dept. of Computer Science and Engineering
Outline: Studying the mathematical foundations of Quantum Mechanics. [Project Report](#).
- Spring 2016 **Certified Randomness Generation using Quantum Non-Locality.**
Course Project for Quantum Computing
Outline: Studied Quantum Non-Locality and it's applications to randomness certification and generation. [Project Report](#)
- Spring 2016 **Rotobot.**
Course project for TA202 - Manufacturing Processes 2
Our group received an award for having the fifth best project from over 60 groups for designing and manufacturing a machine which rotates around 2 perpendicular axes and can produce hollow sphere.
- Fall 2015 **Rotating Bridge.**
Course project for TA201 - Manufacturing Processes 1
Our group received the 3rd best project award from over 60 groups.

Leadership Experience

- July 2016 - **Science CoffeeHouse IIT Kanpur, Coordinator.**
Organised several student talks on intriguing scientific topics. Also organised a treasure hunt as a part of the inter hostel technical competitions.
- July 2016 - **Association for Computing Activities, IIT Kanpur , Coordinator.**
[ACA](#) is the student body of the Computer Science department.
- July 2016 - **Card & Board Games Club IIT Kanpur, Coordinator.**
Organised several campus board games meetups and conducted inter hostel competitions in the games Dominion & Carcassonne.
- July 2015 - **English Literary Events, Antaragni, Coordinator.**
- Oct 2015 Organised various literary events as a part of the institute cultural festival. There were over 300 participants from colleges across the nation.

Selected talks

- Nov 2016 **Quantum Entanglement & Nonlocal games**, SIGTACS, IITK, [Slides](#) .

Sept 2016 **Introduction to TCS**, *for freshman students*, ACA, CSE IITK.
June 2016 **Rectangles are Nonnegative Juntas**, *CQT CS Talk*, Singapore.
April 2016 **Is it really random?**, Science CoffeeHouse, IITK.
Jan 2016 **Nature and Certification of Randomness**, ACA, [Slides](#) .

Test Scores

December **GRE General Test**.
2016 332/340(perfect 170 in the quant section)
December **TOEFL iBT**.
2016 109/120

Miscellaneous

- Sporadic blogger at arareddy.wordpress.com
- Secured Distinction in initial grade Keyboards Exam, Rock and Pop organised by Trinity School of Music, London in December 2015.
- Completed the touch typing course on typing.com. A five minute typing test in February 2017 gave a result of 61WPM with 94% accuracy.
- Participated in the Shannon Centenary day celebrations at IIT Kanpur organised by the department of Electrical Engineering.