

Aditya Dwarkesh

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Academic Qualifications

- 2019-Present **Indian Institute for Science Education and Research, Kolkata, Department of Mathematics & Statistics,**
Five-year integrated BS-MS Course in Mathematics and Statistics, Current CGPA: 8.94.
- 2019 **RN Podar School, Mumbai,**
Central Board of Secondary Education (CBSE), Class 12, Subjects: Physics, Chemistry, Mathematics, English, Engineering Graphics.
91.4%
- JEE-Mains,**
Examination conducted for various undergraduate science institutions in India.
98.4 percentile
- SAT subject tests.**
800/800 in math level 2 and in physics.
- SAT.**
1540/1600 in the main test.

Research & Publications

Selected publications.

- Dwarkesh, Aditya (2022). *Wilderness & Civilization: A Phenomenological Perspective*. *Filosofie-Tijdschrift*, jr. 32, no. 2.
- Dwarkesh, Aditya & Voleti, Satbhav (2021). *Gödel's Incompleteness Theorems: An Interdisciplinary Review*. In: *Indian Science Cruiser*, Vol 35, No 4, pg 34-50.
- Dwarkesh, Aditya et. al (2020), *A Highschooler's Guide to GeV-Range Electromagnetism*, *The Physics Educator*, Vol. 02, No. 03.
- Dwarkesh, A. (2019). *'Fundamentality' as a Linguistic Paradigm and Linguistics as a Fundamental Paradigm*. In: Aguirre, A., Foster, B., Merali, Z. (eds) *What is Fundamental?*. The Frontiers Collection. Springer, Cham.

Research work.

- Currently working on a project under the supervision of Dr. Amartya Goswami (University of Johannesburg) which generalizes Jacobson's structure theory of rings to non-associative (Novikov) algebras, which is expected to result in a publication.
- Selected for the MITACS Globalink 2023 summer research internship. To work under the supervision of Dr. Martin Frankland (University of Regina, Saskatchewan, Canada) for a duration of 10 weeks on the cohomology of graded Lie algebras.

Awards

- May 2018- **Beamline for Schools, European Council for Nuclear Research (CERN).**
- December 2018
 - Beamline for Schools (BL4S) is an official competition powered by CERN, the European Organization for Nuclear Research, in Geneva, which invites teams of high-school students to propose a scientific experiment to be performed.
 - Competed against 195 teams from 42 countries, and became the first Asian team to secure a top spot and win a sponsored trip to Geneva, Switzerland and over a span of 15 days, executed our experiment at the T9 beamline of Proton Synchrotron, where we attempted to heuristically reconstruct the Lorentz force equation based on the empirical data we gathered from our runs.
- December 2018 **Department of Atomic Energy, Government of India.**
- Felicitated by Chairman of Bhabha Atomic Research Centre, K.N. Vyas.
 - Awarded for extraordinary contribution in representing India at European Council of Physics (CERN) BL4S.

- August 2017- **Foundational Questions Institute, (FQXi).**
- December 2017 Authored a prizewinning article on the topic of 'What is Fundamental?'
- o Participated and won a prize in FQXi's 2017 essay contest on the topic of 'What is Fundamental?'
 - o Competed alongside established physicists and Nobel laureates such as Sean M. Carroll, Brian D. Josephson and many more towards whom the contest was aimed
 - o Subsequently, the essay was awarded a prize and was published by Springer as part of a compendium of the winning essays in its 'Frontiers of Science' collection
 - o Link to the [essay](#) and the [book](#).
- December 2016 **Indian Philosophy Olympiad.**
- o Secured national rank 5 in the 2016 Indian Philosophy Olympiad
- October 2016 **International English Olympiad, SOF.**
- o Secured international rank 17 in the 6th International English Olympiad
- In my younger days **Others.**
- o Part of the winning relay race team in grade 9 and grade 10 in my school's annual Sport Day, secured 3rd and 2nd prize in the 100m sprint for each respective year
 - o Completed Trinity Grade 1 in theory of music with distinction at the age of 8, and completed grade 2 in theory with merit the next year
 - o Completed Group 2 of the "Sri Sathya Sai Education Programme" (said to reflect a student's exemplary moral values)
 - o Won many certificates and medals in various local chess and gymnastics tournaments

Co-curricular Activities

- December 2021 **PhilSci India Winter School.**
- o Participated as a student in a 5-day winter school program
 - o Attended talks given by various top-level researchers on topics in the philosophy of science
 - o Gave a presentation on the last day based on one of the talks attended
- June 2021 - **Institute of Philosophy, Zagreb, "In & Out—Questioning the Philosophical Canon".**
- July 2021 o Participated as a student and engaged with graduate students and esteemed lecturers in a [summer school](#) which focused on the origin and shortcomings of present-day philosophy's "canon"
- August 2019 **RAD@home, Astronomy Collaboratory, India.**
- o Was selected to participate in a one day long training session intended to enable young undergraduate students to engage in astronomical observational research at a professional level
 - o Learned to make multi-wavelength astronomical images by accessing freely available archival data on NASA Skyview

Outreach

- April 2022 **Department Day, Poster Presentation.**
- o In collaboration with a friend, designed and presented a poster which explains Gödel's incompleteness theorems to the layman.
- July 2020-Current **Cogito - The Thought Capsule, Student-run magazine.**
- o Editor of Cogito, a web-based bi-monthly
 - o The magazine aims to encourage rational thinking, scientific awareness and communicate general science amongst the public, while also entertaining slightly technical articles for those who may be so inclined
 - o Also contributes for the same as an author on certain occasions
 - o Link to [website](#)
- March 2017- **The Eyries and Pyres of Thought, TED Organization.**
- March 2019 o Started a newsletter in collaboration with the TED organization in order to explain advanced topics in a simple manner for students all over the world.
- o The newsletter covered topics like Analytic Philosophy, Cognitive Science, Relativity, Quantum mechanics
 - o Contributed articles for each issue on the topic of Analytic Philosophy.
 - o Link to [newsletters](#)

March 2019 **National Training Program, *Raising a Mathematician (RAMTP)*.**

The purpose of the organization is to search and mentor young mathematical talent throughout India.

- Delivered invited lectures to the students for a day on an introduction to particle physics
- Introduced them to the field and entertained the eager queries of their curious minds
- Helped demonstrate elementary but visually striking physics experiments such as Young's double slit, cloud chamber in order to inculcate interest

Extracurricular Activities

2023.

- Wrote a short story to be published by PS Publishing in the eminent literary critic S.T. Joshi's upcoming anthology, *Black Wings VII*.

2022.

- Event organiser in LEXIS 2.0, IISER Kolkata's official literary fest

2021.

- Office bearer of IISER Kolkata's literary club

2019.

- Declared brand ambassador of my high school at the farewell post 12th grade as acknowledgement of my contribution as a student and peer back to the school
- Lead scriptwriter for the annual school event 'Drishtikon' in grade 9, grade 10 and grade 11

2017.

- Was selected as a visiting student at TIFR Mumbai as part of the 'Frontiers of Science' program
- Designed and made a robot which detected and minimized water wastage in household fixings along with two teammates as part of the Technology Robot Artificial Intelligence (TRAI) Summit organised by Consilience

Community Service

August 2019 **Ek Pehal-IISER Kolkata.**

- Participated in a clothes distribution drive and helped an ongoing library setup in order to uplift the underprivileged
- Helped in cataloguing and segregated the books and doing the same for and distributing the clothes
- Devoted about ten hours a week for two weeks as well as one full day for the clothes distribution

2017 **Vanshakti.**

- Participation in a mangrove tree-planting project by NGO Vanshakti in Bhandup, Mumbai
- Directly participated in the afforestation efforts and tree-planting for two full days

2017 **Red Cross.**

- Participated in a Red Cross first-aid training camp in the year 2017
- Received hands-on experience in administering first-aid such as CPR

References

Md. Ali Zinna, *Associate Professor*,

Department of Mathematics and Statistics, Indian Institute for Science Education and Research, Kolkata,
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Mihir Chakraborty, *Visiting Professor*,

School of Cognitive Science, Jadavpur University, Kolkata,
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Shyam Wuppuluri, *Research Associate*,

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