

# Profile

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VIDWAN Profile page:  
<https://vidwan.inflibnet.ac.in/profile/154255/MTU0MjU1>

Website : <https://uthradgvc.synthasite.com/>

Youtube: <https://youtube.com/c/uthradorairajan>

## ***Educational Profile***

<b>Degree</b>	<b>University/ College</b>	<b>Year</b>
Ph.D. in Physics	University of Madras	2008
M.Sc. in Physics	Pachaiyappa's College, Chennai	1996
B.Sc. in Physics	Ethiraj College for Women, Chennai	1994

**Broad Area of Research** : Spectroscopy as applicable to pharmaceutical and biological fields

## ***Professional Profile***

### **❖ Teaching and Administration**

- July, 1996 - till date - Associate Professor and **Head Department of Physics** - D.G.Vaishnav College, Chennai
- **Convenor**, Faculty Development Cell, D.G.Vaishnav College, Chennai from 2024
- **Convenor**, Special Needs Equal Opportunity Cell, D.G.Vaishnav College, Chennai from 2022
- **Coordinator**, NSEJS, National Standard Examination in Junior Science conducted by Indian Association of Physics Teachers IAPT, 2024
- Certified as a **trainer of STEM Teacher Training** Workshops on Research based Pedagogical Tools (RBPT) organized by Centre of Excellence in Science and Mathematics Education (COESME), IISER, Pune under Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching PMMMMNTT, MHRD, Govt. of India
- **Mentor** , 1000 Girls 1000 Futures Mentoring, The New York Academy of Sciences, NYAS , 2021-22
- **Mentor**, Mentx program of Young Academy of Sciences, 2021-22
- **Mentor** , STEMU Mentoring, The New York Academy of Sciences, NYAS , 2018-19

- **Chairman**, STEM Science Project for Tamil Nadu,, Dept. of School Education, TNRMSA (Tamilnadu Rashtriya Madhyamik Shiksha Abhiyan), MHRD, Govt.of India for 2015 – 2017
- **Overall Coordinator, DBT STAR College Scheme**, DG Vaishnav College, Chennai from 2013 to 2017.
- **Coordinator, Indian Institute of Remote sensing, ISRO** Outreach Programmes under e-learning mode
- **Visiting faculty**, B.Sc.M.L.T at **The Sankara Nethralaya Academy**, Chennai 2013 to 2016

❖ ***Participation in Educational Bodies framing syllabus, setting Question papers, BoS, external Academic audit***

- External Academic Audit member for Physics Department for the year 2022-23, Guru Nanak College, Chennai
- External Academic Audit member for Science Departments for the year 2022-23, Chevalier T.Thomas Elizabeth College for Women, Chennai
- Subject Expert for curriculum revamping UG and PG syllabi of Physics, Tamilnadu State Council for Higher Education, Aug, 2022
- Academic consultant for script writing and reviewing Digital content preparation in Physics for class XII, Samagra Shiksha, TN School Education Department during 2021-22
- Subject Expert – Designing a new syllabus for school education and involved in revision of curriculum, syllabus and textbooks by **TNSCERT**, Tamilnadu State Council of Educational Research and Training from Aug, 2017.
- Chairman, Board of Studies, B.Sc,Physics, DG Vaishnav College, Chennai
- Chairman, Board of Studies, M.Sc. Physics (2009 -15 ), DG Vaishnav College, Chennai
- Chairman, Board of Studies, B.Sc. Physics with Computer Application (2011-15), DG Vaishnav College, Chennai
- Special Invitee, Board of Studies meeting for B.Sc. at University of Madras in 2008
- Chairman, Board of Examinations, B.Sc,Physics, DG Vaishnav College, Chennai
- Chairman, Board of Examinations, M.Sc. Physics (2009-15), DG Vaishnav College, Chennai
- Chairman, Board of Examinations, B.Sc.Physics with Computer Application (2011-15), DG Vaishnav College, Chennai

***Membership, Scientific Organisations***

- Secretary, Indian Association of Physics Teachers, Tamilnadu & Pudhucherry Regional Council IAPT RC13 from 2022
- Full Member, OWSD Organization for Women in Science for the Developing World

- Regular Member, Association of Asia-Pacific Physical society- Division of Condensed Matter Physics, AAPPS-DCMP, Mumbai, India
- Life Member, Indian Society of Analytical Scientists, BARC, India
- Life Member, Indian Laser Association, RRCAT, Indore, India
- Life Member, The Indian Science Congress Association, Kolkata, India
- Life Member, Indian Women Scientists' Association, Mumbai, India
- Life Member, Indian Physics Association, Mumbai, India
- Life Member, Indian Association for Physics Teachers, India
- Elected Fellow, Young Academy of India (YAI ), 2021

### ***Achievements, Awards and Fellowships Received***

- Recipient of Biochemical Society's (UK) **Diversity in Science Grant**, 2024 and organized Science for ALL hands-on workshop for Neurodiverse learners and students with disability
- Attended the Career Development Workshop for Women in Physics at The International Centre for Theoretical Physics, **ICTP, Trieste, Italy** organised by ICTP, UNESCO and IAEA (The International Atomic Energy Agency) during 6-11, Nov, 2023 (with partial funding)
- Recipient of the prestigious **IAPT Dinabandhu Sahu Memorial Award – 2023** conferred by **Indian Association of Physics Teachers** for the significant contribution towards Undergraduate Physics Teaching and Science outreach activities 5, Sep, 2023.
- Recipient of funding of Rs.1,04,152 from Bharatiya Bhasha Samiti, Ministry of Education, Govt.of India as the Coordinator of National Level Science communication workshop, Feb, 2023.
- Co-Author, **Vigyan Vidhushi** Project, **Vigyan Prasar, DST**, Govt.of India, Dec, 2021- April, 2022
- Created posters on S&T milestones of our country for **Vigyan Sarvatra Pujyate, DST, Govt.of India**, Feb, 2022
- Reviewer of **e-content in Physics** for Higher Secondary students through **Samgraha Shiksha, TN School Education Department**, 2021-22
- Reviewer of Tamil translation of Class 8 Science worksheets of Vigyan Pratibha, **Homi Bhabha Centre for science Education, TIFR**, 2020-21
- **Received funding** for the project **Use of Foldscope as a Educational and Training tool**, for the year 2018-19 by the Department of Biotechnology, Ministry of Science & Technology, Govt. of India. This is a project under the collaboration of **Govt. of India** with Prakash Labs of **Stanford University**, USA, 2018-19

- Received funding under DBT STAR College Support Scheme, Department of Biotechnology, Govt.of India to coordinate and arrange various skill enhancing programme and hands-on trainings to B.Sc. students of three Departments Physics, Chemistry and Botany and help the growth of lab and library facilities for these three departments during 2012-17.
- Completed **NME-ICT project** of Ministry of Human Resource Development (**MHRD**), **Govt. of India**, to prepare e-content learning material **for two practical papers (ELHP-305: V and ELHP – 206) of B.Sc.(H) Electronics course of Delhi University** with the support of EMMRC Anna University, Chennai in Nov, 2017.
- Speaker at TEDx event- **TEDxYouth** held at KRM Public School, Chennai and delivered a TEDx talk A Stroll with Science 8, October, 2017.
- Awarded prize for the **best oral presentation** at the First Annual Convention of Tamil Nadu and Pondicherry Regional Council of **Indian Association of Physics Teachers (IAPT - RC13)** held during 22-23 September, 2017 at IIT Madras, Chennai.
- **The Sankara Nethralaya Academy** appreciated and recognized the scholastic services in imparting academic knowledge and skills to students to excel in life and honoured with a citation on 14, June, 2017.
- **Completed UGC Minor Research Project** “To develop a model to calculate the Carbon footprint of Dwaraka Doss Goverdhan Doss Vaishnav College” of sanction Rs.1,05,000 by **University Grants Commission**, during Nov, 2011 to May, 2013.
- **Best Teacher Award** by Lions Clubs International, District 324 A1 in September, 2013.
- **Best Tamil Science writer** award for the year 2012-13 awarded by Prof.V.C.Kulandaiswamy educational trust for popularization of Science in Tamil.
- Awarded **Teacher Fellowship** under FIP X Plan during 08-06-05 and 31-03-07 by **UGC** for doing Ph.D. Programme
- Worked as project fellow for **UGC Major project** “Fabrication of computerized microwave bench for dielectric studies” during Jan 1999 to July 2000

### ***Publications in peer-reviewed Journals***

- International cooperation to enable capacity building for Women in Physics, Science Diplomacy Review, Vol 6 (1), 53-56 (2024). ISSN 2583-4967
- An overview on steps to accelerate Science Communication in Tamil, International Research Journal of Tamil, Vol 4 (2), 45-53 ( 2022 ) , DOI : 10.34256/irjt2226
- Science worksheets for Children in Regional languages: A Translator’s Perspective, Translation Today (UGC CARE), Vol. 15(2), 177-194 (2021). DOI: 10.46623/tt/2021.15.2.ar8

- Synthesis, Growth and Characterisation of L-Alanine Potassium Sulphate Single Crystals, International Journal of Engineering Sciences Research and Technology, 3, 124-137 (2019).
- UV-Visible Spectroscopic Analysis of Influence of Trace Element Ions on Albendazole, Asian Journal of Chemistry, Vol. 22 No.1, 657-660 (2010).
- FTIR Spectral Study on Jaundice Blood Samples Before and After Treatment, Asian Journal of Chemistry, Vol. 22 No.1, 51-56 (2010).
- Vibrational spectra and Qualitative analysis of Albendazole and Mebendazole , Asian Journal of Chemistry, Vol. 20 No.8, 6310-6324 (2008).
- FTIR and UV-Visible Spectral Study on Normal and Jaundice Blood Samples , Asian Journal of Chemistry, Vol. 20 No.7, 5695-5703 (2008).
- Fourier transform Infrared and Fourier transform Raman spectra and normal coordinate analysis of Ethyleneimine, Indian Journal of Pure and Applied Physics, Vol.46, 100-105, Feb 2008.

#### ***Details of National level Conferences organized as Convenor***

- Ariviyal Pesalaam Vaanga, National level Science Communication workshop, 21-22, Feb, 2023 funded by Ministry of Education, Govt. of India  
<https://www.youtube.com/playlist?list=PLeu7iTiLNUmjGHBbuoWHGrz40i1uInRa>
- Science Popularisation talks for Vigyan Sarvatra Pujyate on 25 & 28, Feb, 2022, in association with Vigyan Prasar, Ariviyal Palagai and TNSTC
- National Level Online Faculty Development Programme in Science Pedagogy, in association with IAPT RC-13, 9-16, Aug, 2021
- National Level Webinar series nurturing Global competencies in STEM, Dec, 2020-March 2021
- UGC Seminar on Science in Ancient India, 27-28, Feb, 2015
- Seminar on Recent Trends in Applied Physics, SRTAP 2012, Feb 20-21, 2012
- National Seminar on Physical Sciences NSPS 2010, Feb 25 - 26, 2010

#### **Books Authored**

1. இந்திய அறிவியல் அறிஞர்கள் (Biography of Indian Scientists in Tamil ), SWASAM Publications, 2024, ISBN 978-81-19550-84-5.
2. என் மாயப் பள்ளி, (My Magic School of Abhay Bang in Tamil) ISBN 978-81-961852-0-6, Jothi Publications, 2024
3. சிறுவர் அறிவியல், ஆசிரியர் கையேடு (Siruvar Ariviyal -Tamil Translation of Small Science Teacher's guide Class 1&2), Homi Bhabha Centre for Science Education, TIFR and IMSC 2024 , ISBN 978-81-974480-9-6. Funded by Department of Atomic Energy, Govt.of India.

4. Exploring Science and Mathematics with Vigyan Pratibha Learning Units- Student Version (Class 8 worksheets in Tamil), Homi Bhabha Centre for Science Education, TIFR and IMSC. 2023 , ISBN 978-81-963057-4-1. Funded by Department of Atomic Energy, Govt.of India.
5. Co-author, இந்தியப் பாரம்பரியத்தின் பொக்கிஷம்- அறிவியல் பூர்வமாக சரிபார்க்கப்பட்ட இந்திய பாரம்பரிய அறிவினூடே ஒரு பயணம் -தொகுதி I (Indhiyap paarambariyaththin Pokkisham , SVASTIK- Scientifically Validated Societal Traditional Knowledge- Vol1), **CSIR NISCP**, Govt. of India. ISBN 978-81-967612-8-8. 2023.
6. Co-author, *Digital Electronics (in Tamil)*, *டிஜிட்டல் எலக்ட்ரானிக்ஸ் ஓர் அறிமுகம்* , **UGC (Undergraduate )**, e-Kumbh portal, **Ministry of Education**, Govt. of India, 2023, <https://ekumbh.aicte-india.org/allugcbook.php>.
7. கண்டேன் ஆற்றலை, ISBN 978-81-958085-6-4, Jothi Publications, 2023
8. யாவர்க்குமாம் கல்வி , ISBN 978-81-958085-4-0, Jothi Publications, 2022
9. Co-author, Vigyan Vidushi, 75 Women Trailblazers of Science, Vigyan Prasara, DST, Govt. of India, 2022. ISBN 978-81-7480-388-7
10. Exploring Science and Mathematics with Vigyan Pratibha Learning Units- Teacher Version (Class 8 worksheets in Tamil), Homi Bhabha Centre for Science Education, TIFR and IMSC. 2022. Funded by Department of Atomic Energy, Govt.of India.
11. நுண்ணலைகளைப் பற்றி நாம் அறிந்தது எப்படி, Thooral Books , 2021 -Tamil translation of Microwaves of Issac Assimov, published under MHRD funded Project Kaleidoscope of IITM

#### Details of Translation Projects involved

- Translator, CSIR NISCP SVASTIK posters
- Reviewer, Tamil translation of Small Science series of books , HBCSE and IMSc , 2022
- Translating Venkatraman Series books - i)The Big and the Small, Vol 1 ; ii) Saha under Muthamizh Aringnar Tamil Translation Project, Tamilnadu State Government 2021-23
- Completed the vetting of Tamil translation of all the Science worksheets for class 8 from Vigyan Pratibha, HBCSE and IMSc during 2020- 21  
<https://vigyanpratibha.in/index.php/learning-units/>
- Vetting and translating books of Project Kaleidoscope, citizen science volunteering project translating popular Science comics and non-fiction to Tamil 2017-21
- Translating Science comics by Jean Pierre Petit Tamil version of Science without Borders *savoir-sans-frontieres*.
- Dubbing and training students to dub Science videos of Arvindgupta toys to Tamil from 2016 till now

e-content created for B.Sc.Physics & Electronics students through EMMRC, Swayam Prabha

Channel 10 Playlist - <https://youtube.com/playlist?list=PLnyO7y0pwB9a9Gq8zfMOPd9o9pUPJ4Utd>

Clocked RS flip-flop

Boolean algebra and logic gates for B.Sc. Physics and Eelectronics students

Flip Flop for B.Sc.Physics & Electronics students

Basics of Multiplex circuits

Basic logic gates

## Science Outreach

### DBT Foldscope activities

- Organised and acted as resource person with my team for various DBT Foldscope workshops popularizing the Foldscope and inspiring students to do science. Details in this blog- <https://microcosmos.foldscope.com/?author=1301>
- Translated Foldscope assembly instructions to Tamil and is available online <https://microcosmos.foldscope.com/?p=157636>

### Details of workshops/ hands-on trainings/industrial visits/inter disciplinary programmes organized as Overall Coordinator, DBT STAR College Support Scheme

Under this prestigious scheme, from Department of Biotechnology, (Ministry of Science & Technology, Govt. of India), coordinate and arrange various skill enhancing programmes and Hands-on training to B.Sc. students of three Departments Physics, Chemistry and Botany and help the growth of lab and library facilities for these three departments. The role includes responsibility to integrate various streams of Basic Sciences and bring in an inter-disciplinary approach and motivate the students to pursue higher education in Science. Under this Scheme, coordinated atleast 60 training programme for the students of the three departments. Activities done under my coordination under this scheme are published in the website at [www.dgvcdbtstar.webs.com](http://www.dgvcdbtstar.webs.com).

### Science Communication

#### *Through All India Radio -*

- **Arivukku Virundhu**, Science facts for all, Anna Community FM Radio, June 2023
- **Ariviyal Arputhangal**, Science Snippets for Commoners from 9-16, July, 2018, Chennai A
- **Ariviyal Oru Arimugam**, on Women in Science from 21-27, June, 2017, Chennai A
- **Andraada Ariviyal Thagavalgal**, daily Sci-capsules from 21,Nov-16,Dec, 2016, Chennai A
- **Ariviyal Saaral**, Science snippets for women during 10 – 28, Sep 2012, Chennai A
- **Ariviyal Ula** - Weekly roundup on Science related happenings and events in Chennai aired in 783KHz, AIR from June 12, 2012 till Dec, 2012.
- Guest speaker to talk on importance of learning Science during National Science Day celebrations in FM Rainbow, Chennai broadcasted on Mar 2, 2011.

- **Scienceekku oru Saavi** - Science snippets for everyday life for common man in FM Rainbow, Chennai from Nov 5 to Dec 4, 2010.

#### ***Through DD Podhigai TV***

- **Environment related** - On Carbon footprint and pharmacognosy during July 2010 on three consecutive weekends.
- Guest speaker in Seidhi Vimarsanam programme on Women's Day in DDK Chennai telecasted on Mar 6, 2011.

#### ***Through writing in science magazines ( in Tamil / English)***

Written more than 30 articles/ non- fiction stories in Tamil and English on various scientific facts and history of science. These have been published in various science magazines in two decades. These are targeted to create enthusiasm about science among public, school teachers, young mothers and school children, mainly in rural and semi urban areas. Their pdf version is available at <https://uthradgvc.synthasite.com/science-through-stories-and-history.php>

#### ***Women Scientists of India series, DAV Prajya magazine for Children***

1. Dr.Bimla Buti, Vol 4(2), p54-56, Oct, 2024
2. Prof.Rajinder Jeet Hans-Gill, Vol 4(1), p54-57, Sep 2024
3. Prof.Parimala Raman, Vol 3(12), p53-55, Aug, 2024
4. Rohini M.Godbole, Vol 3(11), p51-53, July, 2024
5. Dr.Urbasi Sinha, Prajya, Vol 3(10), p57-59, June, 2024
6. Dr.Tessy Thomas, Prajya, Vol 3(9), p50-52, May, 2024
7. Dr.Uma Ramakrishnan, Prajya, Vol 3(8), p56-58, April, 2024
8. Dr.Renu Swarup, Prajya, Vol 3(7), p52-55, March, 2024
9. Shobhana Narasimhan, Prajya, Vol 3(6), p52-54, Feb, 2024
10. Darshan Ranganathan, Prajya, Vol 3(5), p54-56, Jan, 2024
11. Sujatha Ramadorai, Prajya, Vol 3(4), p53-55, Dec, 2023
12. Asima Chatterjee, Prajya, Vol 3(3), p53-55, Nov, 2023
13. Rajeswari Chatterjee, Prajya, Vol 3(2), p56-58, Oct 2023
14. Janaki Ammal , Prajya, Vol 3(1), p56-57, Sep 2023
15. Kamal Randive, Prajya, Vol 2(12), p54-56, Aug, 2023
16. Kamala Sohonie, Prajya, Vol 2(11), Prajya, Vol p53-55, July, 2023
17. Dr.Annapurni Subramaniam, Prajya, Vol 2(10), p54-55, June, 2023.
18. Anna Mani, Prajya, Vol 2(9), p54-56, May, 2023.

#### ***Other Publications***

19. Thadam potta Penn Vinjanigal, Ariviyal Noki, The Sciscope, DIET, Salem, Vol 1(2), July, 2024



20. Renu Swarup, Ariviyal Palagai, DST, p10-12, June, 2023
21. Anna Mani, Ariviyal Palagai, DST, p14-16, May, 2023
22. Scientist R.Chidambaram, Ore India News (online magazine) ,12, Nov, 2019
23. Hargobind Khorana, Ore India News (online magazine), 9, Nov, 2019
24. Prof.GN Ramachandran, Ore India News (online magazine), 8,Oct, 2019
25. Prabhilal Bhatnagar, Ore India News (online magazine), 8, Aug, 2019
26. Oru Velir neelap pulli, Arivukkann, p8-9, Oct, 2016
27. Mudhal Poonjai Kolli, Ariviyal Oli, p33-35, Sep 2015
28. Enbum Uriyathu Payirkku, Arivukan, p17-19, Sep 2015
29. Beri beri, Ariviyal Poonga, p21-23, Jul-Sep, 2015
30. Vaiyittril oru jannal, Ariviyal Oli, p63-64, Feb 2014
31. Ambroise Pare, Ariviyal Oli, p37-41, July 2013
32. Thadupoosi Thondriya kadhai, Ariviyal Oli, p77-82, Feb 2013
33. Pala pala paanai, Ariviyal Oli, p20, 23,24, Nov, 2012.
34. Anesthesia, Ariviyal Poonga, Issue 24, Vol6, Oct-Dec, 2012
35. Avar Avarai Unnamaataar, Ariviyal Oli, p55 -58, Feb, 2012
36. Oor Aaniyin kadhai, Ariviyal Oli, p15-16, Dec, 2011
37. Sillaaich chidharaadha kannadi-II, Ariviyal Oli, p25-26, Oct, 2011
38. Sillaaich chidharaadha kannadi- I, Ariviyal Oli, p11-12, July, 2011
39. John Dalton, Ariviyal Oli, p31-32, May, 2011
40. Urulaik kizhangu patta paadu, Ariviyal Tamil, p23-24, April-May, 2011
41. Mudhal Cooker, Ariviyal Oli, p64-66, Mar 2011
42. Vandhargal kandaargal thelindhargal vendrargal, Ariviyal Tamil, p24-25, Feb-Mar 2011
43. Soda neer pirandha kadhai, Ariviyal Oli, p19-20, Feb 2011
44. Vidhai ondru pottal surai ondrum mulaikkum, Ariviyal Poonga, Issue 6, vol 6, 2011
45. Epsom enum uurilae, Kumudham Health, p52-53, Jan 16-31, 2011
46. Kaalavadi aana marundhugal, Amudhasurabhi, p34-35, May 2010
47. Antimony vandhadu eppadi?, Ariviyal poonga, p18-19, Jul-Sep, 2010
48. Muyarchi udayaar egazhchi adayaar, Ariviyal Oli, p29-30, Sep 2010
49. Parakkum Pandhu Parakkum, Ariviyal poonga, p21-22, Oct-Dec, 2010
50. Arivudayyar aavadhu arivaar, Ariviyal Oli, p29-30, Nov 2010
51. Kandhai aanalum kasakkik kattu, Ariviyal Oli, p73-76, Feb 2010
52. En veetuth thottathil, eyarbiyal, Ariviyal Oli, p27-28, Dec 2009
53. Samayal araiyil eyarbiyal, Ariviyal Oli, p17-19, Nov 2009
54. Columbusin muttai, Ariviyal Oli, p15-16, Sep 2009
55. Graghanam kandu bayandha kathai, Ariviyal Oli, p71-72, Feb 2009

***Self- help articles to students to pursue Higher education available at***

<https://uthradgvc.synthasite.com/college-admission-and-higher-education.php>

- A compilation of various scholarships schemes available for needy students from charitable trusts and agencies – Kallooriyil padikka udhavith thogai yengu kidaikkum?, p6-10, Pudiya Thalaimurai Kalvi, Dec,12, 2011.
- A compilation of Scholarships from various agencies/trusts and Govt. for students from Arts and Science Colleges.
- Compilation of research institutes in India in various fields of Science to guide students to pursue research.
- A handbook on details of internships available for Physics and Chemistry graduates and post graduates

**e-Books of Tamil translations done** available at [www.arvindguptatoys.com](http://www.arvindguptatoys.com) & <https://uthradgvc.synthasite.com/books-translated---science-and-education.php>

#### ***On education***

- **My Magical School** of Dr.Abhay Bhang
- **A New Perspective in School Education** – an interview with David Horsburgh
- **The story of a little lizard that learnt to fly** by Jean Pierre Petit. Tamil version available at <http://www.savoir-sans-frontieres.com/>
- **Kandaen Aatralai, Energetiquement** (on Energy) by Jean Pierre Petit. Tamil version available at <http://www.savoir-sans-frontieres.com/>
- **Yaanaikkutty** – Tamil Translation of The Elephant's Child available at <http://www.savoir-sans-frontieres.com/>
- A few chapters of Free at Last, the Sudbury Valley School by Daniel Greenburg

#### ***Children's illustrated e-books translated to Tamil***

- Wangari's trees of Peace
- Henri's scissors
- My feet are the wheel chair
- Mirette on the high wire
- Kanthamma-story of a woman construction worker
- Nasreen's secret school
- The Animal School by George H.Reavis

#### ***Through dubbing Science videos***

- Dubbed around 60 science videos and mentored students to dub 140 Science videos into Tamil and vetted them. These videos originally created by **Arvind Gupta, IUCAA** serve as excellent resource material to learn science and can help people at grass root levels, as these are videos that teach Science concepts through low cost materials. These videos do not have copyright and available for free in You Tube already. Links of these Tamil videos dubbed by me and students is <https://uthradgvc.synthasite.com/science-videos-in-tamil.php>
1. I Wish to be a Humming Bird of Wangari Matthai  
<https://www.youtube.com/watch?v=Ix-MLurnLGw&list=ULk8OB4wJ3qMU&index=6586>

2. Cup Centrifuge <http://www.youtube.com/watch?v=pVFlpmEA6j4>
3. Fresh Eggs Sink <http://www.youtube.com/watch?v=EIGY99KTD4U>
4. Brine Buoyancy <http://www.youtube.com/watch?v=NvxPG4sq7tY>
5. Centrifugal Pump <http://www.youtube.com/watch?v=0z3sSGX6YuA>
6. Marble Mouse [http://www.youtube.com/watch?v=MgoM\\_spX3Ks](http://www.youtube.com/watch?v=MgoM_spX3Ks)
7. Fountain Jet <http://www.youtube.com/watch?v=0wPDIZdwY4M>
8. Tilt Balance <http://www.youtube.com/watch?v=M9rGCEIATRY>
9. Height Might <http://www.youtube.com/watch?v=iEUumvWj034>
10. Paper Kite <http://www.youtube.com/watch?v=Sulq7tdZ51E>
11. Sewing Machine <http://www.youtube.com/watch?v=XzuoOseEmGE>
12. JCB Truck <https://youtu.be/Rp9Y7vgV5dY>
13. D.C. Motor <http://www.youtube.com/watch?v=eMie89w9OoM>
14. No Magnet Motor <http://www.youtube.com/watch?v=-PP-oUDKssA>
15. Magnificent Motor <http://www.youtube.com/watch?v=cVJialr61XI>
16. Standing Spinning Pencil [http://www.youtube.com/watch?v=4JYCCE\\_R8ok](http://www.youtube.com/watch?v=4JYCCE_R8ok)
17. Bouncy Ball [https://youtu.be/c93cmN7\\_HWM](https://youtu.be/c93cmN7_HWM)
18. Dump Truck <https://youtu.be/yzGOj-l2jYc>
19. Japanese Lantern <https://youtu.be/di1ibKnzGBk>
20. Jumping Dragonfly <https://youtu.be/7GqjZ8yNwoE>
21. Mobile Dancers <https://youtu.be/s0ggkKkfo9M>
22. Pecking Birds <https://youtu.be/mFICojny0G8>
23. Rolling Bottle <https://youtu.be/hPnN47KXXfl>
24. Spinning Spindle <https://youtu.be/pPB-7mQpoXI>
25. Straw Spray <https://youtu.be/CddPjVNOUk>
26. Tumbling Capsule <https://youtu.be/uGtVpnSdEK4>
27. Tumbling Match box <https://youtu.be/T62MFOCs7bs>
28. CD Hovercraft <https://youtu.be/cUAjes2SNLg>
29. Pull Plungers <https://youtu.be/l1s0WLFtKTA>
30. Touching Slate <https://youtu.be/ypPJU3XS98E>
31. Terrific Tornado [https://youtu.be/yUuqqn\\_xLns](https://youtu.be/yUuqqn_xLns)
32. Wind Generator <https://youtu.be/l991S7vao7o>
33. Surface Tension <https://youtu.be/zxR4pM-VD-0>
34. Water Bulge <https://youtu.be/-F3bsD6Onhk>

35. Babloos Boat <https://youtu.be/gYto04ymd-k>
36. Constant Flow <https://youtu.be/WHo-9tDvEWs>
37. Matchsticks Model <https://youtu.be/dnPYZ27ahIM>
38. Balancing Door Guard <https://youtu.be/g1dLR-pCJOQ>
39. Boyle's Balloon in Bottle <https://youtu.be/XuBz8qcE674>
40. Safety Pin Spinner <https://youtu.be/5TdGaZnrXsw>
41. Easy Balance <https://youtu.be/y3g20fJBLsY>
42. Glow without flame <https://youtu.be/r2yPo856LRI>
43. Silver tree <https://youtu.be/spZy1zki3gA>
44. Blow ball <https://youtu.be/q9Tjx3zc7I4>
45. Blow balloon [https://youtu.be/P9XZjG1J\\_1s](https://youtu.be/P9XZjG1J_1s)
46. Flying colour <https://youtu.be/Kkl7eGy356E>
47. Fireless flame <https://youtu.be/IIGft40D3l0>
48. Fire without match <https://youtu.be/LcDnyBzBIQk>
49. Chemical color change <https://youtu.be/gU9YjcrQacM>
50. Yen yellow <https://youtu.be/xjGpiiy7Rek>
51. Synthetic jelly <https://youtu.be/apZzid3hBGA>
52. Water absorbent Polymer <https://youtu.be/bonck6GUFak>
53. Synthetic bouncy ball <https://youtu.be/FpM-epChF7M>
54. Sweet Flame <https://youtu.be/jKjg9CuVWE>
55. Solid Liquid <https://youtu.be/KE4aiz-ZLP0>
56. Rocking toy <https://youtu.be/SolMti32XWo>
57. Candle fun <https://youtu.be/XGB2-pVK4eo>
58. The Pale Blue Dot of Carl Sagan- Animated Film [https://www.youtube.com/watch?v=\\_Pdd285SNiw](https://www.youtube.com/watch?v=_Pdd285SNiw)

#### ***Through Blogs and articles***

- ***Talking Science to kids*** on importance of Science communication during ***World Science day for Peace and Development*** in DBT Blog
- ***Star-lights-up-holistic-science*** - sums up the importance of interdisciplinary activities for undergrads in colleges and how Colleges can tap STAR support scheme for their growth
- [http://mdachennai.com/data/newsletter/MDA%20Newsletter\\_Dec-2016.pdf](http://mdachennai.com/data/newsletter/MDA%20Newsletter_Dec-2016.pdf) – a word to teachers for empathizing and helping children with learning difficulties

### ***Acted as Resource person***

- **Hands-on STEM workshops**

1. Vigyan Prathibha Teachers Workshop for KV, JNV, AECS and Navodhaya School Teachers, Institute of Mathematical Sciences, Chennai, 14, July, 2024
2. Vigyan Pratibha DIET SCERT Workshop, Institute of Mathematical Sciences, Chennai, 25, June 2024
3. Vigyan Prathibha Teachers Workshop for KV, JNV, AECS and Navodhaya School Teachers, Institute of Mathematical Sciences, Chennai, 20, Nov, 2023
4. Vigyan Prathibha Teachers Workshop for KV, JNV, AECS and Navodhaya School Teachers, Institute of Mathematical Sciences, Chennai, 11, Jul, 2023
5. STEM SPARKS, Empowering Educators, Physics teachers training of Velammal Nexus organized by Velammal Matric.Hr.Sec.Schools in association with IAPT RC13, Chennai on 9, Sep, 2023
6. Learning by doing for Science Teachers handling classes 6 to 10, Vidya Mandir Senior Secondary School in association with IAPT RC13, 19, April, 2023
7. Resource Person, Illam Thedi Kalvi Workshop for Science Volunteers, Institute of Mathematical Sciences, Chennai, 1, April, 2023
8. Osmosis Vigyan Pratibha workshop School Teachers, Institute of Mathematical Sciences, Chennai, 9, Jan, 2023
9. Vigyan Pratibha workshop for KV and Navodhaya School Teachers, Institute of Mathematical Sciences, Chennai, 19, Aug, 2022
10. Vigyan Pratibha Teachers Workshop TN Govt. School Teachers, Institute of Mathematical Sciences, Chennai, 10-12, Aug, 2022
11. VPDS Workshop for School Teachers organized by Vigyan Pratiba, HBCSE and Institute of Mathematical Sciences, Chennai, 6, May, 2022
12. VPDS Workshop for School Teachers by Vigyan Pratiba , HBCSE , Institute of Mathematical Sciences, Chennai, 3, May, 2022
13. Resource person and reviewer, 5 days workshop on Digital Content Script Review for Physics, 13-17, Dec, 2021, TNSCERT, Chennai
14. Resource person at National Level Workshop on Microscopy and Photomicrography, organised by PG & Research Department of Microbiology, DG Vaishnav College, Chennai on 21, Jan, 2020
15. Resource person for session on Development of e-content for the Faculty Development Programme organised by Justice Basheer Ahmed Sayeed College for Women, Chennai on 31, Oct 2019
16. Resource person for One day Workshop on Innovative Thinking organised by Idea and Innovation council, CTTE College for Women, Chennai on 24, Sep, 2019.

17. Resource person for One day workshop on DBT Foldscope – Assembly & Usage, organised by Department of Physics, CTTE College for Women, Chennai on 22, Aug, 2019.
18. Resource person, DBT Foldscope workshop organised for School students and teachers, Ramakrishna Mission Higher Secondary School (South), on 13, Aug, 2019.
19. Resource person to train 30 TamilNadu Science Forum volunteers on Zero Shadow Day, on 16, April, 2017.
20. Resource person at KRM Public School (CBSE), Chennai to train 100 students and teachers for Zero Shadow Day workshop, 8, April, 2017.
21. Held **Zero Shadow Day** workshop for students, faculty and lab assistants at DG Vaishnav College, 1, April, 2017 and 24, April, 2017
22. Mentored 200 girl students from Vivekananda Vidhyalaya Group of Schools on the topic **Women and Social Challenges** on 18<sup>th</sup> March 2017.
23. Acted as Mentor Young Environmental Scientists –Senior / Junior Categories organized by Industrial Waste Management Association, on 8 & 15, Oct, 2016.
24. Resource person at District Level Content Enrichment Training for the Physics PGTs in Govt. and Govt.aided Schools organised by DIET, Chennai held at Don Bosco Hr.Sec.School, Perambur on 17, Oct 2014.
25. Resource person at **One day Workshop on Group Theory and its Application to Molecular Vibrations (WOGAM 2011)** on **Normal Coordinate Analysis of water molecule** organized by Postgraduate Department of Physics, Women's Christian College, Chennai in collaboration with Indian Spectrophysics Association on Oct 7, 2011.

- **On Science & Technology, STEM, Innovation - Talks and Guest Lectures**

1. Invited Talk on **Science of Musical Instruments – Contributions by Sir CV Raman**, Conference on Indian Knowledge Systems, IUAC, New Delhi, 11-12, July 2024.
2. Invited Talk on **Small Science Translation Initiative**, Primary Science: A Discussion, The Institute of Mathematical Sciences, Chennai, 20, June, 2024.
3. Invited Talk on **New age Teachers**, SBOA Matriculation & Higher Secondary School, Chennai, 3, June, 2024.
4. Chairperson, Panel discussion on **Accessing knowledge from across the world**, Two day workshop on "Science communication in Tamil - contemporary challenges and opportunities.", The Institute of Mathematical Sciences, Chennai, 24-25, May, 2024.
5. Invited Talk on "Self Learners- Why? How?", Young Student Scientist Programme (YSSP) catalyzed by Tamilnadu State Council for Science and Technology conducted at MCC, Chennai, 5, Feb, 2024
6. Panelist (representing Tamil), Apni Bhasha Apna Vigyan: Strengthening Science Communication in Indian Languages, Vigyanika- Science Literature Festival, **India International Science Festival, IISF 2023**, Faridabad, India, 18, Jan, 2024  
<https://pib.gov.in/PressReleaselframePage.aspx?PRID=1997570>

7. Panelist, Balancing Family and Career at the Career Development Workshop for Women in Physics at The International Centre for Theoretical Physics, **ICTP, Trieste, Italy** on 7, Nov, 2023
8. Indian Scientists inspired by Swami Vivekananda – a talk at Physics Association, Ramakrishna Mission Vivekananda College, Chennai, 27, Sep, 2023
9. Talk on “Contribution of our Country to Mathematics”, organized by PG and Research Department of Mathematics, DDGD Vaishnav College, Chennai, 1, Sep, 2023
10. Invited Talk, “Ariviyal Tamil” organized by Department of Tamil (Shift II), A.M Jain College, Meenambakkam, Chennai, 9, Aug, 2023
11. Guest speaker, “Have Indians done any science?”, Varahamihira Science Forum, Chennai, 24, June, 2023.
12. Panelist, One day workshop Joys and Thrills of Learning and Teaching, Department of Physics, Madras Christian College, Chennai in association Indian Association of Physics Teachers IAPT RC 13, 23, June, 2023
13. Vivekananda- an influencer, NSS, Dwaraka Doss Goverdhan Doss Vaishnav College, Chennai, 12, Jan, 2022
14. Differentiated Classroom for STEM Teachers at National Level Online Faculty Development Programme in Science Pedagogy, organised by Department of Physics, Dwaraka Doss Goverdhan Doss Vaishnav College in association with IAPT RC-13 on 11, Aug, 2021
15. Talk on Incorporating Science & Technology Innovations in everyday Teaching through our Curriculum, through webinar organised by Department of Physics, SIVET College, Chennai on 27, July, 2020
16. Talk on Science and Technology Innovations for COVID-19: Teaching perspective through webinar Organised by the Department of H&S in association with Institution’s Innovation Council, REC Rajalakshmi Engineering College, Chennai on 3, July, 2020
17. Delegate in IISF 2019, India International Science Festival 2019 at Kolkatta during 5-8, Nov, 2019
18. Resource person for session on Higher Education & ICT in Three day workshop on UGC-NET Preparatory Sessions organised by NAAC Coordination Committee, DG Vaishnav College, Chennai during 3-6, May, 2019
19. Guest speaker at Society for Women Engineers, SWE Chennai Affiliate on **Indian Women in STEM**, as a part of International Women’s Day Celebration, 6, March, 2019
20. Guest Speaker, Lilavati’s Daughters- Women Scientists of India at Varahamihira Science Forum, Chennai, 24, November, 2018.
21. Resource person, Foldscope workshop organised for School students, teachers and research scholars by Indian Association of Physics Teachers at IITMadras, Chennai on 22, September, 2018.
22. Invited talk at Dr.MGR Educational and Research Institute, Deemed to be University, Adayalampattu Campus on 20, September, 2018.

23. Guest speaker at the Department of Physics, Anna Adarsh College for Women, Chennai and gave a talk on Leelavathi's Daughters on 27, August, 2018.
24. Guest Speaker in the Panel Discussion - Fighting scientific and cultural illiteracy in Tamil Nadu using Tamizh's innate strengths at **The Pandy Litfest 2018** on 2, August, 2018
25. Delivered Bharath Rathna C.Subramaniam Endowment Lecture "Ariviyal Valarchi-Varalaarum Puviyiyalum", organized by Department of Tamil Literature, University of Madras on 21, March, 2018.
26. Participated as a delegate for Round Table Meet on Mass Communication, **India International Science Festival (IISF 2017)** organised by the Government of India at NIOT, Chennai on 13, Oct, 2017.
27. **Chaired** the Secondary Science Syllabus Framing Workshop of State Council of Educational Research and Training, Tamilnadu held at SRM University on 20<sup>th</sup> & 21<sup>nd</sup> September, 2017.
28. Mentor for Upper Primary Science Education, **Seminar on Developing New Curriculum-2017, organized by** The State Council of Educational Research and Training, along with the Directorate of School Education 20-22, July 2017.
29. Resource person to mentor at Science in-service training for teachers of Chennai District, RMSA, Chennai on 10, July, 2017.
30. Resource person to mentor Science teachers in Zonal Level Science Teachers Mentor training of Kanchipuram District, RMSA, Kanchipuram Dist. at Kelambakkam, on 23, June, 2017.
31. Chief Guest and inaugurated National Group Song Competition 2016 organised by Bharat Vikas Parishad, Tambaram Branch on 25, Sept 2016.
32. Chief Guest at Sri Ramakrishan Mission Higher Secondary School, T.Nagar, Chennai on 6, August 2016.
33. Guest Speaker at Savitriammal Oriental Higher Secondary School and addressed the senior students on **Growth of Science and Technology in recent times**, on 22, July 2016.
34. Inaugurated Science Exhibition as Chief Guest and addressed the students of KRM Public School (CBSE), Chennai on 15, July 2016.
35. Inaugurated, delivered Keynote address and invited talk at the state level seminar on Enhancing Intellectual and Emotional attitude of Learners at Global level, Dr.Rajalakshmi College of Education, Avadi, Chennai, 3, Jan, 2015.
36. Inaugurated, delivered Keynote address and invited talk at the state level seminar on Ethical Imperatives to Environmental Education- A strategic shift for Sustainable Development of Green and Clean India, SathyaSai B.Ed. College, Avadi, Chennai, 29, Nov 2014.
37. Served as a judge to select the best exhibits during the Revenue District Level Science Exhibition by the students of Chennai district held at Bentinck Higher Secondary School for Girls, Vepery, Chennai on 8, Nov, 2014.
38. Inaugurated the Science Association at Valliammal Matriculation Higher Secondary school, Anna Nagar East, Chennai and addressed the gathering on August 4, 2014



39. Addressed as Chief guest and gave a talk at Srimathi Maharani Bai Jumna Doss Vaishnav Higher Secondary School, Arumbakkam, Chennai on June, 2014.
40. Resource person in Physical Science Department and addressed the B.Ed Teacher trainees at Meston College of Education, Royapettah, Chennai on 24, March, 2014.
41. Guest speaker and honoured meritorious awardees of Sir.C V Raman Science project achievers , V.O.C. Vidiyalayaa Matriculation Higher Secondary School, Perambur, Chennai on March 14, 2014.
42. Conducted a training session on Foldscope at Microscopy and photomicrography workshop organised by P.G. & Research Dept. of Microbiology, D.G.Vaishnav College on 22, Sep, 2017.
43. Addressed at Women's Day celebration 2014 by Theagaraya Chetty Educational Institutions, Washermanpet, Chennai on March 7, 2014.
44. Guest for valedictory function of Physics Association, Queen Mary's College, Chennai on 28, Feb, 2014.
45. Participated in the seminar on Developing New Curriculum – 2017 held at Kalaivanar Arangam and **Chaired** the sessions for secondary education at Anna University, organized by the SCERT, State Council of Educational Research and Training, Tamilnadu on 20, 21 & 22 July, 2017.
46. Guest speaker, Physics Association PhysElectra, Bhakthavathsalam College for Women, Chennai, 2014
47. Invited talk **Beyond Convention**, a TEDX event organized by Sri Sairam Engineering College Chennai, **TEDX SAIRAM** on August 17, 2013.
48. Resource person at Workshop organized by **Federation of Science Clubs of Tamilnadu** (FSCT) and the **Department of School Education, Corporation of Chennai** in association with the **Science City**, Chennai on the theme "Emerging Trends in Science Teaching" for the PG physics teachers on July 26, 2013.
49. Addressed the gathering as Chief guest and gave a talk at Srimathi Maharani Bai Jumna Doss Vaishnav Higher Secondary School, Arumbakkam, Chennai on June 11, 2013.
50. Delivered talk "**Science Communication through Stories**", at **XII Regional Workshop on Science Writing/ Journalism** organised by Sri Sairam Engineering College and MTS Academy, Chennai sponsored by National Council for Science & Technology Communication, New Delhi on Dec 14, 2012.
51. Inaugurated **CONFLUENZ**, book exhibition and **Sci Expo**, Science Project and delivered talk, as a part of Children's Day Celebration at Shri.B.S. Mootha Girls Senior Secondary School, West Mambalam, Chennai on Nov, 10, 2011.
52. Delivered talk "**Sindhanai Seivom**", a talk on our country's growth in Science and Technology, then and now to commemorate the Birth Anniversary of Nobel Laureate Sri. Subramanyam Chandrasekar at Hindu Hr.Sec.School, Triplicane, Chennai on Oct, 19, 2011.

- ***On Empowerment through Inclusive Education***

1. Organised **Science for ALL workshop** -an hands-on experiential learning for neurodiverse learners and students with disability, 28, Oct, 2024.
2. Invited talk and trainer on “Equitable and inclusive classrooms through differential Education”, One day Seminar on Experiential Learning towards NEP 2020, NKT National College of Education for Women, Chennai in association with IAPT RC 13, 21, Dec, 2023
3. “How to get your Child ready for College?”, Dyslexia Talks by Gift of Learning Differently Parents Support Group, GOLD PSG, Online talk, 18, Nov, 2023
4. Pedagogical Techniques and REACHING the SPECIAL NEEDS of the students, Faculty Induction Programme, Organised by FDP Cell & IQAC, Dwaraka Doss Goverdhan Doss Vaishnav College, Chennai, 15, June, 2023 & 13, June, 2024.
5. Understanding differential Needs of Students- Marching towards Inclusive Learning Practices in One week Online Faculty Induction Programme organised by IQAC, Dwaraka Doss Goverdhan Doss Vaishnav College, Chennai on 30, Sep, 2021
6. Delivered Talk on “Empowerment Schemes for Persons with Intellectual Disabilities – Integrating in Inclusive Education” in 7 day National Webinar on Exploration of Opportunities for Women Empowerment organized by the Centre for Women Empowerment & Women Studies of Manonmaniam Sundaranar University, Tirunelveli, India on 30, Sep, 2020
7. Delivered Talk on "Empowerment of persons with disabilities (Divyangjan) by effective utilization of schemes of Govt. of India” in 7 day National Webinar on Exploration of Opportunities for Women Empowerment organized by the Centre for Women Empowerment & Women Studies of Manonmaniam Sundaranar University, Tirunelveli, India on 25, Sep, 2020
8. Invited Talk on Concession in Entry into Colleges for Children with Special Learning Difficulties organised by Madras Dyslexia Association, MDA, Chennai on 06, July, 2019
9. Emotions, intellect and learning at the **State level Seminar** on Enhancing Intellectual and Emotional attitude of Learners at Global level, Dr.Rajalakshmi College of Education, Avadi, Chennai, 3, Jan, 2015.

- ***Advocating Science Outreach***

1. Poster presentation on Showcasing Women leaders in STEM through Science Outreach, Career Development Workshop for Women in Physics at The International Centre for Theoretical Physics, ICTP, Trieste, Italy 7, Nov, 2023
2. Native and purely National Institutions that nurture indigenous minds, National Conference of Science Communication & Science Teachers, CSIR-NIScPR, Vigyan Prasar, DST, Govt. Of India, 29-30, Nov, 2021
  1. **Building STEM intelligence through story telling** organized by DGVC Library and NDLI club, 20, Sep, 2021 - <https://youtu.be/2MrtfvhwU7g>
  2. **Swami Vivekananda- Science Influencer**, Vivekananda Kendra Prakashan, Chennai, 11, Sep, 2021- <https://m.youtube.com/watch?v=ff3LDiTuJZQ&feature=youtu.be>

3. **Importance of Science communication** with Curio Talks, Young Academy of India, 4, July, 2021 - <https://m.youtube.com/watch?v=OHENc24F5lk>
4. **Milk to Curd-** Importance of taking Science to common people in regional languages, 27, Jan, 2021 -<https://youtu.be/7kB2lz7hS2w>
5. Presented a paper Science Outreach – The road less travelled at **the First Annual Convention of Tamil Nadu and Pondicherry Regional Council of Indian Association of Physics Teachers** (IAPT - RC13) held during 22-23, September, 2017 at IIT Madras, Chennai.
6. Invited speaker in Science and Media Advocacy session at **National Seminar on Women Leadership in S & T: Opportunities & Challenges**, organised by Vigyan Prasar, DST in collaboration with DBT, Government of India on 8-9, March 2017.
7. Invited Speaker at Workshop to create Awareness on Science in Tamil by Tamilnadu Arasu Ariviyal Tamil Mandram, 10-11, Dec, 2010
8. Marundugalin Tharakkattuppaatil agachivappu niramaalai iyalin indriyamaiyaap pangu (Tamil), National Science - **Tamil Conference**, Manonmaniam Sundaranar University, Tirunelveli, Oct 7-8, 2010.

#### ***Resource Person speaking on Environment related issues***

1. Campus sustainability for Clean and Green India, **State level Seminar** on Ethical Imperatives to Environmental Education, SathyaSai B.Ed. College, Avadi, Chennai, 29, Nov 2014.
2. Campus sustainability, **International Conference** on Emerging Trends and Challenges in Science & Technology, ICETCST- 2013, Chennai, 1-2, March, 2013.
3. Carbon footprint, XII Conference, Tamilaga Ariviyal Paeravai, Periyar University, Aug 23 – 25, 2012, Salem, India.
4. Sustainability of campuses, UGC sponsored **International Conference** on Research: Perspectives and Procedures, SDNB Vaishnav College for Women, Chennai, Aug 23 – 24, 2012.
5. Green Campuses, a step towards sustainability, **UGC & TNSCST National Level Seminar** on Advanced Mathematical methods on Climate Change, 2-3, April, 2012, Department of Physics, Presidency College, Chennai.
6. Carbon footprint study of an Academic Institution, **UGC & TNSCST National Level Seminar Seminar** on Advanced Mathematical methods on Climate Change, 2-3 April '12, Department of Physics, Presidency College, Chennai
7. Assessing Carbon footprint of Academic Institutions, **International Conference** on Impact of Physical Sciences on Biology, ICIPB 2011, Jul 7-9, 2011, Queen Mary's College, Chennai, India.

#### ***Courses completed On Patents, Intellectual Property Rights***

- One week National e-Workshop on Innovation & intellectual Property Rights organized by Innovative Technology Enabling Centre(InTEC), CSIR-IMMT, Bhuvanesar 14-19, June, 2021
- General course on Intellectual Property conducted by **World Intellectual Property Organisation,**
- **WIPO** on distance learning mode during Oct- Dec, 2020
- Online **course Promoting access to Medical Technologies and innovation- a WHO, WIPO, WTO Executive course** on the intersection between Public health, Intellectual Property and trade organised by World Health Organisation, WHO, World Trade Organisation, WTO and World Intellectual Property Organisation, WIPO held during 29, Sep to 31, Oct, 2020
- e-tutorial on **Using Patent Information** organised by **World Intellectual Property Organisation, WIPO**
- Distance Learning Course on **Introduction To The Patent Cooperation Treaty** organised by **World Intellectual Property Organisation, WIPO**

***Courses / Development Programs attended (for updating skills and professional competence)- On Pedagogy, Teaching Tools/strategies, STEM training, Science Diplomacy and Leadership training***

- Attended 5<sup>th</sup> SHAW-IAU Workshop on Astronomy held virtually organized by The Office of Astronomy for Education, International Astronomical Union, France, 29, Nov – 1, Dec, 2023.
- Career Development Workshop for Women in Physics at The International Centre for Theoretical Physics, **ICTP, Trieste, Italy** organised by ICTP, UNESCO and IAEA (The International Atomic Energy Agency) during 6-10, Nov, 2023
- Two week Online Intensive **Training cum Orientation Programme on Translation and Interpretation** organized by the National Translation Mission, Central Institute of Indian Languages, Mysuru during 17-30, Sep, 2021
- 5 days Online Training on **Artificial Intelligence for Education** organised by CIET-NCERT during 20-24, Sep, 2021
- S4D4C European **Science Diplomacy** online course, June, 2021
- One day National Online Workshop on **Outcome Based Education and NBA Accreditation** by CREATES, **IISER Bhopal** under under Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching PMMMNTT, MHRD, Govt.of India on 10, Oct, 2020
- 5-day online **FDP** on Universal Human Values for DEEKSHARAMBH (Student Induction Program)” organized by **NIT Patna** during 21 – 25, September 2020.
- Online Workshop on **Evidence Based Teaching and Learning Strategies in Higher Education** organised by CREATES, IISER Bhopal under Pandit Madan Mohan Malaviya

National Mission on Teachers and Teaching PMMMNTT, MHRD, Govt.of India on 20-22,July, 2020

- Two day workshop on **Ancient Indian Mathematics and Astronomy** conducted by Department of Humanities and Social Sciences, IITMadras on 12, March, 2020
- Workshop in Physics- Revision of UG Curriculum based on LOCF organised by University of Madras at Guru Nanak College, Chennai on 13, Dec, 2019
- Five day course **Instructional Course on Indian Sciences** organised by KV Sarma Research Foundation, Chennai supported by TATA Trusts during 27, Nov-1, Dec, 2019
- Training Programme on **Academic Leadership**, organized by Centre for Academic Leadership and Education Management, Aligarh Muslim University under Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching PMMMNTT, MHRD, Govt.of India at MEASI Institute of Management, The New College, Chennai, 1-4, April, 2019.
- One day State Level Inter Collegiate Workshop cum training programme on Identification and Supporting Dyslexic students organized by the Internal Quality Assurance Cell, DG Vaishnav College, Chennai, 5, Feb, 2019.
- Level2 of the STEM Teacher Training Workshop on **Research based Pedagogical Tools** (RBPT) organized by Centre of Excellence in Science and Mathematics Education (COESME), **IISER Pune** jointly with Indian Institute of Technology (IIT) Gandhinagar, Gujarat; Department of Biotechnology (**DBT**), Government of India; and **Newton Bhabha Fund** of the British Council along with experts from **University of Sheffield** at IISER, PUNE, 19-19, Jan, 2019
- Attended **Foldscope Orientation Workshop** organized by the Department Biotechnology, Ministry of Science & Technology, Govt. of India, at International Centre for Genetic Engineering and Biotechnology, New Delhi on 16, April, 2018.
- **Pedagogy workshop for undergraduate science teachers** organized by Centre of Excellence in Science and Mathematics Education (COESME), **IISER Pune** jointly with Indian Institute of Technology (IIT) Gandhinagar, Gujarat; Department of Biotechnology (**DBT**), Government of India; and **Newton Bhabha Fund** of the British Council along with experts from **University of Sheffield** Indian Institute of Technology (IIT) Gandhinagar, Gujarat, from 10-13, Dec, 2017,
- Participated in **DBT – Prakash Lab’s Workshop on Foldscope** organised by IIT Bombay, NIRRH , Mumbai and Department of Biotechnology, Ministry of Science & Technology, Govt. of India, on 28 – 29 August, 2017.
- One day training cum planning workshop for a massive campaign on “Zero Shadow Day” organised by **Pondicherry Science Forum catalyzed & supported by Vigyan Prasar**, DST, Govt. of India, New Delhi in Association with POEC – Astronomical Society of India at Dr.APJ Abdul Kalam Science centre & Planetarium, Pondicherry on 26, March 2017.

- Participated and completed **MOOC on ICT Integration in Higher Education** conducted by Department of Educational Technology, SNDT Women's University, Mumbai during Oct-Dec, 2016.
- Six day Workshop on Basic Teacher Training on “ Effective Teaching Techniques” for Dyslexic Children conducted by **Madras Dyslexia Association** during 25-30, April, 2016.
- One day Workshop on Capacity Building and Sustainable Management in Education organized by Loyola Institute of Business Administration, LIBA, Chennai in March, 2014.
- Completed **One Year training Course in Science Journalism (online)** conducted by the Indian Science Communication Society, Lucknow and National Council for Science & Technology Communication, DST, Govt. of India, 2012.
- Workshop in Physics Education and Research WPER 2011 organised by IITMadras, during 19-24, Dec, 2011
- Refresher Course in Physics conducted by UGC – Academic Staff College, University of Madras at Dept.of Theoretical Physics, University of Madras during 17, Aug - 8, Sep, 2010
- Refresher Course in Information Technology conducted by UGC - ASC, University of Madras at Dept.of Biophysics, University of Madras during 1-21, Aug, 2007

**On Environment related issues-** One Day Enviro Camp – WED 2011 jointly organized by MS Swaminathan Research Foundation (MSSRF), Federation of Science Clubs of Tamilnadu (FCST) and Loyola Institute of Frontier Energy (LIFE) on June 4, 2011.

#### **Counselling trainings attended**

- One day workshop on **Mental Health in Childhood and Adolescence: Assessment and Therapeutic Interventions** conducted by Department of Psychology, Women's Christian College, Chennai on 16, Feb, 2016.
- Barefoot **Counsellor Training Programme** by Anchor Self- Help Access (ASHA) conducted by counselor Brinda Jayaraman, March, 2009.

#### **Other Interests**

Helping to set up and mentor groups on science activities; Singing and listening to Carnatic Music and fusion music ; Cooking – One Pot One Shot (**OPOS**) hassle free cooking; Gardening ; Social networking; Tree walks; Listening to talks on heritage, culture, temple history; Taking part in food walks; interact with children of various age groups.

D.UTHRA