

# Radha Pyari Sandhir, PhD

Scientific Adviser/Writer/Physicist with a specialization in quantum physics and computing, an entrepreneurial mindset, and a passion for science communication and outreach.

@ radha.pyari@gmail.com 🌐 RadhaPyariSandhir.Com

## EXPERIENCE

### Scientific Adviser

[RadhaPyariSandhir.com](#) 09/2018 - Ongoing Remote

- Ideate, research, and conduct 'believability' testing for science fiction books and screenplays, and technical advertisements; Clients range from independent screenwriters and novelists, to companies such as Lenovo
- Lead world-building brainstorming sessions with creators

### Editor, Manuscript

[Scribe Media](#) 08/2019 - Ongoing Remote

- Evaluate manuscripts written by well-established professionals and public personalities, identify weak points, and provide actionable feedback
- Conduct in-depth edits to provide future authors with the tools to write the best version of their books
- Provide scientific subject matter expertise in physics

### Science Writer & Columnist

[Film Inquiry](#) 03/2018 - Ongoing Remote

- Communicate the natural sciences and technology to cinephiles and popular culture enthusiasts by drawing ties between science fiction in film/tv and real-life science
- Conduct relevant research on each topic, and interact with subject matter experts for accuracy testing

### Founder

[Sploosh Design](#) 2015 - Ongoing Delhi, India

Independent design studio that focuses on creating and curating things for people to express their passion about things they love.

- Lead/manage a team of over 8 freelance artists, designers, and developers
- Design, execute, and host events sponsored by companies such as BMW, HarperCollins, and Radio One

### Machine Learning Consultant

[Tutorific! by ContentFlow](#) 11/2012 - 11/2013 Noida, India

- Developed an algorithm for an interactive, online adaptive tutoring system for students, through soft computing tools; the adaptive engine made use of psychometrics and support vector machines to cater to each student's unique learning needs and abilities

### Editor, Coursework

[Dayalbagh Educational Institute](#) 03/2011 - 08/2012 Agra, India

- Edited OpenCourseWare material for Computer Science and English courses

### Junior Research Fellow

[Variable Energy Cyclotron Centre](#) 03/2010 - 03/2011 Kolkata, India

- Employed soft computing techniques such as fuzzy clustering in order to help design a forward calorimeter for ALICE, one of the four major LHC experiments at CERN, Geneva

## LATEST PUBLICATIONS

### Journal

- R. P. Sandhir. "State-independent Quantum Key Distribution with Two-way Classical Communication." *Quantum Information and Computation*, 2019, vol. 19, no. 15 & 16, doi:0.26421/QIC19.15-16.

- R. P. Sandhir and V. Ravishankar. "Weak classicality in coupled N-level quantum systems." *The European Physical Journal D*, 2019, vol. 73, no. 119. doi:10.1140/epjd/e2019-100007-4.

### Popular Science

- R. P. Sandhir. "The Sci-fi Writer's Guide to Quantum Physics." *Film Inquiry*, 2019.

## EDUCATION

### PhD - Theoretical Quantum Physics

[Indian Institute of Technology, Delhi & Dayalbagh Educational Institute](#)

2013 - 2018 Delhi, India

- Thesis (awarded 2020): "Elements of Non-classicality in Multi-level Systems"

### MPhil - Computer Science

[Dayalbagh Educational Institute](#)

2009 Agra, India

- Thesis: "Soft and Quantum-inspired Hybrid Models for Function Approximation and Pattern Classification"

### MSc - Computer Science

[Dayalbagh Educational Institute](#)

2007 - 2008 Agra, India

- Thesis: "A Study of Fuzzy-Rough Attribute Reduction and Quantum Fuzzy-Neural Networks"

### BSc (Hons) - Physics

[Dayalbagh Educational Institute](#)

2004 - 2007 Agra, India

## AWARDS / CERTIFICATIONS

👩‍🔬 Women Scientists' Fellowship, 2014-2018

Dept of Science & Technology, Govt of India

🏆 Director's Medal (twice), 2008, 2009

Dayalbagh Educational Institute

🧠 IBM Quantum Challenge 2020 (Advanced)

## SKILLS & INTERESTS

### Tools & Technologies

Python | Qiskit | MATLAB, Mathematica S. O. | MS Office | LaTeX | Scrivener | Adobe Photoshop | Adobe Illustrator | Teamwork | Meistertask | Markdown | Jupyter | Git |

### Industry Knowledge

Leadership | Project/Event Management | Organization | Content/Technical Writing/Editing | Soft Computing | Quantum Computing | Physics | Creative Writing | Graphic Design |

### Personal Interests

Cosplay | Writing (fiction & non-fiction) | Reading | Dungeons & Dragons | Planning/Journaling

## LANGUAGES

English	Native	●●●●●●
Hindi	Intermediate	●●●●●●
Latin	Beginner	●●●●●●