



Pune Knowledge Cluster (PKC) & Inter-University Centre for Astronomy and Astrophysics (IUCAA)

Present

Hands-on STEM Teacher Training Workshop

Organized By	Pune Knowledge Cluster (PKC) in collaboration with Inter-University Centre for Astronomy and Astrophysics (IUCAA)
Date	Start Date: 7 December 2022 End Date: 8 December 2022
Location	This is a hands-on training workshop and it will be conducted at the Inter-University Centre for Astronomy and Astrophysics (IUCAA) Science Centre
Course Duration	2 Days
Course Description	This workshop is majorly focused on hands-on training and conceptual understanding of the difficult topics from the syllabus along with introduction to digital pedagogy.
For whom	<ul style="list-style-type: none">● Teachers teaching 6th to 9th grades
Potential Gains	<ul style="list-style-type: none">● Train teachers to use hands-on science toys in regular teaching for making the teaching-learning process effective and at the same time enjoyable.● Train teachers to use the latest STEM-based pedagogical techniques/digital pedagogy and use technology to teach effectively. These teachers will then become facilitators who provoke learners to think and scaffold the learning process.● Develop project-based learning to impart skills relevant to Indian contexts.● To enhance the use of science activities in areas of STEM and Digital Pedagogy

Number of participants	50
Trainers	<ul style="list-style-type: none">● Mr. Samir Dhurde● Ms. Shivani Pethe● Mr. Rupesh Labde● Ms. Prachi Pasalkar● Ms. Shraddha Gargatti● Ms. Bhavana Shah● Mr. Atharva Pathak
Registration Fees	The registration is free and open to all. However, it is on first-cum-first serve basis.

Schedule of the 2-Day Workshop

Day & Date	Topic	Speaker
Wednesday, 7 December 2022	Inaugural Remarks and Pre-Workshop Test	Prof.Ajit Kembhavi, Principal Investigator, PKC
	Session 1: Distances in Astronomy	Mr.Samir Dhurde, IUCAA
	Session 2: Hands-on Activity on Space Toys	Ms. Shivani Pethe, IUCAA
	Session 3: Discussion on Lesson Plans	IUCAA Team
	Session 4: Hands-on Activity on the theme of Light	Mr. Rupesh Labde, IUCAA
Friday, 8 December 2022	Session 1: Digital Pedagogy in STEM Education	PKC Team: Ms. Prachi Pasalkar, PKC Ms. Shraddha Gargatti, PKC Ms. Bhavana Shah, PKC
	Session 2: IUCAA Visit	IUCAA Team
	Session 3: 'App-stronomy': Use of Mobile Apps and Tools in Astronomy and education	Mr. Atharva Pathak, PKC
	Session 4: Post-Workshop Test & Feedback	PKC & IUCAA Team
	Valedictory & Group Photograph	PKC & IUCAA Team

About the trainers



Mr. Samir Dhurde: He is in-charge of the popular outreach programme - SciPOP, at the Inter-University Centre for Astronomy & Astrophysics (IUCAA) in Pune, India. He trained as a Radio Astronomer during his Masters' degree in Physics. He works professionally towards developing and using methods and activities to make Science and astronomy learning fun. Over the last decade he has been in many Education and Outreach advisory groups of organisations such as the ASI, TMT, LIGO-India, ISRO, IAU etc., putting in efforts to design large-scale educational programmes and resources in India and abroad. He has been awarded the national level Zubin Kumbhavi award for outreach by the ASI for his work. He loves to travel across his vast and beautiful country to inspire children, encourage amateur astronomers to contribute to Science and to share Astronomy knowledge with his people.






Ms. Shivani Pethe: She is an Outreach Associate at Inter-University Centre for Astronomy and Astrophysics (IUCAA) & has an experience in designing Science and Space toys as well as various educational resources for Science Education and Outreach. She has been working in IUCAA for 4+ years and engages in organising workshops and programs for school and college students as well as teachers. She has done her Masters in Nanotechnology as well as Masters in Education, and also a Founder of her own start-up - WonderLab which specialises in setting up science labs in schools across India.






Mr. Rupesh Labde: He is an Outreach Associate at Inter-University Centre for Astronomy and Astrophysics (IUCAA) & has an experience in designing, Making Science experiments and toys as well as various educational resources for Science Education and Outreach. He has been working in IUCAA for 5+ years and engages in organising workshops and programs for rural school and college students as well as teachers. He has done his Masters in Physics from Pune University. He has worked in Agastya International Foundation as an In-charge Instructor and in the LG Mobile Science Laboratory, Pune University as an Assistant. He has volunteered in the outreach activities of LIGO-INDIA and TMT.



Mr. Atharva Pathak: He currently works as a Software Engineer & Data Manager for the Pune Knowledge Cluster established by the Office of Principal Scientific Adviser, Govt. Of India & hosted by IUCAA, Pune, IN. He is an Astronomer for 12+ years. Before this, he was a Project Assistant in Astronomy and Outreach, at the Inter University Centre for Astronomy & Astrophysics, IUCAA and also has been working on various Freelance projects, development required for Websites, Applications as well as Localizations of various softwares. He is also the Executive committee member of Jyotirvidya Parisansta, India's Oldest association of Amateur Astronomers, and looks after the IOTA-India Occultation section as a webmaster and data curator. He is fond of travelling, reading, trekking and food.

	<p>Ms. Prachi Pasalkar: She is a Program Manager at Pune Knowledge Cluster established by the Office of Principal Scientific Adviser, Govt of India and hosted by IUCAA, Pune. She has a Master's in Physics and has teaching experience at an undergraduate college; she taught at Fergusson College, Pune, for 4.5 years. She is also a visiting faculty for the past three years at the blended B.Sc. program of the Savitribai Phule Pune University (SPPU) in collaboration with Melbourne University, Australia. At IISER, Pune worked as a Program Manager at IISER Pune at the Centre of Excellence in Science and Mathematics Education-COESME under the Pandit Madan Mohan Malaviya National Mission for Teachers at teaching (PMMMNTT) under MoE. She has developed and conducted teacher training programs at this centre with a team. She coordinated the Multilevel teacher training program- Research Based Pedagogical Tools (RBPTs). She has travelled to various parts of the country, organizing and conducting these workshops. She and her team have worked on conceptualizing and designing modules and implementing the Faculty Induction program (FIP) for newly recruited college teachers. She coordinated the DST- INSPIRE camps at IISER Pune and has coordinated five such camps. The other projects/programs handled included the 'Learning Science through Innovation' program in collaboration with the Vigyan Ashram, the Vigyan Jyoti Camp for girls' students – an initiative by DST, Pedagogy Workshops for Maharashtra State High School Science Teachers, organized under the Rashtriya Madhyamik Shiksha Abhiyan, Maharashtra State, Orientation Camp for Girl Students under Vigyan Jyoti Scheme (supported by Department of Science and Technology). She was associated with STEM for the STEM program at IISER and developed teaching resources in Physics as a part of the program.</p>
	<p>Ms. Shraddha Gargatti: She currently works as an Assistant Project Manager at Pune Knowledge Cluster established by the Office of Principal Scientific Adviser, Govt of India and hosted by IUCAA, Pune. She is an Electronics Engineer by training. Her current area of work involves providing opportunity for school students and teachers to access and adopt digital content related to STEM education through a project "Teach with Tech". She earlier worked as a Science Communicator with a prestigious Indo-German joint venture Science Express – a unique, innovative mobile exhibition mounted on a 16-coach AC train, an initiative of NCSTC, Department of Science and Technology travelling to more than 120 cities across India to promote awareness about S&T among young minds. She also conducted hands-on science activities for students on-board in "Joy of Science" lab. Later, after working over a year as a lecturer at a polytechnic college, she was managing a science outreach project, Exciting Science Group, for 7 years, by liaising with practicing researchers from two of India's premier research institutes, CSIR-NCL and IISER-Pune, to expose school students from lower socioeconomic background to the thrill of research and discovery by engaging them in inquiry based programmes aimed at conveying the excitement of science and technology. Her passions include travelling, trekking, reading and music.</p>
	<p>Ms. Bhavana Shah: M.Sc. (Botany) B.Ed. Currently she is working with Pune Knowledge Cluster, established by the Office of Principal Scientific Adviser, Govt of India and hosted by IUCAA, Pune as Project Assistant on "Teach with Tech Project". Before this she has worked with C M International School for 5 years teaching grade 1 to grade 12 students. She has also worked with various Environmental NGOs such as Ecological Society and INORA.</p>

<p>About the organizers</p> 	<p>The Pune Knowledge Cluster (PKC) has been established by the Office of the Principal Scientific Adviser to the Government of India. The aim is to bring together academia, R&D institutions and the industry of Pune and its surrounding areas, to address the challenging problems of the region through innovative means, using scientific knowledge and engaging highly skilled human resources. Furthermore, PKC aims to foster capacity building and promote skills development and entrepreneurship among the students and professionals of the city. All relevant organizations and experts will be partners and consulted to identify sustainable solutions to the problems of the city and improve its livability and prosperity.</p> <p>While the PKC is administered by the Inter-University Centre for Astronomy and Astrophysics (IUCAA), it is a project of and for the whole city. In the initial phase, PKC would focus on air, water, health, and sustainable mobility.</p> <p>For more information, visit : https://www.pkc.org.in/</p>
<p>Partner organization</p> 	<p>Inter-University Centre for Astronomy and Astrophysics (IUCAA):</p> <p>IUCAA is an autonomous institution set up by the University Grants Commission (UGC) of India to promote the nucleation and growth of active groups in astronomy and astrophysics at Indian universities. IUCAA aims to be a centre of excellence within the university sector for teaching, research and development in astronomy and astrophysics.</p> <p>For more information, visit: https://www.iucaa.in/</p>
<p>Funding Partner</p> 	<p>Lenovo:</p> <p>Lenovo (HKSE: 992) (ADR: LNVGY) is a US\$70 billion revenue global technology powerhouse, ranked #171 in the Fortune Global 500, employing 75,000 people around the world, and serving millions of customers every day in 180 markets. Focused on a bold vision to deliver smarter technology for all, Lenovo has built on its success as the world's leading PC player by expanding into new growth areas of infrastructure, mobile, solutions and services. This transformation together with Lenovo's world-changing innovation is building a more inclusive, trustworthy, and sustainable digital society for everyone, everywhere.</p> <p>To find out more visit https://www.lenovo.com and read about the latest news via our StoryHub.</p>