

## **PAVAN IYENGAR**

**Address:** A-604, 10 Kasturkunj, ICS Colony , Bhosale Nagar, Pune, Maharashtra, India - 411007

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### **POSITIONS**

#### **Visiting Lecturership**

IBB,UoP,Pune

2/2014 - current

Conducting a course for the first years (Physics 1- Fluids , Electromagnetism) and second years (Nuclear Physics) at the Institute of Bioinformatics & Biotechnology , University of Pune.

#### **Project Fellow**

IISER Pune

9/2013 - current

Implementing independent Research Project from inception to publication which is Follow Up of previous work in bengaluru at Raman Research Institute .

#### **Vacation Students Program fellow**

Raman Research Institute

5/2012 - 5/2013

With R Srikanth we studied Quantum Walks in order to look at the Energy Transfer in Photosynthesis . We have worked on defining quantumness using noisy quantum walks.

#### **M.Sc. Project student**

National Centre for Radio Astrophysics-Tata Institute of Fundamental Research (NCRA-TIFR )

1/2011 - 6/2011

Theoretical calculation for Optimising a Focal Plane Array used in Radio Astronomy.

#### **Vacation Students Program Project**

IUCAA

Study of "X-ray irradiated accretion disk structure " under Prof. Ranjeev Misra from May 2010 – June 2010

#### **Content Developer**

Espoir Technologies Private Limited

### **SKILLS**

#### **Computation**

Fortran,Scilab,OCTAVE,Python

#### **Others**

Physics, Mathematical Modeling, Research, Problem Solving,Sustainable Solutions searching

### **EDUCATION**

#### **M.Sc, Physics**

University of Pune, Department of Physics

6/2009 - 6/2012

#### **B.Sc., Physics**

University of Pune, Fergusson College

6/2006 - 6/2009

## **RECOMMENDATIONS**

### **Prof.Ahmed Sayeed**

Course Tutor for CM , QM1 and mentor .  
sayeed@physics.unipune.ac.in

### **Prof.Rajaram Nityananda**

M.Sc. project guide and mentor since B.Sc.  
rajaram.nityananda@gmail.com

### **Prof.Rajeev Pathak**

Course instructor for QM1 , QM2 and mentor .  
pathak@physics.unipune.ac.in

### **Prof.R Srikanth**

Vacation Student Program Guide and Collaborator  
skrintha@gmail.com

## **TALKS**

*'A new way to optimize an Array in Astronomy and some insight into Quantum Photosynthesis .'* -  
Pavan Iyengar  
Raman Memorial Conference 2012, 2/2012  
Presented work towards M.Sc. theses at RMC 2012 .

## **PUBLICATIONS**

*Quantifying quantumness via commutators: an application to quantum walk* - Pavan Iyengar, G.  
N. Chandan, R. Srikanth  
to be communicated, 5/2013  
<http://arxiv.org/abs/1312.1329>

The question of witnessing or quantifying nonclassicality of quantum systems has been addressed in various ways. For a given system or theory, we propose identifying it with the incompatibility of admissible states. We quantify the nonclassicality of quantum systems using the Hilbert-Schmidt norm of the commutator of two states. As a particular application of this measure, we study the classicalization of a discrete-time quantum walk with a noisy coin.

## **Conferences and Schools participated**

Participated in the International Workshop on Quantum Biology at IIT-Jodhpur.(25th-27th Jan 2013)

ICTS Mini Winter School on Quantum information and Computation Jan 3rd -5th 2013 at ICTS,IISC Bengaluru.

IISC Bangalore-Cambridge Innovation Network - SCIENCE, INNOVATION AND ENTREPRENEURSHIP on 13 September 2012.

Winter School (Tutorials included) on "Ultracold Atoms for Fundamental Science and Enabling Technologies" 17-21 Dec 2012 organized by IISER Pune and The University of Nottingham.

Frontiers of Excellence in Photovoltaic Science and Technology Jan 15-17th 2012 at IITB

DST-SERC school in Non-Linear Dynamics at IISER-Pune in DEC 2011.

Radio Astronomy School 2011 – NCRA-TIFR.

QFT 2011 at IISER Pune funded and organized by the Max Planck Partner Group in Quantum Field Theory at IISER Pune. <http://www.iiserpune.ac.in/qft/index.html>

## **ACHIEVEMENTS**

*Selected for Vacation Students Research Training Program under Dr.V.V.Acharya in Group Theory at Fergusson College Maths Department in June 2008*

*Selected twice for the National Talent Search Program of the Indian Physics Association, conducted by BARC in Jan 2007 and again in Jan 2008.*

*Ranked 21st in Maharashtra State in the Graduate Excellence Examination , awarded State Scholarship.*

*Selected to take part in the workshop “Scientific Study of water” conducted by Pune Inter Collegiate Consortium in 2006*

## **VOLUNTEER**

*a. Curriculum development in it's Technology Enablement in Curriculum Program and b. Fundraising, Science Education Initiative-India  
Excellence Education*

## **ASSOCIATIONS**

*Aam Aadmi Party (AAP)*

*AAP Pune party member for clean governance in the city of Pune. In charge of booth management in Rangehills area .*

*Berkeley Rural Energy Group (BREG, University of California Berkley)*

*Group Member of BREG which is an international group focusing on Energy for Rural areas.*

*Science For All Foundation*

*Program Officer for a. setting up of the Section 25 Not For Profit company b. Carrying out a pilot project to judge a good way to educate rural gifted, underprivileged and under resourced children to excel in sciences and in the larger picture solve their problems through innovation. c. To develop a socio economic model for excellence education from school level.*

## **RESOURCES**

Website

<http://pavaniyengar.weebly.com/>

Blog including details of my work in Physics and Community sphere.

## **PERSONAL**

**Nationality** India

**Languages** Marathi,Hindi,English,Kannada

**Hobbies** Cycling,Gardening,Interacting with people